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PRELIMINARY ASSESSMENT AND SITE INSPECTION FOR U S ARMY HAWK MISSILE SITE GEIGER KEY SITE 22 NAS KEY WEST FL
9/1/2012
TETRA TECH

# Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62470-08-D-1001

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# Preliminary Assessment and Site Inspection
# U.S. Army Hawk Missile Site, Geiger Key, Site 22

## Naval Air Station Key West
## Key West, Florida

## Contract Task Order JM16

## September 2012

NAVFAC
Naval Facilities Engineering Command
Southeast
NAS Jacksonville
Jacksonville, Florida 32212-0030

TETRA TECH NUS, Inc.

# PRELIMINARY ASSESSMENT AND SITE INSPECTION
# U.S. ARMY HAWK MISSILE SITE, GEIGER KEY, SITE 22
# NAVAL AIR STATION (NAS) KEY WEST, KEY WEST, FLORIDA

## COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

**Submitted to:**
**Naval Facilities Engineering Command Southeast**
**Building 903**
**NAS Jacksonville**
**Jacksonville, Florida 32212-0030**

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**Prepared under:**
**Contract Number N62470-08-D-1001**
**Contract Task Order JM16**

**SEPTEMBER 2012**

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# EXECUTIVE SUMMARY

Tetra Tech, Inc. (Tetra Tech) has been contracted by the U.S. Department of Navy (Navy) and funded by the Naval Facilities Engineering Command (NAVFAC) Southeast (SE) to perform a Preliminary Assessment (PA) and Site Inspection (SI) at the former United States (US) Army Hawk Missile Site (AHMS) Geiger Key (Site 22) at Naval Air Station (NAS) Key West, Key West, Florida. The work was conducted for Contract Task Order (CTO) JM16 under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001. The PA is the first component of the overall site evaluation, which is a limited scoped investigation of readily available information, and a site and environs reconnaissance. The PA was designed to distinguish if further investigation was necessary and if so be followed by an SI. The SI is not intended as a full-scale study of the nature and extent of contamination but is performed to augment the data collected in the PA and to generate site-specific data to determine whether contaminants are present or absent and whether response actions or further investigation is appropriate. The objective of performing this PA/SI was to efficiently gather the data necessary to make this determination. The United States Environmental Protection Agency (USEPA) guidance for conducting and documenting PAs and SIs was followed to provide an overall site evaluation.

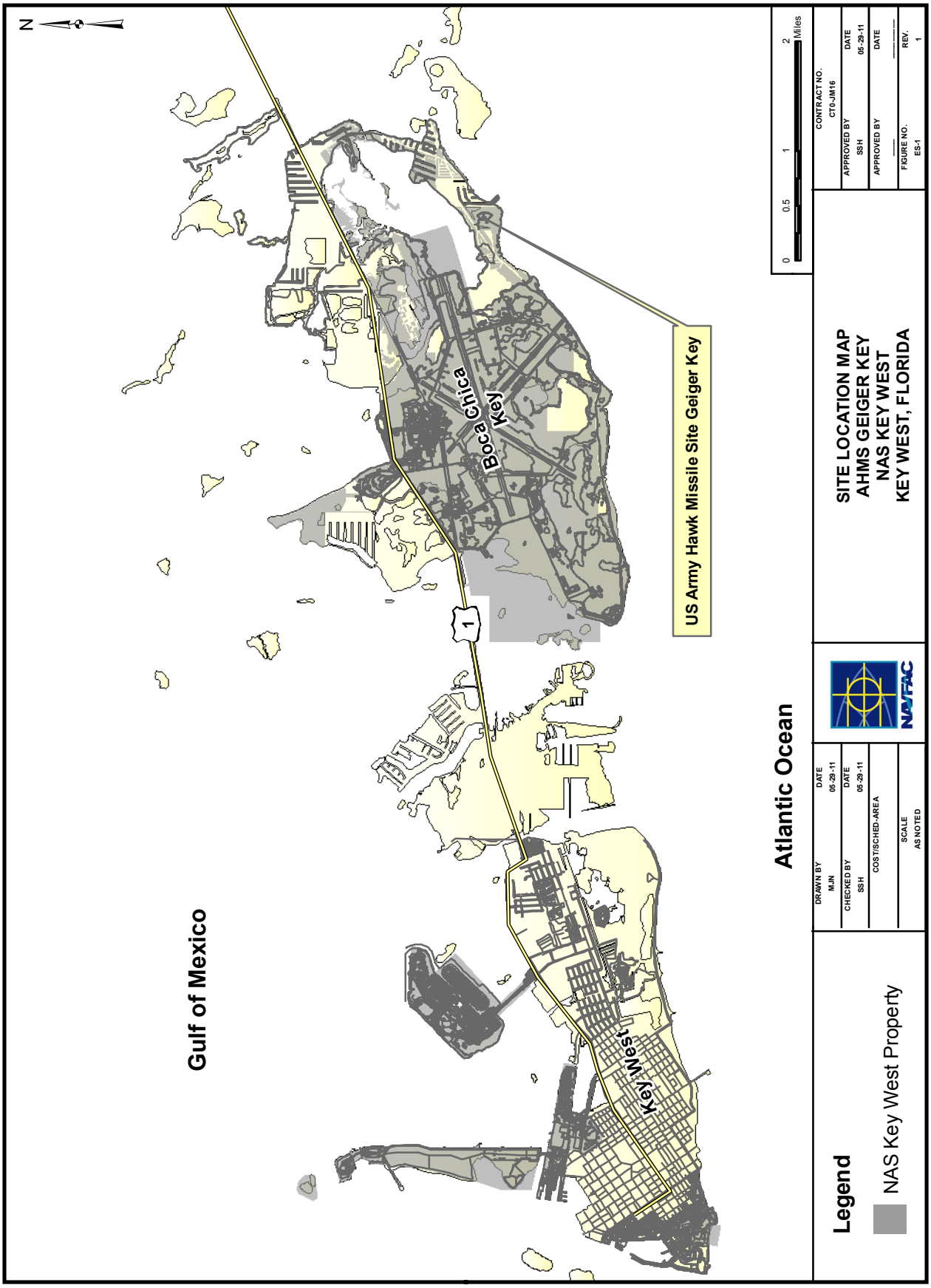
NAS Key West is located in the Florida Keys, between the Gulf of Mexico and the Atlantic Ocean in Monroe County, Florida. The first naval base was constructed in Key West in 1823 to combat piracy in South Florida. The NAS Key West complex comprises 6,249 acres of land, distributed over 14 properties that include: Demolition Key, Fleming Key, Truman Annex, Trumbo Point Annex, Peary Court Annex, Sigsbee Park Annex, Navy Branch Health Clinic – Key West, Boca Chica Field, North Boca Chica, Geiger Key, Big Coppitt Key, Rockland Key, Navy Computer and Telecommunications Station – Saddlebunch Key, and Battery HM-40 – Key Largo Site. The installation's present-day mission is to provide pilot training facilities and services, as well as access to airspace and training ranges for tactical aviation squadrons.

Information regarding the former AHMS Geiger Key is the focus of this PA/SI report and is included in the following paragraphs:

The former AHMS Geiger Key Site is approximately 12 acres located along State Road S-941 (Old Boca Chica Road) on the southwest end of Geiger Key. AHMS Geiger Key is bordered to the south by the Atlantic Ocean and to the north by State Road S-941. The eastern border is Boundary Lane, which is located within a residential area that consists of several man-made canals connected to the Atlantic Ocean. Wetlands border the property to the west. (Figure ES-1)

Based on historical maps and aerial photographs, the land on which AHMS Geiger Key was built was previously salt ponds filled by the U.S. Army in order to adapt the area for use as a missile site. Work on the facility began in 1965 in support of the Cuban Missile Crisis, and continued for several years thereafter. The site contains most of the original buildings used for storage, maintenance, and repairs on the Hawk missiles. It also contains the original radar and illuminator towers, missile launch pads, and generator building. It was used for coastal defense until 1979, at which time the Army units demobilized from all of the Hawk Missile batteries in the Florida Keys. The current and future land use is industrial as outlined in the NAS Key West Base Master Plan.

A series of investigations have occurred at AHMS Geiger Key, based on the indication of groundwater contamination in the vicinity of a closed aboveground storage tank (AST), first described in the Closure Report submitted to the Florida Department of Environmental Protection (FDEP) in 1996. The investigations, restricted to a small area on the site, verified that there was soil and groundwater contamination, but the horizontal extent of contamination was never fully delineated. Also, free product was consistently detected in at least one monitoring well, eventually leading the Navy to plan a Treatability Study to evaluate the effectiveness of passive free product recovery. Early during the Treatability Study, it was determined that the amount of free product had increased and that passive free product recovery was no longer an appropriate remedial option (Tetra Tech, 2006).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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| °C | Degrees Celsius |
| °F | Degrees Fahrenheit |
| %D | Percent Difference or Percent Drift |
| %R | Percent Recovery |
| µg/L | microgram per liter |
| µg/kg | microgram per kilogram |
| Accutest | Accutest Laboratories Southeast |
| AHMS | U.S. Army Hawk Missile Site |
| AST | Aboveground Storage Tank |
| BB&L | Blasland, Bouck & Lee, Inc. |
| bgs | Below Ground Surface |
| CAC | Common Access Cards |
| CDP | Census Designated Place |
| Centauri | Centauri Labs |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act of 1980 |
| CFR | Code of Federal Regulations |
| CLEAN | Comprehensive Long-Term Environmental Action Navy |
| CSM | Conceptual Site Model |
| CTO | Contract Task Order |
| DL | Detection Limit |
| DoD | Department of Defense |
| DOT | Department of Transportation |
| DQI | Data Quality Indicator |
| DPT | Direct Push Technology |
| ELAP | Environmental Laboratory Accreditation Program |
| F.A.C. | Florida Administrative Code |
| FDEP | Florida Department of Environmental Protection |
| GCTL | Groundwater Cleanup Target Level |
| GPS | Geographic Positioning System |
| HASP | Health and Safety Plan |
| ICRMP | Installation Cultural Resources Management Plan |
| IDW | Investigation-Derived Waste |
| INRMP | Installation Natural Resources Management Plan |
| IR | Installation Restoration |

| | |
|---|---|
| IRP | Installation Restoration Program |
| L | Liter |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MDL | Method Detection Limit |
| mg/kg | Milligram per Kilogram |
| mL | Milliliter |
| MNA | Monitored Natural Attenuation |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| msl | Mean Sea Level |
| NAS | Naval Air Station |
| NAVFAC | Naval Facilities Engineering Command |
| Navy | United States Department of the Navy |
| NRHP | National Register of Historic Places |
| NTU | Nephelometric Turbidity Unit |
| OVA | Organic Vapor Analyzer |
| PA | Preliminary Assessment |
| PAH | Polycyclic Aromatic Hydrocarbon |
| PAL | Project Action Limit |
| PCB | Polychlorinated Biphenyl |
| PID | Photoionization Detector |
| PPE | Personal Protective Equipment |
| PQLG | Project Quantitation Limit Goals |
| QA/QC | Quality Assurance / Quality Control |
| QAPP | Quality Assurance Project Plan |
| RPD | Relative Percent Difference |
| SAP | Sampling and Analysis Plan |
| SAR | Site Assessment Report |
| SARA | Superfund Amendments and Reauthorization Act |
| SCTL | Soil Cleanup Target Level |
| SE | Southeast |
| SI | Site Inspection |
| SOP | Standard Operating Procedure |
| SVOC | Semivolatile Organic Compound |
| Tetra Tech | Tetra Tech, Inc. |
| TRPH | Total Recoverable Petroleum Hydrocarbons |

| | |
|---|---|
| US | United States |
| U.S.C. | United States Code |
| USCG | United States Coast Guard |
| USDA | United States Department of Agriculture |
| USEPA | United States Environmental Protection Agency |
| USGS | United States Geological Survey |
| UFP | Uniform Federal Policy |
| µg/L | Microgram per Liter |
| VOC | Volatile Organic Compound |
| WW | World War |

# 1.0 PRELIMINARY ASSESSMENT INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) was contracted to conduct a Preliminary Assessment (PA) at the former United States (U.S.) Army Hawk Missile Site (AHMS) Geiger Key (Site 22) at Naval Air Station (NAS) Key West, Monroe County, Florida (Figure 1-1). Tetra Tech has prepared this PA under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001, Contract Task Order (CTO) JM16. The Department of Defense (DoD) and the United States (US) Department of the Navy (Navy) continue to establish policy and guidance for environmental remediation under the process outlined in the National Contingency Plan (40 Code of Federal Regulations [CFR] 300), as authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, 42 United States Code (U.S.C.) 9605, and amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499 (hereinafter CERCLA). In accordance with Executive Order 12580, DoD is the lead agency for actions taken under the authority of CERCLA at DoD installations. US Environmental Protection Agency (USEPA) guidance was used for conducting and documenting the information contained in this PA.

This PA report is organized into the following sections:

Section 1 – Introduction
Section 2 –Background and History
Section 3 – Physical and Environmental Characteristics
Section 4 – Potential Contamination Migration Pathways
Section 5 – Summary and Conclusion

## 1.1 PURPOSE

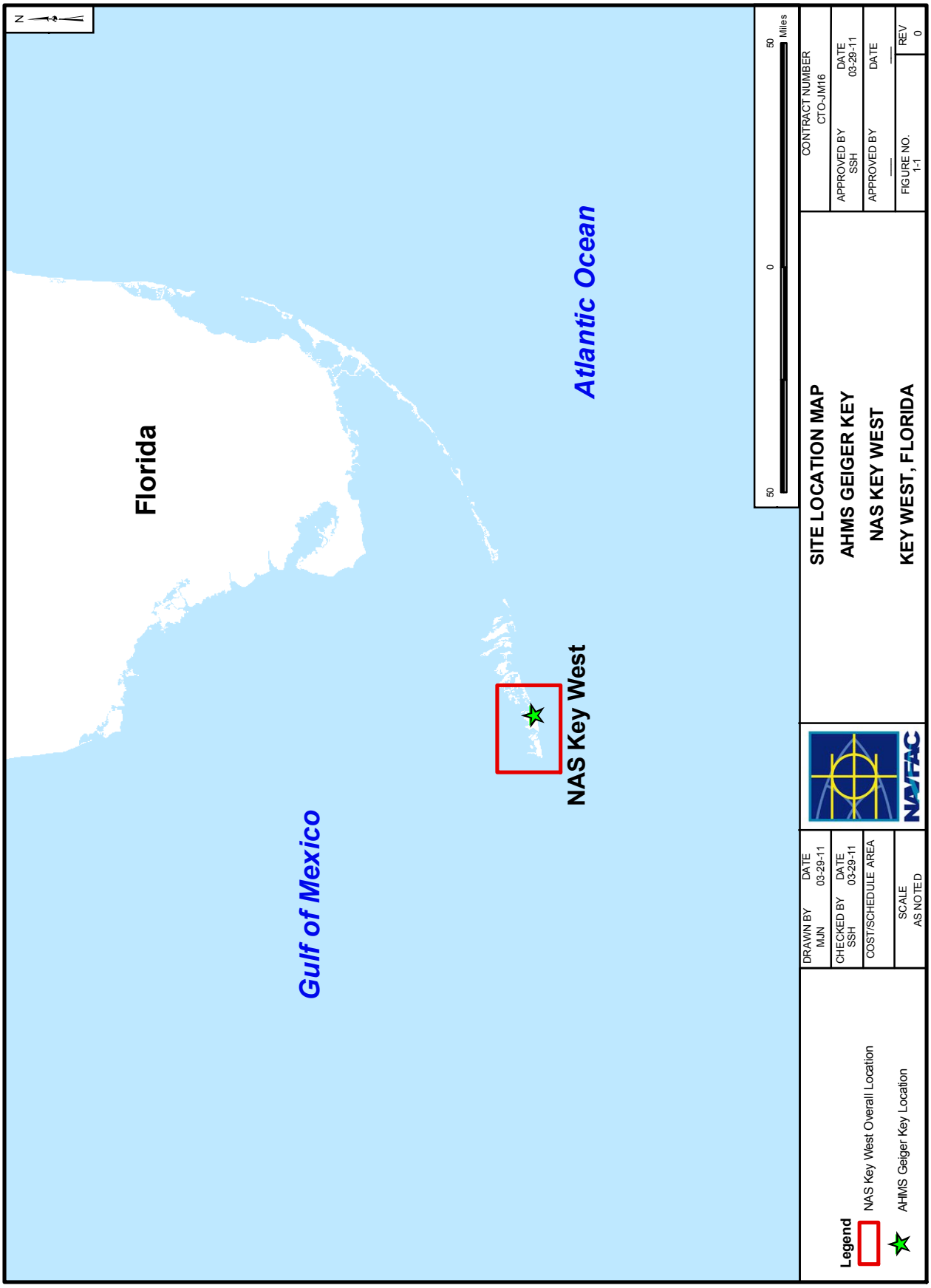
This PA summarizes the history of operations at AHMS Geiger Key, from conception to present time. This PA provides an assessment of the current conditions of the site environment, past investigation activities, and provides the Navy and regulatory decision-makers with necessary information to determine if chemical contaminants present an imminent hazard to human health or the environment and warrant a response action.

## 1.2 PRELIMINARY ASSESSMENT APPROACH

The CERCLA implementing guidance, prepared for sites contaminated with hazardous substances, describes the PA as a limited-scope investigation based on existing and available data.

The PA process for this site involved collecting and reviewing existing and available information about the site. Data collection activities included off-site and on-site research and interviews. The process also included conducting a limited visual survey to assess physical evidence that may indicate the presence of chemical contamination at the site. The Tetra Tech data collection team conducted the on-site portion of the data collection and the limited visual survey for NAS Key West from 24 October through 29 October 2010. This PA is inclusive and makes use of all available data relating to chemical use at AHMS Geiger Key, including historical records, field data, anecdotal evidence, interviews with former site employees, and professional knowledge and experience.

It is based, in part, on information provided in the attached appendices and is subject to the limitations and qualifications presented in the referenced documents.


N
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Atlantic Ocean
Gulf of Mexico
NAS Key West
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50
Miles
Legend
NAS Key West Overall Location
AHMS Geiger Key Location
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COST/SCHEDULE AREA
SCALE AS NOTED
NAVFAC
SITE LOCATION MAP
AHMS GEIGER KEY
NAS KEY WEST
KEY WEST, FLORIDA
CONTRACT NUMBER CTO-JM16
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# 2.0 BACKGROUND AND HISTORY

The following sections provide general information about NAS Key West, including its location and setting, a history of the installation, missions over time, storage, and usage.

## 2.1 GENERAL FACILITY BACKGROUND

### 2.1.1 History

NAS Key West is located in the Florida Keys, between the Gulf of Mexico and the Atlantic Ocean in Monroe County, Florida (Figure ES-1). The first naval base was constructed in Key West in 1823 to combat piracy in South Florida. Expansion of the base occurred in stages, between 1823 and 1917, and coincided with periods of military activity during the Mexican War, the Spanish-American War, and World War (WW) I. When WWI ended, the base was decommissioned and many buildings were destroyed, although the land remained property of the United States (US) government.

At the onset of WWII, the base was re-opened to support naval destroyers and patrol bomber aircraft. Satellite facilities, including Meacham Field and a runway at Boca Chica, were developed. On 15 December 1940, the seaplane base was designated as a naval air station. Aerial photographs dated 1942 show that Fleming Key was constructed during this time period using dredge spoils from the channels being created and/or expanded near Fleming Key (Malcolm Pirnie, 2010). In May 1945, the satellite fields were disestablished and combined into one aviation facility, NAS Key West. After WWII, NAS Key West was retained as a training facility. During the subsequent Cuban Missile Crisis, operational and reconnaissance flights were flown from the station. In March 1979, a decision was made to keep NAS Key West as a fully operational naval air station.

NAS Key West's present-day mission is to provide pilot training facilities and services, as well as access to airspace and training ranges for tactical aviation squadrons. NAS Key West offers access to one of the primary range complexes at which aircrews of the United States Atlantic Fleet train. The NAS Key West Range Complex, encompassing 25,498 square nautical miles of ocean, consists of an at-sea operating area that includes surface and subsurface waters, offshore special use airspace, a submerged surface target, and other special-use airspace. In addition, the range includes a Tactical Combat Training System used for air-to-air combat training. As such, NAS Key West serves as the Navy's East Coast pilot training facility for tactical aviation squadrons.

### 2.1.2 Location and Setting

The NAS Key West complex comprises 6,249 acres of land distributed over fourteen properties that are: Demolition Key, Fleming Key, Truman Annex, Trumbo Point Annex, Peary Court Annex, Sigsbee Park Annex, Navy Branch Health Clinic - Key West, Boca Chica Field, North Boca Chica, Geiger Key, Big Coppitt Key, Rockland Key, Navy Computer and Telecommunications Station - Saddlebunch Key, and Battery HM-40 - Key Largo Site. The present-day mission of the installation is to provide pilot training facilities and services, as well as access to airspace and training ranges for tactical aviation squadrons. Information for the NAS Key West area related to climate, topography, geology, soil and vegetation types, hydrology, hydrogeology, cultural and natural resources, and threatened, endangered, and protected species relevant to the Conceptual Site Model (CSM) for each site are presented below. Other supporting background information is included in the PA.

### 2.1.3 Current Land Use and Anticipated Future Land Use

NAS Key West serves as the Navy's East Coast pilot training facility for tactical aviation squadrons.

Current land use, by facility is as described below:

**NAS Key West Facility Locations**

| Facility Name | Location | Description |
|---|---|---|
| Battery HM-40 | Key Largo | Inactive missile site. |
| Big Coppitt Key | Big Coppitt Key | Former antenna facility and weapons storage area. |
| Boca Chica Field | Boca Chica Key | Airfield and associated facilities. |
| Demolition Key | North Fleming Key | Formerly used for demolition of explosives. |
| Fleming Key | Fleming Key | Dredge spoil area, weapons magazine, Special Forces training area, City of Key West wastewater treatment plant. |
| Geiger Key | Geiger Key | Inactive missile site; managed for uses including research, recreation, and wildlife. |
| Naval Computer and Telecommunications Station | Saddlebunch Key | Location for frequency transmitters for various types of transmissions. |
| Navy Branch Health Clinic | Key West | Naval branch medical clinic. |
| North Boca Chica | Boca Chica Key | Mixed use area, which includes former installation restoration (IR) site, pistol range, wastewater treatment plant, and other facilities. |
| Peary Court Annex | Key West | Residential area. |
| Rockland Key | Rockland Key | Air Installations, Compatible Use Zones and residential area. |
| Sigsbee Park Annex | Key West | Residential area. |
| Truman Annex | Key West | Mixed use area. |
| Trumbo Point Annex | Key West | Mixed use area, which included United States Coast Guard (USCG) facilities, helicopter pad, military lodging, and other facilities. |

It is anticipated that future land use will be the same as current land use.

## 2.2 FORMER AHMS GEIGER KEY SITE DESCRIPTION

The former AHMS Geiger Key is located south of State Road S-941 (Old Boca Chica Road) on the southwest end of Geiger Key. State Road S-941 can be accessed directly from the main Overseas Highway at approximately Mile Marker 11. Figure 2-1 shows the site location on the United States Geological Survey (USGS) topographic quadrangle map (Boca Chica Key, Florida Quadrangle). The site is located at latitude 24° 34' 45" North and longitude 81° 41' 40" West. AHMS Geiger Key is bordered to the south by the Atlantic Ocean and to the north by State Road S-941. Boundary Lane provides the eastern border, which is located within a residential area that consists of several man-made canals connected to the Atlantic Ocean. Wetlands border the property to the west. The site and surrounding area are shown on Figure 2-2. The total land area of the site is approximately 12 acres. The Site is currently abandoned and over grown with vegetation.

## 2.3 FORMER AHMS GEIGER KEY SITE HISTORY

In October 1962, the US Army 6$^{th}$ Missile Battalion (Hawk), 65$^{th}$ Artillery was ordered to Key West, Florida. Four batteries were stationed to house the battalion across Key West and Boca Chica Key as a link in the defensive perimeter around the Keys during the confrontation between the United States, the Soviet Union, and Cuba, known as the Cuban Missile Crisis. Battery A was located on Fleming Key; Battery B was originally located on Smathers Beach then moved to the Key West International Airport; Battery C was originally at NAS Boca Chica, then moved to Saddlebunch Key and was finally moved to a permanent location on Geiger Key, and Battery D was located on NAS Boca Chica.

The Geiger Key site, originally called Battery C or Charlie Battery was completed by the Army and became operational in March 1965 (Osato and Straup, 1968). In 1967, the Charlie Battery was dedicated as the "Florentino R. Roque Hawk Missile Site" in honor of a local Key West Army man who lost his life in Vietnam (KWC, 1967). This anti-aircraft facility was built as a permanent installation and was intended to guard against attack from Cuba, 90 miles away. The Hawk missile was initially designed to destroy aircraft and was later adapted to destroy other missiles in flight. During operations, work in support of the Site's mission was focused on keeping the missiles, radar towers, and equipment clean and ready for use at all times. Maintenance of the individual components for the Hawk system included, but was not limited to, generator maintenance and repair, radar coolant service and electronic component replacement and anti-corrosion repairs, missile component replacement, anti-corrosion and contamination maintenance, and replacement of vital air-conditioning for electronics (Osato and Straup, 1968).

In February 2009, an interview was conducted by NAS Key West representatives with a former AHMS Geiger Key employee in order to gain additional information on the daily activities performed at the Hawk missile sites on NAS Key West during operational years (Tetra Tech, 2010). The results of the interview confirmed the large amount of maintenance and repair necessary to keep the Hawk system operational, and the disposal practices that occurred at the missile site. The site decommissioned in April 1979 and continues to be maintained by the NAS Key West. The current and future land use is industrial as outlined in the NAS Key West Base Master Plan. To date, no other activities have occurred at the facility and it is currently abandoned.

### 2.3.1 Site Layout

The site contains most of the original buildings used for storage, maintenance, operation, and repairs on the Hawk missiles. It also contains the original radar and illuminator towers, missile launch pads, and generator building. The layout of the Site is presented on Figure 2-3.

The Generator Building housed a series of generators that supplied electricity to the site. Solvents were commonly used during the repairs and maintenance of the generators. It was reported that trichloroethene was used extensively in the generator building for these purposes. This information was confirmed by a former employee who specifically recalled “yellow liquid” constantly flowing from the Generator Building (Tetra Tech, 2010). Also attached to the Generator Building were large transformers, housed in a secure metal cage.

The Assembly and Storage Building located on the west side of the Site was the main location for all maintenance and repairs on the missiles. It was reported that solvents were used extensively in the Assembly and Storage Building and (to a lesser extent) the missile storage sheds, located on both sides of the Assembly and Storage Building. These two sheds were used to store a ready supply of missiles.

Four radar towers and an illuminator tower are located in the central portion of the Site and were an integral part of the Hawk missile anti-aircraft system. Each tower was used for a specific type of radar (Pulse Acquisition Radar, Continuous Wave Acquisition Radar, High Power Illuminator Radar, and Range Only Radar) and held approximately 4 gallons of coolant for radar equipment (Osato and Straup, 1968). It was noted that during coolant replacement activities, old coolant was allowed to drain to the ground directly under, or adjacent to, the tower. In addition, maintenance and repair activities generally took place on the tower itself. Used solvents were simply poured over the side of the tower when a particular maintenance or repair activity was completed.

The six missile launch pads were relatively well maintained. It was reported that no maintenance took place at the individual launch pads because of live ordnance hazards.

### 2.3.2 Previous Investigations

Previously conducted Site Investigations are discussed in this section. The first study was a Closure Report completed in 1996 (Blasland, Bouck & Lee, Inc. [BB&L], 2002). The Site has a 2,000-gallon aboveground storage tank (AST) and a 300-gallon AST, previously used to store diesel fuel for emergency generators. According to BB&L, the ASTs were closed in place on April 27, 1996. The data in the Closure Report indicated that soil and groundwater in the vicinity of the 2,000-gallon AST showed signs of petroleum hydrocarbons above the Florida Department of Environmental Protection (FDEP) regulatory criteria in place at the time of closure (BB&L, 2002). It was recommended in the Closure Report that a Contamination Assessment be performed.

In October 2001, a Contamination Assessment was performed by BB&L, during which time soil and groundwater samples were collected from locations adjacent to the 2,000-gallon AST and directly east of the Generator Building. The results were reported in the Site Assessment Report (SAR) submitted to the FDEP (BB&L, 2002). Free product was not detected in any of the soil borings or monitoring wells. Soil samples from areas exhibiting elevated organic vapor analyzer (OVA) readings were submitted to the analytical laboratory for analysis. The Total Recoverable Petroleum Hydrocarbon (TRPH) concentration was greater than the FDEP Soil Cleanup Target Level (SCTL) at a soil sample location less than 20 feet south of the closed 2,000-gallon AST. No other analytes were detected in the soil samples at a concentration greater than the SCTL. The groundwater analytical results indicated that several petroleum hydrocarbons were detected in two monitoring wells at concentrations greater than the FDEP Groundwater Cleanup Target Levels (GCTLs). These wells, their locations, and the petroleum hydrocarbons detected above the GCTL are shown on Figure 2-5 of the SAR (BB&L, 2002).

The horizontal extent of contamination was not delineated during the October 2001 Contamination Assessment. However, Monitored Natural Attenuation (MNA) was recommended as it was thought that NAS Key West Site 22 contaminant concentrations were not high enough to warrant further assessment (BB&L, 2002). In May 2002, the FDEP approved the SAR and concurred with the recommendation to continue further field investigation to delineate the extent of impact from the petroleum hydrocarbons (Tetra Tech, 2003).

On November 30, 2003, a Supplemental Site Assessment Work Plan was prepared to assess the horizontal extent of petroleum contamination at the Site (Tetra Tech, 2003). The work plan was implemented between November 2003 and May 2004 (Tetra Tech, 2004). In November 2003, 52 direct-push technology (DPT) borings were advanced to the north of the former 2,000-gallon AST and the area surrounding the Generator Building because the area south of the tank was investigated during the 2001 Contamination Assessment. Soil samples were collected for OVA field and/or laboratory analysis. Based upon elevated OVA readings, three soil samples were submitted

to the laboratory for analysis. TRPH was detected, but at concentrations less than the residential SCTL. No other petroleum hydrocarbons were detected in the remaining soil samples. Concentrations in several groundwater samples collected from boreholes immediately adjacent to the Generator Building exceeded the GCTLs for TRPH and PAHs.

Based on the SAR, five additional shallow monitoring wells and one additional deep monitoring well were installed in February 2004. Groundwater samples from the newly installed and existing wells were collected in February and May 2004 for off-site laboratory analysis and evaluation of natural attenuation parameters. Benzene, 1-methylnaphthalene, 2-methylnapthlane, naphthalene, acenaphthene, and TRPH were detected at concentrations exceeding the GCTLs. Also, free product (0.06 feet) was measured in monitoring well G01-MW-06 during the February 2004 sampling event. During the May 2004 sampling event, benzene, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, and benzo(b)fluoranthene were detected at concentrations that exceeded the GCTLs, and free product (0.05 feet) was again measured in monitoring well G01-MW-06. The amount of free product was greater than 0.01 feet, thus eliminating MNA as an appropriate remedy for the site (Tetra Tech, 2004). The Tetra Tech 2004 report concluded that active remediation was required, preferably preceded by additional delineation to fully define the horizontal and vertical extent of contamination. Detections from the Supplementary Site Assessment report are located in Tables 2-1 thru 2-4.

In September 2005, a Treatability Study Work Plan for AHMS Geiger Key was developed (Tetra Tech, 2005). Because of the small amount of free product (an estimated 21 gallons) present, the goal of the Treatability Study was to evaluate the effectiveness of passive free product recovery in collecting free product from the single monitoring well at the Site. During the implementation of the Treatability Study in 2006, it was noted that the volume of free product had increased; therefore, passive free product recovery was no longer an appropriate remedial option (Tetra Tech, 2006).

**TABLE 2-1**

**SOIL ANALYTICAL RESULTS, NOVEMBER 2003**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**

| DEPTH (feet bgs) | LOCATION | PARAMETER | RESULT (mg/kg) | QUAL[(a)] | SCTL[(b)] (mg/kg) |
|---|---|---|---|---|---|
| **Total Recoverable Petroleum Hydrocarbons** | | | | | |
| 0-2 | G01-SB-01 | Total Recoverable Petroleum Hydrocarbons | 83 | | 340 |
| 0-2 | G01-SB-19-AVG | Total Recoverable Petroleum Hydrocarbons | 82 | J | |

Notes:
The notation "AVG" indicates that duplicate samples were collected and averaged for the reported result.
(a) Qualifier (Qual.) Codes:
J – The result is an estimated quantity.
(b) Soil Cleanup Target Level (SCTL), residential criteria for direct exposure, as listed in Chapter 62-777, Florida Administrative Code (F.A.C.), Table II.
bgs below ground surface
mg/kg milligram per kilogram

**TABLE 2-2**

**GROUNDWATER SCREENING ANALYTICAL RESULTS, NOVEMBER 2003**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
**PAGE 1 OF 5**

| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[a] | GCTL[b] (µg/L) |
|---|---|---|---|---|
| **VOLATILE ORGANIC COMPOUNDS** | | | | |
| G01-GS-18-1103 | 1,1-DICHLOROETHANE | 0.3 | J | 70 |
| G01-GS-05-1103 | BENZENE | 2 | | 1 |
| G01-GS-06-1103 | BENZENE | 0.3 | J | |
| G01-GS-09-1103 | BENZENE | 5 | | |
| G01-GS-10-1103 | BENZENE | 11 | | |
| G01-GS-11-1103 | BENZENE | 13 | J | |
| G01-GS-12-1103 | BENZENE | 6 | J | |
| G01-GS-13-1103 | BENZENE | 0.4 | J | |
| G01-GS-14-1103 | BENZENE | 0.2 | J | |
| G01-GS-16-1103 | BENZENE | 8 | J | |
| G01-GS-17-1103 | BENZENE | 0.1 | J | |
| G01-GS-19-1103 | BENZENE | 4 | J | |
| G01-GS-22-1103 | BENZENE | 0.5 | J | |
| G01-GS-30-1103 | BENZENE | 0.1 | J | |
| G01-GS-32-1103 | BENZENE | 0.1 | J | |
| G01-GS-40-1103 | BENZENE | 0.2 | J | |
| G01-GS-10-1103 | CIS-1,2-DICHLOROETHENE | 0.6 | J | 70 |
| G01-GS-11-1103 | CIS-1,2-DICHLOROETHENE | 1 | | |
| G01-GS-04-1103 | ETHYLBENZENE | 0.7 | J | 30 |
| G01-GS-05-1103 | ETHYLBENZENE | 6 | | |
| G01-GS-06-1103 | ETHYLBENZENE | 2 | | |
| G01-GS-07-1103 | ETHYLBENZENE | 0.3 | J | |
| G01-GS-08-1103 | ETHYLBENZENE | 0.2 | J | |
| G01-GS-09-1103 | ETHYLBENZENE | 26 | | |
| G01-GS-10-1103 | ETHYLBENZENE | 21 | | |
| G01-GS-11-1103 | ETHYLBENZENE | 28 | | |
| G01-GS-12-1103 | ETHYLBENZENE | 39 | | |
| G01-GS-16-1103 | ETHYLBENZENE | 52 | | |
| G01-GS-22-1103 | ETHYLBENZENE | 24 | | |
| G01-GS-28-1103 | ETHYLBENZENE | 0.1 | J | |
| G01-GS-29-1103 | ETHYLBENZENE | 0.8 | J | |
| G01-GS-30-1103 | ETHYLBENZENE | 1 | | |
| G01-GS-31-1103 | ETHYLBENZENE | 3 | | |
| G01-GS-32-1103 | ETHYLBENZENE | 5 | | |
| G01-GS-33-1103 | ETHYLBENZENE | 0.7 | J | |
| G01-GS-34-1103 | ETHYLBENZENE | 0.1 | J | |

**TABLE 2-2**

**GROUNDWATER SCREENING ANALYTICAL RESULTS, NOVEMBER 2003**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
**PAGE 2 OF 5**

| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[a] | GCTL[b] (µg/L) |
|---|---|---|---|---|
| G01-GS-35-1103 | ETHYLBENZENE | 0.1 | J | 30 |
| G01-GS-36-1103 | ETHYLBENZENE | 0.1 | J | |
| G01-GS-39-1103 | ETHYLBENZENE | 1 | | |
| G01-GS-40-1103 | ETHYLBENZENE | 1 | | |
| G01-GS-41-1103 | ETHYLBENZENE | 0.2 | J | |
| G01-GS-43-1103 | ETHYLBENZENE | 2 | | |
| G01-GS-44-1103 | ETHYLBENZENE | 0.2 | J | |
| G01-GS-46-1103 | ETHYLBENZENE | 0.3 | J | |
| G01-GS-28-1103 | M+P-XYLENES | 0.2 | J | 20 |
| G01-GS-29-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-30-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-31-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-32-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-33-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-35-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-36-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-39-1103 | M+P-XYLENES | 3 | | |
| G01-GS-40-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-44-1103 | M+P-XYLENES | 0.3 | J | |
| G01-GS-46-1103 | M+P-XYLENES | 0.2 | J | |
| G01-GS-29-1103 | O-XYLENE | 0.3 | J | 20 |
| G01-GS-30-1103 | O-XYLENE | 0.2 | J | |
| G01-GS-31-1103 | O-XYLENE | 0.5 | J | |
| G01-GS-32-1103 | O-XYLENE | 0.2 | J | |
| G01-GS-39-1103 | O-XYLENE | 3 | | |
| G01-GS-44-1103 | O-XYLENE | 0.3 | J | |
| G01-GS-32-1103 | TOLUENE | 0.2 | J | 40 |
| G01-GS-39-1103 | TOLUENE | 1 | | |
| G01-GS-44-1103 | TOLUENE | 0.2 | J | |
| G01-GS-28-1103 | TOTAL XYLENES | 0.2 | J | 20 |
| G01-GS-29-1103 | TOTAL XYLENES | 0.5 | J | |
| G01-GS-30-1103 | TOTAL XYLENES | 0.4 | J | |
| G01-GS-31-1103 | TOTAL XYLENES | 0.7 | J | |
| G01-GS-32-1103 | TOTAL XYLENES | 0.4 | J | |
| G01-GS-33-1103 | TOTAL XYLENES | 0.2 | J | |
| G01-GS-35-1103 | TOTAL XYLENES | 0.2 | J | |
| G01-GS-36-1103 | TOTAL XYLENES | 0.2 | J | |

**TABLE 2-2**

**GROUNDWATER SCREENING ANALYTICAL RESULTS, NOVEMBER 2003**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENTREPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
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| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[a] | GCTL[b] (µg/L) |
|---|---|---|---|---|
| G01-GS-39-1103 | TOTAL XYLENES | 6 | | 20 |
| G01-GS-40-1103 | TOTAL XYLENES | 0.2 | J | |
| G01-GS-44-1103 | TOTAL XYLENES | 0.6 | J | |
| G01-GS-46-1103 | TOTAL XYLENES | 0.2 | J | |
| **POLYCYCLIC AROMATIC HYDROCARBONS** | | | | |
| G01-GS-11-1103 | 1-METHYLNAPHTHALENE | 24 | | 20 |
| G01-GS-12-1103 | 1-METHYLNAPHTHALENE | 100 | | |
| G01-GS-16-1103 | 1-METHYLNAPHTHALENE | 150 | | |
| G01-GS-19-1103 | 1-METHYLNAPHTHALENE | 30 | | |
| G01-GS-22-1103 | 1-METHYLNAPHTHALENE | 2,100 | J | |
| G01-GS-31-1103 | 1-METHYLNAPHTHALENE | 15 | | |
| G01-GS-32-1103 | 1-METHYLNAPHTHALENE | 39 | | |
| G01-GS-33-1103 | 1-METHYLNAPHTHALENE | 2 | | |
| G01-GS-36-1103 | 1-METHYLNAPHTHALENE | 1.8 | | |
| G01-GS-38-1103 | 1-METHYLNAPHTHALENE | 5 | | |
| G01-GS-40-1103 | 1-METHYLNAPHTHALENE | 13 | | |
| G01-GS-43-1103 | 1-METHYLNAPHTHALENE | 33 | | |
| G01-GS-46-1103 | 1-METHYLNAPHTHALENE | 2.4 | | |
| G01-GS-48-1103 | 1-METHYLNAPHTHALENE | 0.36 | | |
| G01-GS-11-1103 | 2-METHYLNAPHTHALENE | 23 | | 20 |
| G01-GS-12-1103 | 2-METHYLNAPHTHALENE | 120 | | |
| G01-GS-16-1103 | 2-METHYLNAPHTHALENE | 110 | | |
| G01-GS-19-1103 | 2-METHYLNAPHTHALENE | 22 | | |
| G01-GS-22-1103 | 2-METHYLNAPHTHALENE | 2,300 | J | |
| G01-GS-31-1103 | 2-METHYLNAPHTHALENE | 1.6 | | |
| G01-GS-32-1103 | 2-METHYLNAPHTHALENE | 41 | | |
| G01-GS-33-1103 | 2-METHYLNAPHTHALENE | 2.2 | | |
| G01-GS-36-1103 | 2-METHYLNAPHTHALENE | 1.9 | | |
| G01-GS-38-1103 | 2-METHYLNAPHTHALENE | 4.1 | | |
| G01-GS-40-1103 | 2-METHYLNAPHTHALENE | 8.6 | | |
| G01-GS-43-1103 | 2-METHYLNAPHTHALENE | 24 | | |
| G01-GS-46-1103 | 2-METHYLNAPHTHALENE | 1.4 | | |
| G01-GS-48-1103 | 2-METHYLNAPHTHALENE | 0.36 | | |
| G01-GS-11-1103 | ACENAPHTHENE | 0.48 | | 20 |
| G01-GS-12-1103 | ACENAPHTHENE | 5 | J | |
| G01-GS-16-1103 | ACENAPHTHENE | 13 | J | |
| G01-GS-19-1103 | ACENAPHTHENE | 0.79 | | |

**TABLE 2-2**

**GROUNDWATER SCREENING ANALYTICAL RESULTS, NOVEMBER 2003**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
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| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[a] | GCTL[b] (µg/L) |
|---|---|---|---|---|
| G01-GS-22-1103 | ACENAPHTHENE | 180 | J | 20 |
| G01-GS-31-1103 | ACENAPHTHENE | 4.2 | | |
| G01-GS-32-1103 | ACENAPHTHENE | 2 | | |
| G01-GS-33-1103 | ACENAPHTHENE | 0.83 | | |
| G01-GS-36-1103 | ACENAPHTHENE | 0.38 | | |
| G01-GS-38-1103 | ACENAPHTHENE | 0.2 | | |
| G01-GS-40-1103 | ACENAPHTHENE | 0.76 | | |
| G01-GS-43-1103 | ACENAPHTHENE | 2.1 | | |
| G01-GS-46-1103 | ACENAPHTHENE | 2.5 | | |
| G01-GS-48-1103 | ACENAPHTHENE | 0.091 | J | |
| G01-GS-11-1103 | ACENAPHTHYLENE | 0.078 | J | 210 |
| G01-GS-33-1103 | ACENAPHTHYLENE | 0.071 | J | |
| G01-GS-16-1103 | ANTHRACENE | 1.8 | | 2,100 |
| G01-GS-31-1103 | ANTHRACENE | 0.39 | | |
| G01-GS-43-1103 | ANTHRACENE | 0.26 | | |
| G01-GS-16-1103 | FLUORANTHENE | 0.65 | | 280 |
| G01-GS-11-1103 | FLUORENE | 0.76 | | 280 |
| G01-GS-12-1103 | FLUORENE | 7 | J | |
| G01-GS-16-1103 | FLUORENE | 17 | J | |
| G01-GS-19-1103 | FLUORENE | 0.87 | | |
| G01-GS-22-1103 | FLUORENE | 260 | J | |
| G01-GS-31-1103 | FLUORENE | 5.9 | | |
| G01-GS-32-1103 | FLUORENE | 2.7 | | |
| G01-GS-33-1103 | FLUORENE | 0.79 | | |
| G01-GS-36-1103 | FLUORENE | 0.48 | | |
| G01-GS-38-1103 | FLUORENE | 0.21 | | |
| G01-GS-40-1103 | FLUORENE | 0.66 | | |
| G01-GS-43-1103 | FLUORENE | 2.3 | J | |
| G01-GS-46-1103 | FLUORENE | 1.5 | | |
| G01-GS-11-1103 | NAPHTHALENE | 55 | | 20 |
| G01-GS-12-1103 | NAPHTHALENE | 120 | | |
| G01-GS-16-1103 | NAPHTHALENE | 48 | | |
| G01-GS-19-1103 | NAPHTHALENE | 43 | | |
| G01-GS-22-1103 | NAPHTHALENE | 510 | J | |
| G01-GS-31-1103 | NAPHTHALENE | 1.7 | | |
| G01-GS-32-1103 | NAPHTHALENE | 25 | | |

**TABLE 2-2**

**GROUNDWATER SCREENING ANALYTICAL RESULTS, NOVEMBER 2003**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
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| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[a] | GCTL[b] (µg/L) |
|---|---|---|---|---|
| G01-GS-33-1103 | NAPHTHALENE | 0.81 | | 20 |
| G01-GS-36-1103 | NAPHTHALENE | 0.78 | | |
| G01-GS-38-1103 | NAPHTHALENE | 2 | | |
| G01-GS-40-1103 | NAPHTHALENE | 32 | | |
| G01-GS-43-1103 | NAPHTHALENE | 17 | | |
| G01-GS-46-1103 | NAPHTHALENE | 2.2 | | |
| G01-GS-48-1103 | NAPHTHALENE | 0.47 | | |
| G01-GS-11-1103 | PHENANTHRENE | 0.75 | | 210 |
| G01-GS-12-1103 | PHENANTHRENE | 9 | J | |
| G01-GS-16-1103 | PHENANTHRENE | 27 | | |
| G01-GS-19-1103 | PHENANTHRENE | 0.8 | | |
| G01-GS-22-1103 | PHENANTHRENE | 510 | J | |
| G01-GS-31-1103 | PHENANTHRENE | 6.1 | | |
| G01-GS-32-1103 | PHENANTHRENE | 3.3 | J | |
| G01-GS-33-1103 | PHENANTHRENE | 0.2 | | |
| G01-GS-36-1103 | PHENANTHRENE | 0.11 | J | |
| G01-GS-38-1103 | PHENANTHRENE | 0.2 | | |
| G01-GS-40-1103 | PHENANTHRENE | 0.4 | | |
| G01-GS-43-1103 | PHENANTHRENE | 4.2 | J | |
| G01-GS-46-1103 | PHENANTHRENE | 1.9 | | |
| G01-GS-16-1103 | PYRENE | 1.3 | | 210 |
| G01-GS-22-1103 | PYRENE | 25 | J | |
| G01-GS-31-1103 | PYRENE | 0.17 | J | |

Shading indicates an exceedance of the GCTL.
(a) Qualifier (Qual.) Codes:
J – The result is an estimated quantity.
(b) Soil Cleanup Target Level (SCTL), residential criteria for direct exposure, as listed in Chapter 62-777, Florida Administrative Code (F.A.C.), Table II.
µg/L - microgram per liter

**TABLE 2-3**

**LABORATORY GROUNDWATER ANALYTICAL RESULTS, MAY 2004**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
**PAGE 1 OF 3**

| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[b] | GCTL[c] (µg/L) |
|---|---|---|---|---|
| **METALS** | | | | |
| G01-MW-07-0504-AVG | ARSENIC | 3.8075[a] | | 50 |
| **VOLATILE ORGANIC COMPOUNDS** | | | | |
| G01-MW-05-0504 | 1,1-DICHLOROETHANE | 0.4 | J | 70 |
| G01-MW-07-0504-AVG | 1,1-DICHLOROETHANE | 0.8 | J | |
| G01-MW-08-0504 | 1,1-DICHLOROETHANE | 3 | | |
| G01-MW-09-0504 | 1,1-DICHLOROETHANE | 0.5 | J | |
| G01-MW-11-0504 | 1,1-DICHLOROETHANE | 1 | | |
| G01-MW-07-0504-AVG | BENZENE | 0.3[a] | J | 1 |
| G01-MW-08-0504 | BENZENE | 6 | | |
| G01-MW-09-0504 | BENZENE | 0.2 | J | |
| G01-MW-11-0504 | BENZENE | 1 | | |
| G01-MW-07-0504-AVG | CARBON DISULFIDE | 1.4 | | 700 |
| G01-MW-08-0504 | CARBON DISULFIDE | 0.2 | J | |
| G01-MW-09-0504 | CARBON DISULFIDE | 0.2 | J | |
| G01-MW-01A-0504 | CIS-1,2-DICHLOROETHENE | 0.1 | J | 70 |
| G01-MW-07-0504-AVG | CIS-1,2-DICHLOROETHENE | 1.4 | | |
| G01-MW-08-0504 | CIS-1,2-DICHLOROETHENE | 0.9 | J | |
| G01-MW-09-0504 | CIS-1,2-DICHLOROETHENE | 0.8 | J | |
| G01-MW-11-0504 | CIS-1,2-DICHLOROETHENE | 0.6 | J | |
| G01-MW-02-0504 | ETHYLBENZENE | 0.2 | J | 30 |
| G01-MW-05-0504 | ETHYLBENZENE | 0.2 | J | |
| G01-MW-08-0504 | ETHYLBENZENE | 4 | | |
| G01-MW-09-0504 | ETHYLBENZENE | 0.3 | J | |
| G01-MW-10-0504 | ETHYLBENZENE | 2 | | |
| G01-MW-11-0504 | ETHYLBENZENE | 6 | | |
| G01-MW-12-0504 | ETHYLBENZENE | 2 | | |
| G01-MW-07-0504-AVG | TOTAL 1,2-DICHLOROETHENE | 1.55 | J | 70 |
| G01-MW-08-0504 | TOTAL 1,2-DICHLOROETHENE | 0.9 | J | |
| G01-MW-09-0504 | TOTAL 1,2-DICHLOROETHENE | 0.8 | J | |
| G01-MW-07-0504-AVG | TRANS-1,2-DICHLOROETHENE | 0.4[a] | J | 100 |
| G01-MW-07-0504-AVG | TRICHLOROETHENE | 0.4[a] | J | 3 |
| **POLYCYCLIC AROMATIC HYDROCARBONS** | | | | |
| G01-MW-05-0504 | 1-METHYLNAPHTHALENE | 3.8 | J | 20 |
| G01-MW-07-0504-AVG | 1-METHYLNAPHTHALENE | 1.65 | | |
| G01-MW-08-0504 | 1-METHYLNAPHTHALENE | 34 | | |

**TABLE 2-3**

**LABORATORY GROUNDWATER ANALYTICAL RESULTS, MAY 2004**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
**PAGE 2 OF 3**

| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[(b)] | GCTL[(c)] (µg/L) |
|---|---|---|---|---|
| G01-MW-09-0504 | 1-METHYLNAPHTHALENE | 14 | | 20 |
| G01-MW-10-0504 | 1-METHYLNAPHTHALENE | 9.6 | | |
| G01-MW-11-0504 | 1-METHYLNAPHTHALENE | 40 | | |
| G01-MW-12-0504 | 1-METHYLNAPHTHALENE | 16 | | |
| G01-MW-05-0504 | 2-METHYLNAPHTHALENE | 0.2 | | 20 |
| G01-MW-07-0504-AVG | 2-METHYLNAPHTHALENE | 7.5[(a)] | | |
| G01-MW-08-0504 | 2-METHYLNAPHTHALENE | 47 | | |
| G01-MW-09-0504 | 2-METHYLNAPHTHALENE | 36 | | |
| G01-MW-10-0504 | 2-METHYLNAPHTHALENE | 0.77 | | |
| G01-MW-11-0504 | 2-METHYLNAPHTHALENE | 43 | | |
| G01-MW-12-0504 | 2-METHYLNAPHTHALENE | 6.9 | | |
| G01-MW-04-0504 | ACENAPHTHENE | 0.19 | J | 20 |
| G01-MW-05-0504 | ACENAPHTHENE | 92 | | |
| G01-MW-07-0504-AVG | ACENAPHTHENE | 0.165 | J | |
| G01-MW-08-0504 | ACENAPHTHENE | 2 | J | |
| G01-MW-09-0504 | ACENAPHTHENE | 1.3 | | |
| G01-MW-10-0504 | ACENAPHTHENE | 0.25 | | |
| G01-MW-11-0504 | ACENAPHTHENE | 2.6 | | |
| G01-MW-12-0504 | ACENAPHTHENE | 2.2 | | |
| G01-MW-05-0504 | ANTHRACENE | 3.6 | J | 2,100 |
| G01-MW-10-0504 | ANTHRACENE | 0.11 | J | |
| G01-MW-11-0504 | ANTHRACENE | 0.28 | | |
| G01-MW-12-0504 | ANTHRACENE | 0.16 | J | |
| G01-MW-07-0504-AVG | BENZO(B)FLUORANTHENE | 3.05[(a)] | J | 0.2 |
| G01-MW-05-0504 | FLUORANTHENE | 2.4 | | 280 |
| G01-MW-07-0504-AVG | FLUORENE | 0.29 | | 280 |
| G01-MW-08-0504 | FLUORENE | 3 | J | |
| G01-MW-09-0504 | FLUORENE | 3 | J | |
| G01-MW-10-0504 | FLUORENE | 0.07 | J | |
| G01-MW-11-0504 | FLUORENE | 2.8 | | |
| G01-MW-12-0504 | FLUORENE | 1.3 | | |
| G01-MW-05-0504 | NAPHTHALENE | 11 | | 20 |
| G01-MW-07-0504-AVG | NAPHTHALENE | 10[(a)] | | |
| G01-MW-08-0504 | NAPHTHALENE | 31 | | |
| G01-MW-09-0504 | NAPHTHALENE | 23 | | |
| G01-MW-10-0504 | NAPHTHALENE | 5.9 | | |
| G01-MW-11-0504 | NAPHTHALENE | 16 | | |

**TABLE 2-3**

**LABORATORY GROUNDWATER ANALYTICAL RESULTS, MAY 2004**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
**PAGE 3 OF 3**

| LOCATION | PARAMETER | RESULTS (µg/L) | QUAL[b] | GCTL[c] (µg/L) |
|---|---|---|---|---|
| G01-MW-12-0504 | NAPHTHALENE | 5 | | 20 |
| G01-MW-05-0504 | PHENANTHRENE | 2.5 | | 210 |
| G01-MW-07-0504-AVG | PHENANTHRENE | 0.57 | | |
| G01-MW-08-0504 | PHENANTHRENE | 4 | J | |
| G01-MW-09-0504 | PHENANTHRENE | 3 | J | |
| G01-MW-10-0504 | PHENANTHRENE | 0.87 | | |
| G01-MW-11-0504 | PHENANTHRENE | 3.6 | J | |
| G01-MW-12-0504 | PHENANTHRENE | 2 | | |
| G01-MW-05-0504 | PYRENE | 0.74 | | |
| **TOTAL RECOVERABLE PETROLEUM HYDROCARBONS** | | | | |
| G01-MW-02-0504 | TOTAL PETROLEUM HYDROCARBONS | 440 | J | 5,000 |
| G01-MW-04-0504 | TOTAL PETROLEUM HYDROCARBONS | 810 | | |
| G01-MW-05-0504 | TOTAL PETROLEUM HYDROCARBONS | 1,000 | | |
| G01-MW-07-0504-AVG | TOTAL PETROLEUM HYDROCARBONS | 490 | J | |
| G01-MW-08-0504 | TOTAL PETROLEUM HYDROCARBONS | 1,300 | | |
| G01-MW-09-0504 | TOTAL PETROLEUM HYDROCARBONS | 2,700 | | |
| G01-MW-10-0504 | TOTAL PETROLEUM HYDROCARBONS | 1,900 | | |
| G01-MW-11-0504 | TOTAL PETROLEUM HYDROCARBONS | 2,000 | | |
| G01-MW-12-0504 | TOTAL PETROLEUM HYDROCARBONS | 2,700 | | |

Shading indicates an exceedance of the GCTL.
The notation "AVG" indicates that duplicate samples were collected and the results were averaged.
Result:
(a) The chemical was detected in one of two duplicate samples. For averaging purposes, one-half the detection limit was averaged with the detected result.
(b) Qualifier (Qual.) Codes:
J – The reported value is an estimated quantity.
(c) Groundwater Cleanup Target Level (GCTL), as defined in Chapter 62-777, Florida Administrative Code (F.A.C.) Table I.
µg/L - microgram per liter

**TABLE 2-4**

**NATURAL ATTENUATION PARAMETERS SUMMARY**
**GEIGER KEY HAWK MISSILE SITE G-01**
**SUPPLEMENTAL SITE ASSESSMENT REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**

| Measurements | | Parameters | | | | |
|---|---|---|---|---|---|---|
| **Monitoring Well** | **Date** | **Methane (µg/L)** | **Nitrate (mg/L)** | **Sulfate (mg/L)** | **DO (mg/L)** | **$CO_2$ (mg/L)** |
| G01-MW-01 | 2/4/2004 | 200 | 0.004 J | 2,000 | NA | NA |
| | 5/26/2004 | 400 | ND | 1,500 | 0.1 | 900 |
| G01-MW-01A | 2/4/2004 | 160 | ND | 2,300 | NA | NA |
| | 5/25/2004 | 190 | 0.011 J | 1,900 | 0.3 | 45 |
| G01-MW-02 | 2/4/2004 | 57 | ND | 2,200 | NA | NA |
| | 5/24/2004 | 380 | 0.034 J | 1,200 | 1.0 | 115 |
| G01-MW-03 | 2/4/2004 | 1,100 | ND | 1,200 | NA | NA |
| | 5/20/2004 | 690 | 0.22 | 3.4 | 0.5 | 140 |
| G01-MW-04 | 2/4/2004 | 500 | 0.044 J | 1,400 | NA | NA |
| | 5/24/2004 | 870 | ND | 1,300 | 0.6 | 90 |
| G01-MW-05 | 2/5/2004 | 4,400 | ND | 460 | NA | NA |
| | 5/24/2004 | 3,700 | 0.019 J | 460 | 0.25 | 180 |
| G01-MW-06 | 2/5/2004 | 9,100 | ND | 130 | NA | NA |
| | 5/25/2004 | NA | NA | NA | NA | NA |
| G01-MW-07 | 2/6/2004 | 940 | ND | 2,000 | 0.7 | 19 |
| | 5/25/2004 | 920* | 0.0275 J* | 1,750* | 0.8 | 850 |
| G01-MW-08 | 2/6/2004 | 2,600 | 0.0082 J | ND | 0.8 | 110 |
| | 5/25/2004 | 6,100 | 0.25 | 170 | 0.1 | 160 |
| G01-MW-09 | 2/6/2004 | 3,800 | 0.011 J | 1,300 | 0.4 | 150 |
| | 5/25/2004 | 2,600 | 0.0079 J | 540 | 0.15 | 225 |
| G01-MW-10 | 2/6/2004 | 2,500 | ND | 500 | 0.3 | 130 |
| | 5/20/2004 | 2,600 | 0.005 J | 24 | 0.2 | 160 |
| G01-MW-11 | 2/6/2004 | 5,150* | ND | 150* | 0.6 | 155 |
| | 5/24/2004 | 7,800 | ND | 140 | 0.3 | 200 |
| G01-MW-12 | 2/6/2004 | 4,700 | 0.015 J | 150 | 0.8 | 122 |
| | 5/20/2004 | 5,600 | 0.0094 J | 460 | 0.5 | 105 |

Notes:
The qualifier 'J' indicates that the result is estimated.
DO Dissolved oxygen
$CO_2$ Carbon dioxide
mg/L milligram per liter
µg/L microgram per liter
ND Not detected
NA Not analyzed
*Duplicates were collected and the results were averaged for the reported result.

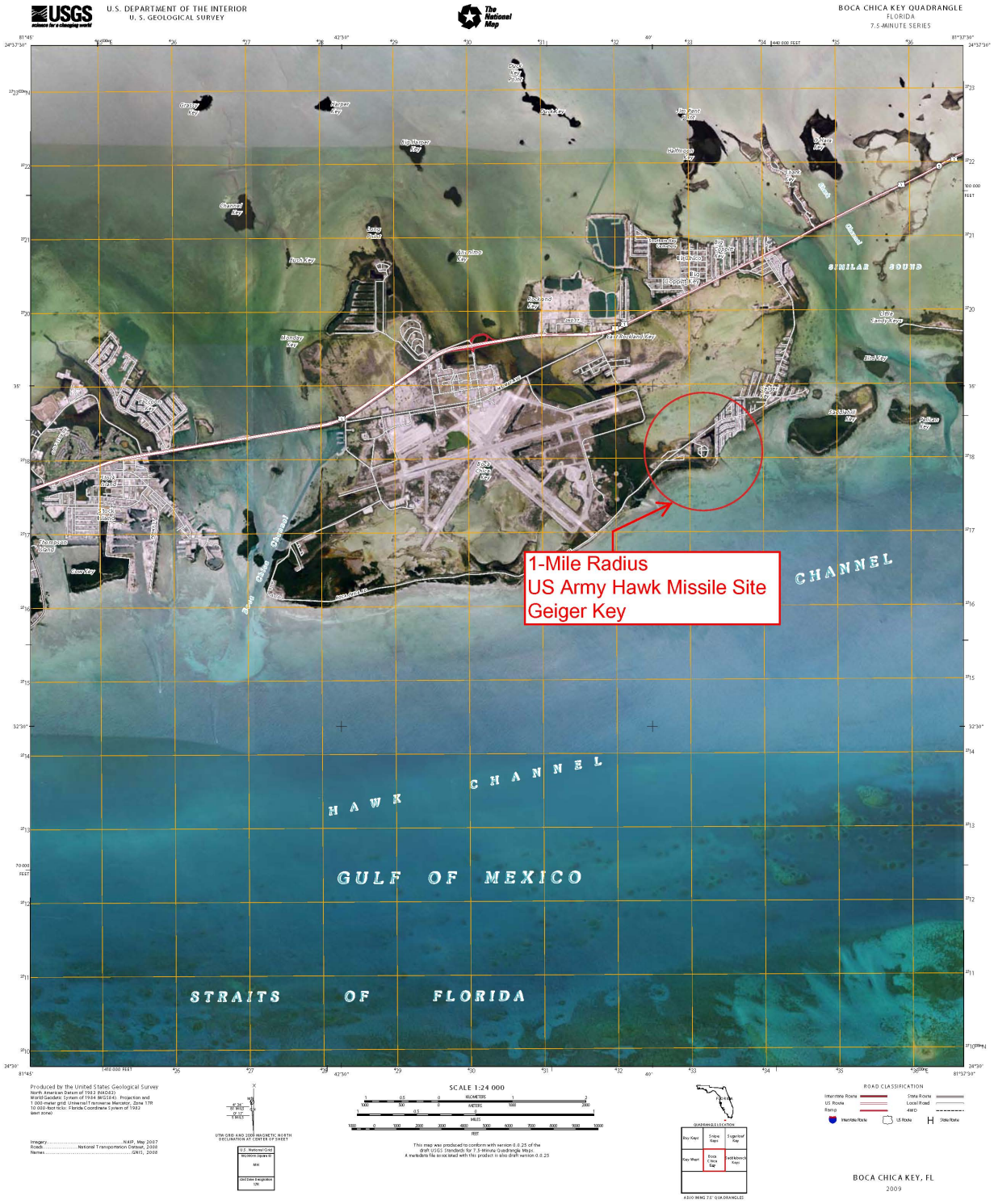
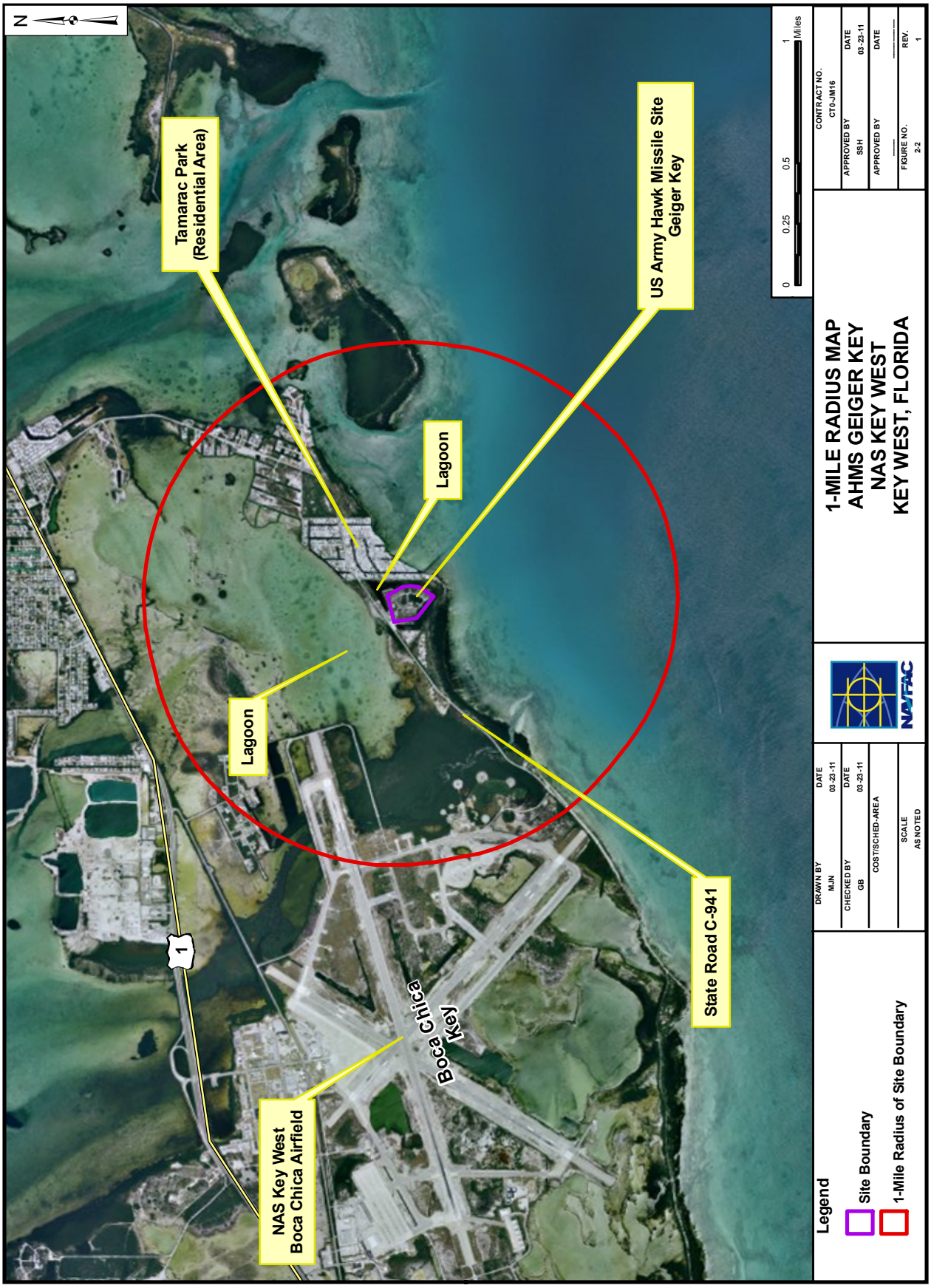
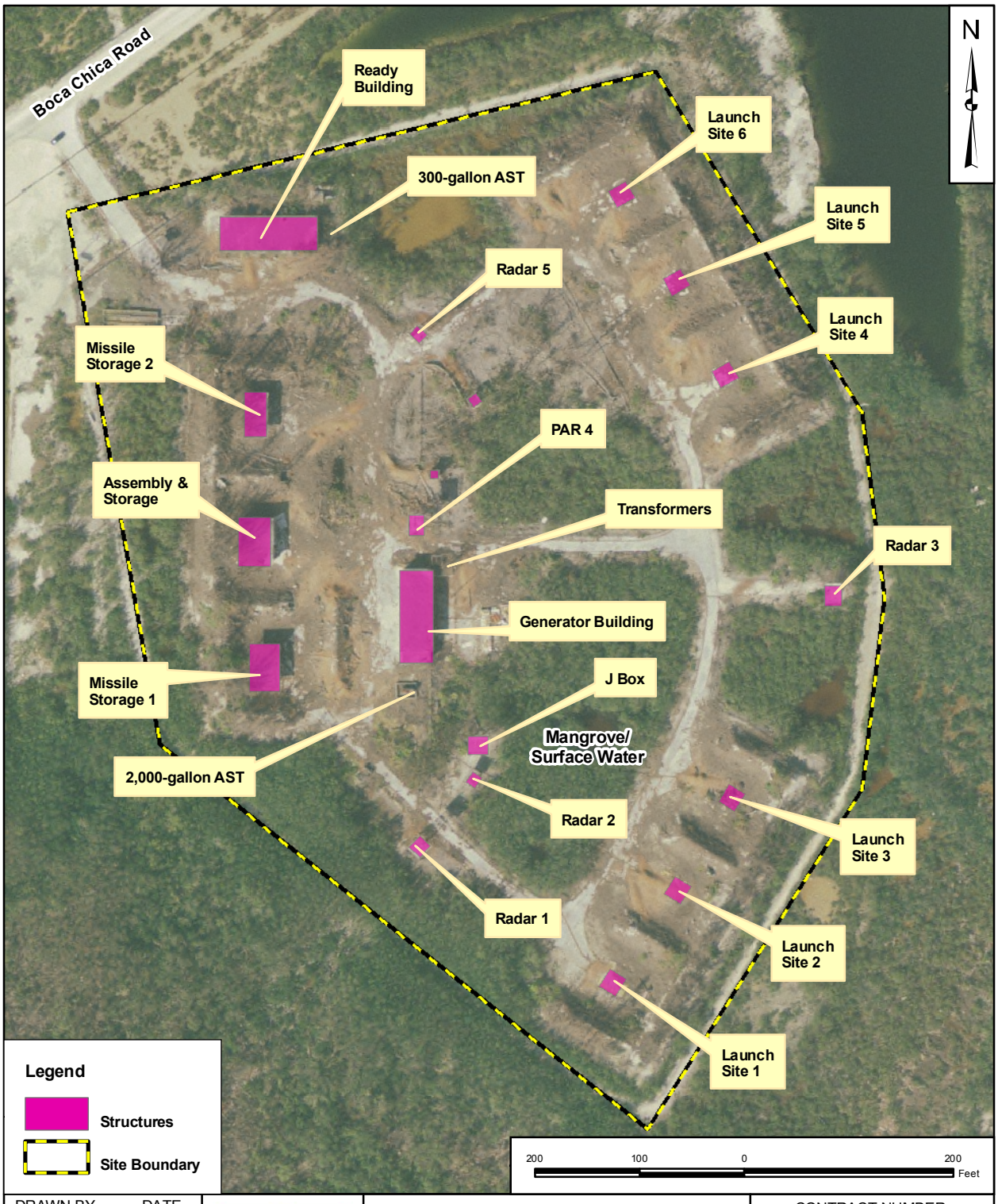



Figure 2-1: USGS Quad Map


N
Tamarac Park
(Residential Area)
US Army Hawk Missile Site
Geiger Key
Lagoon
Lagoon
State Road C-941
Boca Chica
Key
NAS Key West
Boca Chica Airfield
1
0
0.25
0.5
1
Miles
Legend
Site Boundary
1-Mile Radius of Site Boundary
DRAWN BY
MJN
DATE
03-23-11
CHECKED BY
GB
DATE
03-23-11
COST/SCHED-AREA
SCALE
AS NOTED
NAVFAC
1-MILE RADIUS MAP
AHMS GEIGER KEY
NAS KEY WEST
KEY WEST, FLORIDA
CONTRACT NO.
CTO-JM16
APPROVED BY
SSH
DATE
03-23-11
APPROVED BY
DATE
FIGURE NO.
2-2
REV.
1




| | | | |
|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | **SITE LAYOUT AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY SSH | DATE 03-24-11 | | OWNER NUMBER — |
| REVISED BY — | DATE — | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | FIGURE NO. 2-3 / REV 0 |

# 3.0 PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

The following sections provide general information for NAS Key West, including climate, topography, geology, hydrogeology, hydrology, soil and vegetation types, water resources, and endangered species.

## 3.1 CLIMATE

The Florida Keys, where Geiger Key is located, has a subtropical, marine climate and are susceptible to occasional tropical storms and hurricanes. The Florida Keys have their lowest average temperature of 64.4 degrees Fahrenheit (°F) in January and the highest average temperature of 88.7 °F in August. The average annual temperature is 77 °F. The combined effect of the proximity of the Gulf Stream and the Gulf of Mexico mitigate the effects of cold fronts, resulting in a temperature difference between summer and winter of about 14 °F. The lowest average rainfall is 1.6 inches in February and the highest average rainfall is 6.4 inches in September. Annually, the Florida Keys receive an average of approximately 40 inches of rainfall (Integrated Natural Resources Management Plan [NAVFAC], 2008).

The location of the Florida Keys results in tropical storms and hurricanes being a large threat. The hurricane season lasts from June through November each year. While hurricanes can occur throughout that period, hurricane frequency is greatest in the period from August through October. Hurricanes typically approach Key West from the south and east and effect the south, east, and west sides of the islands; however, hurricanes have struck Key West from every side. The probability of a hurricane with winds greater than 73 miles per hour occurring in the 50 mile segment of the coast near Key West is 13 percent annually. For a hurricane with winds greater than 125 miles per hour in the same area, the probability is 4 percent annually (NAVFAC, 2008).

## 3.2 TOPOGRAPHY

The Florida Keys, including NAS Key West, consist of a series of low islands extending southwest of the Florida mainland. Naturally occurring elevations of the islands rarely exceed 5 feet above sea level. Most of the NAS Key West complex has elevations averaging 4 to 5 feet above mean sea level (msl), as is the case for developed areas of the installation including Trumbo Point Annex and parts of Fleming Key. The Dredge Spoil Area on Fleming Key is approximately 10 feet above msl. The Boca Chica airfield is 6 feet above msl. The other interior areas of Boca Chica and other parts of the NAS Key West complex adjacent to water bodies have elevations ranging from 0 to 2 feet above msl (NAVFAC, 2008).

The Atlantic Ocean is located along the eastern side of the Florida Keys, and the Gulf of Mexico is located along the western side. Along the Atlantic Coast, a narrow shelf is present, then the seafloor drops into the Straits of Florida. The tropical waters of Florida along the Atlantic Coast make the area favorable for the development of coral reefs several miles offshore (NAVFAC, 2008).

The topography of the Geiger Key Site is relatively flat with a naturally occurring elevation of five feet above sea level.

## 3.3 GEOLOGY

The Florida Keys are low-lying islands that comprise overlying Pleistocene limestone included in the southern zone of the coastal lowlands. This area is part of the Florida Plateau and is assigned to the Gold Coast-Florida Bay District. In this area, Pleistocene limestone and limestone cap rocks are prevalent. The Florida Keys are divided into the Upper Keys, from Bahia Honda northward, the Lower Keys, from Big Pine Key to Key West, and the Holocene mud islands of Florida Bay. The Florida Keys are further subdivided into three island groups: 1) the Oolitic Keys, which include the Key West area; 2) the Coral Reef Keys; and 3) the Dry Tortugas, shoals, and islands composed of bioclastic carbonate sand and mud (NAVFAC, 2008).

The Geiger Key Site is located in the lower Keys, which are underlain by the oolitic facies of the Miami Limestone. The oolitic facies consists of well-sorted ooids with varying amounts of skeletal material (corals, echinoids, mollusks, algae) and some quartz sand, and is a soft, white to yellow, stratified to massive, cross-bedded and are constituted of pure calcium carbonate, which may contain shell fragments and minor quartz sand. Key Largo Limestone underlies the Miami oolite; major constituents are cemented remains of ancient coral reefs and a subsidiary amount of fossils or coral, shell algae, and echinids. The oolite facies of the Miami Limestone passes laterally into the Key Largo Limestone at the southeastern point of Big Pine Key. The oolite in the rest of the island is underlain by the Key Largo Formation. The facies intergradation and superposition of the two units were mapped in detail by using cores from nine shallow wells drilled by the US Geological Survey (USGS). Unconsolidated to consolidated Miocene sediments of the Tamiami, Hawthorn, and Tampa formations, Oligocene Suwannee Limestone, and Eocene Avon Park Formation underlie recent and Pleistocene deposits (NAVFAC, 2008).

## 3.4 HYDROGEOLOGY

The Biscayne Aquifer (i.e., the Surficial Aquifer) and the Floridian Aquifer are the two main aquifers beneath the Florida Keys. The Biscayne Aquifer is considered one of the most productive and permeable aquifers in the world. Hydrogeologically, the Florida Keys fall into two natural groups defined by the distribution of their principal geologic units. The first group consists of the narrow and

elongate Upper Keys that comprise the Key Largo Limestone. Groundwater is at best brackish in these islands and has not been studied. The second group consists of the Lower Keys, which are relatively large and comprise the Miami Limestone. Small freshwater to slightly brackish lenses occur on the largest of these islands. Lenses on Key West and Big Pine Key have been the subject of published water-resources studies by the USGS. However, the freshwater below the lower Florida Keys is subject to salt water intrusion due to the permeability of the Key Largo limestone formation, which underlies the less porous Miami oolite formation that forms the base layer of the islands. Due to the salt water intrusion, the Biscayne Aquifer at NAS Key West is only available for non-potable use. The aquifer averages 5 feet below ground surface (bgs) and is generally centered to the western half of the island of Key West (NAVFAC, 2008).

## 3.5 HYDROLOGY

NAS Key West is within the Florida Bay-Florida Keys Watershed. Approximately 53 percent of the annual rainfall total occurs from June to October during hurricane season. Due to the porosity of the limestone substrate, most rainfall on the Florida Keys percolates into the limestone rather than running off the ground surface. The amount of rain that does become overland runoff is carried to tidal waters via overland flow or storm drains (NAVFAC, 2008).

The Florida Keys are bordered by the Atlantic Ocean to the east and the Gulf of Mexico to the west.

The Lower Florida Keys are consequently subjected to mixed semidiurnal tides (usually two high and two low tides per day). The mean tidal range is approximately 1.3 feet and the spring tidal range is approximately 1.8 feet. Flood tides flow toward the Gulf of Mexico, while ebb tides flow toward the Atlantic Ocean (NAVFAC, 2008).

The waters around the Florida Keys are designated as Outstanding Florida Waters. The classification essentially prohibits a significant decrease in ambient water quality. Long standing issues with decreasing water quality in the area have led Congress to direct the USEPA, in conjunction with the Department of Commerce, to develop a Water Quality Protection Program for the area (NAVFAC, 2008).

## 3.6 GROUNDWATER RESOURCES

In general, water resources in the Florida Keys are insufficient for the human population of the area. Most Keys have only ephemeral freshwater lenses and cannot be relied on for perennial supplies of potable water (Klein 1970). Only the largest of the Lower Keys, Big Pine and Key West for example, have permanent freshwater lenses. Even the large Upper Keys, such as Elliott Key, do not have permanent lenses, even though rainfall increases northward. The Lower Keys are more likely to have lenses because of their geometry and geology. These Keys retain the broad flat of an ooid

shoal in contrast to the Upper Keys, which are narrow and elongate parallel to the shelf. In addition, the surficial lithologic unit of the Lower Keys (oolite) is less transmissive than that of the Upper Keys (reef).

Although some groundwater is used for irrigation (on Big Pine Key), and some potable water is provided by cisterns and reverse-osmosis facilities, more than 95 percent of water for domestic use is now provided by the Florida Keys Aqueduct Authority via pipeline from a wellfield on the mainland. Currently about 57,000 cubic meters per day (15 million gallons per day) are pumped to the Florida Keys (NOAA, 1995). The volume of this flow for two days is comparable to the volume of the freshwater lens beneath Key West during the wet season, (Mackenzie 1990).

The majority of water pumped to the Keys is for domestic use. Key West and Key Colony Beach (Marathon) have sewage-treatment facilities and ocean outfalls. Much of the remaining freshwater is disposed of as sewage through septic tanks and shallow wells (10-30 m) beneath the islands. The sewage is rich in nutrients, providing a potential environmental problem in this region of oligotropic waters. The ultimate fate of the sewage beneath the islands is a topic of continuing study (Shinn et al., 1994). Based on water usage and disposal methods, it is clear that freshwater piped to the Florida Keys can be a significant contribution to small and short duration lenses of these islands.

## 3.7 SOIL AND VEGETATION TYPES

NAS Key West is composed of a variety of soil types, but is dominated by the Urban Land Complex. The Urban Land Complex is a soil series designation used by the US Department of Agriculture (USDA) to denote areas of heavily modified or developed land that no longer have the attributes that would enable them to be designated by a soil series found in an undisturbed area. Based on a survey conducted at NAS Key West using the Florida Natural Areas Inventory, there are five natural communities present, in addition to landscaped areas around buildings. Mangroves represent a coastal wetland habitat in the Florida Keys. The five communities present include (NAVFAC, 2008):

- Tidal swamp. The largest natural community present; dominated by three mangrove species including red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), and white mangrove (*Laguncularia racemosa*). Wetland communities have a variable group of plants depending on the specific salinity, substrate, and tidal influence.

- Coastal Rock Barren. Located between the tidal swamp and inland communities; includes flat rocklands with plentiful, exposed and eroded limestone with sparse vegetation including stunted, xeric and halophytic shrubs, cacti, algae, and herbs. Vegetation is typically dominated by buttonwood (*Conocarpus erectus*) varying from stunted shrubs to small trees.

- Beach Dune. Includes wind-deposited foredune and wave-deposited upper beach areas that have sparse vegetation. Vegetation typically includes pioneer species, such as sea oats (*Uniola paniculata*).

- Coastal Berm. Includes a variety of plant associations that develop on storm deposited ridges of sand, shell, and debris. May be vegetated with thick stands of shrubs and small trees or sparsely vegetated with spiny xerophytic plants. Typical species may include scrub buttonwood (*Conocarpus erectus*), black (*Avicennia germinans*) or white (*Laguncularia racemosa*) mangroves, Christmas berry (*Lycium carolinianum*), and sea purslane (*Sesuvium sp*.).

- Rockland Hammock. Hardwood forest present on an upland site with limestone near or at the surface and frequently exposed. Vegetation may be similar to a coastal berm, but is usually more diverse and mature with a canopy. Species may include Jamaican dogwood (*Piscidia piscipula*), gumbo limbo (*Bursera simaruba*), poisonwood (*Metopium toxiferum*), and sea grape (*Coccoloba uvifera*). Understory and groundcover usually comprise the same species.

Geiger Key is bordered to the south by the Atlantic Ocean and to the north by State Road S-941. The eastern border is provided by Boundary Lane, which is located within a residential area that consists of several man-made canals connected to the Atlantic Ocean. The native vegetation is a mangrove fringe and Brazilian pepper trees, used to buffer the site from the residential areas. Wetlands, mangrove swamp border the property to the west. The mangrove swamp is either flooded with each tide, or if cut off from tidal action, remain permanently wet. The land on which AHMS Geiger Key was built was previously salt ponds filled by the U.S. Army in order to adapt the area for use as a missile site.

## 3.8 ENDANGERED AND SPECIAL STATUS SPECIES

A large number of protected species are known to, or have the potential to, occur on NAS Key West (NAVFAC, 2008). Some of the threatened or endangered species that have the potential to be present at the Site include the Key Largo woodrat, silver rice rat, Key Largo cotton mouse, Lower Keys marsh rabbit, bald eagle, roseate tern, eastern indigo snake, and Schaus swallowtail butterfly (NAVFAC, 2008). These species are listed on Table 3-1.

## 3.9 CULTURAL RESOURCES

Due to the long history and location of NAS Key West, many cultural resources exist within the installation. The National Register of Historic Places (NRHP) includes the following sites/structures associated with NAS Key West: Fort Zachary Taylor, HA. 19 (Japanese Midget Submarine), Little White House (also known as Quarters “A”), and the US Naval Station District (roughly bounded by

Whitehead Street, Eaton Street, and Caroline Street). Seventeen other architectural resources are considered eligible for the NRHP and include buildings, structures, or objects at Fleming Key, Geiger Key, Trumbo Point Annex, Truman Annex, and the Naval Medical Center (USACE, 2003).

**TABLE 3-1**

**SUMMARY OF PROTECTED SPECIES KNOWN OR POTENTIALLY FOUND ON NAS KEY WEST PROPERTY
NAVAL AIR STATION
KEY WEST, FLORIDA
PAGE 1 OF 2**

| Common Name | Scientific Name | Federal Status | State Status | Occurrence |
|---|---|---|---|---|
| **Mammals** | | | | |
| Key Largo Woodrat | *Neotoma floridana smalli* | E | E | |
| Silver Rice Rat | *Oryzomys palustris natator* | E | E | Y |
| Key Largo Cotton Mouse | *Peromyscus gossypinus allapaticola* | E | E | |
| Lower Keys Marsh Rabbit | *Sylvilagus palustris hefneri* | E | E | Y |
| West Indian Manatee | *Trichechus manatus* | E | E | |
| **Birds** | | | | |
| White-crowned Pigeon | *Columba leucocephalus* | | T | Y |
| Peregrine Falcon | *Falco peregrinus* | | E | Y |
| Bald Eagle | *Haliaeetus eucocephalus* | T | T | Y |
| Least Tern | *Sterna Antillarum* | | T | Y |
| Roseate Tern | *Sterna dougallii dougallii* | T | T | Y |
| **Reptiles and Amphibians** | | | | |
| American Crocodile | *Crocodylus Acutus* | E | E | Y |
| Eastern Indigo Snake | *Drymarchon Corais Couperi* | T | T | |
| Green Sea Turtle | *Chelonia mydas* | E | E | |
| Hawksbill Sea Turtle | *Eretmochelys imbricata* | E | E | |
| Leatherback Sea Turtle | *Dermochelys coriacea* | E | E | |
| Loggerhead Sea Turtle | *Caretta caretta* | T | T | Y |
| Key Ringneck Snake | *Diadophis puctatus acricus* | | T | |
| Lower Keys Brown Snake | *Storeria dekayi victa* | | T | |
| Rim Rock Crowned Snake | *Tantilla oolitica* | | T | |
| Lower Keys Ribbon Snake | *Thamnophis sauritus sackenii* | | T | |
| **Fish** | | | | |
| Smalltooth Sawfish | *Pristis pectinata* | E | | |
| **Invertebrates** | | | | |
| Elkhorn Coral | *Acropora palmata* | T | | |
| Miami Blue Butterfly | *Cyclargus thomasi bethunebakeri* | C | E | |
| Schaus Swallowtail Butterfly | *Heraclides aristodemus ponceanus* | E | E | |
| Staghorn Coral | *Acropora cervicornis* | T | | |
| Stock Island Tree Snail | *Orthalicus reses (not incl. nesodryas* | T | E | |
| **Plants** | | | | |
| Cinnecord,Tamarindillo | *Acacia choriophylla* | | E | Y |
| Barbed-Wire Cactus | *Acanthocereus tetragonus* | | T | Y |

**TABLE 3-1**

**SUMMARY OF PROTECTED SPECIES KNOWN OR POTENTIALLY FOUND ON NAS KEY WEST PROPERTY
NAVAL AIR STATION
KEY WEST, FLORIDA
PAGE 2 OF 2**

| Common Name | Scientific Name | Federal Status | State Status | Occurrence |
|---|---|---|---|---|
| Seaside Ageratum | *Ageratum littorale* | | E | Y |
| Sea Lavender | *Argusia gnaphalodes* | | E | Y |
| Blodgett's Wild Mercury | *Argythamnia blodgettii* | C | E | Y |
| Pine Pink Orchid | *Bletia purpurea* | | T | Y |
| Locustberry | *Byrsonima lucida* | | T | Y |
| Wild Cinnamon | *Canella winterana* | | E | Y |
| Garber's Spurge | *Chamaesyce garberi* | E | E | Y |
| Porter's Sandmat | *Chamaesyce porteriana* | | E | Y |
| Silver Palm | *Coccothrinax argentata* | | T | Y |
| Curacao Bush | *Cordia globosa* | | E | Y |
| Rhacoma, Maidenberry | *Crossopetalum rhacoma* | | T | Y |
| Milkbark | *Drypetes diversifolia* | | E | Y |
| Red Stopper | *Eugenia rhombea* | | E | Y |
| Caribbean Princewood | *Exostema caribaeum* | | E | Y |
| Wild Cotton | *Gossypium hirsutum* | | E | Y |
| Lignum-Vitae | *Guaiacum sanctum* | | E | Y |
| Manchineel | *Hippomane mancinella* | | E | Y |
| Joewood | *Jacquinia keyensis* | | T | Y |
| Wild Dilly | *Manilkara jaimiqui* | | T | Y |
| Prickly Pear Cactus | *Opuntia stricta* | | T | Y |
| Smooth Devil's Claw | *Pisonia rotundata* | | E | Y |
| Long-Stalked Stopper | *Psidium longipes* | | T | Y |
| Bahama Wild Coffee | *Psychotria ligustrifolia* | | E | Y |
| Bahama Brake Fern | *Pteris bahamensis* | | T | Y |
| Inkberry, Half-Flower | *Scaevola plumieri* | | T | Y |
| Florida Boxwood | *Schaefferia frutescens* | | E | Y |
| Mahogany | *Swietenia mahagoni* | | T | Y |
| Silver Thatch Palm | *Thrinax morissii* | | E | Y |
| Green Thatch Palm | *Thrinax radiata* | | E | Y |
| Twisted Airplant | *Tillandsia flexuosa* | | T | Y |
| Giant Airplant | *Tillandsia utriculata* | | E | Y |
| West Indian Trema | *Trema lamarckianum* | | E | Y |

C = Candidate Species, E = Endangered Species, T = Threatened Species, PT = Proposed Threatened Species, Y = Indicated a species known to occur on NAS Key West property (NAVFAC, 2008)

# 4.0 POTENTIAL CONTAMINATION MIGRATION PATHWAYS

## 4.1 GROUNDWATER

The source of groundwater contamination is most likely former operational areas, including the former AST area, the Generator Building, the Missile Assembly and Storage Buildings, the radar towers, and the missile launch sites. These potential sources will be taken into consideration during future remedial investigations at this site. The groundwater in the area associated with the 2,000-gallon AST is known to be contaminated with petroleum hydrocarbon constituents associated with diesel fuel. Solvents were likely released from the Generator Building and the Assembly and Storage Building. Solvents and coolant were released from the radar towers. Coolant may have been released from the transformers located on the northeast side of the Generator Building. However, these potential releases have yet to be investigated. This PA addresses the need to determine if additional contaminants (those not investigated previously) are present in the former operational areas of the site.

Groundwater flow direction is inconsistent. During the February 2004 gauging event, the groundwater flow direction was to the east, while the May 2004 gauging event indicated radial flow with a primarily southerly component (Tetra Tech, 2004). This inconsistent pattern of groundwater flow is indicative of tidal influence on the surficial aquifer. At this time, it is not known if contaminated groundwater is discharging to any of the surface water features surrounding the Site.

In general, groundwater in the Florida Keys is unfit for domestic use (e.g., drinking, showering, or cooking). Therefore, there is no consumption of groundwater by human receptors.

## 4.2 SURFACE WATER

Recharge of groundwater at the Site occurs through infiltration of rainwater in areas not covered by asphalt and/or concrete. Surface water flow is influenced by minor variations in topography, as the Site is relatively flat. During heavy rainstorms, surface water likely flows toward the northern portion of the Site toward the two lagoons adjacent to the Site (Figure 2-2). During these events, surface soil may also be transported into the two lagoons.

## 4.3 SOIL

Contaminants in surface soil can leach to the subsurface and easily reach the shallow water table, which is approximately 2 to 4 feet below ground surface (bgs). Groundwater flow in the area is affected by several factors, including tidal fluctuation, hurricane events, and the nature of the oolitic limestone caprock. The surface soil consists mainly of unsorted fill material consisting of crushed

oolitic limestone, caprock and shell fragments and extends from 0-2 in places. Oolitic limestone extends from approximately 2-25 feet bgs. This is a unique geological feature found throughout NAS Key West. It is likely that these factors can either minimize or enhance groundwater and plume migration over time.

## 4.4 LAND USES

Access to the Site was originally restricted to military personnel and contractors. Currently, the security conditions at the Site are relaxed. The fence is in disrepair and there is evidence that trespassers are using the Site for recreational purposes. The full extent of these recreational activities is not known, but may include sunbathing and fishing in the lagoons. The only other potential receptors that may access the Site include personnel potentially engaged in Site cleanup and/or redevelopment activities. These individuals may have direct contact with the contaminated groundwater in the future.

## 4.5 NEARBY POPULATION

Geiger Key is included in the census-designated place (CDP) of Big Coppitt Key, which also includes Shark Key. Tamarac Park, a small residential community consisting of houses and trailers, is located along the North Boundary of the Site at Boundary Lane. Other trailer park communities are Geiger Key Pub & Grill and Geiger Key Marina. As of the 2000 census, the CDP had a total population of 2,595. The Site is secured along CR 941 with a fence and locked gates; however, there is access from the northern boundary.

# 5.0 SUMMARY AND CONCLUSIONS

The former AHMS Geiger Key Site is an approximately 12-acre site located on Geiger Key along State Road S-941 (Old Boca Chica Road), on the southwest end of Geiger Key. The AHMS Geiger Key site is bordered to the south by the Atlantic Ocean and to the north by State Road S-941. The eastern border is provided by Boundary Lane, which is located within a residential area that consists of several man-made canals connected to the Atlantic Ocean. Wetlands border the property to the west. The site is currently abandoned and the vegetation is very overgrown. Due to the overgrowth of vegetation, certain portions of the site are inaccessible unless vegetation is disturbed.

Based on historical maps and aerial photographs, the land on which AHMS Geiger Key was built was previously salt ponds filled by the US Army in order to adapt the area for use as a missile site. Work on the facility began shortly after the time of the Cuban Missile Crisis in 1965, but continued for several years thereafter. The site contains most of the original buildings used for storage, maintenance and repairs on the Hawk missiles. It also contains the original radar and illuminator towers, missile launch pads, and generator building. It was used for coastal defense until 1979, at which time the Army units demobilized from all of the Hawk Missile batteries in the Florida Keys.

Information obtained during both the initial and sequential site visits indicates that the operational history of site supports the use of chlorinated solvents, petroleum products, PCBs, pesticides and metals. The remaining structures onsite have signs of degradation and the site has signs of trespassing (App. A). Research on the previous investigations on site supports that these studies were isolated and focused on petroleum contamination around AST and generator building. Previous data collected through these investigations included detections of benzene, 1-methylnaphthalene, 2-methylnapthlane, naphthalene, acenaphthene, benzo(b)fluoranthene and TRPH detected at concentrations exceeding the GCTLs. Also, free product was measured in monitoring well G01-MW-06 during both the February and May 2004 sampling events. In October 2001, TRPH concentration was detected greater than the SCTL at a soil sample location; no further detections above SCTL have been recorded since for any compound. No investigations regarding surface water have been conducted on site.

# 6.0 SITE INSPECTION INTRODUCTION

## 6.1 PURPOSE OF REPORT

This report describes the results of the Geiger Key Hawk Missile Site (AHMS Geiger Key) Site Inspection (SI) located at Naval Air Station (NAS) Key West, located in Monroe County, Florida (Figure 6-1). Field activities were performed and included the collection of groundwater samples from existing monitoring wells and the groundwater and soil samples collected using direct push technology (DPT). This work was performed under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62470-08-D-1001, Contract Task Order (CTO) JM16.

## 6.2 SCOPE OF WORK

This document addresses operational areas of AHMS Geiger Key that have not been investigated to determine if contaminants are in soil and/or groundwater. The document will present the data from this SI to make a decision regarding the next steps, if any, in the remedial process.

The field investigations were based on the contents of the Uniform Federal Policy Sampling and Analysis Plan (UFP-SAP) (Tetra Tech NUS, Inc. [Tetra Tech], 2010). The UFP-SAP was prepared in accordance with the requirements of the *Uniform Federal Policy for Quality Assurance Project Plans* (UFP-QAPP) (USEPA, 2005) and the United States Environmental Protection Agency (USEPA) *Guidance for Quality Assurance Project Plans, EPA QA/G-5, QAMS* (USEPA, 2002b). The contents of the UFP-SAP were based on USEPA Guidance for Performing Site Inspections under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (1992).

## 6.3 OBJECTIVES

The primary objective of the SI was to determine the presence or absence of soil and/or groundwater contamination at the AHMS Geiger Key. In so doing, recommendations establishing the path forward were developed, as applicable. Other objectives were to build on information contained in the Preliminary Assessment (PA) and previous investigations by gathering additional site-specific information and initial field data to perform field reconnaissance and surveys, to gather analytical data and to outline potential sources of soil and/or groundwater contamination, if present.

## 6.4 REPORT ORGANIZATION

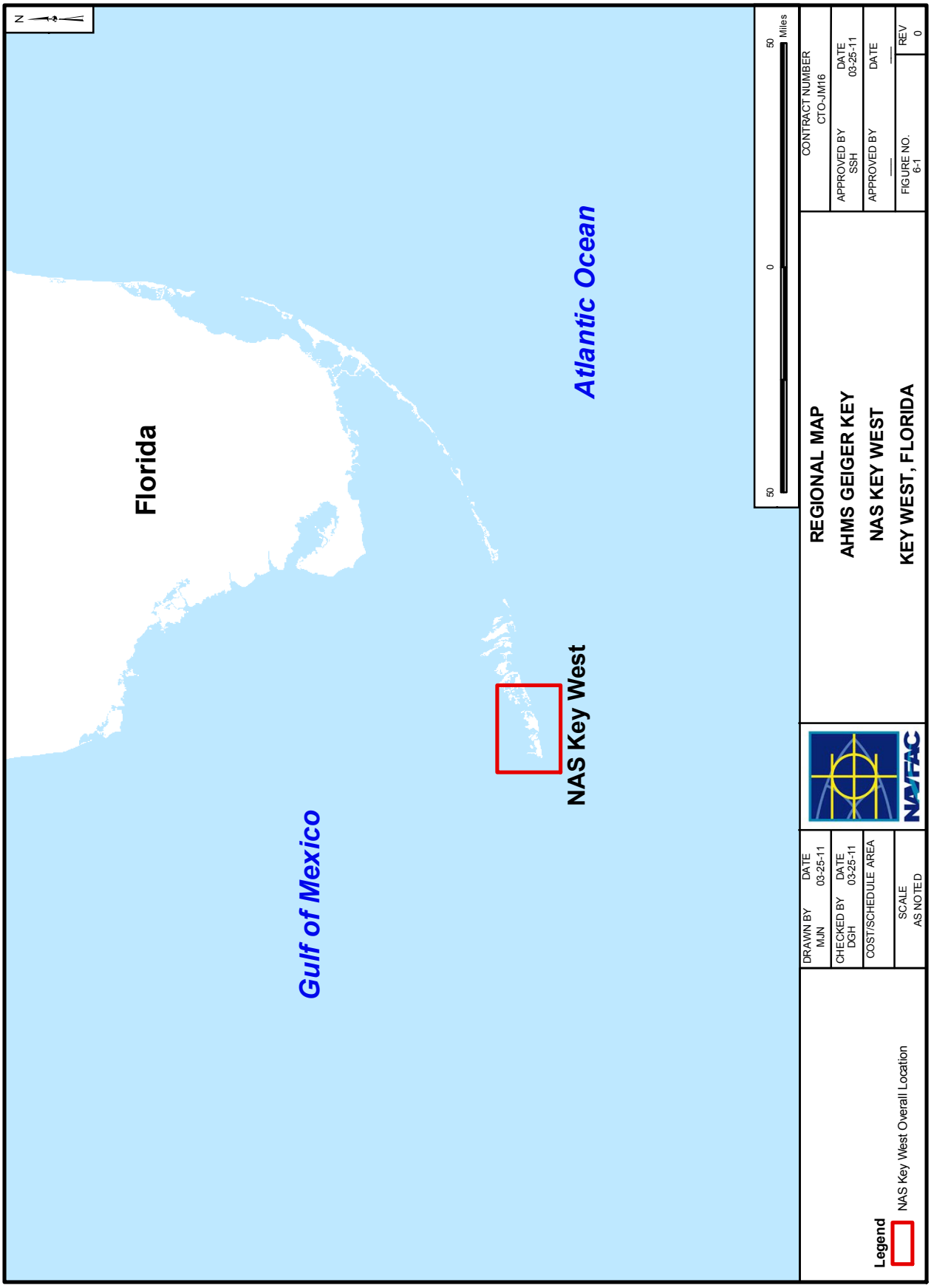
The following information is contained in this document:

- Section 6.0 discusses the purpose of the report and the objectives of the SI.

- Section 7.0 discusses general methodology including the site inspection approach, SI methods, and analytical methodology.
- Section 8.0 discusses the AHMS Geiger Key.

The following appendices are included in this report and provide technical information compiled during the SI:

Appendix C: Groundwater Log Sheets
Appendix D: Soil Log Sheets
Appendix E: Chain of custodies
Appendix F: Boring Logs
Appendix G; Field Screening Results
Appendix H: Validation Reports


N
Florida
Atlantic Ocean
Gulf of Mexico
NAS Key West
50
0
50
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COST/SCHEDULE AREA
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NAVFAC
REGIONAL MAP
AHMS GEIGER KEY
NAS KEY WEST
KEY WEST, FLORIDA
CONTRACT NUMBER CTO-JM16
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FIGURE NO. 6-1
REV 0

# 7.0 GENERAL METHODOLOGY

## 7.1 SITE INSPECTION APPROACH

### 7.1.1 Site Preparation and Mobilization Activities

All preliminary activities such as subcontractor procurement and coordination, clearance of utilities, obtaining authorizations and site access were completed in accordance with the UFP-SAP (Tetra Tech, 2010). Tetra Tech field personnel mobilized to NAS Key West on October 24, 2010. All field team members reviewed the approved UFP-SAP, associated appendices, and Health and Safety Plan (HASP) prior to the start of project activities.

#### 7.1.1.1 Site Accessibility

NAS Key West is a controlled area accessible only through guarded access gates. To gain access to NAS Key West, all Tetra Tech personnel and subcontractors were required to provide copies of valid NAS Key West access badges, common access cards (CACs), or current military identification to complete the field work.

Access to the AHMS GEIGER KEY required daily coordination with NAS Key West environmental staff. The entry point located on Boca Chica Road was secured with a combination lock. During working hours the gate was left un-locked. After each work day was complete, field staff would lock the gate.

#### 7.1.1.2 Subcontracting

The project necessitated the use of four subcontractors to provide drilling and analytical laboratory services. Tetra Tech staff performed utility clearance at all sites where drilling activities took place. A Florida-licensed driller employed by Wombat Environmental LLC of Stuart, Florida, supervised and performed the drilling. Accutest Laboratories SE (Orlando, FL), Empirical Laboratories, LLC (Nashville, TN) and Centauri Labs (Frederick, MD), all Navy and Florida certified laboratories, performed analytical services.

## 7.2 SITE INSPECTION METHODS

### 7.2.1 Field Investigation Methods

Groundwater and subsurface soil samples were collected during the field investigation. Groundwater samples were collected from existing monitoring wells using low-flow methods via

peristaltic pump. Groundwater samples and sub-surface soil samples collected from the boring locations were collected via DPT.

Field forms presented in Appendices C and D include the Groundwater and Soil Sample Log Sheets.

#### 7.2.1.1 Direct Push Technology

DPT methods were used to collect in situ groundwater and sub-surface soil samples at select locations within AHMS Geiger Key (Figure 7-1). DPT methods involve the advancement of a DPT sampling screen to a target depth. The screen is then revealed to the formation and groundwater is withdrawn via Teflon™ tubing to the surface via a peristaltic pump.

Groundwater samples from the DPT borings were collected using low-flow purging techniques (discharge rate of less than 1 liter per minute) with a peristaltic pump using Teflon™ tubing dedicated to each well. All groundwater samples were collected using the procedures specified in FS 2200, Groundwater Sampling (FDEP, 2008).

#### 7.2.1.2 Monitoring Well Sampling Techniques

Groundwater samples from the monitoring wells were collected using low-flow purging techniques (discharge rate of less than 1 liter per minute) with a peristaltic pump using Teflon™ tubing dedicated to each well. All groundwater samples were collected using the procedures specified in FS 2200, Groundwater Sampling (FDEP, 2008). Figure 7-2 shows the monitoring well locations.

Prior to groundwater sample collection from existing monitoring wells, water level and free product measurements were taken at each monitoring well (as described in the next section) and the wells were purged. Both purging and sampling operations were conducted at a flow rate that results in a groundwater turbidity measurement of 20 nephelometric turbidity units (NTUs) or less. Inherent turbidity was minimized to the greatest extent possible using low flow techniques; individual well conditions and local geology may prevent meeting the 20 NTU criteria.

### 7.2.2 Water Level Measurements

Prior to groundwater sample collection from existing monitoring wells, water level and free product measurements were taken at each monitoring well. One synoptic round of electronic water-level measurements was conducted at the site to provide information regarding groundwater flow patterns and hydraulic gradients. Water-level measurements were completed within the shortest time possible on the same day, and no sooner than 24 hours after a significant precipitation event to minimize the precipitation effects on the data sets. Water level measurements were recorded to the nearest 0.01 foot and referenced to a top of casing notch or north side of the well casing. The

measurement instrument was decontaminated prior to conducting the measurement event and between each monitoring well.

### 7.2.3 Investigation-Derived Waste Management

Investigation-Derived Waste (IDW) generated during this event was containerized by Tetra Tech in Department of Transportation (DOT)-approved (DOT specification 17C) 55-gallon drums and stored in a centralized location near the Generator Building. The drums were labeled, sealed, and temporarily stored pending completion of analytical results. Tetra Tech provided the NAS Key West Installation Restoration Program (IRP) Manager with the analytical results upon receipt. Tetra Tech was responsible for IDW disposal and seek the assistance of the NAS Key West IRP Manager for the associated manifest paperwork.

### 7.2.4 Field Sample Documentation

Appropriate pre-preserved, certified-clean bottleware was supplied by the laboratories. Matrix-specific sample log sheets were maintained for each sample collected. In addition, sample collection information was recorded in bound field notebooks or specific field forms. Samples were packaged and shipped according to FS 1000, General Sampling Procedures (FDEP, 2008).

Field documentation was performed in accordance with SOP SA-6.3 presented in Appendices C, D and F. A summary of all field activities were properly recorded in a bound logbook with consecutively numbered pages that cannot be removed. At a minimum, the following information was recorded in the site logbook:

- Name of the person to whom the logbook is assigned.
- Project name.
- Project start date.
- Names and responsibilities of on-site project personnel including subcontractor personnel.
- Arrival/departure of site visitors.
- Arrival/departure of equipment.
- Sampling activities and sample log sheet references.
- Description of subcontractor activities.
- Sample pick-up information, including chain-of-custody numbers, air bill numbers, carrier, time, and date.
- Description of borehole or monitoring well installation activities and operations.

- Health and safety issues.
- Description of photographs including date, time, photographer, roll and picture number, location, and compass direction of photograph.

### 7.2.5 Sample Handling, Packaging, and Shipping

Following sample collection using appropriate bottleware, all samples were immediately placed on ice in a cooler. The glass sample containers were enclosed in bubble-wrap in order to protect the bottleware during shipment. The cooler was secured using strapping tape along with a signed custody seal. Sample coolers were delivered to a local courier location for priority overnight delivery to the selected laboratory for analysis. Samples were preserved as appropriate, based on the analytical method. The laboratories provided pre-preserved sample containers for sample collection. Samples were maintained at 4 (± 2) °C until delivery to the laboratory. Proper custody procedures were followed throughout all phases of sample collection and handling.

After collection, each sample was maintained in the sampler's custody until formally transferred to another party (e.g., Federal Express). For all samples collected, chain-of-custody forms document the date and time of sample collection, the sampler's name, and the names of all others who subsequently held custody of the sample. Specifications for chemical analyses were also documented on the chain-of-custody form. Tetra Tech SOP SA-6.3 (Field Documentation) is provided in Appendix E and provides further details on the chain-of-custody procedure.

These subsections outline the procedures used by field and laboratory personnel to document project activities and sample collection procedures during this SI. All forms were filled in as completely as possible.

Tetra Tech personnel collected the samples and properly handled the samples in order to not introduce contamination. Samples were sealed in appropriate containers, packaged by Tetra Tech personnel and placed in sealed coolers following chain-of-custody procedures, in accordance with SOP FS 1000. Samples to be analyzed for volatile organic compounds (VOCs) were accompanied by a VOC trip blank. All coolers contained a temperature blank. Samples were transferred under chain-of-custody to a courier, as described below. Once received by the laboratory, receipt was documented on the chain-of-custody form and the samples were checked in. The samples remained under chain-of-custody throughout the analysis period to ensure their integrity was preserved. Details are provided below.

Samples delivered to the laboratory(s) were made by a public courier (Federal Express). After sample collection, they were sent to the laboratory(s) within 24 hours. No sample holding times were exceeded.

### 7.2.6 Quality Control Samples

Quality assurance/quality control (QA/QC) samples were collected during sampling activities to monitor both field and laboratory procedures, in accordance with the UFP-SAP (Tetra Tech, 2010). QA/QC samples included field duplicates and temperature blanks. Types of QA/QC samples are briefly described below.

- Field Duplicates - consisted of a single sample split into two portions. Field duplicates were collected at the rate of one for every 20 samples collected during this field investigation to assess the overall precision of the sampling and analysis program.

- Temperature blanks - used to determine if samples were adequately cooled during shipment. Temperature blanks consisted of analyte-free water supplied by the laboratory. One temperature blank was submitted to the laboratory in each cooler, and the temperature was checked upon receipt at the laboratory.

### 7.2.7 Global Positioning System

Each sample location was marked with a brightly colored pin flag pushed into the ground next to the boring. If pin flags were not used due to ground hardness (i.e. oolitic limestone or asphalt/concrete), then spray paint was used to mark the sampling location. Boring locations were pre-loaded into a hand held Trimble XH (sub-meter) global positioning system (GPS) unit. This information is retained in the Tetra Tech database and can be used as a reference if repeat sampling is required at any of the sample locations.

### 7.2.8 Decontamination Procedures

Decontamination of major equipment and sampling equipment was performed in general accordance with FC 1000, Cleaning/Decontamination Procedures (FDEP, 2008). Sampling equipment (e.g., non-disposable hand trowels, hand augers) were decontaminated prior to and between sampling at each location. At each site, an abbreviated decontamination procedure consisting of a soapy water (laboratory-grade detergent) rinse followed by a deionized water rinse was performed.

### 7.2.9 Record Keeping

Documentation of field observations were recorded in a field logbook and/or field log sheets, including sample collection logs, boring logs, VOC screening logs, and monitoring well construction logs. Field logbooks utilized on this project consisted of a bound, water-resistant logbook. All pages of the logbook were numbered sequentially and observations were recorded with indelible ink.

Field sample log sheets used to document sample collection details, and other observations and activities were recorded in the field logbook. Instrument calibration logs were used to record the daily instrument calibration. Example field forms are included in Appendices C and D.

For sampling and field activities, the following information was recorded in the field log as appropriate:

- Site name and location
- Date and time of logbook entries
- Personnel and their affiliations
- Weather conditions
- Activities involved with the sampling
- Subcontractor activity summary
- Site observations including site entry and exit times
- Site sketches made on-site
- Visitor names, affiliations, arrival and departure times
- Health and safety issues including personal protective equipment (PPE)

## 7.3 ANALYTICAL METHODOLOGY

### 7.3.1 Analytical Methods

Chemical analysis for semivolatile organic compounds (SVOCs), PCBs and pesticides in groundwater and soil were performed by Empirical Laboratories, LLC. Analysis for total recoverable petroleum hydrocarbons (TRPHs) in groundwater and soil was performed by Accutest Laboratory. Chemical analysis for VOCs, polycyclic aromatic hydrocarbons (PAHs) and metals was performed by Centauri Labs. All laboratories used are in the Department of Defense (DoD) Environmental Laboratory Approval Program (ELAP).

### 7.3.2 Data Usability General Methodology

Data review processes used to determine whether analytical laboratory data were of acceptable technical quality for use in decision-making. The review began with data validation, which is a comparison of data quality indicators (DQIs) to prescribed acceptance criteria. The DQIs used are measures to assess the bias and precision of the analytical calibrations and sample analyses. The output of this review was a set of alphabetic flags such as “U,” “J,” “R,” or combinations thereof, that

may have been assigned to individual results based on the validation effort. These flags were used to infer the general quality of the data. Also evaluated were the measures of data completeness, sensitivity, comparability and representativeness. Validated analytical results and the data usability reports are provided in Appendix H

### 7.3.3 Data Validation Process

Limited data validation was conducted to evaluate false positives included and evaluations of data completeness, holding time compliance, calibrations, field QC and laboratory-generated blanks, field duplicate precision, and detection limits (DLs) for the data collected during the SI. The data packages provided by the analytical laboratory are expansive enough to allow future complete formal data validation, if necessary. Assignment of data qualification flags conformed to USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA 2008) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004). Data validation specifications require that various data qualifiers be assigned when a deficiency is detected or when a result is less than its detection limit. If no qualifier is assigned to a result that has been validated, the data user is assured that no technical deficiencies were identified during validation. The qualification flags used are defined as follows:

- U – Indicates that the chemical was not detected at the numerical detection limit (sample-specific detection limit) noted. Non-detected results from the laboratory are reported in this manner. This qualifier is also added to a positive result (reported by the laboratory) if the detected concentration is determined to be attributable to contamination introduced during field sampling or laboratory analysis.

- UJ – Indicates that the chemical was not detected; however, the detection limit (sample-specific detection limit) is considered to be estimated based on problems encountered during laboratory analysis. The associated numerical detection limit is regarded as inaccurate or imprecise.

- J – Indicates that the chemical was detected; however, the associated numerical result is not a precise representation of the concentration that is actually present in the sample. The laboratory reported concentration is considered to be an estimate of the true concentration.

- UR – Indicates that the chemical may or may not be present. The non-detected analytical result reported by the laboratory is considered to be unreliable and unusable. This qualifier is applied in cases of gross technical deficiencies [e.g., holding time missed by a factor of two times the specified time limit or severe calibration non-compliance, or extremely low QC recovery].

- R – Indicates that the chemical may or may not be present. The positive analytical result

reported by the laboratory is considered to be unreliable and unusable. This qualifier is applied in cases of gross technical deficiencies.

The preceding data qualifiers may be categorized as indicative of major or minor problems. Major problems are defined as issues that result in the rejection of data and qualification with UR or R qualifiers.

These data are considered invalid and not used for decision-making purposes unless they are used in a qualitative way and the use is justified and documented. Minor problems are defined as issues resulting in the estimation of data and qualification with "U," "J," and "UJ" qualifiers. Estimated analytical results are considered to be suitable for decision-making purposes unless the data use requirements are very stringent and the qualifier indicates a deficiency that is incompatible with the intended data use. A "U" qualifier does not necessarily indicate that a data deficiency exists because all non-detect values are flagged with the "U" qualifier regardless of whether a quality deficiency has been detected.

### 7.3.4 Data Validation Outputs

After data were validated, a list was developed of non-conformities requiring data qualifier flags used to alert the data user to inaccurate or imprecise data. The reviewer then prepared a technical memorandum presenting qualification of the data, if necessary, and the rationale for making such qualifications (See Appendix H). The net result was a data package that had been carefully reviewed for its adherence to prescribed technical requirements. Pertinent quality estimates are summarized in a more quantitative format in the following section.

### 7.3.5 Data Quality Review

DQIs are parameters monitored to help establish the quality of data generated during an investigation. Some of the DQIs are generated from analysis of field samples (e.g., field duplicates) and some are generated from the analysis of laboratory samples (e.g., laboratory duplicates). Individually, field and laboratory DQIs provide measures of the performance of the respective investigative operations (field or laboratory). During data validation, individual QC results were evaluated. If individual QC results were acceptable, no validation flag was assigned to an analytical result; otherwise, a flag indicating the type of QC deficiency was assigned to the result.

#### Completeness

Completeness is a measure of the number of valid samples or measurements that are available relative to the number of samples or measurements that were intended to be generated. For this project, completeness was measured on two different bases:

- Samples collected - measure of the usable samples collected compared to those intended to be collected.

- Laboratory measurements - measure of the amount of usable valid laboratory measurements per matrix for each target analyte.

Usable valid samples (or results) were those judged, after data assessment, to represent the sampling populations and to have not been disqualified for use through data validation or additional data review. Completeness was determined using the following equation:

$$\%\mathbf{C} = \frac{\mathbf{V}}{\boldsymbol{T}}\boldsymbol{x}\ \mathbf{100}$$

where %C = percent completeness

V = number of samples (or results) determined to be valid

T = total number of planned samples (or results)

**Sensitivity**

Sensitivity is a comparison of the project quantitation limit goals (PQLGs) to the laboratory's DLs listed in Worksheet 15 in the UFP-SAP (Tetra Tech, 2010).

Sensitivity is the ability of the method or instrument to detect the target analytes at the level of interest. Sensitivity can be evaluated by calculating the percentages of analyte DLs that exceeded Project Action Limits (PALs). Two different percentages can be calculated: 1) the percentage of non-detected results that exceeded PALs when considering the total number of non-detected results, and 2) the percentage of non-detected results that exceeded PALs when considering the total number of results analyzed (both positive and non-detected results). The percentage of non-detected results that exceeded PALs when considering the total number of non-detected results is used to evaluate the overall success of the laboratory in achieving DLs equal to or less than PALs. The percentage of non-detected results that exceeded PALs when considering the total number of results analyzed (positive and non-detected results) is used to evaluate the effect of sensitivity exceedances on the complete corresponding data set.

**Accuracy**

Accuracy requirements for field measurements are typically ensured through control over sample collection and handling, and through routine instrument calibration. Field accuracies were monitored through the use of blanks to detect cross-contamination and by monitoring adherence to procedures that prevent sample contamination or degradation. Rinsate blanks were collected during the SI to assess cross-contamination via sample collection equipment. Each blank was obtained under

representative field conditions by collecting the rinse water generated by running analyte-free water through sample collection equipment after decontamination and before use. The rinsate blank was analyzed for the same chemical constituents as the associated environmental samples.

Accuracy in the laboratory was measured through the comparison of a spiked sample or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) result to a known or calculated value, and was expressed as a percent recovery (%R). It was also assessed by monitoring the analytical recovery of select surrogate compounds added to samples that are analyzed by organic chromatographic methods. LCSs were used to assess the accuracy of laboratory operations with minimal sample matrix effects. Matrix spike/matrix spike duplicate (MS/MSD) and surrogate compound analyses measure the combined accuracy effects of the sample matrix, sample preparation, and sample measurement. LCS and MS analyses were performed at a frequency of one per 20 associated samples of like matrix. Laboratory accuracy was assessed by comparing calculated %R values to accuracy control limits specified by the laboratory using SW-846 methods.

Percent recovery is calculated using the following equation:

$$\%\mathbf{R} = \frac{\boldsymbol{Ss - So}}{\boldsymbol{S}} \boldsymbol{x100}$$

where %R = percent recovery
Ss = result of spiked sample
So = result of non-spiked sample
S = concentration of spiked amount.

**Precision**

Precision is a measure of the degree to which two or more measurements agree and describes the reproducibility of measurements of the same parameter for samples analyzed under similar conditions. Precision for chemical parameters is expressed as a Relative Percent Difference (RPD), which is defined as the ratio of the difference to the mean for the two values being evaluated. RPDs, typically expressed as percentages, are used to evaluate both field and laboratory duplicate precision and are calculated as follows:

$$\mathbf{RPD} = \frac{(\boldsymbol{V1 - V2})}{(\boldsymbol{V1 + V2})/\boldsymbol{2}} \boldsymbol{x\ 100}$$

where RPD = relative percent difference
V1, V2 = two results obtained by analyzing duplicate samples.

The precision estimates obtained from duplicate field samples encompass the combined uncertainty associated with sample collection, homogenization, splitting, handling, laboratory and field storage

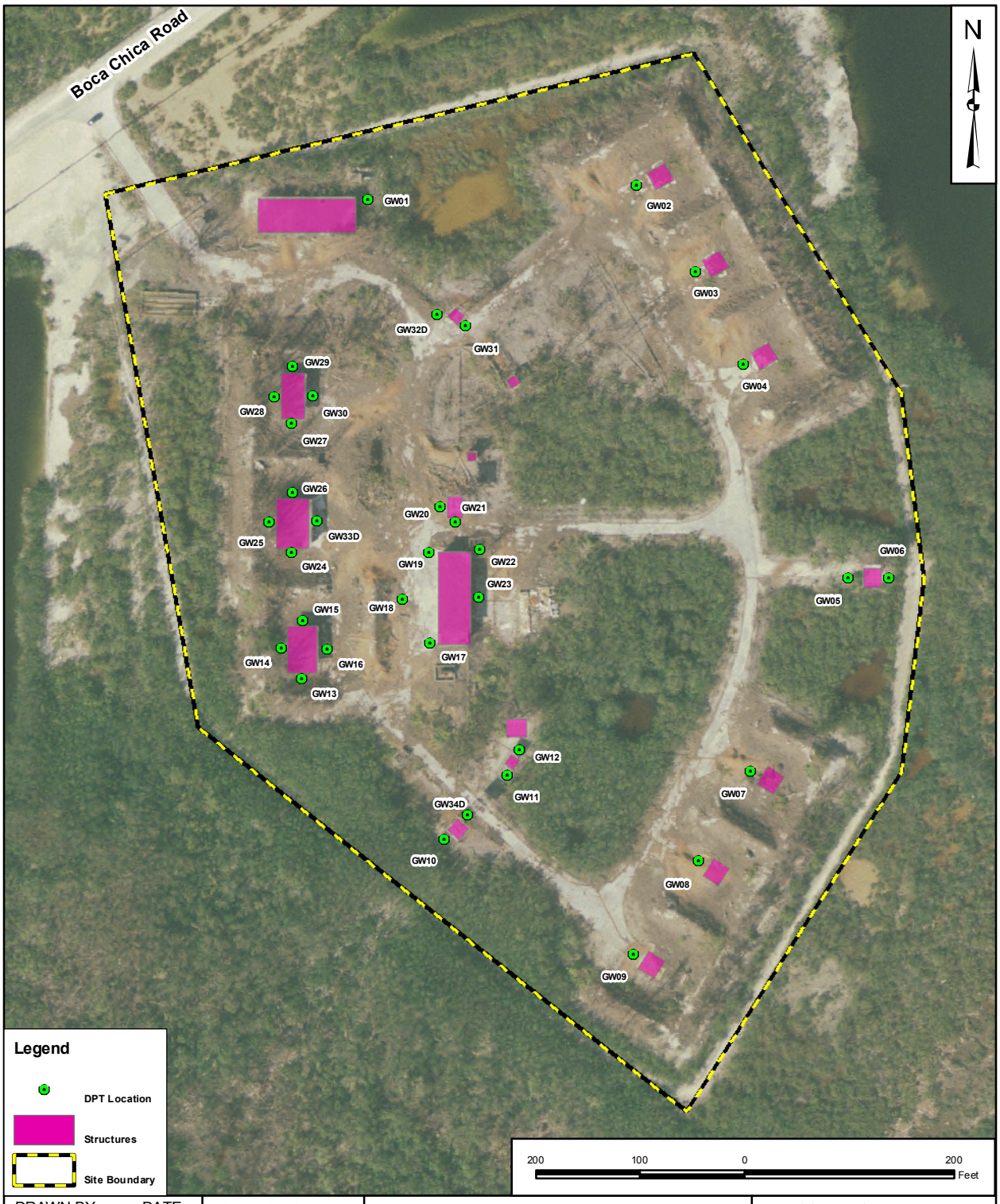
(as applicable), preparation for analysis, and analysis. In contrast, precision estimates obtained from analyzing duplicate laboratory samples incorporate only homogenization, sub-sampling, preparation for analysis, laboratory storage (if applicable), and analysis uncertainties.

**Comparability**

Comparability is defined as the confidence with which one data set can be compared with another (e.g., among sampling points and among sampling events). Comparability was achieved by using standardized sampling and analysis methods and standardized data reporting formats. Comparability of field data was insured by following the UFP-SAP (Tetra Tech, 2010). Comparability of laboratory measurements was achieved primarily through the use and documentation of standard sampling and analytical methods. Results were reported in units that ensured comparability with previous data and with current state and federal standards and guidelines. Comparability of laboratory measurements was assessed primarily through the use of QC samples and through adherence to the laboratory's QA plan.

**Representativeness**

Representativeness is an expression of the degree to which data accurately and precisely depict the actual characteristics of a population or environmental condition existing at the site. The UFP-SAP (Tetra Tech, 2010) and the use of standardized sampling, sample handling, sample analysis, and data reporting procedures were designed so that the final data would accurately represent actual site conditions. It is believed that all reported data are adequately representative of site conditions.

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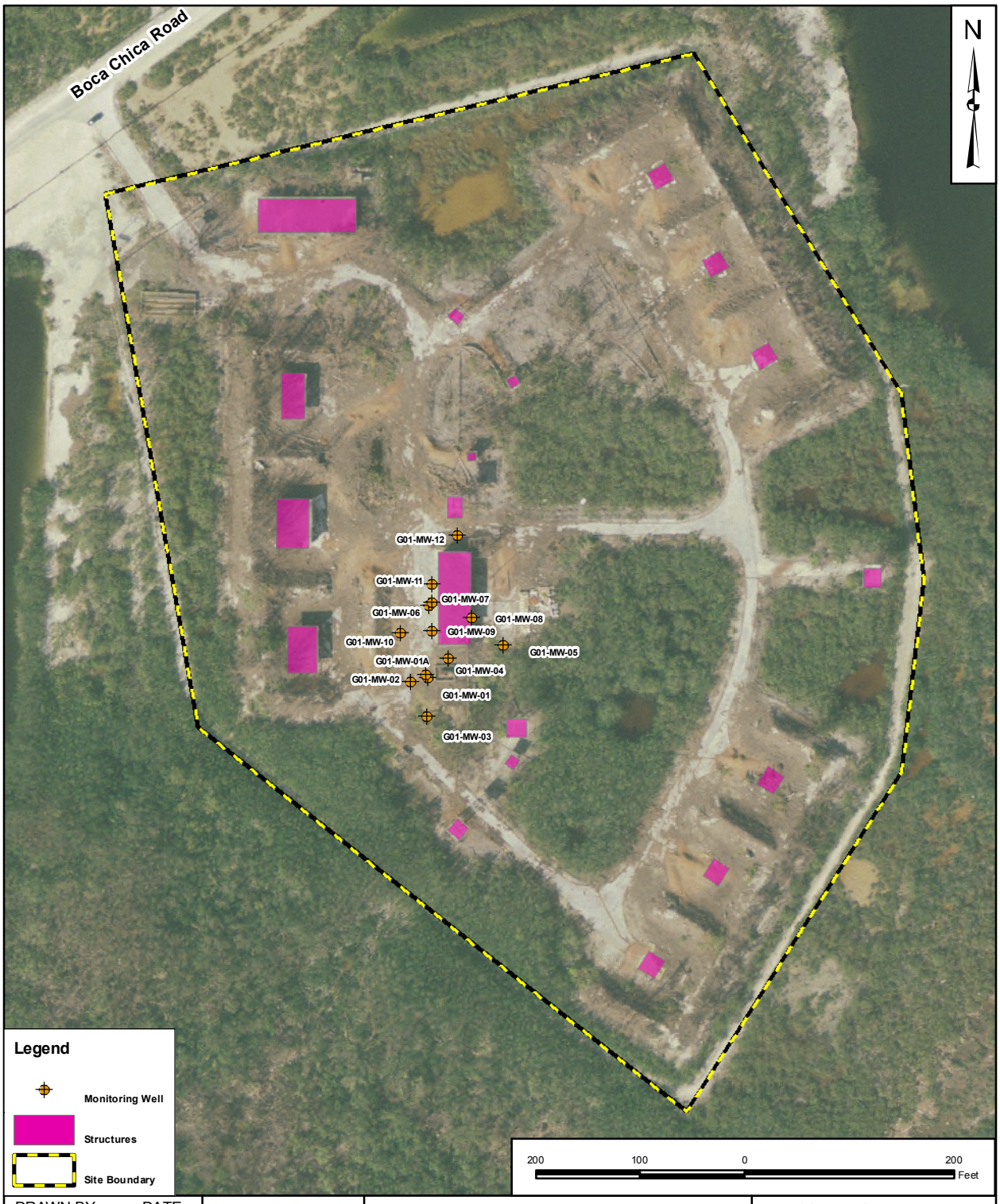
| DRAWN BY MJN | DATE 03-25-11 | **DPT LOCATIONS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY DGH | DATE 03-25-11 | | OWNER NUMBER — |
| REVISED BY — | DATE — | | APPROVED BY SSH / DATE 03-25-11 |
| SCALE AS NOTED | | | FIGURE NO. 7-1 / REV 0 |

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| DRAWN BY MJN | DATE 03-25-11 | **MONITORING WELL LOCATIONS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY DGH | DATE 03-25-11 | | OWNER NUMBER — |
| REVISED BY — | DATE — | | APPROVED BY SSH / DATE 03-25-11 |
| SCALE AS NOTED | | | FIGURE NO. 7-2 / REV 0 |

# 8.0 GEIGER KEY HAWK MISSILE SITE

## 8.1 SITE BACKGROUND

The former AHMS Geiger Key Site is an approximately 12-acre site located on Geiger Key along State Road S-941 (Old Boca Chica Road) on the southwest end of Geiger Key. The AHMS Geiger Key is bordered to the south by the Atlantic Ocean and to the north by State Road S-941. The eastern border is provided by Boundary Lane, which is located within a residential area that consists of several man-made canals connected to the Atlantic Ocean. Wetlands border the property to the west. (Figure ES-1)

### 8.1.1 Historical Information

The former AHMS Geiger Key site, originally called Battery C or Charlie Battery was completed by the Army and became operational in March 1965 (Osato and Straup, 1968). Based on historical maps and aerial photographs, the land on which AHMS Geiger Key was built was previously salt ponds filled by the US Army in order to adapt the area for use as a missile site. In 1967, the Charlie Battery was dedicated as the "Florentino R. Roque Hawk Missile Site" in honor of a local Key West Army man who lost his life in Vietnam (KWC, 1967). This anti-aircraft facility was built as a permanent installation and was intended to guard against attack from Cuba, 90 miles away. The Hawk missile was initially designed to destroy aircraft and was later adapted to destroy other missiles in flight. During operations, work in support of the Site's mission was focused on keeping the missiles, radar towers, and equipment clean and ready for use at all times. Maintenance of the individual components for the Hawk system included, but was not limited to, generator maintenance and repair, radar coolant service and electronic component replacement and anti-corrosion repairs, missile component replacement, anti-corrosion and contamination maintenance, and replacement of vital air-conditioning units for electronics (Osato and Straup, 1968). In February 2009, an interview was conducted by NAS Key West representatives with a former AHMS Geiger Key employee in order to gain additional information on the daily activities performed at the Hawk missile sites on NAS Key West during operational years (Tetra Tech, 2010). The results of the interview confirmed the large amount of maintenance and repair necessary to keep the Hawk system operational, and the poor disposal practices that occurred at the missile site. The site was decommissioned in April 1979 and continues to be maintained by the NAS Key West. The current and future land use is industrial as outlined in the NAS Key West Base Master Plan. To date, no new use has been found for the facility and it is currently abandoned.

A series of investigations have occurred at AHMS Geiger Key based on the indication of groundwater contamination in the vicinity of a closed-in-place aboveground storage tank (AST), first

described in the Closure Report submitted to the Florida Department of Environmental Protection (FDEP) in 1996. The investigations, which were restricted to a small area on the site, verified that there was soil and groundwater contamination, but the horizontal extent of contamination was never fully delineated. Also, free product was consistently detected in one monitoring well, leading the Navy to perform a Treatability Study to evaluate the effectiveness of passive free product recovery. Early during the Treatability Study, it was determined that the amount of free product had increased and that passive free product recovery was no longer an appropriate remedial option (Tetra Tech, 2006). An SI was completed to determine if contaminants are present in soil and/or groundwater in the operational areas of Site 22 that have not yet been investigated. The Project Team will evaluate the data from this SI to make a decision regarding the next steps, if any, in the remedial process.

### 8.1.2 Contaminant Storage and Usage

The source of groundwater contamination is most likely the former operational areas, including the former AST area, the Generator Building, the Missile Assembly and Storage Buildings, the radar towers, and the missile launch sites. The groundwater in the area associated with the 2,000-gallon AST is known to be contaminated with petroleum hydrocarbon constituents associated with diesel fuel. Solvents were likely released from the Generator Building and the Assembly and Storage Building. Solvents and coolant were released from the radar towers. Coolant may have been released from the transformers located on the northeast side of the Generator Building. However, these potential releases have yet to be investigated. This SI addresses the need to determine if additional contaminants (those not investigated previously) are present in the former operational areas of the site.

### 8.1.3 Potential Contaminant Migration Pathways

Recharge of groundwater at the Site occurs through infiltration of rainwater in areas that are not covered by asphalt and/or concrete. Surface water flow is influenced by minor variations in topography, as the Site is relatively flat. During heavy rainstorms, surface water likely flows toward the northern portion of the Site toward the two lagoons adjacent to the Site. During these events, surface soil may also be transported into the two lagoons.

Contaminants in surface soil can leach to the subsurface and easily reach the shallow water table, which is approximately 2 to 4 feet bgs. Groundwater flow in the area is affected by several factors, including tidal fluctuation, hurricane events, and the nature of the oolitic limestone caprock. There is very little or no surface soil present on-site, instead subsurface soil is found at approximately 0- to 2-feet bgs, with the oolitic limestone caprock extending from approximately 2- to 25-feet bgs. This is a unique geological figure found throughout NAS Key West. It is likely that these factors can either minimize or enhance groundwater and plume migration over time. Groundwater flow direction is

inconsistent. During the February 2004 gauging event, the groundwater flow direction was to the east, while the May 2004 gauging event indicated radial flow with a primarily southerly component (Tetra Tech, 2004). This inconsistent pattern of groundwater flow is indicative of tidal influence on the surficial aquifer. At this time, it is not known if contaminated groundwater is discharging to any of the surface water features surrounding the Site, this possibility will be investigated during future remedial activities.

#### 8.1.4 Current Land Use and Potential Exposure Pathways

AHMS Geiger Key is located on NAS Key West, which is an active naval air station. In general, groundwater in the Florida Keys is unfit for domestic use (e.g., drinking, showering, or cooking). Therefore, there is no consumption of groundwater by human receptors. Furthermore, NAS Key West has a potable water system that is used by the personnel located on the property.

Access to the Site was originally restricted to military personnel and contractors. Currently, the security conditions at the Site are relaxed. The fence is in disrepair and there is evidence that trespassers are using the Site for recreational purposes. The full extent of these recreational activities is not known, but may include sunbathing and fishing in the lagoons. The only other potential receptors that may access the Site include personnel potentially engaged in Site cleanup and/or redevelopment activities. These individuals may have direct contact with the contaminated groundwater in the future.

## 8.2 SITE INSPECTION FIELD ACTIVITIES

### 8.2.1 Field Data Collection

#### 8.2.1.1 Monitoring Well Sampling

Groundwater samples were collected from the existing monitoring wells with the exception of monitoring well G01-MW-11. Groundwater samples from the monitoring wells were collected using low-flow purging techniques (discharge rate of less than 1 liter per minute) with a peristaltic pump using Teflon™ tubing dedicated to each well. All groundwater samples were collected using the procedures specified in FS 2200, Groundwater Sampling (FDEP, 2008).

Prior to groundwater sample collection from existing monitoring wells, water level and free product measurements were taken at each monitoring well and the wells were purged. Both purging and sampling operations were conducted at a flow rate that minimized the groundwater turbidity measurement.

The samples were transferred to the laboratory-supplied sample containers immediately following sample collection, placed in a cooler, chilled with ice, and shipped under chain-of-custody protocol for analysis.

#### 8.2.1.2 DPT Groundwater Sampling

A total of 31 shallow groundwater samples and three deep groundwater samples were collected from DPT borings. DPT methods were used to collect in situ groundwater samples at select locations within Site 22. DPT methods involve the advancement of a DPT sampling screen to a target depth. The screen is then revealed to the formation and groundwater is withdrawn via Teflon™ tubing to the surface via a peristaltic pump.

Groundwater samples from the DPT borings were collected using low-flow purging techniques (discharge rate of less than 1 liter per minute) with a peristaltic pump using Teflon™ tubing dedicated to each well. All groundwater samples were collected using the procedures specified in FS 2200, Groundwater Sampling (FDEP, 2008). Figure 8-2 specifies the groundwater sampling locations for this investigation.

The samples were transferred to the laboratory-supplied sample containers immediately following sample collection, placed in a cooler, chilled with ice, and shipped under chain-of-custody protocol for analysis.

#### 8.2.1.3 Soil Sampling

Subsurface soil samples were collected from the DPT borings using the procedures specified in FDEP SOP FS 3000. An Initial 34 soil samples were collected from the DPT borings from the 0 to 2 feet range and screened on-site using a developing head-space analysis methodology and photo ionization detector (PID). Data from the headspace purge method and PID results were used to determine which soil samples were to be sent to the lab, with the exception of soil samples collected from each former Radar Site and site PAR 4. Of the 34 initial borings, a total of 20 soil samples were shipped for laboratory analysis. Field technicians collected five soil samples at the former Radar Sites and selected 15 soil samples for shipment to the laboratory, based on elevated contaminant concentrations found through the field screening process.

After collection of the selected soil samples, the samples were placed in a cooler, chilled with ice, and shipped under chain-of-custody protocol to Centauri for analysis.

## 8.3 SITE INSPECTION DATA COLLECTION RESULTS

### 8.3.1 Results

#### 8.3.1.1 Free Product

Monitoring well G01-MW-11 was not sampled pursuant to DEP-SOP-001/01, FS 2221, 3. The rule states: "DEP does not recommend sampling of wells with floating non-aqueous phase liquid for trace contaminants as sampling data from such wells cannot provide useful information regarding the level of contamination. Furthermore, FDEP believes that these wells may never provide legitimate data as they may have become (permanently) chemically damaged by the product being in contact with the well casing for an extended period of time".

#### 8.3.1.2 Metals

Metals were detected in groundwater samples at levels exceeding respective Groundwater Cleanup Target Levels (GCTLs) in one monitoring well and 15 soil boring locations. There were no exceedances of Soil Cleanup Target Levels (SCTLS) found in the soil samples. Groundwater contaminants exceeding GCTLs consisted of arsenic, cadmium, iron and lead (Tables 8-1 and 8-2, Figure 8-2).

Groundwater and soil samples collected at each launch site resulted in only one cadmium concentration (6.44 micrograms per liter [µg/L] at GKHMS-GW-004) that exceeded the GCTL (5 µg/L). The remaining boring locations that resulted in groundwater contaminant concentrations exceeding metal GCTLs were found at the Radar sites, storage facilities and at or near the Generator Building.

#### 8.3.1.3 PCB/Pesticides

There were contaminant detections of PCBs and pesticides found throughout the site; however, only two exceedances of pesticide GCTLs were found in groundwater for alpha-BHC. Both locations (G01-MW-12 and GKHMS-GW-FD04) were immediately adjacent to the Generator Building (Tables 8-3 through 8-4, Figure 8-3).

#### 8.3.1.4 TRPH

One groundwater sample at boring GKHMS-GW-021 resulted in a TRPH concentration (5.6 mg/L) that exceeded the GCTL of 5 mg/L. No further groundwater or soil samples resulted in GCTL exceedances for TRPH (Tables 8-5, Figure 8-4).

#### 8.3.1.5 VOC/SVOC

There were no concentrations of VOCs or SVOCs that resulted in exceedances of GCTLs or SCTLs during this SI.

### 8.4 CONCLUSIONS

The former AHMS Geiger Key Site is an approximately 12 acre site located on Geiger Key along State Road S-941 (Old Boca Chica Road) on the southwest end of Geiger Key. The site is currently abandoned and the vegetation is overgrown. Due to the overgrowth of vegetation, certain portions of the site are inaccessible unless vegetation is disturbed.

Based on historical maps and aerial photographs, the land on which AHMS Geiger Key was built was previously salt ponds filled by the US Army in order to adapt the area for use as a missile site. Work on the facility began shortly after the Cuban Missile Crisis in 1965 and continued for several years thereafter. The site contains most of the original buildings used for storage, maintenance and repairs on the Hawk missiles. It also contains the original radar and illuminator towers, missile launch pads, and generator building. The site was used for coastal defense until 1979, at which time ownership was transferred to the Navy. The current and future land use is industrial as outlined in the NAS Key West Base Master Plan. To date, no new use has been found for the facility and it is currently abandoned.

Free product was observed only at monitoring well G01-MW-11 (Figure 7-2). This is approximately 13 feet north of the last recorded observation of free product during the 2006 Treatability Study. One groundwater sample from boring GKHMS-GW-021 resulted in a TRPH concentration (5.6 mg/L) that exceeded the GCTL (5 mg/L) (Tables 8-5, Figure 8-4)

Metals (arsenic, cadmium, iron, and lead) were detected at concentrations greater than screening criteria in groundwater. Arsenic was found in exceedance of the GCTL in monitoring well GKHMS-MW-03 (19 µg/L) and boring locations GKHMS-GW-012 (53 µg/L) and GKHMS-GW-011. Lead exceeded criteria of 15 µg/L in boring locations GKHMS-GW-028 (19.5 µg/L) and GKHMS-GW-032D (19.6 µg/L). There was an iron detection of 6100 µg/L at boring GKHMS-GW-032D that exceeded the GCTL of 4200 µg/L. Sodium was detected in all samples, most of which exceeded the GCTL of 160,000 µg/L. Elevated sodium concentrations are due saltwater intrusion, which is typical at other NAS Key West sites (Tables 8-1 and 8-2, Figure 8-2)

Cadmium was found in exceedance of the GCTL in 10 groundwater boring locations and five monitoring wells. Cadmium is a known chemical in metal coating, particularly corrosion resistant plating on steel. It is also used in paint pigmentation because cadmium forms various salts from which the sulfides are used as a yellow pigment. Also, cadmium selenide can be used as red

pigment. Both pigments create bright long-lasting colors and were used in industrial paint at the site. The boring locations and monitoring well locations that resulted in groundwater contaminant concentrations exceeding cadmium GCTL were found at the radar sites, storage facilities, and at or near the Generator Building. All of these structures were steel or steel/concrete and were treated with a metal coating to prevent corrosion from the saline climate. The groundwater and soil samples collected at each launch site resulted in only one cadmium concentration that exceeded the GCTL. The steel structures are the most likely source of cadmium. Two exceedances of pesticide GCTLs were found in groundwater. They were for alpha-BHC and found immediately adjacent to the Generator Building in samples collected from monitoring well GKHMS-MW-12 and sample GKHMS-GW-FD04, which was a field duplicate collected from monitoring well GKHMS-MW-08 (Tables 8-4 through 8-6, Figure 8-3). . The concentrations were 0.0378 µg/L and 0.00831 µg/L, respectively. Alpha-BHC was an insecticide created in 1942. It was widely used along with many other organochlorine pesticides until they were removed for commercial and residential use in the 1980s due to the high toxicity levels associated with them.

There were no concentrations of VOCs or SVOCs that resulted in exceedances of GCTLs or SCTLs.

## 8.5 RECOMMENDATIONS

The following actions are recommended for the former AHMS Geiger Key site in the form of an Expanded SI:

- Confirmatory sampling for TRPH in the vicinity of monitoring well GKHMS-MW-12. To include, but not limited to, additional sampling for TRPH taken through the generator building floor to delineate the free product;
- Additional confirmatory sampling of media for metals;
- Conduct a site-specific risk assessment, prior to the completion of a Remedial Action Plan, to determine the human health risk of exposure to metals from this site.

These actions correlate with the steps in Rule 62.780.680 (3) Risk Management Option Level III as a final remedy in place. Rule 62.780.680 (3) is included in Appendix I for reference.

**TABLE 8-1**

**GROUNDWATER ANALYTICAL Exceedances FOR METALS**
**GEIGER KEY HAWK MISSILE SITE G-01**
**PRELIMINARY ASSESSMENT AND SITE INSPECTION REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**
**PAGE 1 OF 2**

| Sample | Parameter | Result | Qualifier | GCTL | Units |
|---|---|---|---|---|---|
| GKHMS-GW-002-1010 | SODIUM | 1310000 | | 160000 | µg/L |
| GKHMS-GW-003-1010 | SODIUM | 1710000 | | 160000 | µg/L |
| GKHMS-GW-004-1010 | CADMIUM | 6.44 | | 5 | µg/L |
| GKHMS-GW-004-1010 | SODIUM | 3200000 | | 160000 | µg/L |
| GKHMS-GW-005-1010 | CADMIUM | 22.2 | J | 5 | µg/L |
| GKHMS-GW-005-1010 | SODIUM | 8870000 | | 160000 | µg/L |
| GKHMS-GW-006-1010 | CADMIUM | 12 | J | 5 | µg/L |
| GKHMS-GW-006-1010 | SODIUM | 10600000 | | 160000 | µg/L |
| GKHMS-GW-007-1010 | SODIUM | 1790000 | | 160000 | µg/L |
| GKHMS-GW-008-1010 | SODIUM | 1220000 | | 160000 | µg/L |
| GKHMS-GW-009-1010 | SODIUM | 2460000 | | 160000 | µg/L |
| GKHMS-GW-010-1010 | CADMIUM | 12.8 | J | 5 | µg/L |
| GKHMS-GW-010-1010 | SODIUM | 11600000 | | 160000 | µg/L |
| GKHMS-GW-011-1010 | CADMIUM | 8.37 | | 5 | µg/L |
| GKHMS-GW-011-1010 | SODIUM | 3340000 | | 160000 | µg/L |
| GKHMS-GW-012-1010 | ARSENIC | 53 | | 10 | µg/L |
| GKHMS-GW-012-1010 | CADMIUM | 20.7 | J | 5 | µg/L |
| GKHMS-GW-012-1010 | SODIUM | 9050000 | | 160000 | µg/L |
| GKHMS-GW-013-1010 | SODIUM | 3050000 | | 160000 | µg/L |
| GKHMS-GW-014-1010 | SODIUM | 2230000 | | 160000 | µg/L |
| GKHMS-GW-015-1010 | SODIUM | 497000 | J | 160000 | µg/L |
| GKHMS-GW-016-1010 | SODIUM | 165000 | J | 160000 | µg/L |
| GKHMS-GW-017-1010 | SODIUM | 519000 | | 160000 | µg/L |
| GKHMS-GW-024-1010 | SODIUM | 1080000 | | 160000 | µg/L |
| GKHMS-GW-025-1010 | SODIUM | 752000 | | 160000 | µg/L |
| GKHMS-GW-026-1010 | SODIUM | 293000 | J | 160000 | µg/L |
| GKHMS-GW-027-1010 | CADMIUM | 5.64 | | 5 | µg/L |
| GKHMS-GW-027-1010 | SODIUM | 449000 | | 160000 | µg/L |
| GKHMS-GW-028-1010 | LEAD | 19.5 | | 15 | µg/L |
| GKHMS-GW-028-1010 | SODIUM | 698000 | | 160000 | µg/L |
| GKHMS-GW-029-1010 | SODIUM | 1390000 | | 160000 | µg/L |
| GKHMS-GW-030-1010 | SODIUM | 341000 | | 160000 | µg/L |
| GKHMS-GW-031-1010 | CADMIUM | 6.64 | | 5 | µg/L |
| GKHMS-GW-031-1010 | SODIUM | 1240000 | | 160000 | µg/L |
| GKHMS-GW-032D-1010 | CADMIUM | 13.7 | J | 5 | µg/L |
| GKHMS-GW-032D-1010 | IRON | 6100 | | 4200 | µg/L |

**TABLE 8-1**

**GROUNDWATER ANALYTICAL EXCEEDANCES FOR METALS
GEIGER KEY HAWK MISSILE SITE G-01
PRELIMINARY ASSESSMENT AND SITE INSPECTION REPORT
NAVAL AIR STATION
KEY WEST, FLORIDA
PAGE 2 OF 2**

| Sample | Parameter | Result | Qualifier | GCTL | Units |
|---|---|---|---|---|---|
| GKHMS-GW-032D-1010 | LEAD | 19.6 | | 15 | µg/L |
| GKHMS-GW-032D-1010 | SODIUM | 7820000 | | 160000 | µg/L |
| GKHMS-GW-033D-1010 | CADMIUM | 9.78 | J | 5 | µg/L |
| GKHMS-GW-033D-1010 | SODIUM | 7650000 | | 160000 | µg/L |
| GKHMS-GW-034D-1010 | SODIUM | 7910000 | | 160000 | µg/L |
| GKHMS-GW-09-1010 | SODIUM | 847000 | J | 160000 | µg/L |
| GKHMS-GW-FD001-1010 | SODIUM | 522000 | | 160000 | µg/L |

µg/L - microgram per liter
J - The result is an estimated quantity
Groundwater Cleanup Target Level (GCTL) as defined in Chapter 62-777, Florida Administrative Code (F.A.C.), Table I

**TABLE 8-2**

**MONITORING WELL ANALYTICAL EXCEEDANCES FOR METALS
GEIGER KEY HAWK MISSILE SITE G-01
PRELIMINARY ASSESSMENT AND SITE INSPECTION REPORT
NAVAL AIR STATION
KEY WEST, FLORIDA**

| Sample | Parameter | Result | Qualifier | GCTL | Units |
|---|---|---|---|---|---|
| G01-MW-01-1010 | CADMIUM | 5.09 | J | 5 | µg/L |
| G01-MW-01-1010 | SODIUM | 671000 | J | 160000 | µg/L |
| G01-MW-01A-1010 | SODIUM | 10200000 | J | 160000 | µg/L |
| G01-MW-02-1010 | CADMIUM | 5.45 | J | 5 | µg/L |
| G01-MW-02-1010 | SODIUM | 791000 | J | 160000 | µg/L |
| G01-MW-03-1010 | ARSENIC | 19 | J | 10 | µg/L |
| G01-MW-03-1010 | CADMIUM | 9.69 | J | 5 | µg/L |
| G01-MW-03-1010 | SODIUM | 3620000 | J | 160000 | µg/L |
| G01-MW-04-1010 | CADMIUM | 6.39 | J | 5 | µg/L |
| G01-MW-04-1010 | SODIUM | 1770000 | J | 160000 | µg/L |
| G01-MW-05-1010 | SODIUM | 333000 | | 160000 | µg/L |
| G01-MW-06-1010 | SODIUM | 363000 | | 160000 | µg/L |
| G01-MW-07-1010 | SODIUM | 5280000 | J | 160000 | µg/L |

µg/L - microgram per liter
J - The result is an estimated quantity
Groundwater Cleanup Target Level (GCTL) as defined in Chapter 62-777, Florida Administrative Code (F.A.C.), Table I

**TABLE 8-3**

**GROUNDWATER ANALYTICAL EXCEEDANCES FOR PCB AND PESTICIDES**
**GEIGER KEY HAWK MISSILE SITE G-01**
**PRELIMINARY ASSESSMENT AND SITE INSPECTION REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**

| Sample | Parameter | Result | Qualifier | GCTL | Units |
|---|---|---|---|---|---|
| GKHMS-GW-FD04-1010 | ALPHA-BHC | 0.00831 | J | 0.006 | µg/L |

µg/L - microgram per liter
J - The result is an estimated quantity
Groundwater Cleanup Target Level (GCTL) as defined in Chapter 62-777, Florida Administrative Code (F.A.C.), Table I

**TABLE 8-4**

**MONITORING WELL ANALTICAL EXCEEDANCES FOR PCBS AND PESTICIDES**
**GEIGER KEY HAWK MISSILE SITE G-01**
**PRELIMINARY ASSESSMENT AND SITE INSPECTION REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**

| Sample | Parameter | Result | Qualifier | GCTL | Units |
|---|---|---|---|---|---|
| G01-MW-12-1010 | ALPHA-BHC | 0.0378 | J | 0.006 | µg/L |

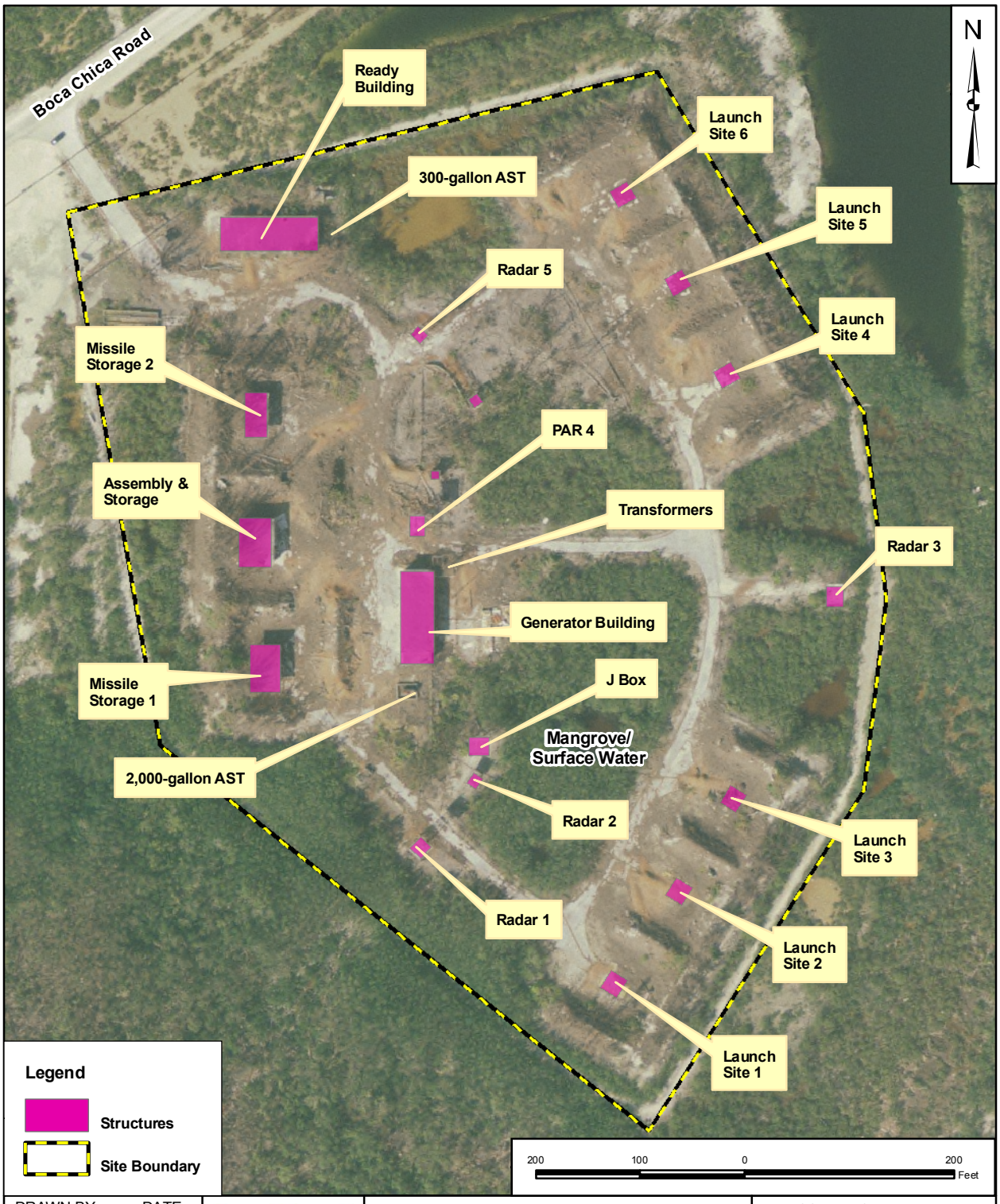
µg/L - microgram per liter
J - The result is an estimated quantity
Groundwater Cleanup Target Level (GCTL) as defined in Chapter 62-777, Florida Administrative Code (F.A.C.), Table I

**TABLE 8-5**

**GROUNDWATER ANALTYICAL EXCEEDANCES FOR TRPH**
**GEIGER KEY HAWK MISSILE SITE G-01**
**PRELIMINARY ASSESSMENT AND SITE INSPECTION REPORT**
**NAVAL AIR STATION**
**KEY WEST, FLORIDA**

| Sample | Parameter | Result | Qualifier | GCTL | Units |
|---|---|---|---|---|---|
| GKHMS-GW-021-1010 | TRPH (C08-C40) | 5.59 | | 5 | mg/L |

mg/L - milligram per liter
J - The result is an estimated quantity
Groundwater Cleanup Target Level (GCTL) as defined in Chapter 62-777, Florida Administrative Code (F.A.C.), Table I

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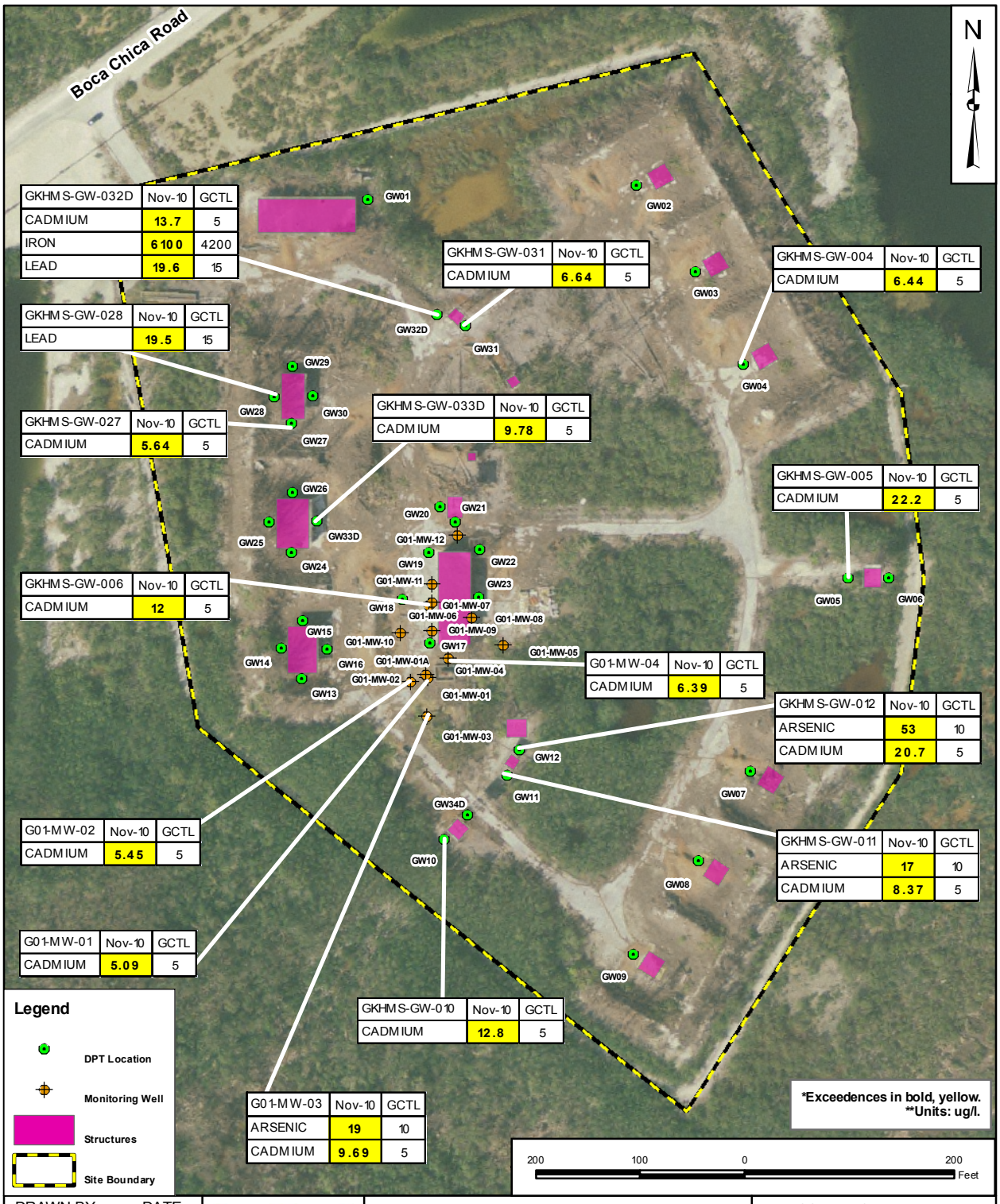
| DRAWN BY MJN | DATE 03-25-11 | **SITE LAYOUT AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY DGH | DATE 03-25-11 | | OWNER NUMBER — |
| REVISED BY — | DATE — | | APPROVED BY SSH / DATE 03-25-11 |
| SCALE AS NOTED | | | FIGURE NO. 8-1 / REV 0 |

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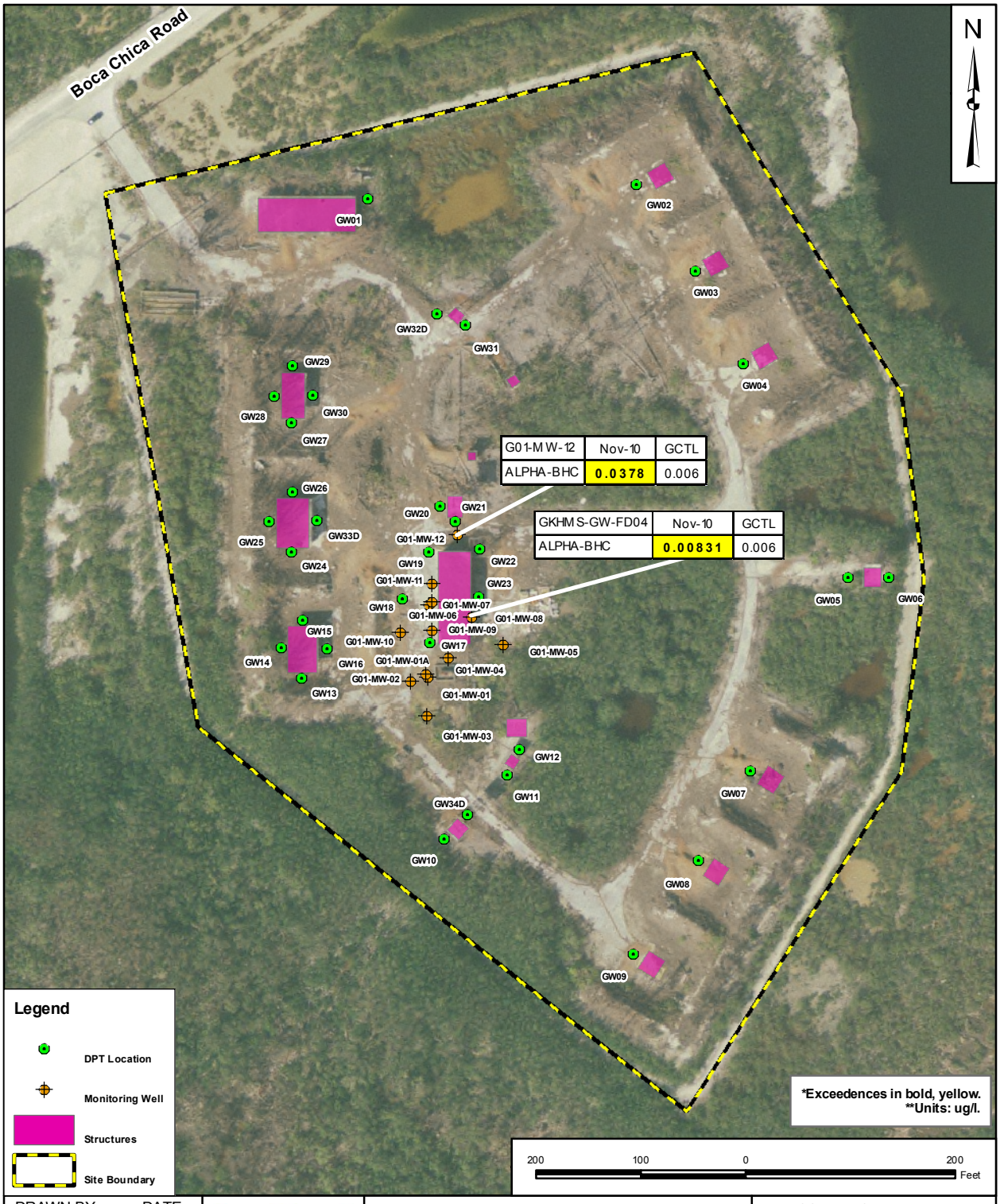
| DRAWN BY MJN | DATE 03-25-11 | **GROUNDWATER METALS ANALYTICAL RESULTS NOVEMBER 2010 AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY DGH | DATE 03-25-11 | | OWNER NUMBER — |
| REVISED BY — | DATE — | | APPROVED BY SSH / DATE 03-25-11 |
| SCALE AS NOTED | | | FIGURE NO. 8-2 / REV 0 |

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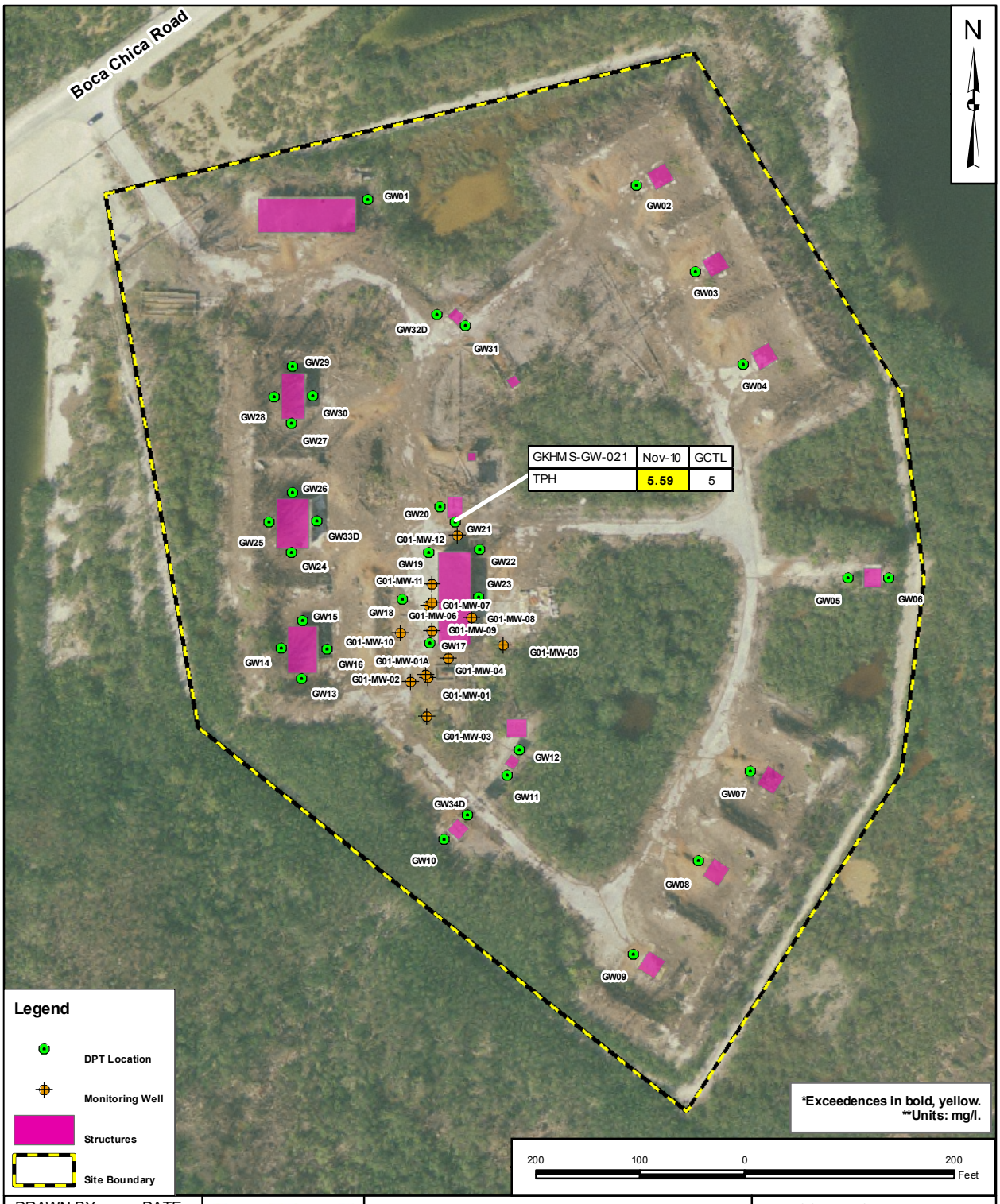
| DRAWN BY MJN | DATE 03-25-11 | **GROUNDWATER PESTICIDE/PCB ANALYTICAL RESULTS NOVEMBER 2010 AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY DGH | DATE 03-25-11 | | OWNER NUMBER — |
| REVISED BY — | DATE — | | APPROVED BY SSH / DATE 03-25-11 |
| SCALE AS NOTED | | | FIGURE NO. 8-3 / REV 1 |

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| DRAWN BY MJN | DATE 03-25-11 | **GROUNDWATER TPH ANALYTICAL RESULTS NOVEMBER 2010 AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY DGH | DATE 03-25-11 | | OWNER NUMBER — |
| REVISED BY — | DATE — | | APPROVED BY SSH / DATE 03-25-11 |
| SCALE AS NOTED | | | FIGURE NO. 8-4 / REV 0 |

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# APPENDIX A

# PHOTODOCUMENTATION LOB FOR PRELIMINARY ASSESSMENT

**Looking North Toward Generator, Ready and Assembly and Storage Buildings**

**Looking North Toward PAR 4 and Generator Building**

| | | | | |
|---|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | | | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY GB | DATE 03-24-11 | | **HISTORIC PHOTOS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | OWNER NUMBER — |
| REVISED BY — | DATE — | NAVFAC | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | | FIGURE NO. / REV 0 |

**Looking North at Launch Sites 4, 5 and 6**

**View of Generator Bldg., PAR 4 and Radar 5**

| | | | | |
|---|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | NAVFAC | **HISTORIC PHOTOS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY GB | DATE 03-24-11 | | | OWNER NUMBER — |
| REVISED BY — | DATE — | | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | | FIGURE NO. / REV 0 |

**Looking South to PAR 4, Generator Bldg. and Radar Towers 1 and 2 Feb 2009**

**Radar Tower 5 - Feb 2009**

| | | | | |
|---|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | NAVFAC | **HISTORIC PHOTOS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY GB | DATE 03-24-11 | | | OWNER NUMBER — |
| REVISED BY — | DATE — | | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | | FIGURE NO. / REV 0 |

**Former Transformer Location - Feb 2009**

**View of Lagoon Adjacent to Site - Feb 2009**

| | | | | |
|---|---|---|---|---|
| DRAWN BY: MJN | DATE: 03-24-11 | NAVFAC | **HISTORIC PHOTOS<br>AHMS GEIGER KEY<br>NAS KEY WEST<br>KEY WEST, FLORIDA** | CONTRACT NUMBER: CTO-JM16 |
| CHECKED BY: GB | DATE: 03-24-11 | | | OWNER NUMBER: — |
| REVISED BY: — | DATE: — | | | APPROVED BY: SSH / DATE: 03-24-11 |
| SCALE: AS NOTED | | | | FIGURE NO. / REV: 0 |

**Assembly & Storage Bldg - Oct, 2010**

**Abandoned Radar Tower 3 - Oct 2010**

| | | | | |
|---|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | NAVFAC | **HISTORIC PHOTOS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY GB | DATE 03-24-11 | | | OWNER NUMBER — |
| REVISED BY — | DATE — | | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | | FIGURE NO. / REV 0 |

**Current View of Launch Site 6 - Oct 2010**

**Debris Piled at Launch Site - Oct 2010**

| | | | | |
|---|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | NAVFAC | **HISTORIC PHOTOS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY GB | DATE 03-24-11 | | | OWNER NUMBER — |
| REVISED BY — | DATE — | | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | | FIGURE NO. / REV 0 |

**More Metal Debris on Site - Oct 2010**

**Stained Asphalt -Oct 2010**

| | | | | |
|---|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | NAVFAC | **HISTORIC PHOTOS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY GB | DATE 03-24-11 | | | OWNER NUMBER — |
| REVISED BY — | DATE — | | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | | FIGURE NO. / REV 0 |

View of 2000 gal. AST - Oct 2010

View of Missile Storage Bldg. -Oct 2010

| | | | | |
|---|---|---|---|---|
| DRAWN BY MJN | DATE 03-24-11 | NAVFAC | **HISTORIC PHOTOS AHMS GEIGER KEY NAS KEY WEST KEY WEST, FLORIDA** | CONTRACT NUMBER CTO-JM16 |
| CHECKED BY GB | DATE 03-24-11 | | | OWNER NUMBER — |
| REVISED BY — | DATE — | | | APPROVED BY SSH / DATE 03-24-11 |
| SCALE AS NOTED | | | | FIGURE NO. / REV 0 |

# APPENDIX B

# INTERVIEW

**Geiger Key Hawk Missile Site Visit – Summary**

This is a brief summary highlighting the environmental-related discussions held during a site visit to the former Geiger Key Hawk Missile Site, located on Geiger Key, Florida. In attendance were Ron Demes, Jim Brooks, and Bob Courtright from NAS Key West, a former employee who was stationed at the missile site when it was active, and Chuck Bryan. Although the former employee worked at the Hawk Missile sites for about a year, the activities observed by the former employee had been repeated many times before and (most likely) after. The former employee noted that the Army (and the people in the Army) tended to do the same things, over and over again. The information in this document was provided by the former employee based on his first-hand knowledge of operations at the site and discussions with other employees who worked at the site.

The former employee noted the pond to the west of the entrance gate received various parts, at least two vehicles, some electronics gear, and basically anything else that needed a quick disposal (out of sight) prior to any type of inspection. The former employee recalled several IG inspections taking place during the 1969-1970 timeframe. Employees would "scramble" just prior to each inspection to clean-up the site and make it look organized and free of old parts, non-functional, equipment, etc. In addition, supplies and equipment would sometimes be subject to these "convenient" disposal practices toward the end of the fiscal year, which would justify purchasing new equipment (and maintaining the same budgetary level) for the following fiscal year. These "unofficial" disposal practices only occurred when officers were not on site.

The former employee noted the septic system to the right just after entering the former Geiger Key Hawk Missile site. The only bathroom (or kitchen, for that matter) on site was located across the entrance road inside the "Ready Building" to the left, just past the entrance gate.

The former employee mentioned the radar towers – each tower had a different purpose. But each tower also held about 4 gallons of coolant for the electronic gear on the tower. The former employee also noted the most efficient way to replace the coolant was to allow the fluid to drain to the ground. In addition, maintenance and repair activities generally took place on the tower. Solvent disposal was most conveniently performed by tossing it over the side of the tower when a particular maintenance or repair activity was completed.

Each missile site contained two sheds where additional missiles were stored. These missiles were kept in "ready" condition should they need to be launched in a hurry. The Assembly and Maintenance Building was located next to one of the missile storage sheds. The former employee noted solvents were used extensively in the Assembly and Maintenance Building and (to a lesser extent) the missile storage sheds. There was an emphasis on keeping the missiles ready and clean. The former employee also noted that gloves were never worn when using solvents (the solvents were one of the best ways to keep employees' hands relatively clean).

The Generator Building housed two large generators supplying electricity to the site. The generators required a lot of attention to remain operational. Solvents were liberally used during the repairs and maintenance performed on the generators. The former employee specifically recalled "yellow liquid" constantly flowing from the generator building across the asphalt toward the berm. Trichloroethylene was used most extensively in the generator building. Staining in front of the generator building can be observed in a site photograph located on the "missiles in Key West" web site given at the end of this summary.

The former employee recalled the transformers formerly located adjacent to the Generator Building. The area still has a chain-link fence around it, but no transformers are currently located on site. There was a control center (the size of a small "shack") located behind the Generator Building. Maintenance trailers were also located behind the generator building.

The former employee recalled seeing oil on the standing water in the ponds. Oils (and other liquids) were often dumped into the ponds. The petroleum sheen would help control the mosquito population. The chemicals would also reduce the plant growth within the ponds – making it easier to keep them clear of any plants or trees. Thus, the employees felt it was to their overall benefit to put spent chemicals in the ponds. They would also use herbicides and manual removal techniques to control plant growth in the ponds and (more generally) on the whole site.

There is a "J Box" building adjacent to one of the ponds. The former employee recalled this building being painted more than once. When finished, the extra paint was put in a pond or on the ground. This was a standard procedure for paint disposal upon completion of any painting project on site.

The launch pads were a relatively clean part of the site – the missiles had to be ready for an immediate launch at all times. Maintenance or repairs on missiles were not performed on the pads.

The former employee recalled a rather humorous incident where liquid was discharged from the top of the CWAR tower and felt like a light rain on the person below. The point of this story being: the employees at the missile site would strictly follow procedures when officers (or other visitors) were on site – but they would "modify" their actions when left alone. This missile site (designated "Charlie Battery") and the one on the northern portion of Boca Chica Key (designated "Delta Battery") rarely received visitors as they were a little too far "out of the way" for officers to drop in unexpectedly. Thus, officers spent less time at these batteries, and more time at the one on Key West ("Bravo Battery" - just north of the Key West airport). Personnel were constantly shifting between Charlie and Delta Batteries, so everything the former employee described about the missile site on Geiger Key also applies to the one on Boca Chica Key. Personnel generally followed the most convenient method they could think of for disposal at Charlie and Delta Batteries when the Duty Officers were not around. Back then, there was very little environmental awareness and few laws governing proper disposal, so such practices seemed appropriate at the time.

More information on all of the Hawk Missile sites located on or near Key West can be found online at http://www.missilesofkeywest.com/.

| | |
|---|---|
| **From:** | Bryan, Chuck |
| **To:** | Stotler-Hardy, Shauna; Churchill, Peggy |
| **Subject:** | FW: Environmental Investigations at the Former Hawk Missile Sites, Charlie and Delta Batteries |
| **Date:** | Friday, March 05, 2010 10:29:48 AM |

---

FYI - bits of information coming in from the former workers. Just enjoy the reading for now; these should help you with your DQOs.

-----Original Message-----
From: Wes Guidry [mailto:wesguidry@suddenlink.net]
Sent: Thursday, March 04, 2010 8:11 PM
To: Bryan, Chuck
Subject: Re: Environmental Investigations at the Former Hawk Missile Sites, Charlie and Delta Batteries

some bits and pieces are coming in. I am trying to get them to talk. I will work on it.

> Back in the mid 70's when I was still a 16E, we had to wipe down the radars and launchers with a mixture of red hydraulic fluid and either, trichoethylene or trichloroethylene. Bad stuff either way. It made the equipment shine for "dog and pony" shows. the big wigs liked shiny equipment! I heard it was banned in the late 70's.
> - Steve

> I remberer wiping down the equipment with cherry juice. I think they stopped that in the 80's when they found it also rotted out some of the gaskets.
>
> Dave

| | |
|---|---|
| **From:** | Bryan, Chuck |
| **To:** | Stotler-Hardy, Shauna; Churchill, Peggy |
| **Subject:** | FW: Environmental Investigations at the Former Hawk Missile Sites, Charlie and Delta Batteries |
| **Date:** | Friday, March 05, 2010 10:30:06 AM |

---

-----Original Message-----
From: Wes Guidry [mailto:wesguidry@suddenlink.net]
Sent: Thursday, March 04, 2010 8:19 PM
To: Bryan, Chuck
Subject: Re: Environmental Investigations at the Former Hawk Missile Sites, Charlie and Delta Batteries

I remember working on the tower with the maintenance guy, and he drained a bunch of stuff from the illuminator. He said it was coolant, and let it run off the tower. Anybody know what that stuff was?

> glycol was used to cool the hipar.

The "cherry juice" is of interest to them. The mixture (what was the menu?) had some bad stuff in it

> the cherry juice or hydralic fluid was mil-H5606
> and then there was trychloroethylene. that was used
> to clean electronic components and chassis. Bad stuff.

| | |
|---|---|
| **From:** | Bryan, Chuck |
| **To:** | Stotler-Hardy, Shauna; Churchill, Peggy |
| **Subject:** | FW: Site Remediation Key West |
| **Date:** | Friday, March 05, 2010 10:30:55 AM |

---

**From:** Bob Campbell [mailto:bcampbell12333@yahoo.com]
**Sent:** Thursday, March 04, 2010 4:40 PM
**To:** Bryan, Chuck
**Subject:** Re: Site Remediation Key West

Chuck
I have taken part in a number of remediation efforts with the company I have worked with for 33 years. I am only too keenly aware of the complexities of that which was acceptable during the Cold War years and now. It was expedient back in those days I guess.
Contact me if I can be of further assistance.
-Bob

---

**From:** "Bryan, Chuck" <Chuck.Bryan@tetratech.com>
**To:** Bob Campbell <bcampbell12333@yahoo.com>
**Sent:** Thu, March 4, 2010 2:38:39 PM
**Subject:** RE: Site Remediation Key West

Bob,

Thank you very much for taking the time to provide us useful information to help us design our environmental sampling at the former Charlie and Delta batteries. We had not considered the potential asbestos issue - it is something we should probably look at. I recall Wes saying similar things about the solvent use.

We will include your information as part of our justification for the sampling design we end up using. Thank you again.

**Chuck Bryan** | **Project Manager**
Cell: 305.393.7109 | Direct: 803.641.4943 | Fax: 803.642.8454
chuck.bryan@tetratech.com
Tetra Tech, Inc. | 900 Trail Ridge Road | 3rd Floor | Aiken, SC 29803

Complex World | Clear Solutions
www.tetratech.com | www.ttnus.com

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From: Bob Campbell [mailto:bcampbell12333@yahoo.com]
Sent: Thursday, March 04, 2010 3:07 PM
To: Bryan, Chuck
Subject: Site Remediation Key West

Chuck
Wes Guidry forwarded you name and cover letter to me. I was stationed in Key West at the missile site by the airport (Bravo Battery) '70-'71. I am familiar with the (actual and probable) HAZMAT issues that might be encountered on any of the four battery locations.
Trichloroethylene, (TCE) was used for just about everything under the sun. Degreasing things was the most common application, and it was conducted over most of the positions formerly occupied by the radars and missiles.
Diesel fuel would have have been found in abundance in and around the generator buildings.
Transite (asbestos) walls may have been present in the generator buildings as well. Glycols (propylene and ethylene) would have been present there too in all likelihood.
As the equipment was run on 416 volts, 400 Hz, there were transformers present. PCBs were very often employed as heat-transfer media in those devices.
Asbestos floor tile was almost certainly employed in the "ready building" portion of the sites.
Only a guess on this, but I'm betting defoliants were used to keep the mangroves and weeds in check.
Lastly, there is the possibility of minute amounts of radioactivity due to the large vacuum tubes employed in the search radars. Microcurie amounts at best. Not sure of the isotope, but it may have been tritium (H3).
Having said all this, I'd bet very little of the contaminants remain because of many years of rainfall, and the water table being so close to the surface down there.
My background, beyond the time spent in the Army, included time in a nuclear medicine research lab, and 33 years in a chemical plant.

Bob Campbell
St. Louis, MO

# APPENDIX C

# GROUNDWATER LOG SHEETS

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-01-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-01 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | 4.08 |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | na |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | peristaltic |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/05/10 | 11:01 | 4.08 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/05/10 | 11:32 | 4.10 | 150.0 | Clear | None | 6.99 | 6.300 | 0.64 | 4.3 | 27.1 | -322.8 | 0 | N/A |
| 11/05/10 | 11:35 | 4.10 | 150.0 | Clear | None | 6.98 | 6.319 | 0.63 | 5.4 | 27.2 | -322.8 | 0 | N/A |
| 11/05/10 | 11:38 | 4.10 | 150.0 | Clear | None | 6.99 | 6.310 | 0.60 | 4.3 | 27.3 | -322.8 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:01 | 11:38 | 37 | 5.55 | Clear | None | 6.99 | 6.310 | 0.60 | 4.3 | 27.3 | -322.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/05/10 | 11:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-12 |
| ✓ | 11/05/10 | 11:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 11:40 | Pesticides | SW846 8081B | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 11:40 | PCBs | SW846 8082A | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 11:40 | TRPH | FL PRO | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-11 |
| ✓ | 11/05/10 | 11:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-12 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-01** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-01 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | na |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | na |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.99 | 6.310 | 0.60 | 4.3 | 27.3 | -322.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

develop well with mini Whale pump. Well develops clear, purge approximately 25 gallons

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-01A-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-01A | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.99 | 6.310 | 0.60 | 4.3 | 27.3 | -322.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/06/10 | 10:31 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:31 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:31 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:31 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:31 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-13 |
| ✓ | 11/06/10 | 10:31 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-14 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-01A** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-01A | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.99 | 6.310 | 0.60 | 4.3 | 27.3 | -322.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approximately 30 gallons from well. Well recharges slowly, but clears after development

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-02-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-02 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/05/10 | 9:52 | 2.85 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A |
| 11/05/10 | 10:23 | 3.87 | 150.0 | Clear | None | 6.97 | 4.185 | 1.47 | 2.9 | 28.6 | -301.4 | 0 | N/A |
| 11/05/10 | 10:27 | 3.87 | 150.0 | Clear | None | 6.97 | 4.283 | 1.32 | 3.2 | 28.6 | -301.7 | 0 | N/A |
| 11/05/10 | 10:31 | 3.87 | 150.0 | Clear | None | 6.97 | 4.272 | 1.25 | 1.23 | 28.5 | -301.9 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.97 | 4.272 | 1.25 | 1.23 | 28.5 | -301.9 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/05/10 | 10:35 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 10:35 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-12 |
| ✓ | 11/05/10 | 10:35 | PCBs | SW846 8082A | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 10:35 | Pesticides | SW846 8081B | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 10:35 | TRPH | FL PRO | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-11 |
| ✓ | 11/05/10 | 10:35 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-12 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-02** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-02 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.97 | 4.272 | 1.25 | 1.23 | 28.5 | -301.9 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

Purge approximately 25 gallons from well. Some organic debris removed. Well develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-03-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-03 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/06/10 | 9:15 | 2.88 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/06/10 | 9:48 | 2.85 | 150.0 | Clear | None | 6.87 | 6.984 | 0.90 | 2.9 | 26.4 | -196.0 | 0 | N/A |
| 11/06/10 | 9:51 | 2.19 | 150.0 | Clear | None | 6.88 | 7.012 | 0.75 | 4.3 | 26.4 | -197.5 | 0 | N/A |
| 11/06/10 | 9:54 | 2.19 | 150.0 | Clear | None | 6.88 | 7.024 | 0.69 | 5.4 | 26.4 | -201.2 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9:15 | 9:54 | 39 | 5.85 | Clear | None | 6.88 | 7.024 | 0.69 | 5.4 | 26.4 | -201.2 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/06/10 | 10:01 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:01 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:01 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:01 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:01 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 10:01 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-13 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-03** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-03 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | na |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | na |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | mini-whale pump |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.88 | 7.024 | 0.69 | 5.4 | 26.4 | -201.2 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purged approximately 20 gallons with mini-whale pump. Develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-04-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-04 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/05/10 | 8:46 | 3.45 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/05/10 | 9:17 | 3.45 | 150.0 | Clear | None | 6.88 | 9.608 | 0.96 | 4.5 | 26.6 | -323.0 | 0 | N/A |
| 11/05/10 | 9:20 | 3.49 | 150.0 | Clear | None | 6.88 | 9.608 | 0.82 | 6.5 | 26.7 | -321.4 | 0 | N/A |
| 11/05/10 | 9:24 | 3.49 | 150.0 | Clear | None | 6.88 | 9.608 | 0.82 | 6.5 | 26.7 | -321.4 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9:17 | 9:17 | 0 | 0.0 | Clear | None | 6.88 | 9.608 | 0.82 | 6.5 | 26.7 | -321.4 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/05/10 | 9:28 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-12 |
| ✓ | 11/05/10 | 9:28 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 9:28 | PCBs | SW846 8082A | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 9:28 | Pesticides | SW846 8081B | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 9:28 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-12 |
| ✓ | 11/05/10 | 9:28 | TRPH | FL PRO | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-11 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-04** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-04 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.88 | 9.608 | 0.82 | 6.5 | 26.7 | -321.4 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approximately 40 gallons from well. Much organic debris removed. Well does not develop clear and slow to recharge

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-05-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-05 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | MS/MSD |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.88 | 9.608 | 0.82 | 6.5 | 26.7 | -321.4 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/07/10 | 9:35 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD | ED00000142-14 |
| ✓ | 11/07/10 | 9:35 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 9 | Glass - Clear | 40ml vials | Run MS/MSD | ED00000142-14 |
| ✓ | 11/07/10 | 9:35 | PCBs | SW846 8082A | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD | ED00000142-14 |
| ✓ | 11/07/10 | 9:35 | Pesticides | SW846 8081B | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD | ED00000142-14 |
| ✓ | 11/07/10 | 9:35 | TRPH | FL PRO | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD | ED00000142-13 |
| ✓ | 11/07/10 | 9:35 | Metals | SW846 6020A | 4°C/HNO3 | 3 | Plastic - PE | 1L | Run MS/MSD | ED00000142-14 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-05** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-05 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.88 | 9.608 | 0.82 | 6.5 | 26.7 | -321.4 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approximately 25 gallons from well. Well develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-06-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-06 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | 3.62 |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | na |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | peristaltic |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/10 | 13:01 | 3.65 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/04/10 | 13:32 | 3.67 | 150.0 | Clear | Organic - strong | 6.97 | 2.758 | 1.04 | 5.4 | 30.8 | -331.1 | 0 | N/A |
| 11/04/10 | 13:36 | 3.67 | 150.0 | Clear | Organic - strong | 6.96 | 2.772 | 0.72 | 5.43 | 30.9 | -333.9 | 0 | N/A |
| 11/04/10 | 13:40 | 3.67 | 150.0 | Clear | Organic - strong | 6.96 | 2.770 | 0.65 | 3.3 | 31.0 | -334.5 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13:01 | 13:40 | 39 | 5.85 | Clear | Organic - strong | 6.96 | 2.770 | 0.65 | 3.3 | 31.0 | -334.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/04/10 | 13:45 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-10 |
| ✓ | 11/04/10 | 13:45 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 13:45 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 13:45 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 13:45 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 13:45 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-11 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-06** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-06 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | Organic - strong | 6.96 | 2.770 | 0.65 | 3.3 | 31.0 | -334.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approximately 20 gallons from well. Well develops clear, distinct fuel odor

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-07-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-07 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/06/10 | 10:57 | 4.12 | 150.0 | Cloudy | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/06/10 | 11:28 | 4.16 | 150.0 | Cloudy | None | 6.98 | 4.237 | 0.68 | 138 | 28.1 | -369.0 | 0 | N/A |
| 11/06/10 | 11:31 | 4.16 | 150.0 | Cloudy | None | 6.97 | 4.239 | 0.55 | 135 | 28.2 | -369.6 | 0 | N/A |
| 11/06/10 | 11:35 | 4.19 | 150.0 | Cloudy | None | 6.96 | 4.640 | 0.45 | 130 | 28.4 | -369.8 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Cloudy | None | 6.96 | 4.640 | 0.45 | 130 | 28.4 | -369.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/06/10 | 11:38 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-14 |
| ✓ | 11/06/10 | 11:38 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 11:38 | PCBs | SW846 8082A | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 11:38 | Pesticides | SW846 8081B | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 11:38 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 11:38 | TRPH | FL PRO | 4°C | 1 | Glass - Amber | 1L | None | ED00000142-13 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-07** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-07 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Cloudy | None | 6.96 | 4.640 | 0.45 | 130 | 28.4 | -369.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approximately 25 gallons from well. Well does not recharge quickly so used peristalitic pump to develop. Well develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-08-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-08 | Well Type: | Monitoring Well |
| QC Duplicate ID: | GKHMS-GW-FD04-1010 | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Cloudy | None | 6.96 | 4.640 | 0.45 | 130 | 28.4 | -369.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/07/10 | 11:15 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/07/10 | 11:15 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-14 |
| ✓ | 11/07/10 | 11:15 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/07/10 | 11:15 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/07/10 | 11:15 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-14 |
| ✓ | 11/07/10 | 11:15 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-13 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-08** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-08 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Cloudy | None | 6.96 | 4.640 | 0.45 | 130 | 28.4 | -369.8 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approxmiately 25 gallons from well. Well develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-09-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-09 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | 3.78 |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | na |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | peristaltic |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | B10036B |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/10 | 11:45 | 3.78 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/04/10 | 12:16 | 3.78 | 150.0 | Clear | None | 6.88 | 5.092 | 0.10 | 4.5 | 30.1 | -336.6 | 0 | N/A |
| 11/04/10 | 12:19 | 3.78 | 150.0 | Clear | None | 6.88 | 5.112 | 0.10 | 6.5 | 30.1 | -336.4 | 0 | N/A |
| 11/04/10 | 12:22 | 3.78 | 150.0 | Clear | None | 6.89 | 5.117 | 0.11 | 5.3 | 30.1 | -336.3 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:45 | 12:22 | 37 | 5.55 | Clear | None | 6.89 | 5.117 | 0.11 | 5.3 | 30.1 | -336.3 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/04/10 | 12:25 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 12:25 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-10 |
| ✓ | 11/04/10 | 12:25 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 12:25 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 12:25 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-11 |
| ✓ | 11/04/10 | 12:25 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-10 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-09** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-09 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.89 | 5.117 | 0.11 | 5.3 | 30.1 | -336.3 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purged approx 20 gallons with mini Whaler pump. Well develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-10-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-10 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | 2.95 |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | na |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | peristaltic |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/10 | 10:15 | 2.95 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/04/10 | 10:15 | 2.95 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/04/10 | 10:15 | 2.95 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/04/10 | 10:18 | 2.96 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/04/10 | 11:00 | 2.96 | 150.0 | Clear | None | 7.03 | 0.603 | 0.31 | 5.6 | 28.5 | -135.4 | 0 | N/A |
| 11/04/10 | 11:03 | 2.96 | 150.0 | Clear | None | 7.03 | 0.603 | 0.29 | 5.3 | 28.6 | -137.3 | 0 | N/A |
| 11/04/10 | 11:06 | 2.95 | 150.0 | Clear | None | 7.03 | 0.604 | 0.27 | 6.4 | 28.6 | -139.2 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:15 | 11:06 | 51 | 7.65 | Clear | None | 7.03 | 0.604 | 0.27 | 6.4 | 28.6 | -139.2 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/04/10 | 11:10 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-10 |
| ✓ | 11/04/10 | 11:10 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 11:10 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 11:10 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-10 |
| ✓ | 11/04/10 | 11:10 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-11 |
| ✓ | 11/04/10 | 11:10 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-10 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-10** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-10 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 7.03 | 0.604 | 0.27 | 6.4 | 28.6 | -139.2 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purged approximately 25 gallons with mini Whaler pump, well develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-11-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-11 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 7.03 | 0.604 | 0.27 | 6.4 | 28.6 | -139.2 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✘ | N/A | N/A | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 1 | Glass - Amber | 1L | None | N/A |
| ✘ | N/A | N/A | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | N/A |
| ✘ | N/A | N/A | PCBs | SW846 8082A | 4°C | 1 | Glass - Amber | 1L | None | N/A |
| ✘ | N/A | N/A | Pesticides | SW846 8081B | 4°C | 1 | Glass - Amber | 1L | None | N/A |
| ✘ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Amber | 1L | None | N/A |
| ✘ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |
| ✘ | N/A | N/A | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | N/A |

## General Notes

Approximately 0.09 ft of free product measured in well on Nov 6 and 7. Well was not sampled

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-11** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-11 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 7.03 | 0.604 | 0.27 | 6.4 | 28.6 | -139.2 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approximately 20 gallons from well. Well develops clear

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **G01-MW-12-1010** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-12 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/06/10 | 11:25 | 3.55 | 150.0 | Clear | None | 6.92 | 11.107 | 0.47 | 7.6 | 26.7 | -312.7 | 0 | N/A |
| 11/06/10 | 11:40 | 3.50 | 150.0 | Clear | None | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/06/10 | 12:21 | 3.55 | 150.0 | Clear | None | 6.92 | 11.110 | 0.57 | 6.4 | 26.7 | -312.8 | 0 | N/A |
| 11/06/10 | 12:28 | 3.55 | 150.0 | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/06/10 | 12:32 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-14 |
| ✓ | 11/06/10 | 12:32 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 12:32 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 12:32 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-14 |
| ✓ | 11/06/10 | 12:32 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-13 |
| ✓ | 11/06/10 | 12:32 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-14 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **DEV LOG - G01-MW-12** | Sampler: | Gary Braganza |
| Well ID: | G01-MW-12 | Well Type: | Monitoring Well |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

purge approximately 25 gallons from well. Well develops clear. Water has distinct odor

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-001-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW001 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✖ | N/A | N/A | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | N/A |
| ✖ | N/A | N/A | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | N/A |
| ✖ | N/A | N/A | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | N/A |
| ✖ | N/A | N/A | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | N/A |
| ✖ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-002-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW002 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 9:50 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 9:50 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/28/10 | 9:50 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 9:50 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-003-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW003 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 9:20 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/28/10 | 9:20 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 9:20 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 9:20 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-004-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW004 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 11:20 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/28/10 | 11:20 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/28/10 | 11:20 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 11:20 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-005-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW005 | Well Type: | Other Well Type |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 12:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/28/10 | 12:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 12:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 12:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/28/10 | 12:00 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 12:00 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-006-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW006 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 14:30 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/28/10 | 14:30 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 14:30 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/28/10 | 14:30 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-007-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW007 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 15:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/28/10 | 15:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/28/10 | 15:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/28/10 | 15:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-008-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW008 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 8:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/29/10 | 8:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 8:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/29/10 | 8:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-009-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW009 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 9:20 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 9:20 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/29/10 | 9:20 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/29/10 | 9:20 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-010-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW010 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 11:30 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/29/10 | 11:30 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 11:30 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 11:30 | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |
| ✓ | 10/29/10 | 11:30 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 11:30 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-011-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW011 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 10:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✓ | 10/29/10 | 10:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 10:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 10:40 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 10:40 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | N/A |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-012-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW012 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 10:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 10:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 10:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/29/10 | 10:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-013-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW013 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 13:50 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-2 |
| ✓ | 10/29/10 | 13:50 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 13:50 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-1 |
| ✓ | 10/29/10 | 13:50 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-1 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | ED00000142-1 |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-014-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW014 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 9:30 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/30/10 | 9:30 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/30/10 | 9:30 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/30/10 | 9:30 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-015-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW015 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 10:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/30/10 | 10:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/30/10 | 10:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/30/10 | 10:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-016-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW016 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 10:30 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/30/10 | 10:30 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/30/10 | 10:30 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/30/10 | 10:30 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-017-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW017 | Well Type: | Soil Boring |
| QC Duplicate ID: | GKHMS-GW-FD001-1010 | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 8:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-6 |
| ✓ | 11/02/10 | 8:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-5 |
| ✓ | 11/02/10 | 8:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-6 |
| ✓ | 11/02/10 | 8:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-6 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-018-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW018 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | MS/MSD |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 8:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | run ms/msd | ED00000142-6 |
| ✓ | 11/02/10 | 8:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | run ms/msd | ED00000142-5 |
| ✓ | 11/02/10 | 8:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | run ms/msd | ED00000142-6 |
| ✓ | 11/02/10 | 8:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | run ms/msd | ED00000142-6 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

Run MS/MSD

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-019-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW019 | Well Type: | Soil Boring |
| QC Duplicate ID: | GKHMS-GW-FD002-1010 | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 9:20 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-6 |
| ✓ | 11/02/10 | 9:20 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-6 |
| ✓ | 11/02/10 | 9:20 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-5 |
| ✓ | 11/02/10 | 9:20 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-6 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-020-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW020 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/01/10 | 10:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 10:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 11/01/10 | 10:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 11/01/10 | 10:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-021-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW021 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/01/10 | 11:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 11/01/10 | 11:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 11:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 11/01/10 | 11:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 11:00 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 11:00 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

fuel odor

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-022-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW022 | Well Type: | Soil Boring |
| QC Duplicate ID: | GKHMS-GW-FD003-1010 | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 10:50 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-5 |
| ✓ | 11/02/10 | 10:50 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-6 |
| ✓ | 11/02/10 | 10:50 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-6 |
| ✓ | 11/02/10 | 10:50 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-6 |
| ✓ | 11/02/10 | 10:50 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-6 |
| ✓ | 11/02/10 | 10:50 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-6 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-023-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW023 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 10:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-6 |
| ✓ | 11/02/10 | 10:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-6 |
| ✓ | 11/02/10 | 10:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-5 |
| ✓ | 11/02/10 | 10:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-6 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-024-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW024 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 13:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/30/10 | 13:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/30/10 | 13:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/30/10 | 13:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-025-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW025 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 11:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/30/10 | 11:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/30/10 | 11:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/30/10 | 11:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-026-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW026 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 10:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/31/10 | 10:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/31/10 | 10:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/31/10 | 10:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-027-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW027 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 12:20 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/31/10 | 12:20 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/31/10 | 12:20 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/31/10 | 12:20 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-028-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW028 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 15:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/31/10 | 15:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/31/10 | 15:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/31/10 | 15:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-029-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW029 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 13:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/31/10 | 13:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/31/10 | 13:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/31/10 | 13:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-030-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW030 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 11:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/31/10 | 11:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/31/10 | 11:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/31/10 | 11:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-031-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW031 | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/01/10 | 9:20 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 9:20 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 11/01/10 | 9:20 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 11/01/10 | 9:20 | PCBs | SW846 8082A | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 9:20 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 9:20 | Pesticides | SW846 8081B | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-032D-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW032D | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/01/10 | 8:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 11/01/10 | 8:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 11/01/10 | 8:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 11/01/10 | 8:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-033D-1010** | Sampler: | Gary Braganza |
| Well ID: | GKHMS-GW033D | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 10:00 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/31/10 | 10:00 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/31/10 | 10:00 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/31/10 | 10:00 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# GROUNDWATER SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



| | | | |
|---|---|---|---|
| Sample ID: | **GKHMS-GW-034D-1010** | Sampler: | Derrick Haltiwanger |
| Well ID: | GKHMS-GW034D | Well Type: | Soil Boring |
| QC Duplicate ID: | N/A | MS/MSD: | N/A |

## Well Information

| | | | |
|---|---|---|---|
| Well Diameter (in.) | N/A | Static Water Level (ft-BTOR) | N/A |
| Top of Screen (ft-BTOR) | N/A | H&S PID Monitor Reading (ppm) | N/A |
| Bottom of Screen (ft-BTOR) | N/A | Purge Method | Low flow - peristaltic |
| Total Depth of Well (ft-BTOR) | N/A | Sample Method | N/A |

## Equipment

| | | | | | |
|---|---|---|---|---|---|
| Water Quality Meter: | N/A | Pump Control Box: | N/A | Turbidity Meter: | N/A |

## Purge Information

| Date | Time | Level (ft-BTOR) | Rate (ml/min) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Final Purge / Sample Data

| Start Purge | End Purge | Duration (min.) | Total Vol. (L) | Color | Odor | pH (S.U.) | S.C. (mS/cm) | DO (mg/L) | Turbidity (NTUs) | Temp (ºC) | ORP (mV) | Salinity (%) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | Clear | None | 6.92 | 11.103 | 0.35 | 6.3 | 26.7 | -312.5 | 0 | N/A |

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 8:40 | TRPH | FL PRO | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-4 |
| ✓ | 10/30/10 | 8:40 | VOCs (low level analysis) | SW846 8260B | 4°C/HCL | 3 | Glass - Clear | 40ml vials | None | ED00000142-3 |
| ✓ | 10/30/10 | 8:40 | SVOCs (low level) and SIM PAHs | SW846 8720D/8270DSIM | 4°C | 2 | Glass - Amber | 1L | None | ED00000142-3 |
| ✓ | 10/30/10 | 8:40 | Metals | SW846 6020A | 4°C/HNO3 | 1 | Plastic - PE | 1L | None | ED00000142-3 |
| ✗ | N/A | N/A | B-Tec (BTEX) | B-Tec Field Screening | 4°C | 2 | Glass - Clear | 40ml vials | None | N/A |

## General Notes

None

# APPENDIX D

# SOIL LOG SHEETS

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-001-1010**
Location ID: GKHMS-SO001
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 8:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 8:00 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 8:00 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 8:00 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-002-1010**
Location ID: GKHMS-SO002
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/28/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 8:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 8:20 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 8:20 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 8:20 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-003-1010**
Location ID: GKHMS-SO003
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/28/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 8:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 8:40 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 8:40 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 8:40 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-004-1010**
Location ID: GKHMS-SO004
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/28/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 11:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-005-1010**
Location ID: GKHMS-SO005
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/28/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 9:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 9:00 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 9:00 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 9:00 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-006-1010**
Location ID: GKHMS-SO006
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/28/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/28/10 | 14:30 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-007-1010**
Location ID: GKHMS-SO007
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/28/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 9:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 9:20 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 9:20 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 9:20 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-008-1010**
Location ID: GKHMS-SO008
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/29/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 8:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-009-1010**
Location ID: GKHMS-SO009
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/29/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 9:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-010-1010**
Location ID: GKHMS-SO010
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/29/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 11:30 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-011-1010**
Location ID: GKHMS-SO011
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/29/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 9:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 9:40 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 9:40 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 9:40 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-012-1010**
Location ID: GKHMS-SO012
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/29/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 12:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 12:00 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 12:00 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 12:00 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-013-1010**
Location ID: GKHMS-SO013
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 10/29/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/29/10 | 13:50 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-014-1010**
Location ID: GKHMS-SO014
QC Duplicate ID: N/A

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 14:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 14:00 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 14:00 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 14:00 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-015-1010**
Location ID: GKHMS-SO015
QC Duplicate ID: N/A
Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 10:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-016-1010**
Location ID: GKHMS-SO016
QC Duplicate ID: N/A
Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 10:30 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-017-1010**
Location ID: GKHMS-SO017
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 10:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 10:00 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 10:00 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 10:00 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND
SO-FD001

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-018-1010**
Location ID: GKHMS-SO018
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 11:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 11:40 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-9 |
| ✓ | 11/02/10 | 11:40 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 11:40 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-9 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-019-1010**
Location ID: GKHMS-SO019
QC Duplicate ID: N/A

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 10:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 10:20 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 10:20 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 10:20 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-020-1010**
Location ID: GKHMS-SO020
QC Duplicate ID: N/A

Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/01/10 | 10:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-021-1010**
Location ID: GKHMS-SO021
QC Duplicate ID: GKHMS-SO-FD001-1010

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 11/02/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 10:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 10:40 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 10:40 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 10:40 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-022-1010**
Location ID: GKHMS-SO022
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 11:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 11:00 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 11:00 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 11:00 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-023-1010**
Location ID: GKHMS-SO023
QC Duplicate ID: N/A
Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 13:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 13:40 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 13:40 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 13:40 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-024-1010**
Location ID: GKHMS-SO024
QC Duplicate ID: N/A

Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/30/10 | 13:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-025-1010**
Location ID: GKHMS-SO025
QC Duplicate ID: N/A

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 11:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 11:20 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 11:20 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 11:20 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-026-1010**
Location ID: GKHMS-SO026
QC Duplicate ID: N/A
Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 10:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-027-1010**
Location ID: GKHMS-SO027
QC Duplicate ID: N/A

Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 12:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-028-1010**
Location ID: GKHMS-SO028
QC Duplicate ID: N/A

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 13:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 13:20 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 13:20 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 13:20 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-029-1010**
Location ID: GKHMS-SO029
QC Duplicate ID: N/A

Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 13:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-030-1010**
Location ID: GKHMS-SO030
QC Duplicate ID: N/A

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 12:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 12:40 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 12:40 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 12:40 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-031-1010**
Location ID: GKHMS-SO031
QC Duplicate ID: GKHMS-SO-FD002-1010

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | 11/02/10 | Concentration | Not known |
| Sample Source | Surface Soil-SS | Sample Data Type | Grab |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 11:40 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 11:40 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 11:40 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 11:40 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-032-1010**
Location ID: GKHMS-SO032
QC Duplicate ID: N/A

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 12:20 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 12:20 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 12:20 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 12:20 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

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# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-033-1010**
Location ID: GKHMS-SO033
QC Duplicate ID: N/A
Sampler: Derrick Haltiwanger
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 10/31/10 | 10:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✗ | N/A | N/A | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | N/A |
| ✗ | N/A | N/A | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | N/A |
| ✗ | N/A | N/A | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | N/A |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# SOIL LOG SAMPLE LOG SHEET

TETRA TECH NUS, Inc.

Event: Preliminary Site Assessment and Site Inspection - Site 22
Site Name: KEY WEST NAS - Site 22 - GKHMS
Project No: 112G02607.FI.FK (ED00000142)



Sample ID: **GKHMS-SO-034-1010**
Location ID: GKHMS-SO034
QC Duplicate ID: N/A

Sampler: Gary Braganza
MS/MSD: NA

## Sample Information

| | | | |
|---|---|---|---|
| Date | N/A | Concentration | None |
| Sample Source | None | Sample Data Type | None |

## Location Data

| | | | |
|---|---|---|---|
| Field GPS Northing | N/A | Field XY Coordinate System | N/A |
| Field GPS Easting | N/A | Field XY Datum | N/A |
| Field GPS Method | N/A | Update GIS with New Data? | N/A |

## Sample Details

| Date | Time | method | Monitor | Depth | Color | Notes |
|---|---|---|---|---|---|---|

## Laboratory Analysis

| Coll. | Date | Time | Description | Analysis | Preservative | No. | Type | Vol. | COC Notes | Chain No. |
|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | 11/02/10 | 13:00 | B-Tec (BTEX) | B-Tec Field Screening | 4°C/DI Water | 2 | Glass - Clear | 40 mL vial | None | N/A |
| ✓ | 11/02/10 | 13:00 | TRPH | FL PRO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | None | ED00000142-8 |
| ✓ | 11/02/10 | 13:00 | VOCs | SW846 8260B | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | None | ED00000142-7 |
| ✓ | 11/02/10 | 13:00 | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | SW846 8720D/8270DSIM/8082A/8081B/6010C | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | None | ED00000142-7 |

## Field Analysis

| USCS | Date | Time | Ambient Air Temp. | Water Bath Temp. | Gas Tech Tube Type | GasTech Tube Series | Tube Lot QC Number | Tube Lab Tracking | 50 Purge | 100 Purge | 200 Purge |
|---|---|---|---|---|---|---|---|---|---|---|---|

## General Notes

122-ND
133-ND

# APPENDIX E

# CHAIN OF CUSTODIES

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Derrick Haltiwanger |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 10/29/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-1 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-1** | **Lab Name** | Centauri Labs | **Relenquished By** | Derrick Haltiwanger |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 10/29/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 16:10 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 10/29/10 |
| | | | | **Time** | 17:10 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/10 | GKHMS-GW-002-1010 | 09:50 | SW846 6020A | Metals | GKHMS-GW002 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/10 | GKHMS-GW-002-1010 | 09:50 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW002 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/10 | GKHMS-GW-002-1010 | 09:50 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW002 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-003- | 09:20 | SW846 6020A | Metals | GKHMS- | GW | 4° | 1 | Plastic - | 1L | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | | | GW003 | | C/HNO3 | | PE | | |
| 10/28/10 | GKHMS-GW-003-1010 | 09:20 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW003 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-003-1010 | 09:20 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW003 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/10 | GKHMS-GW-004-1010 | 11:20 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW004 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/10 | GKHMS-GW-004-1010 | 11:20 | SW846 6020A | Metals | GKHMS-GW004 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |

**Page 1 of 3**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/10 | GKHMS-GW-004-1010 | 11:20 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW004 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-005-1010 | 12:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW005 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-005-1010 | 12:00 | SW846 6020A | Metals | GKHMS-GW005 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/10 | GKHMS-GW-005-1010 | 12:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW005 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/10 | GKHMS-GW-005-1010 | 12:00 | SW846 8082A | PCBs | GKHMS-GW005 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-005-1010 | 12:00 | SW846 8081B | Pesticides | GKHMS-GW005 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-006-1010 | 14:30 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW006 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/10 | GKHMS-GW-006-1010 | 14:30 | SW846 6020A | Metals | GKHMS-GW006 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/10 | GKHMS-GW-006-1010 | 14:30 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW006 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-007-1010 | 15:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW007 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| | GKHMS- | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/10 | GW-007-1010 | 15:40 | SW846 6020A | Metals | GKHMS-GW007 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/10 | GKHMS-GW-007-1010 | 15:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW007 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-TB-01 | 08:00 | SW846 8260B | VOCs (low level analysis) | QC | AQ | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 10/29/10 | GKHMS-GW-008-1010 | 08:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW008 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/10 | GKHMS-GW-008-1010 | 08:40 | SW846 6020A | Metals | GKHMS-GW008 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/10 | GKHMS-GW-008-1010 | 08:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW008 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-009-1010 | 09:20 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW009 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-009-1010 | 09:20 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW009 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/10 | GKHMS-GW-009-1010 | 09:20 | SW846 6020A | Metals | GKHMS-GW009 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/10 | GKHMS-GW-010-1010 | 11:30 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW010 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |

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Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/29/10 | GKHMS-GW-010-1010 | 11:30 | SW846 6020A | Metals | GKHMS-GW010 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/10 | GKHMS-GW-010-1010 | 11:30 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW010 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-010-1010 | 11:30 | SW846 8082A | PCBs | GKHMS-GW010 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-010-1010 | 11:30 | SW846 8081B | Pesticides | GKHMS-GW010 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-011-1010 | 10:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW011 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/10 | GKHMS-GW-011-1010 | 10:40 | SW846 6020A | Metals | GKHMS-GW011 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/10 | GKHMS-GW-011-1010 | 10:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW011 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-011-1010 | 10:40 | SW846 8082A | PCBs | GKHMS-GW011 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-011-1010 | 10:40 | SW846 8081B | Pesticides | GKHMS-GW011 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-012-1010 | 10:00 | SW846 6020A | Metals | GKHMS-GW012 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| | GKHMS- | | SW846 | SVOCs (low | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/29/10 | GW-012-1010 | 10:00 | 8720D/8270DSIM | level) and SIM PAHs | GKHMS-GW012 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-012-1010 | 10:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW012 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/10 | GKHMS-GW-013-1010 | 13:50 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW013 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/10 | GKHMS-GW-013-1010 | 13:50 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW013 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-013-1010 | 13:50 | SW846 6020A | Metals | GKHMS-GW013 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |

**Page 3 of 3**

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Derrick Haltiwanger |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 10/29/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-2 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-2** | **Lab Name** | Accutest Laboratories SE | **Relenquished By** | Derrick Haltiwanger |
| **Carrier** | Federal Express | **Address** | 4405 Vineland Road C15 | **Date** | 10/29/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Orlando, FL 32811-7363 | **Time** | 16:12 |
| | | **Lab Contact** | Heather Wandry | **Received By:** | Federal Express |
| | | **Lab Telephone** | 407-425-6700 | **Date** | 10/29/10 |
| | | | | **Time** | 17:12 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/10 | GKHMS-GW-002-1010 | 09:50 | FL PRO | TRPH | GKHMS-GW002 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-003-1010 | 09:20 | FL PRO | TRPH | GKHMS-GW003 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-004-1010 | 11:20 | FL PRO | TRPH | GKHMS-GW004 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-005-1010 | 12:00 | FL PRO | TRPH | GKHMS-GW005 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-006-1010 | 14:30 | FL PRO | TRPH | GKHMS-GW006 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/10 | GKHMS-GW-007- | 15:40 | FL PRO | TRPH | GKHMS- | GW | 4°C | 2 | Glass - | 1L | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | | | GW007 | | | | Amber | | |
| 10/29/10 | GKHMS-GW-008-1010 | 08:40 | FL PRO | TRPH | GKHMS-GW008 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-009-1010 | 09:20 | FL PRO | TRPH | GKHMS-GW009 | GW | 4°C | 2 | Glass - Amber | 1L | |

**Page 1 of 2**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/29/10 | GKHMS-GW-012-1010 | 10:00 | FL PRO | TRPH | GKHMS-GW012 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/10 | GKHMS-GW-013-1010 | 13:50 | FL PRO | TRPH | GKHMS-GW013 | GW | 4°C | 2 | Glass - Amber | 1L | |

**Page 2 of 2**

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/1/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-3 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-3** | **Lab Name** | Centauri Labs | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 11/01/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 16:30 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 11/1/10 |
| | | | | **Time** | 17:00 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/10 | GKHMS-GW-014-1010 | 09:30 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW014 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/10 | GKHMS-GW-014-1010 | 09:30 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW014 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-014-1010 | 09:30 | SW846 6020A | Metals | GKHMS-GW014 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/10 | GKHMS-GW-015-1010 | 10:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW015 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| | GKHMS- | | SW846 | SVOCs (low | GKHMS- | | | | Glass - | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/10 | GW-015-1010 | 10:00 | 8720D/8270DSIM | level) and SIM PAHs | GW015 | GW | 4°C | 2 | Amber | 1L | |
| 10/30/10 | GKHMS-GW-015-1010 | 10:00 | SW846 6020A | Metals | GKHMS-GW015 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/10 | GKHMS-GW-016-1010 | 10:30 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW016 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/10 | GKHMS-GW-016-1010 | 10:30 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW016 | GW | 4°C | 2 | Glass - Amber | 1L | |

**Page 1 of 4**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/10 | GKHMS-GW-016-1010 | 10:30 | SW846 6020A | Metals | GKHMS-GW016 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/10 | GKHMS-GW-024-1010 | 13:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW024 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/10 | GKHMS-GW-024-1010 | 13:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW024 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-024-1010 | 13:00 | SW846 6020A | Metals | GKHMS-GW024 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/10 | GKHMS-GW-025-1010 | 11:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW025 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/10 | GKHMS-GW-025-1010 | 11:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW025 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-025-1010 | 11:40 | SW846 6020A | Metals | GKHMS-GW025 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/10 | GKHMS-GW-034D-1010 | 08:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW034D | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/10 | GKHMS-GW-034D-1010 | 08:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW034D | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-034D-1010 | 08:40 | SW846 6020A | Metals | GKHMS-GW034D | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| | | | | VOCs | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/10 | GKHMS-TB-02* | 08:00 | SW846 8260B | (low level analysis) | QC | AQ | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 10/31/10 | GKHMS-GW-026-1010 | 10:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW026 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/10 | GKHMS-GW-026-1010 | 10:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW026 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-026-1010 | 10:40 | SW846 6020A | Metals | GKHMS-GW026 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/10 | GKHMS-GW-027-1010 | 12:20 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW027 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/10 | GKHMS-GW-027-1010 | 12:20 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW027 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-027-1010 | 12:20 | SW846 6020A | Metals | GKHMS-GW027 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/10 | GKHMS-GW-028-1010 | 15:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW028 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/10 | GKHMS-GW-028-1010 | 15:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW028 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-028-1010 | 15:00 | SW846 6020A | Metals | GKHMS-GW028 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |

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Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/31/10 | GKHMS-GW-029-1010 | 13:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW029 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/10 | GKHMS-GW-029-1010 | 13:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW029 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-029-1010 | 13:00 | SW846 6020A | Metals | GKHMS-GW029 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/10 | GKHMS-GW-030-1010 | 11:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW030 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/10 | GKHMS-GW-030-1010 | 11:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW030 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-030-1010 | 11:40 | SW846 6020A | Metals | GKHMS-GW030 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/10 | GKHMS-GW-033D-1010 | 10:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW033D | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/10 | GKHMS-GW-033D-1010 | 10:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW033D | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-033D-1010 | 10:00 | SW846 6020A | Metals | GKHMS-GW033D | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/1/10 | GKHMS-GW-020-1010 | 10:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW020 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| | | | | SVOCs | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/1/10 | GKHMS-GW-020-1010 | 10:00 | SW846 8720D/8270DSIM | (low level) and SIM PAHs | GKHMS-GW020 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-020-1010 | 10:00 | SW846 6020A | Metals | GKHMS-GW020 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/1/10 | GKHMS-GW-021-1010 | 11:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW021 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/1/10 | GKHMS-GW-021-1010 | 11:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW021 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-021-1010 | 11:00 | SW846 6020A | Metals | GKHMS-GW021 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/1/10 | GKHMS-GW-021-1010 | 11:00 | SW846 8082A | PCBs | GKHMS-GW021 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-021-1010 | 11:00 | SW846 8081B | Pesticides | GKHMS-GW021 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-031-1010 | 09:20 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW031 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/1/10 | GKHMS-GW-031-1010 | 09:20 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW031 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-031-1010 | 09:20 | SW846 6020A | Metals | GKHMS-GW031 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/1/10 | GKHMS-GW-031-1010 | 09:20 | SW846 8082A | PCBs | GKHMS-GW031 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-031-1010 | 09:20 | SW846 8081B | Pesticides | GKHMS-GW031 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-032D-1010 | 08:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW032D | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/1/10 | GKHMS-GW-032D-1010 | 08:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW032D | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-032D-1010 | 08:40 | SW846 6020A | Metals | GKHMS-GW032D | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |

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General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/1/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-4 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-4** | **Lab Name** | Accutest Laboratories SE | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 4405 Vineland Road C15 | **Date** | 11/01/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Orlando, FL 32811-7363 | **Time** | 16:32 |
| | | **Lab Contact** | Heather Wandry | **Received By:** | Federal Express |
| | | **Lab Telephone** | 407-425-6700 | **Date** | 11/1/10 |
| | | | | **Time** | 17:00 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/10 | GKHMS-GW-014-1010 | 09:30 | FL PRO | TRPH | GKHMS-GW014 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-015-1010 | 10:00 | FL PRO | TRPH | GKHMS-GW015 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-016-1010 | 10:30 | FL PRO | TRPH | GKHMS-GW016 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-024-1010 | 13:00 | FL PRO | TRPH | GKHMS-GW024 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/10 | GKHMS-GW-025-1010 | 11:40 | FL PRO | TRPH | GKHMS-GW025 | GW | 4°C | 2 | Glass - Amber | 1L | |
| | GKHMS-GW- | | | | GKHMS- | | | | Glass - | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/10 | 034D-1010 | 08:40 | FL PRO | TRPH | GW034D | GW | 4°C | 2 | Amber | 1L | |
| 10/31/10 | GKHMS-GW-026-1010 | 10:40 | FL PRO | TRPH | GKHMS-GW026 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-027-1010 | 12:20 | FL PRO | TRPH | GKHMS-GW027 | GW | 4°C | 2 | Glass - Amber | 1L | |

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Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/31/10 | GKHMS-GW-028-1010 | 15:00 | FL PRO | TRPH | GKHMS-GW028 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-029-1010 | 13:00 | FL PRO | TRPH | GKHMS-GW029 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-030-1010 | 11:40 | FL PRO | TRPH | GKHMS-GW030 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/10 | GKHMS-GW-033D-1010 | 10:00 | FL PRO | TRPH | GKHMS-GW033D | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-020-1010 | 10:00 | FL PRO | TRPH | GKHMS-GW020 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-021-1010 | 11:00 | FL PRO | TRPH | GKHMS-GW021 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-031-1010 | 09:20 | FL PRO | TRPH | GKHMS-GW031 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/1/10 | GKHMS-GW-032D-1010 | 08:40 | FL PRO | TRPH | GKHMS-GW032D | GW | 4°C | 2 | Glass - Amber | 1L | |

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General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/2/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-5 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-5** | **Lab Name** | Accutest Laboratories SE | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 4405 Vineland Road C15 | **Date** | 11/02/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Orlando, FL 32811-7363 | **Time** | 15:30 |
| | | **Lab Contact** | Heather Wandry | **Received By:** | Federal Express |
| | | **Lab Telephone** | 407-425-6700 | **Date** | 11/2/10 |
| | | | | **Time** | 16:30 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-GW-017-1010 | 08:40 | FL PRO | TRPH | GKHMS-GW017 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-018-1010 | 08:00 | FL PRO | TRPH | GKHMS-GW018 | GW | 4°C | 2 | Glass - Amber | 1L | run ms/msd |
| 11/2/10 | GKHMS-GW-019-1010 | 09:20 | FL PRO | TRPH | GKHMS-GW019 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-022-1010 | 10:50 | FL PRO | TRPH | GKHMS-GW022 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-023-1010 | 10:00 | FL PRO | TRPH | GKHMS-GW023 | GW | 4°C | 2 | Glass - Amber | 1L | |
| | GKHMS-GW- | | | | | | | | Glass - | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | FD001-1010 | 00:00 | FL PRO | TRPH | QC | GW | 4°C | 2 | Amber | 1L | |
| 11/2/10 | GKHMS-GW-FD002-1010 | 00:00 | FL PRO | TRPH | QC | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-FD003-1010 | 00:00 | FL PRO | TRPH | QC | GW | 4°C | 2 | Glass - Amber | 1L | |

**Page 1 of 1**

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/2/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-6 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-6** | **Lab Name** | Centauri Labs | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 11/02/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 15:32 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 11/2/10 |
| | | | | **Time** | 16:32 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/1/10 | GKHMS-TB-03 | 08:00 | SW846 8260B | VOCs (low level analysis) | QC | AQ | 4° C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 11/2/10 | GKHMS-GW-017-1010 | 08:40 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW017 | GW | 4° C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/2/10 | GKHMS-GW-017-1010 | 08:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW017 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-017-1010 | 08:40 | SW846 6020A | Metals | GKHMS-GW017 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| | GKHMS- | | | VOCs | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GW-018-1010 | 08:00 | SW846 8260B | (low level analysis) | GKHMS-GW018 | GW | 4° C/HCL | 3 | Glass - Clear | 40ml vials | run ms/msd |
| 11/2/10 | GKHMS-GW-018-1010 | 08:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW018 | GW | 4°C | 2 | Glass - Amber | 1L | run ms/msd |
| 11/2/10 | GKHMS-GW-018-1010 | 08:00 | SW846 6020A | Metals | GKHMS-GW018 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | run ms/msd |
| 11/2/10 | GKHMS-GW-019-1010 | 09:20 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW019 | GW | 4° C/HCL | 3 | Glass - Clear | 40ml vials | |

**Page 1 of 3**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-GW-019-1010 | 09:20 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW019 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-019-1010 | 09:20 | SW846 6020A | Metals | GKHMS-GW019 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/2/10 | GKHMS-GW-022-1010 | 10:50 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW022 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/2/10 | GKHMS-GW-022-1010 | 10:50 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW022 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-022-1010 | 10:50 | SW846 6020A | Metals | GKHMS-GW022 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/2/10 | GKHMS-GW-022-1010 | 10:50 | SW846 8082A | PCBs | GKHMS-GW022 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-022-1010 | 10:50 | SW846 8081B | Pesticides | GKHMS-GW022 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-023-1010 | 10:00 | SW846 8260B | VOCs (low level analysis) | GKHMS-GW023 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/2/10 | GKHMS-GW-023-1010 | 10:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | GKHMS-GW023 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-023-1010 | 10:00 | SW846 6020A | Metals | GKHMS-GW023 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/2/10 | GKHMS-GW-FD001-1010 | 00:00 | SW846 8260B | VOCs (low level analysis) | QC | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/2/10 | GKHMS-GW-FD001- | 00:00 | SW846 6020A | Metals | QC | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | | | | | | | | | |
| 11/2/10 | GKHMS-GW-FD001-1010 | 00:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | QC | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-FD002-1010 | 00:00 | SW846 8260B | VOCs (low level analysis) | QC | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/2/10 | GKHMS-GW-FD002-1010 | 00:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | QC | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-FD002-1010 | 00:00 | SW846 6020A | Metals | QC | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/2/10 | GKHMS-GW-FD003-1010 | 00:00 | SW846 6020A | Metals | QC | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/2/10 | GKHMS-GW-FD003-1010 | 00:00 | SW846 8260B | VOCs (low level analysis) | QC | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/2/10 | GKHMS-GW-FD003-1010 | 00:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | QC | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/2/10 | GKHMS-GW-FD003-1010 | 00:00 | SW846 8081B | Pesticides | QC | GW | 4°C | 2 | Glass - Amber | 1L | |

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-GW-FD003-1010 | 00:00 | SW846 8082A | PCBs | QC | GW | 4°C | 2 | Glass - Amber | 1L | |

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General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/3/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-7 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-7** | **Lab Name** | Centauri Labs | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 11/03/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 15:08 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 11/3/10 |
| | | | | **Time** | 16:08 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements |
|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-001-1010 | 08:00 | SW846 8260B | VOCs | GKHMS-SO001 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-001-1010 | 08:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO001 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-002-1010 | 08:20 | SW846 8260B | VOCs | GKHMS-SO002 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-002-1010 | 08:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO002 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-003-1010 | 08:40 | SW846 8260B | VOCs | GKHMS-SO003 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-003-1010 | 08:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO003 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-005-1010 | 09:00 | SW846 8260B | VOCs | GKHMS-SO005 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-005-1010 | 09:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO005 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |

**Page 1 of 3**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements |
|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-007-1010 | 09:20 | SW846 8260B | VOCs | GKHMS-SO007 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-007-1010 | 09:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO007 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-011-1010 | 09:40 | SW846 8260B | VOCs | GKHMS-SO011 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-011-1010 | 09:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO011 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-012-1010 | 12:00 | SW846 8260B | VOCs | GKHMS-SO012 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-012-1010 | 12:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO012 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-014-1010 | 14:00 | SW846 8260B | VOCs | GKHMS-SO014 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-014-1010 | 14:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO014 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-017-1010 | 10:00 | SW846 8260B | VOCs | GKHMS-SO017 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-017-1010 | 10:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO017 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | cap |
| 11/2/10 | GKHMS-SO-019-1010 | 10:20 | SW846 8260B | VOCs | GKHMS-SO019 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-019-1010 | 10:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO019 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-021-1010 | 10:40 | SW846 8260B | VOCs | GKHMS-SO021 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-021-1010 | 10:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO021 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-022-1010 | 11:00 | SW846 8260B | VOCs | GKHMS-SO022 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-022-1010 | 11:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO022 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-023-1010 | 13:40 | SW846 8260B | VOCs | GKHMS-SO023 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-023-1010 | 13:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO023 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-025-1010 | 11:20 | SW846 8260B | VOCs | GKHMS-SO025 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-025-1010 | 11:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO025 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements |
|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-028-1010 | 13:20 | SW846 8260B | VOCs | GKHMS-SO028 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-028-1010 | 13:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO028 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-030-1010 | 12:40 | SW846 8260B | VOCs | GKHMS-SO030 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-030-1010 | 12:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO030 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-031-1010 | 11:40 | SW846 8260B | VOCs | GKHMS-SO031 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-031-1010 | 11:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO031 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-032-1010 | 12:20 | SW846 8260B | VOCs | GKHMS-SO032 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-032-1010 | 12:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO032 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-034-1010 | 13:00 | SW846 8260B | VOCs | GKHMS-SO034 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-034-1010 | 13:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO034 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | cap |
| 11/2/10 | GKHMS-SO-FD002-1010 | 00:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | QC | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |
| 11/2/10 | GKHMS-SO-FD002-1010 | 00:00 | SW846 8260B | VOCs | QC | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-FDOO1-1010 | 00:00 | SW846 8260B | VOCs | QC | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-FDOO1-1010 | 00:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | QC | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |



General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/3/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-8 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-8** | **Lab Name** | Accutest Laboratories SE | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 4405 Vineland Road C15 | **Date** | 11/03/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Orlando, FL 32811-7363 | **Time** | 15:12 |
| | | **Lab Contact** | Heather Wandry | **Received By:** | Federal Express |
| | | **Lab Telephone** | 407-425-6700 | **Date** | 11/3/10 |
| | | | | **Time** | 16:12 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-001-1010 | 08:00 | FL PRO | TRPH | GKHMS-SO001 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-002-1010 | 08:20 | FL PRO | TRPH | GKHMS-SO002 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-003-1010 | 08:40 | FL PRO | TRPH | GKHMS-SO003 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-005- | 09:00 | FL PRO | TRPH | GKHMS- | SO | 4°C | 1 | Glass - | 4 oz. wide-mouth | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | | | SO005 | | | | Clear | w/Teflon cap | |
| 11/2/10 | GKHMS-SO-007-1010 | 09:20 | FL PRO | TRPH | GKHMS-SO007 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-011-1010 | 09:40 | FL PRO | TRPH | GKHMS-SO011 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-012-1010 | 12:00 | FL PRO | TRPH | GKHMS-SO012 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-014-1010 | 14:00 | FL PRO | TRPH | GKHMS-SO014 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |

**Page 1 of 2**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-017-1010 | 10:00 | FL PRO | TRPH | GKHMS-SO017 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-018-1010 | 11:40 | FL PRO | TRPH | GKHMS-SO018 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-019-1010 | 10:20 | FL PRO | TRPH | GKHMS-SO019 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-021-1010 | 10:40 | FL PRO | TRPH | GKHMS-SO021 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-022-1010 | 11:00 | FL PRO | TRPH | GKHMS-SO022 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-023-1010 | 13:40 | FL PRO | TRPH | GKHMS-SO023 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-025-1010 | 11:20 | FL PRO | TRPH | GKHMS-SO025 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-028-1010 | 13:20 | FL PRO | TRPH | GKHMS-SO028 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-030-1010 | 12:40 | FL PRO | TRPH | GKHMS-SO030 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-031-1010 | 11:40 | FL PRO | TRPH | GKHMS-SO031 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-032-1010 | 12:20 | FL PRO | TRPH | GKHMS-SO032 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-034-1010 | 13:00 | FL PRO | TRPH | GKHMS-SO034 | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-FD002-1010 | 00:00 | FL PRO | TRPH | QC | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11/2/10 | GKHMS-SO-FDOO1-1010 | 00:00 | FL PRO | TRPH | QC | SO | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |

**Page 2 of 2**

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/3/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-9 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-9** | **Lab Name** | Centauri Labs | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 11/03/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 15:14 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 11/3/10 |
| | | | | **Time** | 16:14 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements |
|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | GKHMS-SO-018-1010 | 11:40 | SW846 8260B | VOCs | GKHMS-SO018 | SO | 4° C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) |
| 11/2/10 | GKHMS-SO-018-1010 | 11:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | GKHMS-SO018 | SO | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap |

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/4/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-10 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-10** | **Lab Name** | Centauri Labs | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 11/04/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 15:13 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 11/4/10 |
| | | | | **Time** | 16:13 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/4/10 | G01-MW-06-1010 | 13:45 | SW846 8260B | VOCs (low level analysis) | G01-MW-06 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/4/10 | G01-MW-06-1010 | 13:45 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-06 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-06-1010 | 13:45 | SW846 8082A | PCBs | G01-MW-06 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-06-1010 | 13:45 | SW846 8081B | Pesticides | G01-MW-06 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW- | 13:45 | SW846 6020A | Metals | G01-MW- | GW | 4° | 1 | Plastic - | 1L | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 06-1010 | | | | 06 | | C/HNO3 | | PE | | |
| 11/4/10 | G01-MW-09-1010 | 12:25 | SW846 8260B | VOCs (low level analysis) | G01-MW-09 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/4/10 | G01-MW-09-1010 | 12:25 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-09 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-09-1010 | 12:25 | SW846 8082A | PCBs | G01-MW-09 | GW | 4°C | 2 | Glass - Amber | 1L | |

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Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/4/10 | G01-MW-09-1010 | 12:25 | SW846 8081B | Pesticides | G01-MW-09 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-09-1010 | 12:25 | SW846 6020A | Metals | G01-MW-09 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/4/10 | G01-MW-10-1010 | 11:10 | SW846 8260B | VOCs (low level analysis) | G01-MW-10 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/4/10 | G01-MW-10-1010 | 11:10 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-10 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-10-1010 | 11:10 | SW846 8082A | PCBs | G01-MW-10 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-10-1010 | 11:10 | SW846 8081B | Pesticides | G01-MW-10 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-10-1010 | 11:10 | SW846 6020A | Metals | G01-MW-10 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/4/10 | GKHMS-TB-04 | 00:00 | SW846 8260B | VOCs (low level analysis) | QC | AQ | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

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General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/5/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-11 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-11** | **Lab Name** | Accutest Laboratories SE | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 4405 Vineland Road C15 | **Date** | 11/05/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Orlando, FL 32811-7363 | **Time** | 13:21 |
| | | **Lab Contact** | Heather Wandry | **Received By:** | Federal Express |
| | | **Lab Telephone** | 407-425-6700 | **Date** | 11/5/10 |
| | | | | **Time** | 15:21 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/4/10 | G01-MW-06-1010 | 13:45 | FL PRO | TRPH | G01-MW-06 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-09-1010 | 12:25 | FL PRO | TRPH | G01-MW-09 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/4/10 | G01-MW-10-1010 | 11:10 | FL PRO | TRPH | G01-MW-10 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-01-1010 | 11:40 | FL PRO | TRPH | G01-MW-01 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-02-1010 | 10:35 | FL PRO | TRPH | G01-MW-02 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-04- | 09:28 | FL PRO | TRPH | G01- | GW | 4°C | 1 | Glass - | 1L | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | | | MW-04 | | | | Amber | | |

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/5/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-12 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-12** | **Lab Name** | Centauri Labs | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 11/05/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 13:26 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 11/5/10 |
| | | | | **Time** | 15:26 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/5/10 | G01-MW-01-1010 | 11:40 | SW846 8260B | VOCs (low level analysis) | G01-MW-01 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/5/10 | G01-MW-01-1010 | 11:40 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-01 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-01-1010 | 11:40 | SW846 8082A | PCBs | G01-MW-01 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-01-1010 | 11:40 | SW846 8081B | Pesticides | G01-MW-01 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW- | 11:40 | SW846 6020A | Metals | G01-MW- | GW | 4° | 1 | Plastic - | 1L | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 01-1010 | | | | 01 | | C/HNO3 | | PE | | |
| 11/5/10 | G01-MW-02-1010 | 10:35 | SW846 8260B | VOCs (low level analysis) | G01-MW-02 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/5/10 | G01-MW-02-1010 | 10:35 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-02 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-02-1010 | 10:35 | SW846 8082A | PCBs | G01-MW-02 | GW | 4°C | 1 | Glass - Amber | 1L | |

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Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/5/10 | G01-MW-02-1010 | 10:35 | SW846 8081B | Pesticides | G01-MW-02 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-02-1010 | 10:35 | SW846 6020A | Metals | G01-MW-02 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/5/10 | G01-MW-04-1010 | 09:28 | SW846 8260B | VOCs (low level analysis) | G01-MW-04 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/5/10 | G01-MW-04-1010 | 09:28 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-04 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-04-1010 | 09:28 | SW846 8082A | PCBs | G01-MW-04 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-04-1010 | 09:28 | SW846 8081B | Pesticides | G01-MW-04 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/5/10 | G01-MW-04-1010 | 09:28 | SW846 6020A | Metals | G01-MW-04 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/5/10 | GKHMS-TB-05 | 00:00 | SW846 8260B | VOCs (low level analysis) | QC | AQ | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

Page 2 of 2

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/8/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-13 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-13** | **Lab Name** | Accutest Laboratories SE | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 4405 Vineland Road C15 | **Date** | 11/08/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Orlando, FL 32811-7363 | **Time** | 14:55 |
| | | **Lab Contact** | Heather Wandry | **Received By:** | Federal Express |
| | | **Lab Telephone** | 407-425-6700 | **Date** | 11/8/10 |
| | | | | **Time** | 15:55 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/6/10 | G01-MW-01A-1010 | 10:31 | FL PRO | TRPH | G01-MW-01A | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-03-1010 | 10:01 | FL PRO | TRPH | G01-MW-03 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-07-1010 | 11:38 | FL PRO | TRPH | G01-MW-07 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-12-1010 | 12:32 | FL PRO | TRPH | G01-MW-12 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/7/10 | G01-MW-05-1010 | 09:35 | FL PRO | TRPH | G01-MW-05 | GW | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/7/10 | G01-MW-08-1010 | 11:15 | FL PRO | TRPH | G01-MW-08 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/7/10 | GKHMS-GW-FD04-1010 | 00:00 | FL PRO | TRPH | QC | GW | 4°C | 1 | Glass - Amber | 1L | |

General Observations and Notes

No Notes

- End of Report -

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

### Project Information

| | | | | | |
|---|---|---|---|---|---|
| **Facility Name** | KEY WEST NAS | **Project Manager (PM)** | Shauna Stotler-Hardy | **Created By** | Gary Braganza |
| **TtNUS Project #** | 112G02607 | **PM Telephone** | | **Created Date** | 11/8/10 |
| **Task/Contract #** | JM16 | **Field Op Leader (FOL)** | Gary Braganza | **Modified By** | |
| **WBS Code #** | FI.FK | **FOL Phone** | | **Modified Date** | |
| **Chain of Custody ID** | ED00000142-14 | **Carrier** | Federal Express | **Printed By** | Derrick Haltiwanger |
| | | **Carrier/Waybill No.** | | **Printed Date** | 12/2/10 |

### Chain of Custody Information

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody #** | **ED00000142-14** | **Lab Name** | Centauri Labs | **Relenquished By** | Gary Braganza |
| **Carrier** | Federal Express | **Address** | 7210 Corporate Court | **Date** | 11/08/2010 |
| **Carrier/Waybill No.** | | **City, State, Zip** | Fredrick, MD 21703 | **Time** | 15:02 |
| | | **Lab Contact** | Chino Ortiz | **Received By:** | Federal Express |
| | | **Lab Telephone** | 301-694-5310 | **Date** | 11/8/10 |
| | | | | **Time** | 16:02 |

### Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/6/10 | G01-MW-01A-1010 | 10:31 | SW846 8260B | VOCs (low level analysis) | G01-MW-01A | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/6/10 | G01-MW-01A-1010 | 10:31 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-01A | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-01A-1010 | 10:31 | SW846 8082A | PCBs | G01-MW-01A | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-01A-1010 | 10:31 | SW846 8081B | Pesticides | G01-MW-01A | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW- | 10:31 | SW846 6020A | Metals | G01-MW- | GW | 4° | 1 | Plastic - | 1L | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 01A-1010 | | | | 01A | | C/HNO3 | | PE | | |
| 11/6/10 | G01-MW-03-1010 | 10:01 | SW846 8260B | VOCs (low level analysis) | G01-MW-03 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/6/10 | G01-MW-03-1010 | 10:01 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-03 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-03-1010 | 10:01 | SW846 8082A | PCBs | G01-MW-03 | GW | 4°C | 2 | Glass - Amber | 1L | |

**Page 1 of 3**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/6/10 | G01-MW-03-1010 | 10:01 | SW846 8081B | Pesticides | G01-MW-03 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-03-1010 | 10:01 | SW846 6020A | Metals | G01-MW-03 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/6/10 | G01-MW-07-1010 | 11:38 | SW846 8260B | VOCs (low level analysis) | G01-MW-07 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/6/10 | G01-MW-07-1010 | 11:38 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-07 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-07-1010 | 11:38 | SW846 8082A | PCBs | G01-MW-07 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-07-1010 | 11:38 | SW846 8081B | Pesticides | G01-MW-07 | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-07-1010 | 11:38 | SW846 6020A | Metals | G01-MW-07 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/6/10 | G01-MW-12-1010 | 12:32 | SW846 8260B | VOCs (low level analysis) | G01-MW-12 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/6/10 | G01-MW-12-1010 | 12:32 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-12 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/6/10 | G01-MW-12-1010 | 12:32 | SW846 8082A | PCBs | G01-MW-12 | GW | 4°C | 2 | Glass - Amber | 1L | |
| | G01-MW- | | | | G01- | | | | Glass - | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/6/10 | 12-1010 | 12:32 | SW846 8081B | Pesticides | MW-12 | GW | 4°C | 2 | Amber | 1L | |
| 11/6/10 | G01-MW-12-1010 | 12:32 | SW846 6020A | Metals | G01-MW-12 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/7/10 | G01-MW-05-1010 | 09:35 | SW846 8260B | VOCs (low level analysis) | G01-MW-05 | GW | 4°C/HCL | 9 | Glass - Clear | 40ml vials | Run MS/MSD |
| 11/7/10 | G01-MW-05-1010 | 09:35 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-05 | GW | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/7/10 | G01-MW-05-1010 | 09:35 | SW846 8082A | PCBs | G01-MW-05 | GW | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/7/10 | G01-MW-05-1010 | 09:35 | SW846 8081B | Pesticides | G01-MW-05 | GW | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/7/10 | G01-MW-05-1010 | 09:35 | SW846 6020A | Metals | G01-MW-05 | GW | 4° C/HNO3 | 3 | Plastic - PE | 1L | Run MS/MSD |
| 11/7/10 | G01-MW-08-1010 | 11:15 | SW846 8260B | VOCs (low level analysis) | G01-MW-08 | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/7/10 | G01-MW-08-1010 | 11:15 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | G01-MW-08 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/7/10 | G01-MW-08-1010 | 11:15 | SW846 8082A | PCBs | G01-MW-08 | GW | 4°C | 2 | Glass - Amber | 1L | |

**Page 2 of 3**

Tetra Tech NUS, Inc.

# CHAIN OF CUSTODY LOG

## Preliminary Site Assessment and Site Inspection - Site 22 - KEY WEST NAS

Sample Records

| Date | Sample ID# | Time | Analysis | Description | Loc ID | Matrix | Preservative | No. | Type | Requirements | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/7/10 | G01-MW-08-1010 | 11:15 | SW846 8081B | Pesticides | G01-MW-08 | GW | 4°C | 2 | Glass - Amber | 1L | |
| 11/7/10 | G01-MW-08-1010 | 11:15 | SW846 6020A | Metals | G01-MW-08 | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/7/10 | GKHMS-GW-FD04-1010 | 00:00 | SW846 8082A | PCBs | QC | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/7/10 | GKHMS-GW-FD04-1010 | 00:00 | SW846 8260B | VOCs (low level analysis) | QC | GW | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/7/10 | GKHMS-GW-FD04-1010 | 00:00 | SW846 6020A | Metals | QC | GW | 4° C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/7/10 | GKHMS-GW-FD04-1010 | 00:00 | SW846 8081B | Pesticides | QC | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/7/10 | GKHMS-GW-FD04-1010 | 00:00 | SW846 8720D/8270DSIM | SVOCs (low level) and SIM PAHs | QC | GW | 4°C | 1 | Glass - Amber | 1L | |
| 11/8/10 | GKHMS-TB-06-1010 | 00:00 | SW846 8260B | VOCs (low level analysis) | QC | AQ | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

Page 3 of 3

General Observations and Notes

No Notes

- End of Report -

# APPENDIX F

# BORING LOGS

Tetra Tech NUS, Inc.

# BORING LOG



PROJECT NAME: GKHMS -NAS Key West
PROJECT NUMBER: 112G02607
DRILLING COMPANY: Wombat Env
DRILLING RIG: Geoprobe

BORING No.: GKHMS-GW032D
DATE: 11/1/2010
GEOLOGIST: Gary Braganza
DRILLER: Paul Poorbaugh

| Sample No. and Type or RQD | Depth (Ft.) or Run No. | Blows / 6" or RQD (%) | Sample Recovery / Sample Length | Lithology Change (Depth/Ft.) or Screened Interval | MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness | MATERIAL DESCRIPTION: Color | MATERIAL DESCRIPTION: Material Classification | USCS * | Remarks | PID/FID Reading (ppm): Sample | Sampler BZ | Borehole** | Driller BZ** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.5 | | | | | | Asphalt, fill material | | | | | | |
| | 1 | | | | | | oolitic limestone, beige, well | | water table at 2.5 ft | 1 | | | |
| | | | | | | | consolidated, | | | | | | |
| | 4 | | | | | | | | | 0 | | | |
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| | 10 | | | | | | oolitic limestone, minor clay lens | | | | | | |
| | | | | | | | moderately consolidated | | | | | | |
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| | 20 | | | | | | bivalve shell fragments | | | | | | |
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* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No x Well I.D. #: ____

Tetra Tech NUS, Inc.

# BORING LOG



PROJECT NAME: GKHMS -NAS Key West
PROJECT NUMBER: 112G02607
DRILLING COMPANY: Wombat Env
DRILLING RIG: Geoprobe

BORING No.: GKHMS-SO-004
DATE: 10/28/2010
GEOLOGIST: Gary Braganza
DRILLER: Paul Poorbaugh

| Sample No. and Type or RQD | Depth (Ft.) or Run No. | Blows / 6" or RQD (%) | Sample Recovery / Sample Length | Lithology Change (Depth/Ft.) or Screened Interval | MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness | MATERIAL DESCRIPTION: Color | MATERIAL DESCRIPTION: Material Classification | USCS * | Remarks | PID/FID Reading (ppm): Sample | Sampler BZ | Borehole** | Driller BZ** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.5 | | | | | | fill material, sand and gravel | | | | | | |
| | 1 | | | | | | oolitic limestone, beige, well | | water table at 2.5 ft | 1 | | | |
| | | | | | | | consolidated, | | | | | | |
| | 2.5 | | | | | | ↓ | | | 0 | | | |
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* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: _____

Converted to Well: Yes _____ No X Well I.D. #: _____

# APPENDIX G

# FIELD SCREENING RESULTS

## SOIL HEADSPACE SCREENING RESULTS

| LOCATION NO. | SAMPLE INTERVAL (feet bls) | Gas Tec Results 122 Tube* (ppm) | Gas Tec Results 133 Tube** (ppm) | PID READING (ppm) | COMMENTS |
|---|---|---|---|---|---|
| GKHMS-SO001 | 0-2 | ND | ND | 5 | “ |
| GKHMS-SO002 | 0-2 | ND | ND | 3 | |
| GKHMS-SO003 | 0-2 | ND | ND | 3 | |
| GKHMS-SO004 | 0-2 | ND | ND | 5 | |
| GKHMS-SO005 | 0-2 | ND | ND | 8 | Organic odor |
| GKHMS-SO006 | 0-2 | ND | ND | 2 | |
| GKHMS-SO007 | 0-2 | ND | ND | 1 | |
| GKHMS-SO008 | 0-2 | ND | ND | 0 | |
| GKHMS-SO009 | 0-2 | ND | ND | 0 | |
| GKHMS-SO010 | 0-2 | ND | ND | 5 | Organic odor |
| GKHMS-SO011 | 0-2 | ND | ND | 1 | |
| GKHMS-SO012 | 0-2 | ND | ND | 4 | |
| GKHMS-SO013 | 0-2 | ND | ND | 6 | Organic odor |
| GKHMS-SO014 | 0-2 | ND | ND | 2 | |
| GKHMS-SO015 | 0-2 | ND | ND | 5 | |
| GKHMS-SO016 | 0-2 | ND | ND | 3 | |
| GKHMS-SO017 | 0-2 | ND | ND | 1 | |
| GKHMS-SO018 | 0-2 | ND | ND | 0 | |
| GKHMS-SO019 | 0-2 | ND | ND | 1 | |
| GKHMS-SO020 | 0-2 | ND | ND | 1 | |
| GKHMS-SO021 | 0-2 | ND | ND | 2 | Slight petroleum odor |
| GKHMS-SO022 | 0-2 | ND | ND | 1 | |
| GKHMS-SO023 | 0-2 | ND | ND | 0 | |
| GKHMS-SO024 | 0-2 | ND | ND | 2 | |
| GKHMS-SO025 | 0-2 | ND | ND | 4 | |
| GKHMS-SO026 | 0-2 | ND | ND | 0 | Metallic odor |
| GKHMS-SO027 | 0-2 | ND | ND | 3 | |
| GKHMS-SO028 | 0-2 | ND | ND | 1 | |
| GKHMS-SO029 | 0-2 | ND | ND | 2 | |
| GKHMS-SO030 | 0-2 | ND | ND | 0 | |
| GKHMS-SO031 | 0-2 | ND | ND | 0 | Metallic odor |
| GKHMS-SO032 | 0-2 | ND | ND | 3 | |
| GKHMS-SO033 | 0-2 | ND | ND | 2 | |
| GKHMS-SO034 | 0-2 | ND | ND | 3 | |

*Gas Tec 122 Tube – Petroleum product screening
**Gas Tec 133 Tube – chlorinated product screening

# APPENDIX H

# VALIDATION REPORTS

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 16, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – VOC / PAH / PEST / PCB**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – 1010098**

**SAMPLES:** 13 / Aqueous / VOC

| | | |
|---|---|---|
| GKHMS-GW-002-1010 | GKHMS-GW-003-1010 | GKHMS-GW-004-1010 |
| GKHMS-GW-005-1010 | GKHMS-GW-006-1010 | GKHMS-GW-007-1010 |
| GKHMS-GW-008-1010 | GKHMS-GW-009-1010 | GKHMS-GW-010-1010 |
| GKHMS-GW-011-1010 | GKHMS-GW-012-1010 | GKHMS-GW-013-1010 |
| GKHMS-TB-01 | | |

12 / Aqueous / PAH

| | | |
|---|---|---|
| GKHMS-GW-002-1010 | GKHMS-GW-003-1010 | GKHMS-GW-004-1010 |
| GKHMS-GW-005-1010 | GKHMS-GW-006-1010 | GKHMS-GW-007-1010 |
| GKHMS-GW-008-1010 | GKHMS-GW-009-1010 | GKHMS-GW-010-1010 |
| GKHMS-GW-011-1010 | GKHMS-GW-012-1010 | GKHMS-GW-013-1010 |

3 / Aqueous / PEST / PCB

| | | |
|---|---|---|
| GKHMS-GW-005-1010 | GKHMS-GW-010-1010 | GKHMS-GW-011-1010 |

Overview

The sample set for NAS Key West, CTO JM16, SDG 1010098 consisted of thirteen (13) aqueous environmental samples including one (1) trip blank. The samples were analyzed for volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PAH), organochloride pesticides (PEST), and polychlorinated biphenyls (PCB) as indicated above. No field duplicate sample pairs were included in the Sample Delivery Group (SDG).

The samples were collected by Tetra Tech NUS on October 28 and 29, 2010 and analyzed by Centauri Labs. The analysis was conducted in accordance with SW-846 Method 8260B, 8270C SIM, 8081B and 8082 analytical and reporting protocols. The data contained in this SDG were fully validated with regard to the following parameters:

- Data Completeness
* • Holding Times
- Initial and Continuing Calibration
- Laboratory Blank Analyses
- Blank Spike/Blank Spike Duplicate Results
- System Monitoring Compound/Surrogate Recovery
- Internal Standard Recovery
- Compound Quantitation
- Compound Identification
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The initial calibration and continuing calibration relative response factors (RRFs) for 1,2-dibromo-3-chloropropane, and acetone were less than the 0.05 quality control limit on instrument GCMS-B on 11/02/10 and on 11/03/10 @ 08:23. The non-detected 1,2-dibromo-3-chloropropane and acetone, results in all samples were qualified rejected, (UR). The positive acetone result was qualified estimated, (J).

The initial calibration r factor for the linear calibration was less than the 0.995 quality control limit for 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, methyl cyclohexane and naphthalene. The non-detected 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, methyl cyclohexane and naphthalene results in all samples were qualified estimated, (UJ).

The initial calibration RRFs were not reported for the following analytes by the laboratory affecting all samples; acetonitrile, acrylonitrile, cyclohexane, ethyl methacrylate, 1,1,2-trichlorotrifluoroethane, methyl iodide, isobutanol, methacrylonitrile, methyl acetate, methyl cyclohexane, methylmethacrylate, propionitrile, and vinyl acetate. As the response factors could not be verified to be greater than the quality control limit of 0.05, all positive and non-detected sample results were qualified estimated, (J) and (UJ), for the aforementioned analytes, except where rejected for other issues.

The initial calibration relative standard deviation (RSD) was greater than the 15% quality control limit for 1,1,2-trichloroethane, 1,1-dichloropropene, 1,2-dichloroethane, 1,2-dichloropropane, 2-butanone, benzene, bromodichloromethane, cis-1,3-dichloropropene, cyclohexane, dibromomethane, ethyl methacrylate, 1,1,2-trichlorotrifluoroethane, hexachlorobutadiene, isobutyl alcohol, methacrylonitrile, methyl acetate, methyl methacrylate, propionitrile, toluene, trans-1,3-dichloropropene, trichloroethene, and vinyl acetate on instrument GCMS-B on 11/02/10 affecting all the samples. All non-detected aforementioned analyte sample results were qualified estimated, (UJ).

The continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control limit for 1,1,2-trichloroethane, 1,2,3-trichloropropane, 1,2-dichloroethane, 2-butanone, 4-methyl-2-pentanone, acetone, cis-1,3-dichloropropene, dibromomethane, methyl iodide, methacrylonitrile, methyl acetate, methyl tert-butyl ether, methylene chloride, trans-1,2-dichloroethene, and trichloroethene for instrument GCMS-B on 11/03/10 @ 08:23 affecting all the samples. The positive and non-detected aforementioned analytes for the aforementioned samples were qualified estimated, (J) and (UJ), unless rejected for other issues or qualified for blank contamination.

The following VOC laboratory contaminant was detected in the method blank at the following maximum concentration affecting all the samples.

| Analyte | Maximum Conc. µg/l | Action Level µg/l |
|---|---|---|
| Methylene chloride | 2.82 | 28.20 |

An action level of ten times the maximum level for the common laboratory contaminant methylene chloride has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample methylene chloride results were qualified as non-detected, (U), due to method blank contamination.

The laboratory control sample (LCS) and the LCS duplicate (LCSD) percent recoveries (%Rs) were less than the lower quality control limit for acrylonitrile, methyl iodide, and methyl acetate for batch B047031 affecting all samples. The non-detected results for acrylonitrile, methyl iodide, and methyl acetate for all samples were qualified estimated, (UJ).

The VOC surrogate %R was less than the quality control limit for the surrogate dibromofluoromethane and the surrogate %R was greater than the quality control limit for 4-bromofluorobenzene for sample GKHMS-TB-01. The sample non-detected analytes were qualified estimated, (UJ), due to the low surrogate %R, except where qualified rejected for other issues.

PAH

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The retention time and response factor for 1-methylnaphthalene are very similar to 2-methylnaphthalene. The non-detected 1-methylnaphthalene results were qualified as estimated, (UJ), and reported to the reporting limit (other PAH results were reported to the method detection limit).

The internal standard recoveries were less than the quality control limit for samples as listed below. The internal standard recovery data was not provided by the laboratory but was manually evaluated by the data validation chemist. The non-detected PAHs affected by these internal standard quality control limit non-compliances were qualified estimated, (UJ).

| Sample | Internal Standard Non-compliances |
|---|---|
| GKHMS-GW-004-1010 | naphthalene-d8, acenaphthene-d10, phenanthrene-d10, chrysene-d12, perylene-d12 |
| GKHMS-GW-006-1010 | phenanthrene-d10, chrysene-d12, and perylene-d12 |
| GKHMS-GW-007-1010 | phenanthrene-d10, chrysene-d12, and perylene-d12 |
| GKHMS-GW-008-1010 | phenanthrene-d10, chrysene-d12, and perylene-d12 |
| GKHMS-GW-009-1010 | chrysene-d12 and perylene-d12 |

PEST

No issues were identified.

PCB

The initial Centauri analysis of the samples for Aroclors did not include results for Aroclor-1262 and Aroclor-1268. The ChemTech laboratory provided the missing chromatograms which indicated the absence of positive results for Aroclor-1262 and Aroclor-1268. As neither laboratory calibrated for these PCBs, the non-detected Aroclor-1262 and Aroclor-1268 sample results were not added to the database.

A multi-level initial calibration resulting in an average response factor was performed only for Aroclor-1242, Aroclor-1016, and Aroclor-1260. All other Aroclors detected were quantified using a single calibration level response factor for the Aroclor. Additionally, there were only CCVs performed by the laboratory for Aroclor-1242.

Additional Comments

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. ChemTech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not originally reported by the Centauri laboratory. Also, the continuing calibration data for pesticides chlordane and toxaphene were missing and all quality control data was not received for the PCB fraction. The following tables outline the discrepancies between the compounds reported/not reported initially by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC |
| 1-methylnaphthalene | PAH |
| Aroclor-1262 | PCB |
| Aroclor-1268 | PCB |

The VOC analyte 1,4-dioxane was not originally analyzed for by the Centauri Laboratory as was required by the Sample Analysis Plan. The laboratory data from this SDG was forwarded to Chemtech Laboratory after the Centauri Laboratory closed for a re-examination of the VOC raw data from this SDG. Chemtech has reported that all sample data files were scanned for the presence of the 1,4-dioxane's major ions (28, 88, 58, and 29) and none were detected. No 1,4-dioxane results were included in this report and no further action is being taken on this issue.

The VOC chlorobenzene results were not reported by the laboratory for most the samples in this SDG (only the sample GKHMS-GW-005-1010 chlorobenzene result was reported) even though the laboratory had initial calibration and CCV results for chlorobenzene. All of the sample VOC raw data was examined and as no positive results for chlorobenzene were found in the sample raw data, a non-detected result was manually entered for each missing sample chlorobenzene result.

The laboratory provided the missing chromatograms which indicated the absence of positive results for Aroclor-1262 and Aroclor-1268. As the laboratory did not calibrate for these PCBs, the non-detected Aroclor-1262 and Aroclor-1268 sample results were not added to the database and no further action is being taken on this issue.

| Compounds Reported by the Lab not listed in the SAP in the Pesticide Fraction |
|---|
| Chlordane |
| Kepone |
| mirex |

Naphthalene was reported in both the VOC and PAH fractions in this SDG.

The following compounds were reported by the laboratory but were not required per the SAP.

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |

| |
|---|
| 1,2,3-trichloropropane |
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Isobutanol |
| Methacrylonitrile |
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

The VOC laboratory control sample LCS and the LCSD %Rs and the LCS/LCSD RPDs were greater than the high quality control limit for a number of VOC analytes (2-hexanone, acetone, chloroethane, dichlorodifluoromethane, isobutyl alcohol, methylene chloride, methacrylonitrile, and vinyl chloride) for batch B047031 affecting all samples. The non-detected results affected by these analyte LCS/LCSD exceedances for the aforementioned samples were not qualified.

The PEST initial calibration linear calibration r value was less than the 0.995 quality control limit for column RTX-CLP for 4,4'-DDD and for column RTX-CLP2 for endrin aldehyde. All samples had non-detected results for the aforementioned analytes and as the alternate column was within the quality control limit for the linear calibration r value, no action was taken.

The PEST opening continuing calibration verification (CCV) percent difference (%D) was greater than the 15% quality control limit for heptachlor for the column RTX-CLP for instrument GCECD-V on 11/15/10 @ 18:28 affecting all the samples. The closing CCV percent difference (%D) was greater than the 15% quality control limit for 4,4'-DDT, alpha-chlordane, endosulfan I, endosulfan II, gamma-chlordane, heptachlor, and heptachlor epoxide for the column RTX-CLP for instrument GCECD-V on 11/15/10 @ 22:44 affecting all samples for this SDG. As the alternated column %D CCVs were within the quality control limit and the samples had non-detected results for all PEST results, no action was taken.

The PEST surrogate %R tetrachloro-m-xylene (TCMX) was greater than the quality control limit for column RTX-CLP for sample GKHMS-GW-011-1010. All PEST results for the sample were non-detected and as the alternate column surrogate %R was within the quality control limits, no action was taken.

The laboratory did not calculate the CCV %Ds for the PEST analysis for hexachlorobenzene. The data validation chemist manually performed the data calculation for the CCVs for hexachlorobenzene.

**Executive Summary**

**Laboratory Performance:** VOC initial and continuing calibration RRFs less than the quality control limit resulted in rejection of some non-detected VOC analytes. VOC initial calibration RSDs and CCV %Ds greater than the quality control limit resulted in qualification of VOC analytes. VOC methylene chloride positive results were qualified due to method blank contamination. VOC LCS/LCSD %Rs less than the quality control limit resulted in the qualification of non-detected VOC analytes.

PAH non-detected results were qualified due to internal standard recoveries less than quality control limit.

**Other Factors Affecting Data Quality:** The closing of Centauri Laboratories affected the ability of the data validator to obtain missing data.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site Sample Analysis Plan (SAP), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

## Appendix A

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-01 | | | 1010098-02 | | | 1010098-03 | | | 1010098-04 | | |
| FRACTION: OV | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 2,2-DICHLOROPROPANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ACRYLONITRILE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-05 | | | 1010098-06 | | | 1010098-08 | | | 1010098-09 | | |
| FRACTION: OV | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 2,2-DICHLOROPROPANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ACRYLONITRILE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-10 | | | 1010098-11 | | | 1010098-12 | | | 1010098-13 | | |
| FRACTION: OV | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C | 0.36 | UJ | C |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 2,2-DICHLOROPROPANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| ACETONE | | 0.8 | UR | C | 8.03 | J | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ACRYLONITRILE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-01 |
|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-07 |
| FRACTION: OV | SAMP_DATE | 10/28/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | 0.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 1,1,1,2-TETRACHLOROETHANE | 0.2 | UJ | R |
| 1,1,1-TRICHLOROETHANE | 0.25 | UJ | CR |
| 1,1,2,2-TETRACHLOROETHANE | 0.33 | UJ | R |
| 1,1,2-TRICHLOROETHANE | 0.24 | UJ | CR |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | 0.48 | UJ | CR |
| 1,1-DICHLOROETHANE | 0.18 | UJ | R |
| 1,1-DICHLOROETHENE | 0.28 | UJ | R |
| 1,1-DICHLOROPROPENE | 0.34 | UJ | CR |
| 1,2,3-TRICHLOROBENZENE | 0.49 | UR | C |
| 1,2,3-TRICHLOROPROPANE | 0.36 | UJ | CR |
| 1,2,4-TRICHLOROBENZENE | 0.48 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | 0.43 | UJ | R |
| 1,2-DIBROMO-3-CHLOROPROPANE | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | 0.21 | UJ | R |
| 1,2-DICHLOROBENZENE | 0.3 | UJ | R |
| 1,2-DICHLOROETHANE | 0.51 | UJ | CR |
| 1,2-DICHLOROPROPANE | 0.19 | UJ | CR |
| 1,3,5-TRIMETHYLBENZENE | 0.45 | UJ | R |
| 1,3-DICHLOROBENZENE | 0.44 | UJ | R |
| 1,3-DICHLOROPROPANE | 0.23 | UJ | R |
| 1,4-DICHLOROBENZENE | 1 | UJ | R |
| 2,2-DICHLOROPROPANE | 0.21 | UJ | R |
| 2-BUTANONE | 0.35 | UJ | CR |
| 2-CHLOROTOLUENE | 0.38 | UJ | R |
| 2-HEXANONE | 0.31 | UJ | R |
| 4-CHLOROTOLUENE | 0.4 | UJ | R |
| 4-ISOPROPYLTOLUENE | 0.55 | UJ | R |
| 4-METHYL-2-PENTANONE | 0.23 | UJ | CR |
| ACETONE | 0.8 | UR | C |
| ACETONITRILE | 1 | UJ | CR |
| ACRYLONITRILE | 1 | UJ | CER |
| BENZENE | 0.21 | UJ | CR |
| BROMOBENZENE | 0.31 | UJ | R |
| BROMOCHLOROMETHANE | 0.24 | UJ | R |
| BROMODICHLOROMETHANE | 0.19 | UJ | CR |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-01 | | | 1010098-02 | | | 1010098-03 | | | 1010098-04 | | |
| FRACTION: OV | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMOMETHANE | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| CARBON DISULFIDE | | 1.3 | | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | | | | | | | | | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | | 0.17 | UJ | C | 2.31 | U | A | 0.17 | UJ | C | 1.14 | U | A |
| NAPHTHALENE | | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | U | | 0.54 | U | | 0.54 | U | | 0.54 | U | |
| N-PROPYLBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | U | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-05 | | | 1010098-06 | | | 1010098-08 | | | 1010098-09 | | |
| FRACTION: OV | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMOMETHANE | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| CARBON DISULFIDE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | | | | | | | | | | | | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | | 2.2 | U | A | 0.17 | UJ | C | 0.17 | UJ | C | 0.17 | UJ | C |
| NAPHTHALENE | | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | U | | 0.54 | U | | 0.54 | U | | 0.54 | U | |
| N-PROPYLBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | U | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-10 | | | 1010098-11 | | | 1010098-12 | | | 1010098-13 | | |
| FRACTION: OV | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMOMETHANE | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| CARBON DISULFIDE | | 0.29 | U | | 1.42 | | | 1.22 | | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | | | | | | | | | | | | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | | 0.17 | UJ | C | 0.17 | UJ | C | 0.17 | UJ | C | 0.17 | UJ | C |
| NAPHTHALENE | | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | U | | 0.54 | U | | 0.54 | U | | 0.54 | U | |
| N-PROPYLBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | U | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-01 |
|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-07 |
| FRACTION: OV | SAMP_DATE | 10/28/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | 0.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| BROMOFORM | 0.24 | UJ | R |
| BROMOMETHANE | 0.39 | UJ | R |
| CARBON DISULFIDE | 0.29 | UJ | R |
| CARBON TETRACHLORIDE | 0.26 | UJ | R |
| CHLOROBENZENE | | | |
| CHLORODIBROMOMETHANE | 0.26 | UJ | R |
| CHLOROETHANE | 0.23 | UJ | R |
| CHLOROFORM | 0.18 | UJ | R |
| CHLOROMETHANE | 0.79 | UJ | R |
| CIS-1,2-DICHLOROETHENE | 0.2 | UJ | R |
| CIS-1,3-DICHLOROPROPENE | 0.21 | UJ | CR |
| CYCLOHEXANE | 1 | UJ | CR |
| DIBROMOMETHANE | 0.26 | UJ | CR |
| DICHLORODIFLUOROMETHANE | 0.42 | UJ | R |
| ETHYL METHACRYLATE | 1 | UJ | CR |
| ETHYLBENZENE | 0.28 | UJ | R |
| HEXACHLOROBUTADIENE | 0.58 | UJ | CR |
| ISOBUTANOL | 1 | UJ | CR |
| ISOPROPYLBENZENE | 0.37 | UJ | R |
| M+P-XYLENES | 0.67 | UJ | R |
| METHACRYLONITRILE | 1 | UJ | CR |
| METHYL ACETATE | 0.27 | UJ | CER |
| METHYL CYCLOHEXANE | 0.43 | UJ | C |
| METHYL IODIDE | 1 | UJ | CER |
| METHYL METHACRYLATE | 1 | UJ | CR |
| METHYL TERT-BUTYL ETHER | 0.25 | UJ | CR |
| METHYLENE CHLORIDE | 0.17 | UJ | CR |
| NAPHTHALENE | 0.54 | UJ | C |
| N-BUTYLBENZENE | 0.54 | UJ | R |
| N-PROPYLBENZENE | 0.44 | UJ | R |
| O-XYLENE | 0.29 | UJ | R |
| PROPIONITRILE | 1 | UJ | CR |
| SEC-BUTYLBENZENE | 0.5 | UJ | R |
| STYRENE | 0.36 | UJ | R |
| TERT-BUTYLBENZENE | 0.42 | UJ | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-01 | | | 1010098-02 | | | 1010098-03 | | | 1010098-04 | | |
| FRACTION: OV | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-05 | | | 1010098-06 | | | 1010098-08 | | | 1010098-09 | | |
| FRACTION: OV | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-10 | | | 1010098-11 | | | 1010098-12 | | | 1010098-13 | | |
| FRACTION: OV | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-01 | | |
|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-07 | | |
| FRACTION: OV | SAMP_DATE | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | |
| | UNITS | UG/L | | |
| | PCT_SOLIDS | 0.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | UJ | R |
| TOLUENE | | 0.27 | UJ | CR |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | UJ | CR |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | CR |
| TRICHLOROETHENE | | 0.3 | UJ | CR |
| TRICHLOROFLUOROMETHANE | | 0.35 | UJ | R |
| VINYL ACETATE | | 0.29 | UJ | CR |
| VINYL CHLORIDE | | 0.24 | UJ | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-01 | | | 1010098-02 | | | 1010098-03 | | | 1010098-04 | | |
| FRACTION: PAH | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| ACENAPHTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| FLUORENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| NAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| PHENANTHRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | UJ | N | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-05 | | | 1010098-06 | | | 1010098-08 | | | 1010098-09 | | |
| FRACTION: PAH | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ANTHRACENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| BENZO(A)PYRENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| BENZO(B)FLUORANTHENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| BENZO(G,H,I)PERYLENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| BENZO(K)FLUORANTHENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| CHRYSENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| FLUORANTHENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | U | |
| FLUORENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |
| NAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PHENANTHRENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | U | |
| PYRENE | | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N | 0.0167 | UJ | N |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-10 | | | 1010098-11 | | | 1010098-12 | | | 1010098-13 | | |
| FRACTION: PAH | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PHENANTHRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-005-1010 | | | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-04 | | | 1010098-10 | | | 1010098-11 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| 4,4'-DDE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| 4,4'-DDT | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| ALDRIN | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| ALPHA-BHC | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| ALPHA-CHLORDANE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| AROCLOR-1016 | | 0.094 | U | | 0.094 | U | | 0.094 | U | |
| AROCLOR-1221 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1232 | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| AROCLOR-1242 | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| AROCLOR-1248 | | 0.13 | U | | 0.13 | U | | 0.13 | U | |
| AROCLOR-1254 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1260 | | 0.058 | U | | 0.058 | U | | 0.058 | U | |
| BETA-BHC | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| CHLORDANE | | 0.017 | U | | 0.017 | U | | 0.017 | U | |
| DELTA-BHC | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| DIELDRIN | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN I | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN II | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN SULFATE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDRIN ALDEHYDE | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| ENDRIN KETONE | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| GAMMA-BHC (LINDANE) | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| GAMMA-CHLORDANE | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| HEPTACHLOR | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| HEPTACHLOR EPOXIDE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| HEXACHLOROBENZENE | | 0.01 | U | | 0.01 | U | | 0.01 | U | |
| METHOXYCHLOR | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| TOXAPHENE | | 0.017 | U | | 0.017 | U | | 0.017 | U | |

## Appendix B

Results as Reported by the Laboratory

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-002-1010
Sample Date/Time: 10/28/10 09:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 11:39

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 11:39 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 11:39 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 11:39 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 11:39 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 11:39 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 11:39 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 11:39 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-002-1010
Sample Date/Time: 10/28/10 09:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 11:39

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | 1.30 | | 0.290 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 11:39 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 11:39 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 11:39 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-002-1010
Sample Date/Time: 10/28/10 09:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 11:39

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 11:39 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:39 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 82 % | 70-120 | 1 | 11/3/10 11:39 |
| 4-Bromofluorobenzene | 460-00-4 | 118 % | 75-120 | 1 | 11/3/10 11:39 |
| Dibromofluoromethane | 1868-53-7 | 91 % | 85-115 | 1 | 11/3/10 11:39 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/3/10 11:39 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-003-1010
Sample Date/Time: 10/28/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:06

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 12:06 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 12:06 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 12:06 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 12:06 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 12:06 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 12:06 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 12:06 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-003-1010
Sample Date/Time: 10/28/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:06

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 12:06 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Methylene Chloride | 75-09-2 | 2.31 | B | 0.170 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 12:06 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 12:06 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-003-1010
Sample Date/Time: 10/28/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:06

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:06 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:06 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 88 % | 70-120 | 1 | 11/3/10 12:06 |
| 4-Bromofluorobenzene | 460-00-4 | 120 % | 75-120 | 1 | 11/3/10 12:06 |
| Dibromofluoromethane | 1868-53-7 | 93 % | 85-115 | 1 | 11/3/10 12:06 |
| Toluene-d8 | 2037-26-5 | 101 % | 85-120 | 1 | 11/3/10 12:06 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-004-1010
Sample Date/Time: 10/28/10 11:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 12:32 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 12:32 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 12:32 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 12:32 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 12:32 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 12:32 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 12:32 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-004-1010
Sample Date/Time: 10/28/10 11:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 12:32 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 12:32 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 12:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-004-1010
Sample Date/Time: 10/28/10 11:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:32 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 92 % | 70-120 | 1 | 11/3/10 12:32 |
| 4-Bromofluorobenzene | 460-00-4 | 116 % | 75-120 | 1 | 11/3/10 12:32 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/3/10 12:32 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/3/10 12:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-005-1010
Sample Date/Time: 10/28/10 12:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 12:59 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 12:59 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 12:59 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 12:59 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 12:59 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 12:59 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 12:59 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-005-1010
Sample Date/Time: 10/28/10 12:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 12:59 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Methylene Chloride | 75-09-2 | 1.14 | B | 0.170 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 12:59 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 12:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-005-1010
Sample Date/Time: 10/28/10 12:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 12:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 12:59 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 12:59 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100 % | 70-120 | 1 | 11/3/10 12:59 |
| 4-Bromofluorobenzene | 460-00-4 | 101 % | 75-120 | 1 | 11/3/10 12:59 |
| Dibromofluoromethane | 1868-53-7 | 102 % | 85-115 | 1 | 11/3/10 12:59 |
| Toluene-d8 | 2037-26-5 | 101 % | 85-120 | 1 | 11/3/10 12:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 10/28/10 14:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 13:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 13:26 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 13:26 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 13:26 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 13:26 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 13:26 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 13:26 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 13:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 10/28/10 14:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 13:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 13:26 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Methylene Chloride | 75-09-2 | 2.20 | B | 0.170 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 13:26 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 13:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 10/28/10 14:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 13:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 13:26 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:26 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 103 % | 70-120 | 1 | 11/3/10 13:26 |
| 4-Bromofluorobenzene | 460-00-4 | 114 % | 75-120 | 1 | 11/3/10 13:26 |
| Dibromofluoromethane | 1868-53-7 | 105 % | 85-115 | 1 | 11/3/10 13:26 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-120 | 1 | 11/3/10 13:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-007-1010
Sample Date/Time: 10/28/10 15:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 13:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 13:53 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 13:53 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 13:53 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 13:53 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 13:53 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 13:53 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 13:53 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-007-1010
Sample Date/Time: 10/28/10 15:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 13:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 13:53 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 13:53 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 13:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-007-1010
Sample Date/Time: 10/28/10 15:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 13:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 13:53 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 13:53 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 93 % | 70-120 | 1 | 11/3/10 13:53 |
| 4-Bromofluorobenzene | 460-00-4 | 113 % | 75-120 | 1 | 11/3/10 13:53 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/3/10 13:53 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-120 | 1 | 11/3/10 13:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-01
Sample Date/Time: 10/28/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 11:08

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 11:08 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 11:08 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 11:08 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 11:08 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 11:08 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 11:08 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 11:08 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-01
Sample Date/Time: 10/28/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 11:08

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 11:08 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 11:08 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 11:08 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-01
Sample Date/Time: 10/28/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 11:08

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 11:08 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 11:08 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 76 % | 70-120 | 1 | 11/3/10 11:08 |
| 4-Bromofluorobenzene | 460-00-4 | 127 % | 75-120 | 1 | 11/3/10 11:08 |
| Dibromofluoromethane | 1868-53-7 | 84 % | 85-115 | 1 | 11/3/10 11:08 |
| Toluene-d8 | 2037-26-5 | 102 % | 85-120 | 1 | 11/3/10 11:08 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-008-1010
Sample Date/Time: 10/29/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 14:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 14:20 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 14:20 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 14:20 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 14:20 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 14:20 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 14:20 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 14:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-008-1010
Sample Date/Time: 10/29/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 14:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 14:20 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 14:20 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 14:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-008-1010
Sample Date/Time: 10/29/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 14:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 14:20 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:20 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 92 % | 70-120 | 1 | 11/3/10 14:20 |
| 4-Bromofluorobenzene | 460-00-4 | 113 % | 75-120 | 1 | 11/3/10 14:20 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/3/10 14:20 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/3/10 14:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-009-1010
Sample Date/Time: 10/29/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 14:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 14:47 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 14:47 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 14:47 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 14:47 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 14:47 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 14:47 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 14:47 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-009-1010
Sample Date/Time: 10/29/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 14:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 14:47 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 14:47 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 14:47 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-009-1010
Sample Date/Time: 10/29/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 14:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 14:47 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 14:47 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 94 % | 70-120 | 1 | 11/3/10 14:47 |
| 4-Bromofluorobenzene | 460-00-4 | 108 % | 75-120 | 1 | 11/3/10 14:47 |
| Dibromofluoromethane | 1868-53-7 | 99 % | 85-115 | 1 | 11/3/10 14:47 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/3/10 14:47 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-010-1010
Sample Date/Time: 10/29/10 11:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-10
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 15:14

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 15:14 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 15:14 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 15:14 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 15:14 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 15:14 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 15:14 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 15:14 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-010-1010
Sample Date/Time: 10/29/10 11:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-10
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 15:14

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 15:14 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 15:14 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 15:14 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-010-1010
Sample Date/Time: 10/29/10 11:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-10
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 15:14

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 15:14 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:14 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 111 % | 70-120 | 1 | 11/3/10 15:14 |
| 4-Bromofluorobenzene | 460-00-4 | 114 % | 75-120 | 1 | 11/3/10 15:14 |
| Dibromofluoromethane | 1868-53-7 | 108 % | 85-115 | 1 | 11/3/10 15:14 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/3/10 15:14 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-011-1010
Sample Date/Time: 10/29/10 10:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-11
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 15:41

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 15:41 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 15:41 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 15:41 |
| Acetone | 67-64-1 | 8.03 | | 0.800 | 5.00 | 1 | ug/L | 11/3/10 15:41 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 15:41 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 15:41 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 15:41 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-011-1010
Sample Date/Time: 10/29/10 10:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-11
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 15:41

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | 1.42 | | 0.290 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 15:41 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 15:41 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 15:41 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-011-1010
Sample Date/Time: 10/29/10 10:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-11
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 15:41

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 15:41 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 15:41 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 108 % | 70-120 | 1 | 11/3/10 15:41 |
| 4-Bromofluorobenzene | 460-00-4 | 113 % | 75-120 | 1 | 11/3/10 15:41 |
| Dibromofluoromethane | 1868-53-7 | 106 % | 85-115 | 1 | 11/3/10 15:41 |
| Toluene-d8 | 2037-26-5 | 102 % | 85-120 | 1 | 11/3/10 15:41 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-012-1010
Sample Date/Time: 10/29/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-12
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 16:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 16:07 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 16:07 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 16:07 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 16:07 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 16:07 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 16:07 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 16:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-012-1010
Sample Date/Time: 10/29/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-12
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 16:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | 1.22 | | 0.290 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 16:07 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 16:07 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 16:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-012-1010
Sample Date/Time: 10/29/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-12
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 16:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 16:07 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:07 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 107 % | 70-120 | 1 | 11/3/10 16:07 |
| 4-Bromofluorobenzene | 460-00-4 | 112 % | 75-120 | 1 | 11/3/10 16:07 |
| Dibromofluoromethane | 1868-53-7 | 106 % | 85-115 | 1 | 11/3/10 16:07 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-120 | 1 | 11/3/10 16:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-013-1010
Sample Date/Time: 10/29/10 13:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-13
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 16:34

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/3/10 16:34 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/3/10 16:34 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/3/10 16:34 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/3/10 16:34 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 16:34 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/3/10 16:34 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/3/10 16:34 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-013-1010
Sample Date/Time: 10/29/10 13:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-13
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 16:34

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/3/10 16:34 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/3/10 16:34 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/3/10 16:34 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-013-1010
Sample Date/Time: 10/29/10 13:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1010098-13
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/03/10 16:34

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/3/10 16:34 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/3/10 16:34 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 98 % | 70-120 | 1 | 11/3/10 16:34 |
| 4-Bromofluorobenzene | 460-00-4 | 119 % | 75-120 | 1 | 11/3/10 16:34 |
| Dibromofluoromethane | 1868-53-7 | 100 % | 85-115 | 1 | 11/3/10 16:34 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-120 | 1 | 11/3/10 16:34 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-002-1010
Sample Date/Time: 10/28/10 09:50
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-01
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 17:28 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 77 % | 50-110 | 1 | 11/3/10 17:28 |
| Nitrobenzene-d5 | 4165-60-0 | 82 % | 40-110 | 1 | 11/3/10 17:28 |
| Terphenyl-d14 | 1718-51-0 | 101 % | 50-135 | 1 | 11/3/10 17:28 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-003-1010
Sample Date/Time: 10/28/10 09:20
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-02
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 22:45 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 81 % | 50-110 | 1 | 11/3/10 22:45 |
| Nitrobenzene-d5 | 4165-60-0 | 82 % | 40-110 | 1 | 11/3/10 22:45 |
| Terphenyl-d14 | 1718-51-0 | 110 % | 50-135 | 1 | 11/3/10 22:45 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-004-1010
Sample Date/Time: 10/28/10 11:20
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-03
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:17 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 83 % | 50-110 | 1 | 11/3/10 18:17 |
| Nitrobenzene-d5 | 4165-60-0 | 93 % | 40-110 | 1 | 11/3/10 18:17 |
| Terphenyl-d14 | 1718-51-0 | 97 % | 50-135 | 1 | 11/3/10 18:17 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-005-1010
Sample Date/Time: 10/28/10 12:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-04
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 18:41 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 86 % | 50-110 | 1 | 11/3/10 18:41 |
| Nitrobenzene-d5 | 4165-60-0 | 100 % | 40-110 | 1 | 11/3/10 18:41 |
| Terphenyl-d14 | 1718-51-0 | 114 % | 50-135 | 1 | 11/3/10 18:41 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 10/28/10 14:30
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-05
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:05 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 81 % | 50-110 | 1 | 11/3/10 19:05 |
| Nitrobenzene-d5 | 4165-60-0 | 81 % | 40-110 | 1 | 11/3/10 19:05 |
| Terphenyl-d14 | 1718-51-0 | 104 % | 50-135 | 1 | 11/3/10 19:05 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-007-1010
Sample Date/Time: 10/28/10 15:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-06
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:30 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 90 % | 50-110 | 1 | 11/3/10 19:30 |
| Nitrobenzene-d5 | 4165-60-0 | 90 % | 40-110 | 1 | 11/3/10 19:30 |
| Terphenyl-d14 | 1718-51-0 | 123 % | 50-135 | 1 | 11/3/10 19:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-008-1010
Sample Date/Time: 10/29/10 08:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-08
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 19:54 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 50-110 | 1 | 11/3/10 19:54 |
| Nitrobenzene-d5 | 4165-60-0 | 93 % | 40-110 | 1 | 11/3/10 19:54 |
| Terphenyl-d14 | 1718-51-0 | 117 % | 50-135 | 1 | 11/3/10 19:54 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-009-1010
Sample Date/Time: 10/29/10 09:20
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-09
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:18 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 50-110 | 1 | 11/3/10 20:18 |
| Nitrobenzene-d5 | 4165-60-0 | 90 % | 40-110 | 1 | 11/3/10 20:18 |
| Terphenyl-d14 | 1718-51-0 | 119 % | 50-135 | 1 | 11/3/10 20:18 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-010-1010
Sample Date/Time: 10/29/10 11:30
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-10
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 20:43 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 83 % | 50-110 | 1 | 11/3/10 20:43 |
| Nitrobenzene-d5 | 4165-60-0 | 85 % | 40-110 | 1 | 11/3/10 20:43 |
| Terphenyl-d14 | 1718-51-0 | 108 % | 50-135 | 1 | 11/3/10 20:43 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-011-1010
Sample Date/Time: 10/29/10 10:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-11
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:07 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 86 % | 50-110 | 1 | 11/3/10 21:07 |
| Nitrobenzene-d5 | 4165-60-0 | 91 % | 40-110 | 1 | 11/3/10 21:07 |
| Terphenyl-d14 | 1718-51-0 | 100 % | 50-135 | 1 | 11/3/10 21:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-012-1010
Sample Date/Time: 10/29/10 10:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-12
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 76 % | 50-110 | 1 | 11/3/10 21:32 |
| Nitrobenzene-d5 | 4165-60-0 | 76 % | 40-110 | 1 | 11/3/10 21:32 |
| Terphenyl-d14 | 1718-51-0 | 103 % | 50-135 | 1 | 11/3/10 21:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-013-1010
Sample Date/Time: 10/29/10 13:50
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1010098-13
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/03/10 09:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/3/10 21:56 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 85 % | 50-110 | 1 | 11/3/10 21:56 |
| Nitrobenzene-d5 | 4165-60-0 | 87 % | 40-110 | 1 | 11/3/10 21:56 |
| Terphenyl-d14 | 1718-51-0 | 112 % | 50-135 | 1 | 11/3/10 21:56 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-005-1010
Sample Date/Time: 10/28/10 12:00
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1010098-04
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 17:56 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 17:56 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 17:56 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 17:56 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 107 % | 25-140 | 1 | 11/15/10 17:56 |
| DCB | 2051-24-3 | 65 % | 30-135 | 1 | 11/15/10 17:56 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-010-1010
Sample Date/Time: 10/29/10 11:30
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1010098-10
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 19:00 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 19:00 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 19:00 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 19:00 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 126 % | 25-140 | 1 | 11/15/10 19:00 |
| DCB | 2051-24-3 | 67 % | 30-135 | 1 | 11/15/10 19:00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-011-1010
Sample Date/Time: 10/29/10 10:40
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1010098-11
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 19:32 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 19:32 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 19:32 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 19:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 167 % | 25-140 | 1 | 11/15/10 19:32 |
| DCB | 2051-24-3 | 63 % | 30-135 | 1 | 11/15/10 19:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-005-1010
Sample Date/Time: 10/28/10 12:00
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1010098-04
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 15:32 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 15:32 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 15:32 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 15:32 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 15:32 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 15:32 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 15:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 70 % | 25-140 | 1 | 11/4/10 15:32 |
| DCB | 2051-24-3 | 61 % | 40-135 | 1 | 11/4/10 15:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-010-1010
Sample Date/Time: 10/29/10 11:30
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1010098-10
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 16:04 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 16:04 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 16:04 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 16:04 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 16:04 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 16:04 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 16:04 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 70 % | 25-140 | 1 | 11/4/10 16:04 |
| DCB | 2051-24-3 | 69 % | 40-135 | 1 | 11/4/10 16:04 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-011-1010
Sample Date/Time: 10/29/10 10:40
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1010098-11
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 17:09 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 17:09 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 17:09 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 17:09 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 17:09 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 17:09 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 17:09 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 84 % | 25-140 | 1 | 11/4/10 17:09 |
| DCB | 2051-24-3 | 60 % | 40-135 | 1 | 11/4/10 17:09 |

**Appendix C**

Support Documentation

HOLDTIME

**SDG** 1010098

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | | GKHMS-GW-005-1010 | 1010098-04 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| HG | UG/L | GKHMS-GW-011-1010 | 1010098-11 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-012-1010 | 1010098-12 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-010-1010 | 1010098-10 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-009-1010 | 1010098-09 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-008-1010 | 1010098-08 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-007-1010 | 1010098-06 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-006-1010 | 1010098-05 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-004-1010 | 1010098-03 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-003-1010 | 1010098-02 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-002-1010 | 1010098-01 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-013-1010 | 1010098-13 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| OV | UG/L | GKHMS-GW-012-1010 | 1010098-12 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-002-1010 | 1010098-01 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| OV | UG/L | GKHMS-GW-003-1010 | 1010098-02 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | UG/L | GKHMS-GW-004-1010 | 1010098-03 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| OV | UG/L | GKHMS-GW-005-1010 | 1010098-04 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| OV | UG/L | GKHMS-GW-006-1010 | 1010098-05 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| OV | UG/L | GKHMS-GW-007-1010 | 1010098-06 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| OV | UG/L | GKHMS-GW-008-1010 | 1010098-08 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-009-1010 | 1010098-09 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-013-1010 | 1010098-13 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-TB-01 | 1010098-07 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| OV | UG/L | GKHMS-GW-011-1010 | 1010098-11 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-010-1010 | 1010098-10 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| SIM | NG/L | GKHMS-GW-002-1010 | 1010098-01 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| SIM | NG/L | GKHMS-GW-012-1010 | 1010098-12 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| SIM | NG/L | GKHMS-GW-011-1010 | 1010098-11 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| SIM | NG/L | GKHMS-GW-010-1010 | 1010098-10 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| SIM | NG/L | GKHMS-GW-009-1010 | 1010098-09 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| SIM | NG/L | GKHMS-GW-008-1010 | 1010098-08 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| SIM | NG/L | GKHMS-GW-007-1010 | 1010098-06 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| SIM | NG/L | GKHMS-GW-006-1010 | 1010098-05 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| SIM | NG/L | GKHMS-GW-005-1010 | 1010098-04 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| SIM | NG/L | GKHMS-GW-003-1010 | 1010098-02 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| SIM | NG/L | GKHMS-GW-013-1010 | 1010098-13 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| SIM | NG/L | GKHMS-GW-004-1010 | 1010098-03 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| PCB | UG/L | GKHMS-GW-011-1010 | 1010098-11 | NM | 10/29/2010 | 11/03/2010 | 11/04/2010 | 5 | 1 | 6 |
| PCB | UG/L | GKHMS-GW-010-1010 | 1010098-10 | NM | 10/29/2010 | 11/03/2010 | 11/04/2010 | 5 | 1 | 6 |
| PCB | UG/L | GKHMS-GW-005-1010 | 1010098-04 | NM | 10/28/2010 | 11/03/2010 | 11/04/2010 | 6 | 1 | 7 |
| PEST | UG/L | GKHMS-GW-011-1010 | 1010098-11 | NM | 10/29/2010 | 11/03/2010 | 11/15/2010 | 5 | 12 | 17 |
| PEST | UG/L | GKHMS-GW-010-1010 | 1010098-10 | NM | 10/29/2010 | 11/03/2010 | 11/15/2010 | 5 | 12 | 17 |
| PEST | UG/L | GKHMS-GW-005-1010 | 1010098-04 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-GW-002-1010 | 1010098-01 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-003-1010 | 1010098-02 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-004-1010 | 1010098-03 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-005-1010 | 1010098-04 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-006-1010 | 1010098-05 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-007-1010 | 1010098-06 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-008-1010 | 1010098-08 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-009-1010 | 1010098-09 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-010-1010 | 1010098-10 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-011-1010 | 1010098-11 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-012-1010 | 1010098-12 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |

| | | | | | |
|---|---|---|---|---|---|
| GKHMS-GW-013-1010 | 1010098-13 | SW7470A<br>SW8260B<br>SW8270C SIM | Water | 10/29/2010 | 10/30/2010 |
| GKHMS-TB-01 | 1010098-07 | SW8260B | Water | 10/28/2010 | 10/30/2010 |

**SAMPLE RECIEPT**

Thirteen water samples were received on 10/30/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/06/2010.

**8260**

Thirteen water samples were analyzed for volatile organic compounds by the SW846 Method 8260B..
The samples were analyzed within the holding time.

Sample GKHMS-TB-01 had one surrogate recovery above QC limits. No target compounds found in that sample correspond to that surrogate, so the data is not affected. All remaining surrogate recoveries and internal standard responses were within the QC limits.

Duplicate laboratory control samples were analyzed along with the batch.

Recovery of four compounds in the LCS and two compounds in the LCSD were above the QC limits. Because none of the compounds were detected above the reporting limit in the associated client samples, there is no effect on the results reported. Recovery of three compounds in the LCS and LCSD were below QC limits. Because none of the compounds were detected above the method detection limit in the associated client samples, there is no effect on the results reported. The % RPD for four compounds was above the QC limits for the pair.

The response for two compounds was above QC limits and six compounds were below the QC limits in the daily CCV. The response for acetone was very slightly below the control limits. Acetone was detected in sample GKHMS-GW-011-1010 above the reporting limit. Although the LCS was within QC limits, the LCSD was above QC limits. The data may be estimated.
The remaining compounds were not detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

**PCBs**

Three water samples were extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead,a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.

Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

## Metals

Twelve water samples were analyzed for mercury by SW846 method 7470A. A matrix spike and matrix spike duplicate was run on sample GKHMS-GW-002-1010. All QC recovery limits were met.

## SW8270LL-PAH SIM

Twelve water samples were extracted by method 3520C. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
All surrogate recoveries were within the QC requirements.
Some samples had internal standard response outside the QC limits, the samples were reanalyzed with similar results and the reanalyses are included in the package for QA/QC purposes. All other internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were not performed due to insufficient sample volume. Instead two laboratory control samples were extracted and analyzed with this batch. All spike recoveries were within the QC.

## PESTICIDES

Three water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. All recoveries were within the QC limits.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-GW-002-1010 | 1010098-01 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-003-1010 | 1010098-02 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-004-1010 | 1010098-03 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-005-1010 | 1010098-04 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-006-1010 | 1010098-05 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-007-1010 | 1010098-06 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-008-1010 | 1010098-08 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-009-1010 | 1010098-09 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-010-1010 | 1010098-10 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-011-1010 | 1010098-11 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-012-1010 | 1010098-12 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |

| | | | | | |
|---|---|---|---|---|---|
| GKHMS-GW-013-1010 | 1010098-13 | SW7470A<br>SW8260B<br>SW8270C SIM | Water | 10/29/2010 | 10/30/2010 |
| GKHMS-TB-01 | 1010098-07 | SW8260B | Water | 10/28/2010 | 10/30/2010 |

## Subcontracted Analyses

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1010098-01 | 6020A QSM TAL |
| 1010098-01 | 8270D LL SVOC TCL |
| 1010098-02 | 6020A QSM TAL |
| 1010098-02 | 8270D LL SVOC TCL |
| 1010098-03 | 6020A QSM TAL |
| 1010098-03 | 8270D LL SVOC TCL |
| 1010098-04 | 6020A QSM TAL |
| 1010098-04 | 8270D LL SVOC TCL |
| 1010098-05 | 6020A QSM TAL |
| 1010098-05 | 8270D LL SVOC TCL |
| 1010098-06 | 6020A QSM TAL |
| 1010098-06 | 8270D LL SVOC TCL |
| 1010098-08 | 6020A QSM TAL |
| 1010098-08 | 8270D LL SVOC TCL |
| 1010098-09 | 6020A QSM TAL |
| 1010098-09 | 8270D LL SVOC TCL |
| 1010098-10 | 6020A QSM TAL |
| 1010098-10 | 8270D LL SVOC TCL |
| 1010098-11 | 6020A QSM TAL |
| 1010098-11 | 8270D LL SVOC TCL |
| 1010098-12 | 6020A QSM TAL |
| 1010098-12 | 8270D LL SVOC TCL |
| 1010098-13 | 6020A QSM TAL |
| 1010098-13 | 8270D LL SVOC TCL |

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1010098 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 10/29/2010 5:15:00PM |
| Date Received: | 10/30/2010 10:55:00AM | Logged In By: | Kendra Van Wyck |
| Received By: | Kendra Van Wyck | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

| | |
|---|---|
| Shipping Container in good condition? | Y |
| Custody seals present on shipping container? | Y |
| Condition: | |
| Chain-of-Custody present? | Y |
| COC agrees with sample labels? | Y |
| COC signed? | Y |
| Packing present in shipping container? | Y |
| Custody seals present on sample bottles? | N |
| Condition: | |
| Samples intact? | Y |
| Sufficient volume for requested tests? | Y |
| Preservation confirmed? | Y |
| Are there Volatiles samples present? | N |
| Has Zero Headspace? | N/A |
| Total number of bottles: | |
| Total number of samples: | 13 |

Comments:

# SW8260B

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890183.D | Injection Date: | 11/02/10 |
| Instrument ID: | GCMS-B | Injection Time: | 16:48 |
| Sequence: | S047018 | Lab Sample ID: | S047018-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 20.9 | PASS |
| 75 | 30 - 60% of 95 | 51 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.48 | PASS |
| 173 | Less than 2% of 174 | 0.0442 | PASS |
| 174 | 50 - 200% of 95 | 94.8 | PASS |
| 175 | 5 - 9% of 174 | 7.27 | PASS |
| 176 | 95 - 101% of 174 | 96.3 | PASS |
| 177 | 5 - 9% of 176 | 6.45 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047018-CAL1 | B02890184.D | 11/02/2010 | 17:14:00 |
| Cal Standard | S047018-CAL2 | B02890185.D | 11/02/2010 | 17:41:00 |
| Cal Standard | S047018-CAL3 | B02890186.D | 11/02/2010 | 18:08:00 |
| Cal Standard | S047018-CAL4 | B02890187.D | 11/02/2010 | 18:34:00 |
| Cal Standard | S047018-CAL5 | B02890188.D | 11/02/2010 | 19:01:00 |
| Cal Standard | S047018-CAL6 | B02890189.D | 11/02/2010 | 19:28:00 |
| Cal Standard | S047018-CAL7 | B02890190.D | 11/02/2010 | 19:54:00 |
| Cal Standard | S047018-CAL8 | B02890191.D | 11/02/2010 | 20:21:00 |
| Secondary Cal Check | S047018-SCV1 | B02890193.D | 11/03/2010 | 7:56:00 |

# INITIAL CALIBRATION STANDARDS

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047018 | Instrument: | GCMS-B |
| Calibration: | 0111603 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001918 | VOA Tune (GC/MS-B) | S047018-TUN1 | B02890183.D | 11/02/10 16:48 |
| 0002205 | VOA ICAL 0.5 PPB ELEMENT | S047018-CAL1 | B02890184.D | 11/02/10 17:14 |
| 0002207 | VOA ICAL 1.0 PPB ELEMENT | S047018-CAL2 | B02890185.D | 11/02/10 17:41 |
| 0002208 | VOA ICAL 2.0 PPB ELEMENT | S047018-CAL3 | B02890186.D | 11/02/10 18:08 |
| 0002209 | VOA ICAL 5.0 PPB ELEMENT | S047018-CAL4 | B02890187.D | 11/02/10 18:34 |
| 0002210 | VOA ICAL 10.0 PPB ELEMENT | S047018-CAL5 | B02890188.D | 11/02/10 19:01 |
| 0002211 | VOA ICAL 20.0 PPB ELEMENT | S047018-CAL6 | B02890189.D | 11/02/10 19:28 |
| 0002212 | VOA ICAL 40.0 PPB ELEMENT | S047018-CAL7 | B02890190.D | 11/02/10 19:54 |
| 0002213 | VOA ICAL 50.0 PPB ELEMENT | S047018-CAL8 | B02890191.D | 11/02/10 20:21 |
| 0002214 | VOA MIX SECOND SOURCE ELEMENT | S047018-SCV1 | B02890193.D | 11/03/10 07:56 |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.116484 | 8.78287 | | | 15 | |
| 1,1,1-Trichloroethane | 0.6624498 | 8.964297 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.5107566 | 13.43412 | | | 15 | |
| 1,1,2-Trichloroethane | 0.2283942 | 33.04235 | | | 15 | * |
| 1,1-Dichloroethane | 0.7717732 | 12.39146 | | | 15 | |
| 1,1-Dichloroethene | 0.3711489 | 11.32993 | | | 15 | |
| 1,1-Dichloropropene | 1.087045 | 25.28223 | | | 15 | * |
| 1,2,3-Trichlorobenzene | 9.684893E-02 | 63.57313 | 0.9832031 | | | |
| 1,2,3-Trichloropropane | 0.4473402 | 10.60114 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.1341797 | 63.44623 | 0.9839389 | | | |
| 1,2,4-Trimethylbenzene | 5.114888 | 20.03623 | 0.9985987 | | | |
| 1,2-Dibromo-3-chloropropane | 1.014216E-02 | 18.75626 | | | 15 | * |
| 1,2-Dibromoethane | 0.4713555 | 9.195251 | | | 15 | |
| 1,2-Dichlorobenzene | 0.3515131 | 10.70968 | | 0.9992979 | | |
| 1,2-Dichloroethane | 0.5246059 | 41.2223 | | | 15 | * |
| 1,2-Dichloroethene (total) | 0.5027585 | 8.233519 | | | 15 | |
| 1,2-Dichloropropane | 0.5683593 | 31.66195 | | | 15 | * |
| 1,3,5-Trimethylbenzene | 5.952263 | 14.20284 | | | 15 | |
| 1,3-Dichlorobenzene | 2.43776 | 14.29359 | | | 15 | |
| 1,3-Dichloropropane | 1.091156 | 9.968286 | | | 15 | |
| 1,4-Dichlorobenzene | 2.374472 | 12.58217 | | | 15 | |
| 2,2-Dichloropropane | 0.3365477 | 9.227036 | | | 15 | |
| 2-Butanone | 7.242459E-02 | 32.46569 | | | 15 | * |
| 2-Chloroethylvinyl Ether | 8907.764 | 50.18028 | 0.9980411 | | | |
| 2-Chlorotoluene | 4.631978 | 9.316767 | | | 15 | |
| 2-Hexanone | 0.2190266 | 6.713678 | | | 15 | |
| 4-Chlorotoluene | 4.95554 | 12.37025 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.4276112 | 30.61629 | 0.9991402 | | | |
| Acetone | 0.0456676 | 39.26457 | | 0.9996086 | | |
| Acetonitrile | 18346.21 | 13.78049 | 0.9962317 | | | |
| Acrylonitrile | 43710.6 | 9.625617 | | | 15 | |
| Benzene | 2.819357 | 27.91782 | | | 15 | * |
| Bromobenzene | 1.278368 | 7.367428 | | | 15 | |
| Bromochloromethane | 0.1022042 | 10.4447 | | | 15 | |
| Bromodichloromethane | 0.6221092 | 29.48529 | | | 15 | * |
| Bromoform | 0.3684413 | 9.2223 | | | 15 | |
| Bromomethane | 0.080217 | 30.2169 | 0.9964676 | | | |
| Carbon disulfide | 1.261127 | 12.00646 | | | 15 | |
| Carbon tetrachloride | 0.7442417 | 13.15656 | | | 15 | |
| Chlorobenzene | 3.699172 | 7.113433 | | | 15 | |
| Chlorodibromomethane | 0.6831609 | 9.045344 | 0.9979304 | | | |
| Chloroethane | 0.3386901 | 16.14272 | 0.9998514 | | | |
| Chloroform | 0.6088983 | 6.842336 | | | 15 | |
| Chloromethane | 0.5083799 | 14.52575 | | | 15 | |
| cis-1,2-Dichloroethene | 0.3758816 | 5.663625 | | | 15 | |
| cis-1,3-Dichloropropene | 0.4054395 | 20.34171 | | | 15 | * |
| Cyclohexane | 1292555 | 32.68008 | | | 15 | * |
| Dibromomethane | 0.1725585 | 36.68483 | | | 15 | * |
| Dichlorodifluoromethane | 0.3558482 | 13.16741 | | | 15 | |
| Ethyl methacrylate | 211158.5 | 24.84804 | | | 15 | * |
| Ethylbenzene | 7.575219 | 9.713854 | | | 15 | |
| Freon 113 | 1293474 | 15.78787 | | | 15 | * |
| Hexachlorobutadiene | 0.2714185 | 37.07245 | | | 15 | * |
| Iodomethane | 3599342 | 12.55451 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 5258.805 | 43.50744 | | | 15 | * |
| Isopropylbenzene | 7.217441 | 13.32835 | | | 15 | |
| m,p-Xylenes | 2.975394 | 8.976698 | | | 15 | |
| Methacrylonitrile | 53524.73 | 23.64737 | | | 15 | * |
| Methyl Acetate | 31372.81 | 15.14661 | | | 15 | * |
| Methyl tert-Butyl Ether | 0.4306216 | 18.45499 | 0.9976476 | | | |
| Methylcyclohexane | .1143584 | 34.18692 | 0.9910474 | | | |
| Methylene Chloride | 0.3506711 | 39.63032 | | 0.9978228 | | |
| Methylmethacrylate | 733813.5 | 30.1738 | | | 15 | * |
| Naphthalene | 0.1034311 | 50.15162 | 0.9766376 | | | |
| n-Butylbenzene | 4.34243 | 45.61511 | 0.9977579 | | | |
| n-Propylbenzene | 8.565694 | 14.07401 | | | 15 | |
| o-Xylene | 2.489593 | 9.112564 | 0.9996328 | | | |
| p-Isopropyltoluene | 6.076664 | 23.19845 | 0.9973411 | | | |
| Propionitrile | 15194.65 | 27.87815 | | | 15 | * |
| sec-Butylbenzene | 8.048094 | 19.26544 | 0.9965027 | | | |
| Styrene | 3.786209 | 10.74699 | | | 15 | |
| tert-Butylbenzene | 5.062972 | 16.1811 | 0.9990533 | | | |
| Tetrachloroethene | 2.138238 | 13.15271 | | | 15 | |
| Toluene | 1.743137 | 28.86084 | | | 15 | * |
| trans-1,2-Dichloroethene | 0.6296353 | 10.42258 | | | 15 | |
| trans-1,3-Dichloropropene | 0.4054395 | 20.34171 | | | 15 | * |
| Trichloroethene | 0.7738535 | 33.79619 | | | 15 | * |
| Trichlorofluoromethane | 0.8976513 | 12.19688 | | | 15 | |
| Vinyl acetate | 241788.3 | 21.39966 | | | 15 | * |
| Vinyl chloride | 0.4399842 | 8.081486 | | | 15 | |
| Xylene (Total) | 2.813461 | 8.877199 | | | 15 | |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.137718 | 1.080758 | 0.9242545 | 1.054373 | 1.196939 | 1.244954 |
| 1,1,1-Trichloroethane | 0.6321166 | 0.6338306 | 0.5623216 | 0.6294249 | 0.7143744 | 0.7353097 |
| 1,1,2,2-Tetrachloroethane | 0.6463594 | 0.5723211 | 0.4608509 | 0.4430741 | 0.512564 | 0.5088101 |
| 1,1,2-Trichloroethane | 0.370786 | 0.307751 | 0.2132762 | 0.2156686 | 0.2102087 | 0.1782096 |
| 1,1-Dichloroethane | 0.9244567 | 0.8779312 | 0.7340727 | 0.7625004 | 0.8038319 | 0.7567345 |
| 1,1-Dichloroethene | 0.4102824 | 0.3960432 | 0.3431403 | 0.3889274 | 0.4186355 | 0.3851871 |
| 1,1-Dichloropropene | 1.535436 | 1.402195 | 0.9870536 | 1.10091 | 1.050578 | 0.9003959 |
| 1,2,3-Trichlorobenzene | 4.444535E-02 | 4.992828E-02 | 0.0459218 | 6.772354E-02 | 0.1153055 | 0.1542084 |
| 1,2,3-Trichloropropane | 0.5402641 | ~~0.4894522~~ | 0.4079534 | 0.3956316 | 0.4569117 | 0.4584619 |
| 1,2,4-Trichlorobenzene | 6.058071E-02 | 6.835081E-02 | 5.678809E-02 | 0.1036737 | 0.1624796 | 0.2118533 |
| 1,2,4-Trimethylbenzene | 3.789265 | 4.299713 | 4.095353 | 4.642616 | 5.541918 | 6.08496 |
| 1,2-Dibromo-3-chloropropane | ~~0~~ | ~~3.039843E-03~~ | 7.344711E-03 | 8.308987E-03 | 1.067826E-02 | 0.0111616 |
| 1,2-Dibromoethane | 0.5538098 | 0.4947838 | 0.4114293 | 0.4330405 | 0.4768849 | 0.4816186 |
| 1,2-Dichlorobenzene | 0.3172798 | 0.3342637 | 0.3247484 | 0.335396 | 0.3889955 | 0.4083953 |
| 1,2-Dichloroethane | 0.9471049 | 0.741011 | 0.4910138 | 0.4793356 | 0.4471924 | 0.3734511 |
| 1,2-Dichloroethene (total) | 0.5525286 | 0.5446109 | 0.4699761 | 0.4977293 | 0.5358538 | 0.5181266 |
| 1,2-Dichloropropane | 0.9053525 | 0.7539747 | 0.5198543 | 0.5511534 | 0.5161694 | 0.4445078 |
| 1,3,5-Trimethylbenzene | ~~4.659586~~ | 5.162566 | 4.792872 | 5.305948 | 6.378154 | 6.787983 |
| 1,3-Dichlorobenzene | 2.143837 | 2.225036 | 2.010944 | 2.143708 | 2.537025 | 2.775413 |
| 1,3-Dichloropropane | 1.279034 | 1.164588 | 0.9333275 | 0.9723014 | 1.094678 | 1.128046 |
| 1,4-Dichlorobenzene | 2.199035 | 2.214173 | 1.958956 | 2.086143 | 2.486161 | 2.69695 |
| 2,2-Dichloropropane | 0.3589357 | 0.3401283 | 0.2798627 | 0.3072379 | 0.3447387 | 0.3524 |
| 2-Butanone | ~~0.1625636~~ | 0.1157366 | 8.246859E-02 | 7.652483E-02 | 6.955589E-02 | 5.526651E-02 |
| 2-Chloroethylvinyl Ether | ~~0~~ | 0 | 12370.25 | 11024.1 | 10527.95 | 9784.1 |
| 2-Chlorotoluene | 4.463599 | 4.553371 | 3.930855 | 4.153768 | 4.84237 | 5.032948 |
| 2-Hexanone | 0.2348535 | 0.2151137 | 0.1951663 | 0.2002392 | 0.2254449 | 0.2304904 |
| 4-Chlorotoluene | 4.358868 | 4.596561 | 4.182945 | 4.486703 | 5.342988 | 5.656096 |
| 4-Methyl-2-pentanone | 0.717645 | 0.5268999 | 0.372503 | 0.3501974 | 0.3783573 | 0.3659338 |
| Acetone | 7.932622E-02 | 5.819789E-02 | 4.484222E-02 | 4.055833E-02 | 3.859258E-02 | 3.152554E-02 |
| Acetonitrile | 24429.4 | 17991.5 | 17819.8 | 17315.12 | 16905.35 | 17043.86 |
| Acrylonitrile | ~~48394.4~~ | 39541.8 | 40025.1 | 41381.72 | 43518.7 | 45597.29 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Benzene | 4.192009 | 3.70764 | 2.599532 | 2.788104 | 2.667674 | 2.27032 |
| Bromobenzene | 1.34629 | 1.320823 | 1.111461 | 1.145827 | 1.303878 | 1.312086 |
| Bromochloromethane | 0.1154854 | 0.1180547 | 9.977108E-02 | 9.794437E-02 | 0.1072293 | 9.930819E-02 |
| Bromodichloromethane | 0.9481987 | 0.8229535 | 0.5723709 | 0.6039304 | 0.5658161 | 0.4893361 |
| Bromoform | 0.3812644 | ~~0.368309~~ | 0.3118722 | 0.3269331 | 0.3882584 | 0.3938927 |
| Bromomethane | 0.1091412 | 0.1174927 | 9.259139E-02 | 8.300619E-02 | 6.665446E-02 | 0.0581632 |
| Carbon disulfide | 1.39458 | 1.358362 | 1.187775 | 1.341659 | 1.438331 | 1.268423 |
| Carbon tetrachloride | ~~2.27554~~ | ~~1.397602~~ | 0.9233567 | 0.7612746 | 0.7422998 | 0.7139435 |
| Chlorobenzene | 4.079421 | 3.871055 | 3.215587 | 3.452899 | 3.757074 | 3.785151 |
| Chlorodibromomethane | 0.7241622 | ~~0.6521599~~ | 0.5744324 | 0.6220073 | 0.704879 | 0.7279689 |
| Chloroethane | 0.4146973 | 0.3777388 | 0.3124114 | 0.2977452 | 0.2908577 | ~~0.1652325~~ |
| Chloroform | 0.6778612 | 0.6488071 | 0.5571636 | 0.5765395 | 0.6038434 | 0.6206726 |
| Chloromethane | ~~0.6367654~~ | 0.6515399 | 0.541889 | 0.4961354 | 0.5190944 | 0.4470201 |
| cis-1,2-Dichloroethene | 0.4031365 | 0.3865564 | 0.3441134 | 0.3636593 | 0.3938112 | 0.3905888 |
| cis-1,3-Dichloropropene | 0.5281696 | 0.4934648 | 0.3674466 | 0.4009856 | 0.4008292 | 0.3473361 |
| Cyclohexane | 844524 | 802192 | 868510 | 1253787 | 1391769 | 1675181 |
| Dibromomethane | 0.2896865 | 0.2411977 | 0.1639727 | 0.1612166 | 0.1557729 | 0.1273626 |
| Dichlorodifluoromethane | 0.4176431 | 0.4024295 | 0.3474427 | 0.375663 | 0.3832135 | 0.3222187 |
| Ethyl methacrylate | 153122 | ~~137576~~ | 157596 | 182532.4 | 203014.4 | 235087.7 |
| Ethylbenzene | 7.23388 | 7.168635 | 6.289067 | 7.140819 | 8.201071 | 8.490902 |
| Freon 113 | 1131932 | 1048244 | 1063729 | 1299291 | 1351340 | 1487695 |
| Hexachlorobutadiene | 0.1441284 | 0.1908431 | 0.2061281 | 0.2621121 | 0.3069986 | 0.3635383 |
| Iodomethane | ~~2908628~~ | ~~2711920~~ | 2770712 | 3517012 | 3739903 | 3938156 |
| Isobutyl alcohol | 0 | 5053.55 | 5331.05 | 5510.57 | 5711.12 | 6341.158 |
| Isopropylbenzene | 6.11879 | 6.505924 | 6.010448 | 6.762518 | 7.887533 | 8.224195 |
| m,p-Xylenes | 2.836991 | 2.878909 | 2.539297 | 2.840677 | 3.302768 | 3.352229 |
| Methacrylonitrile | 41186 | 42685 | 43175.5 | 46394.2 | 53240.2 | 61969.5 |
| Methyl Acetate | ~~0~~ | ~~26205~~ | 27256 | 26192.2 | 30089.8 | 33124.1 |
| Methyl tert-Butyl Ether | 0.5841319 | 0.5135229 | 0.4291903 | 0.3843388 | 0.4212384 | 0.3913302 |
| Methylcyclohexane | 707878 | 702377 | 750711.5 | 1130364 | 1219879 | 1460349 |
| Methylene Chloride | ~~0.8522035~~ | 0.6279542 | 0.4094029 | 0.3490936 | 0.3340957 | 0.2772488 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Methylmethacrylate | 505896 | 476064 | 500459 | 720506 | 788441.2 | 944835 |
| Naphthalene | ~~5.762227E-02~~ | 7.264312E-02 | 6.104463E-02 | 6.400494E-02 | 9.291294E-02 | 0.1379258 |
| n-Butylbenzene | 1.864631 | 2.490591 | 2.979331 | 4.291665 | 5.416215 | 6.509997 |
| n-Propylbenzene | 7.179015 | 7.68441 | 7.091864 | 7.998169 | 9.40427 | 9.88256 |
| o-Xylene | 2.315662 | 2.399768 | 2.112624 | 2.344121 | 2.685407 | 2.734282 |
| p-Isopropyltoluene | 4.23615 | 4.75218 | 4.751699 | 5.60829 | 6.706934 | 7.511985 |
| Propionitrile | ~~0~~ | 7930 | 12056 | 14559.4 | 15532.9 | 17460.95 |
| sec-Butylbenzene | 6.024264 | 6.686108 | 6.507132 | 7.501995 | 8.903931 | 9.69139 |
| Styrene | 3.357025 | 3.590958 | 3.220363 | 3.518982 | 4.130541 | 4.249643 |
| tert-Butylbenzene | 4.028291 | 4.402848 | 4.207443 | 4.677052 | 5.49207 | 5.859534 |
| Tetrachloroethene | 1.992649 | 1.962984 | 1.650873 | 2.000693 | 2.26959 | 2.437969 |
| Toluene | 2.625611 | 2.307793 | 1.648618 | 1.716929 | 1.625029 | 1.363502 |
| trans-1,2-Dichloroethene | 0.7019206 | 0.7026653 | 0.5958387 | 0.6317993 | 0.6778965 | 0.6456645 |
| trans-1,3-Dichloropropene | 0.5281696 | 0.4934648 | 0.3674466 | 0.4009856 | 0.4008292 | 0.3473361 |
| Trichloroethene | 1.153216 | 1.192551 | 0.6802427 | 0.7119551 | 0.678534 | 0.5920085 |
| Trichlorofluoromethane | 1.029739 | 1.00263 | 0.8513793 | 0.9384542 | 0.9785098 | 0.8833728 |
| Vinyl acetate | 233845 | 175818.5 | 170431.8 | 226746.4 | 244818.5 | 293572.8 |
| Vinyl chloride | 0.4243422 | 0.4715637 | 0.4275189 | 0.4662773 | 0.4961119 | 0.4291982 |
| Xylene (Total) | 2.663215 | 2.719196 | 2.397072 | 2.675158 | 3.096981 | 3.146246 |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.146845 | 1.146031 | | | | |
| 1,1,1-Trichloroethane | 0.6681914 | 0.7240292 | | | | |
| 1,1,2,2-Tetrachloroethane | 0.4875366 | 0.4545363 | | | | |
| 1,1,2-Trichloroethane | 0.1326528 | 0.1986011 | | | | |
| 1,1-Dichloroethane | 0.6417875 | 0.6728711 | | | | |
| 1,1-Dichloroethene | 0.309983 | 0.3169922 | | | | |
| 1,1-Dichloropropene | 0.6614118 | 1.058379 | | | | |
| 1,2,3-Trichlorobenzene | 0.2004096 | ~~0.1934626~~ | | | | |
| 1,2,3-Trichloropropane | 0.4451584 | 0.4269999 | | | | |
| 1,2,4-Trichlorobenzene | 0.2755314 | ~~0.2639965~~ | | | | |
| 1,2,4-Trimethylbenzene | 6.38353 | 6.081748 | | | | |
| 1,2-Dibromo-3-chloropropane | 1.233261E-02 | 1.102678E-02 | | | | |
| 1,2-Dibromoethane | 0.4467425 | 0.4725344 | | | | |
| 1,2-Dichlorobenzene | ~~0.4326207~~ | ~~0.3851788~~ | | | | |
| 1,2-Dichloroethane | 0.2720649 | 0.4456735 | | | | |
| 1,2-Dichloroethene (total) | 0.4443942 | 0.4588481 | | | | |
| 1,2-Dichloropropane | 0.3317182 | 0.5241441 | | | | |
| 1,3,5-Trimethylbenzene | 6.877292 | 6.361025 | | | | |
| 1,3-Dichlorobenzene | 2.914371 | 2.751748 | | | | |
| 1,3-Dichloropropane | 1.052159 | 1.105116 | | | | |
| 1,4-Dichlorobenzene | 2.757223 | 2.597132 | | | | |
| 2,2-Dichloropropane | 0.3300635 | 0.3790149 | | | | |
| 2-Butanone | 4.105142E-02 | 6.636826E-02 | | | | |
| 2-Chloroethylvinyl Ether | 9740.188 | ~~14224.43~~ | | | | |
| 2-Chlorotoluene | 5.116078 | 4.962837 | | | | |
| 2-Hexanone | 0.2195226 | 0.2313825 | | | | |
| 4-Chlorotoluene | 5.701094 | 5.319067 | | | | |
| 4-Methyl-2-pentanone | 0.3475591 | 0.3617943 | | | | |
| Acetone | 2.663043E-02 | ~~2.464636E-02~~ | | | | |
| Acetonitrile | 16772.16 | 18492.47 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Acrylonitrile | 44068.54 | 51841.04 | | | | |
| Benzene | 1.699583 | 2.629998 | | | | |
| Bromobenzene | 1.347468 | 1.339111 | | | | |
| Bromochloromethane | 8.762257E-02 | 9.221822E-02 | | | | |
| Bromodichloromethane | 0.3671 | 0.6071681 | | | | |
| Bromoform | 0.3884717 | 0.3883963 | | | | |
| Bromomethane | 5.521866E-02 | 5.946826E-02 | | | | |
| Carbon disulfide | 1.068738 | 1.031147 | | | | |
| Carbon tetrachloride | 0.6376776 | 0.6868978 | | | | |
| Chlorobenzene | 3.667434 | 3.764755 | | | | |
| Chlorodibromomethane | 0.6893892 | 0.7392875 | | | | |
| Chloroethane | ~~5.854633E-02~~ | ~~6.183004E-02~~ | | | | |
| Chloroform | 0.5665204 | 0.6197786 | | | | |
| Chloromethane | 0.434183 | 0.4687976 | | | | |
| cis-1,2-Dichloroethene | 0.3510586 | 0.3741284 | | | | |
| cis-1,3-Dichloropropene | 0.267889 | 0.4373949 | | | | |
| Cyclohexane | 1597908 | 1906565 | | | | |
| Dibromomethane | 9.147151E-02 | 0.1497874 | | | | |
| Dichlorodifluoromethane | 0.2818643 | 0.3163105 | | | | |
| Ethyl methacrylate | 250144.3 | 296612.4 | | | | |
| Ethylbenzene | 8.092514 | 7.984863 | | | | |
| Freon 113 | 1341143 | 1624420 | | | | |
| Hexachlorobutadiene | 0.4261812 | ~~0.4007819~~ | | | | |
| Iodomethane | 3591655 | 4038614 | | | | |
| Isobutyl alcohol | 6353.516 | 7769.473 | | | | |
| Isopropylbenzene | 8.230303 | 7.999815 | | | | |
| m,p-Xylenes | 3.090347 | 2.961936 | | | | |
| Methacrylonitrile | 62907.77 | 76639.66 | | | | |
| Methyl Acetate | 32221.82 | 39352.96 | | | | |
| Methyl tert-Butyl Ether | 0.3508026 | 0.3704173 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Methylcyclohexane | 1468681 | 1708431 | | | | |
| Methylene Chloride | 0.2290044 | 0.2278979 | | | | |
| Methylmethacrylate | 884195.2 | 1050111 | | | | |
| Naphthalene | 0.1920554 | ~~0.1908091~~ | | | | |
| n-Butylbenzene | 6.844577 | ~~6.341841~~ | | | | |
| n-Propylbenzene | 9.976176 | 9.309088 | | | | |
| o-Xylene | 2.681401 | 2.643483 | | | | |
| p-Isopropyltoluene | 7.799253 | 7.24682 | | | | |
| Propionitrile | 18030.47 | 20792.8 | | | | |
| sec-Butylbenzene | 9.953442 | 9.116488 | | | | |
| Styrene | 4.129297 | 4.09286 | | | | |
| tert-Butylbenzene | 6.039186 | 5.797349 | | | | |
| Tetrachloroethene | 2.341865 | 2.449281 | | | | |
| Toluene | 1.043303 | 1.614309 | | | | |
| trans-1,2-Dichloroethene | 0.5377297 | 0.543568 | | | | |
| trans-1,3-Dichloropropene | 0.267889 | 0.4373949 | | | | |
| Trichloroethene | 0.4531898 | 0.7291313 | | | | |
| Trichlorofluoromethane | 0.7337462 | 0.763379 | | | | |
| Vinyl acetate | 275147.8 | 313925.4 | | | | |
| Vinyl chloride | 0.3840682 | 0.420793 | | | | |
| Xylene (Total) | 2.954033 | 2.855786 | | | | |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890192.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-B | Injection Time: | 07:30 |
| Sequence: | S047019 | Lab Sample ID: | S047019-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 19.9 | PASS |
| 75 | 30 - 60% of 95 | 50.9 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 97.9 | PASS |
| 175 | 5 - 9% of 174 | 6.85 | PASS |
| 176 | 95 - 101% of 174 | 96.1 | PASS |
| 177 | 5 - 9% of 176 | 6.32 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047019-CCV1 | B02890194.D | 11/03/2010 | 8:23:00 |
| Blank | B047031-BLK1 | B02890195.D | 11/03/2010 | 9:21:00 |
| LCS | B047031-BS1 | B02890196.D | 11/03/2010 | 9:48:00 |
| LCS Dup | B047031-BSD1 | B02890197.D | 11/03/2010 | 10:15:00 |
| GKHMS-TB-01 | 1010098-07 | B02890199.D | 11/03/2010 | 11:08:00 |
| GKHMS-GW-002-1010 | 1010098-01 | B02890200.D | 11/03/2010 | 11:39:00 |
| GKHMS-GW-003-1010 | 1010098-02 | B02890201.D | 11/03/2010 | 12:06:00 |
| GKHMS-GW-004-1010 | 1010098-03 | B02890202.D | 11/03/2010 | 12:32:00 |
| GKHMS-GW-005-1010 | 1010098-04 | B02890203.D | 11/03/2010 | 12:59:00 |
| GKHMS-GW-006-1010 | 1010098-05 | B02890204.D | 11/03/2010 | 13:26:00 |
| GKHMS-GW-007-1010 | 1010098-06 | B02890205.D | 11/03/2010 | 13:53:00 |
| GKHMS-GW-008-1010 | 1010098-08 | B02890206.D | 11/03/2010 | 14:20:00 |
| GKHMS-GW-009-1010 | 1010098-09 | B02890207.D | 11/03/2010 | 14:47:00 |
| GKHMS-GW-010-1010 | 1010098-10 | B02890208.D | 11/03/2010 | 15:14:00 |
| GKHMS-GW-011-1010 | 1010098-11 | B02890209.D | 11/03/2010 | 15:41:00 |
| GKHMS-GW-012-1010 | 1010098-12 | B02890210.D | 11/03/2010 | 16:07:00 |
| GKHMS-GW-013-1010 | 1010098-13 | B02890211.D | 11/03/2010 | 16:34:00 |

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890194.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047019 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047019-CCV1 | Injection Time: | 08:23 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 9.74 | 1.116484 | 1.087035 | | -2.6 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 9.19 | 0.6624498 | 0.6121281 | | -7.6 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 9.63 | 0.5107566 | 0.4918183 | | -3.7 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 8.97 | 0.2283942 | 0.1775137 | | -22.3 | 20 | * |
| 1,1-Dichloroethane | A | 10.0 | 8.14 | 0.7717732 | 0.6278108 | | -18.7 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 8.77 | 0.3711489 | 0.3253119 | | -12.4 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 9.91 | 1.087045 | 0.9485239 | | -12.7 | 20 | |
| 1,2,3-Trichlorobenzene | L | 10.0 | 8.12 | 9.684893E-02 | 9.780282E-02 | | -18.8 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 9.50 | 0.4473402 | 0.1470667 | | -67.1 | 20 | * |
| 1,2,4-Trichlorobenzene | L | 10.0 | 8.50 | 0.1341797 | 0.1428401 | | -15.0 | 20 | |
| 1,2,4-Trimethylbenzene | L | 10.0 | 11.0 | 5.114888 | 5.627541 | | 10.0 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 9.77 | 1.014216E-02 | 9.596825E-03 | | -5.4 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 8.98 | 0.4713555 | 0.4234103 | | -10.2 | 20 | |
| 1,2-Dichlorobenzene | Q | 10.0 | 9.77 | 0.3515131 | 0.3752398 | | -2.3 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 8.71 | 0.5246059 | 0.3883527 | | -26.0 | 20 | * |
| 1,2-Dichloropropane | A | 10.0 | 9.41 | 0.5683593 | 0.4646245 | | -18.3 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 11.0 | 5.952263 | 6.370671 | | 7.0 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 10.6 | 2.43776 | 2.588476 | | 6.2 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 9.14 | 1.091156 | 0.9977632 | | -8.6 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 10.6 | 2.374472 | 2.516676 | | 6.0 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 7.95 | 0.3365477 | 0.3871095 | | 15.0 | 20 | |
| 2-Butanone | A | 20.0 | 17.0 | 7.242459E-02 | 0.0569352 | | -21.4 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 10.2 | 4.631978 | 4.747761 | | 2.5 | 20 | |
| 2-Hexanone | A | 20.0 | 18.5 | 0.2190266 | 0.2026094 | | -7.5 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 10.2 | 4.95554 | 4.747761 | | -4.2 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890194.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047019 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047019-CCV1 | Injection Time: | 08:23 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | L | 20.0 | 15.6 | 0.4276112 | 0.3334432 | | -22.0 | 20 | * |
| Acetone | Q | 20.0 | 15.8 | 0.0456676 | 2.955444E-02 | | -20.8 | 20 | * |
| Acetonitrile | L | 100 | 82.2 | 18346.21 | 16087.29 | | -17.8 | 20 | |
| Acrylonitrile | A | 50.0 | 40.3 | 43710.6 | 46084.84 | | 5.4 | 20 | |
| Benzene | A | 10.0 | 9.56 | 2.819357 | 2.360653 | | -16.3 | 20 | |
| Bromobenzene | A | 10.0 | 9.86 | 1.278368 | 1.260537 | | -1.4 | 20 | |
| Bromochloromethane | A | 10.0 | 9.06 | 0.1022042 | 9.252266E-02 | | -9.5 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.22 | 0.6221092 | 0.5002882 | | -19.6 | 20 | |
| Bromoform | A | 10.0 | 9.59 | 0.3684413 | 0.3533263 | | -4.1 | 20 | |
| Bromomethane | L | 10.0 | 8.85 | 0.080217 | 5.551075E-02 | | -11.5 | 20 | |
| Carbon disulfide | A | 20.0 | 17.6 | 1.261127 | 1.093422 | | -13.3 | 20 | |
| Carbon tetrachloride | A | 10.0 | 8.84 | 0.7442417 | 0.6482538 | | -12.9 | 20 | |
| Chlorobenzene | A | 10.0 | 9.52 | 3.699172 | 3.524084 | | -4.7 | 20 | |
| Chlorodibromomethane | L | 10.0 | 9.55 | 0.6831609 | 0.6488946 | | -4.5 | 20 | |
| Chloroethane | L | 10.0 | 9.42 | 0.3386901 | 0.2439068 | | -5.8 | 20 | |
| Chloroform | A | 10.0 | 8.51 | 0.6088983 | 0.5175775 | | -15.0 | 20 | |
| Chloromethane | A | 10.0 | 9.77 | 0.5083799 | 0.4962704 | | -2.4 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 8.96 | 0.3758816 | 0.3330727 | | -11.4 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 9.33 | 0.4054395 | 0.5019235 | | 23.8 | 20 | * |
| Cyclohexane | A | 10.0 | 9.75 | 1292555 | 1265189 | | -2.1 | 20 | |
| Dibromomethane | A | 10.0 | 8.82 | 0.1725585 | 0.1304908 | | -24.4 | 20 | * |
| Dichlorodifluoromethane | A | 10.0 | 9.42 | 0.3558482 | 0.3350188 | | -5.9 | 20 | |
| Ethyl methacrylate | A | 10.0 | 8.81 | 211158.5 | 178967.4 | | -15.2 | 20 | |
| Ethylbenzene | A | 10.0 | 10.2 | 7.575219 | 7.728082 | | 2.0 | 20 | |
| Freon 113 | A | 5.00 | 9.11 | 1293474 | 1206015 | | -6.8 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890194.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047019 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047019-CCV1 | Injection Time: | 08:23 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 10.4 | 0.2714185 | 0.2973494 | | 9.6 | 20 | |
| Iodomethane | A | 10.0 | 6.29 | 3599342 | 168763.7 | | -95.3 | 20 | * |
| Isobutyl alcohol | A | 200 | 165 | 5258.805 | 5235.705 | | -0.4 | 20 | |
| Isopropylbenzene | A | 10.0 | 10.5 | 7.217441 | 7.546278 | | 4.6 | 20 | |
| m,p-Xylenes | A | 20.0 | 21.2 | 2.975394 | 3.149727 | | 5.9 | 20 | |
| Methacrylonitrile | A | 10.0 | 7.55 | 53524.73 | 81309.2 | | 51.9 | 20 | * |
| Methyl Acetate | A | 10.0 | 7.55 | 31372.81 | 114845.5 | | 266 | 20 | * |
| Methyl tert-Butyl Ether | L | 10.0 | 6.47 | 0.4306216 | 0.2784623 | | -35.3 | 20 | * |
| Methylcyclohexane | L | 10.0 | 10.6 | 1143584 | 1127875 | | 5.8 | 20 | |
| Methylene Chloride | Q | 10.0 | 20.9 | 0.3506711 | 0.5181961 | | 109 | 20 | * |
| Methylmethacrylate | A | 10.0 | 9.55 | 733813.5 | 704342.9 | | -4.0 | 20 | |
| Naphthalene | L | 10.0 | 8.17 | 0.1034311 | 8.799805E-02 | | -18.3 | 20 | |
| n-Butylbenzene | L | 10.0 | 9.71 | 4.34243 | 5.413798 | | -2.9 | 20 | |
| n-Propylbenzene | A | 10.0 | 10.6 | 8.565694 | 9.11308 | | 6.4 | 20 | |
| o-Xylene | L | 10.0 | 10.5 | 2.489593 | 2.605052 | | 4.6 | 20 | |
| p-Isopropyltoluene | L | 10.0 | 11.3 | 6.076664 | 6.857882 | | 12.9 | 20 | |
| Propionitrile | A | 10.0 | 10.4 | 15194.65 | 14224.3 | | -6.4 | 20 | |
| sec-Butylbenzene | L | 10.0 | 11.2 | 8.048094 | 8.977782 | | 11.6 | 20 | |
| Styrene | A | 10.0 | 10.4 | 3.786209 | 3.925812 | | 3.7 | 20 | |
| tert-Butylbenzene | L | 10.0 | 10.9 | 5.062972 | 5.524875 | | 9.1 | 20 | |
| Tetrachloroethene | A | 10.0 | 10.0 | 2.138238 | 2.147244 | | 0.4 | 20 | |
| Toluene | A | 10.0 | 9.42 | 1.743137 | 1.434152 | | -17.7 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 8.64 | 0.6296353 | 0.3478761 | | -44.7 | 20 | * |
| trans-1,3-Dichloropropene | A | 10.0 | 9.27 | 0.4054395 | 0.3355818 | | -17.2 | 20 | |
| Trichloroethene | A | 10.0 | 8.88 | 0.7738535 | 0.5952463 | | -23.1 | 20 | * |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890194.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047019 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047019-CCV1 | Injection Time: | 08:23 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Trichlorofluoromethane | A | 10.0 | 8.80 | 0.8976513 | 0.7891802 | | -12.1 | 20 |
| Vinyl acetate | A | 20.0 | 20.9 | 241788.3 | 246343.7 | | 1.9 | 20 |
| Vinyl chloride | A | 10.0 | 9.95 | 0.4399842 | 0.437246 | | -0.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047031-BLK1 | Batch: | B047031 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-GW-013-1010 | 1010098-13 | B02890211.D | 16:34 |
| GKHMS-GW-012-1010 | 1010098-12 | B02890210.D | 16:07 |
| GKHMS-GW-011-1010 | 1010098-11 | B02890209.D | 15:41 |
| GKHMS-GW-010-1010 | 1010098-10 | B02890208.D | 15:14 |
| GKHMS-GW-009-1010 | 1010098-09 | B02890207.D | 14:47 |
| GKHMS-GW-008-1010 | 1010098-08 | B02890206.D | 14:20 |
| GKHMS-GW-007-1010 | 1010098-06 | B02890205.D | 13:53 |
| GKHMS-GW-006-1010 | 1010098-05 | B02890204.D | 13:26 |
| GKHMS-GW-005-1010 | 1010098-04 | B02890203.D | 12:59 |
| GKHMS-GW-004-1010 | 1010098-03 | B02890202.D | 12:32 |
| GKHMS-GW-003-1010 | 1010098-02 | B02890201.D | 12:06 |
| GKHMS-GW-002-1010 | 1010098-01 | B02890200.D | 11:39 |
| GKHMS-TB-01 | 1010098-07 | B02890199.D | 11:08 |
| LCS Dup | B047031-BSD1 | B02890197.D | 10:15 |
| LCS | B047031-BS1 | B02890196.D | 09:48 |

CENTAURI LABS™

# ANALYSIS DATA SHEET

Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047031-BLK1 | File ID: | B02890195.D |
| Sampled: | | Prepared: | 11/03/10 09:21 | Analyzed: | 11/03/10 09:21 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047031 | Sequence: | S047019 | Calibration: | 0111603 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.00 | U |
| 78-93-3 | 2-Butanone | 5.00 | U |
| 95-49-8 | 2-Chlorotoluene | 1.00 | U |
| 591-78-6 | 2-Hexanone | 5.00 | U |
| 106-43-4 | 4-Chlorotoluene | 1.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047031-BLK1 | File ID: | B02890195.D |
| Sampled: | | Prepared: | 11/03/10 09:21 | Analyzed: | 11/03/10 09:21 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047031 | Sequence: | S047019 | Calibration: | 0111603 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.00 | U |
| 75-05-8 | Acetonitrile | 10.0 | U |
| 107-13-1 | Acrylonitrile | 5.00 | U |
| 71-43-2 | Benzene | 1.00 | U |
| 108-86-1 | Bromobenzene | 1.00 | U |
| 74-97-5 | Bromochloromethane | 1.00 | U |
| 75-27-4 | Bromodichloromethane | 1.00 | U |
| 75-25-2 | Bromoform | 1.00 | U |
| 74-83-9 | Bromomethane | 1.00 | U |
| 75-15-0 | Carbon disulfide | 1.00 | U |
| 56-23-5 | Carbon tetrachloride | 1.00 | U |
| 108-90-7 | Chlorobenzene | 1.00 | U |
| 124-48-1 | Chlorodibromomethane | 1.00 | U |
| 75-00-3 | Chloroethane | 1.00 | U |
| 67-66-3 | Chloroform | 1.00 | U |
| 74-87-3 | Chloromethane | 1.00 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U |
| 110-82-7 | Cyclohexane | 1.00 | U |
| 74-95-3 | Dibromomethane | 1.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U |
| 97-63-2 | Ethyl methacrylate | 1.00 | U |
| 100-41-4 | Ethylbenzene | 1.00 | U |
| 76-13-1 | Freon 113 | 1.00 | U |
| 87-68-3 | Hexachlorobutadiene | 1.00 | U |
| 74-88-4 | Iodomethane | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047031-BLK1 | File ID: | B02890195.D |
| Sampled: | | Prepared: | 11/03/10 09:21 | Analyzed: | 11/03/10 09:21 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047031 | Sequence: | S047019 | Calibration: | 0111603 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 78-83-1 | Isobutyl alcohol | 20.0 | U |
| 98-82-8 | Isopropylbenzene | 1.00 | U |
| | m,p-Xylenes | 1.00 | U |
| 126-98-7 | Methacrylonitrile | 1.00 | U |
| 76-20-9 | Methyl Acetate | 1.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 1.00 | U |
| 108-87-2 | Methylcyclohexane | 1.00 | U |
| 75-09-2 | Methylene Chloride | 2.82 | |
| 80-62-6 | Methylmethacrylate | 1.00 | U |
| 91-20-3 | Naphthalene | 1.00 | U |
| 104-51-8 | n-Butylbenzene | 1.00 | U |
| 103-65-1 | n-Propylbenzene | 1.00 | U |
| 95-47-6 | o-Xylene | 1.00 | U |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U |
| 107-12-0 | Propionitrile | 10.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.00 | U |
| 100-42-5 | Styrene | 1.00 | U |
| 98-06-6 | tert-Butylbenzene | 1.00 | U |
| 127-18-4 | Tetrachloroethene | 1.00 | U |
| 108-88-3 | Toluene | 1.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.00 | U |
| 79-01-6 | Trichloroethene | 1.00 | U |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U |
| 108-05-4 | Vinyl acetate | 1.00 | U |
| 75-01-4 | Vinyl chloride | 1.00 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047031 | Laboratory ID: | B047031-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 10.1 | 101 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 9.73 | 97 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.6 | 106 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.1 | 101 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 8.55 | 86 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 9.65 | 96 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.3 | 113 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 9.16 | 92 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 10.4 | 104 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 9.31 | 93 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 9.84 | 98 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 11.7 | 117 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 9.89 | 99 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 10.3 | 103 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 9.78 | 98 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 10.1 | 101 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.0 | 110 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.3 | 113 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 9.50 | 95 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 11.2 | 112 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 8.39 | 84 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 10.6 | 106 | 75 - 125 |
| 2-Hexanone | 10.0 | 13.2 | 132 * | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 11.6 | 116 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 12.2 | 122 | 60 - 135 |
| Acetone | 10.0 | 20.1 | 201 * | 40 - 140 |
| Acetonitrile | 100 | 123 | 123 | 75 - 125 |
| Acrylonitrile | 10.0 | 4.57 | 46 * | 75 - 125 |
| Benzene | 10.0 | 10.2 | 102 | 80 - 120 |
| Bromobenzene | 10.0 | 10.3 | 103 | 75 - 125 |
| Bromochloromethane | 10.0 | 9.85 | 98 | 65 - 130 |
| Bromodichloromethane | 10.0 | 9.57 | 96 | 75 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047031 | Laboratory ID: | B047031-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 10.1 | 101 | 70 - 130 |
| Bromomethane | 10.0 | 14.3 | 143 | 30 - 145 |
| Carbon disulfide | 10.0 | 9.29 | 93 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 9.49 | 95 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.1 | 101 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 10.1 | 101 | 60 - 135 |
| Chloroethane | 10.0 | 8.87 | 89 | 60 - 135 |
| Chloroform | 10.0 | 9.07 | 91 | 65 - 135 |
| Chloromethane | 10.0 | 8.92 | 89 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 10.6 | 106 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 70 - 130 |
| Cyclohexane | 10.0 | 9.43 | 94 | 75 - 125 |
| Dibromomethane | 10.0 | 9.54 | 95 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 6.33 | 63 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 9.60 | 96 | 75 - 125 |
| Ethylbenzene | 10.0 | 10.3 | 103 | 75 - 125 |
| Freon 113 | 10.0 | 8.85 | 88 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.7 | 107 | 50 - 140 |
| Iodomethane | 10.0 | 5.41 | 54 * | 75 - 125 |
| Isobutyl alcohol | 100 | 136 | 136 * | 75 - 125 |
| Isopropylbenzene | 10.0 | 11.5 | 115 | 75 - 125 |
| m,p-Xylenes | 20.0 | 21.4 | 107 | 75 - 130 |
| Methacrylonitrile | 10.0 | 12.1 | 121 | 75 - 125 |
| Methyl Acetate | 10.0 | 5.51 | 55 * | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 8.39 | 84 | 65 - 125 |
| Methylcyclohexane | 10.0 | 9.82 | 98 | 75 - 125 |
| Methylene Chloride | 10.0 | 17.2 | 172 * | 55 - 140 |
| Methylmethacrylate | 10.0 | 9.28 | 93 | 75 - 125 |
| Naphthalene | 10.0 | 8.15 | 82 | 55 - 140 |
| n-Butylbenzene | 10.0 | 10.3 | 103 | 70 - 135 |
| n-Propylbenzene | 10.0 | 10.3 | 103 | 70 - 130 |
| o-Xylene | 10.0 | 10.8 | 108 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047031 | Laboratory ID: | B047031-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| p-Isopropyltoluene | 10.0 | 10.1 | 101 | 75 - 130 |
| Propionitrile | 10.0 | 10.9 | 109 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 9.98 | 100 | 70 - 125 |
| Styrene | 10.0 | 10.2 | 102 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 11.9 | 119 | 70 - 130 |
| Tetrachloroethene | 10.0 | 10.5 | 105 | 45 - 150 |
| Toluene | 10.0 | 9.76 | 98 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 8.35 | 84 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 55 - 140 |
| Trichloroethene | 10.0 | 9.49 | 95 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 9.29 | 93 | 50 - 145 |
| Vinyl acetate | 20.0 | 15.9 | 80 | 75 - 125 |
| Vinyl chloride | 10.0 | 10.2 | 102 | 50 - 145 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 10.8 | 108 | 7 | 30 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 10.5 | 105 | 7 | 30 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.0 | 100 | 5 | 30 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.3 | 103 | 2 | 30 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 9.05 | 90 | 6 | 30 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 10.1 | 101 | 5 | 30 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.7 | 117 | 4 | 30 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 9.56 | 96 | 4 | 30 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 10.0 | 100 | 4 | 30 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 9.61 | 96 | 3 | 30 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 8.96 | 90 | 9 | 30 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 12.1 | 121 | 4 | 30 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 10.5 | 105 | 6 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 10.4 | 104 | 1 | 30 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 10.3 | 103 | 5 | 30 | 70 - 130 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047031 | Laboratory ID: | B047031-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 10.0 | 10.5 | 105 | 4 | 30 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 9.98 | 100 | 10 | 30 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 10.1 | 101 | 11 | 30 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.4 | 104 | 9 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 10.0 | 100 | 11 | 30 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 10.6 | 106 | 23 | 30 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 9.70 | 97 | 9 | 30 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.6 | 106 | 22 | 30 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 10.6 | 106 | 9 | 30 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 13.4 | 134 | 10 | 30 | 60 - 135 |
| Acetone | 10.0 | 13.6 | 136 | 39 | 30 | 40 - 140 |
| Acetonitrile | 100 | 118 | 118 | 4 | 30 | 75 - 125 |
| Acrylonitrile | 10.0 | 4.75 | 48 * | 4 | 30 | 75 - 125 |
| Benzene | 10.0 | 10.6 | 106 | 4 | 30 | 80 - 120 |
| Bromobenzene | 10.0 | 9.76 | 98 | 6 | 30 | 75 - 125 |
| Bromochloromethane | 10.0 | 10.2 | 102 | 4 | 30 | 65 - 130 |
| Bromodichloromethane | 10.0 | 10.0 | 100 | 4 | 30 | 75 - 120 |
| Bromoform | 10.0 | 10.2 | 102 | 0.7 | 30 | 70 - 130 |
| Bromomethane | 10.0 | 12.4 | 124 | 14 | 30 | 30 - 145 |
| Carbon disulfide | 10.0 | 9.42 | 94 | 1 | 30 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 10.2 | 102 | 7 | 30 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.2 | 102 | 0.9 | 30 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 10.8 | 108 | 6 | 30 | 60 - 135 |
| Chloroethane | 10.0 | 6.37 | 64 | 33 | 30 | 60 - 135 |
| Chloroform | 10.0 | 9.66 | 97 | 6 | 30 | 65 - 135 |
| Chloromethane | 10.0 | 6.73 | 67 | 28 | 30 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 11.2 | 112 | 6 | 30 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 10.7 | 107 | 5 | 30 | 70 - 130 |
| Cyclohexane | 10.0 | 9.90 | 99 | 5 | 30 | 75 - 125 |
| Dibromomethane | 10.0 | 9.78 | 98 | 2 | 30 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 4.51 | 45 | 34 | 30 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 9.62 | 96 | 0.2 | 30 | 75 - 125 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047031 | Laboratory ID: | B047031-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Ethylbenzene | 10.0 | 10.4 | 104 | 0.8 | 30 | 75 - 125 |
| Freon 113 | 10.0 | 9.26 | 93 | 5 | 30 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.6 | 106 | 1 | 30 | 50 - 140 |
| Iodomethane | 10.0 | 4.13 | 41 * | 27 | 30 | 75 - 125 |
| Isobutyl alcohol | 100 | 116 | 116 | 16 | 30 | 75 - 125 |
| Isopropylbenzene | 10.0 | 10.9 | 109 | 5 | 30 | 75 - 125 |
| m,p-Xylenes | 20.0 | 21.0 | 105 | 2 | 30 | 75 - 130 |
| Methacrylonitrile | 10.0 | 13.2 | 132 * | 8 | 30 | 75 - 125 |
| Methyl Acetate | 10.0 | 6.60 | 66 * | 18 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.8 | 108 | 25 | 30 | 65 - 125 |
| Methylcyclohexane | 10.0 | 10.1 | 101 | 3 | 30 | 75 - 125 |
| Methylene Chloride | 10.0 | 22.0 | 220 * | 24 | 30 | 55 - 140 |
| Methylmethacrylate | 10.0 | 9.75 | 98 | 5 | 30 | 75 - 125 |
| Naphthalene | 10.0 | 8.90 | 89 | 9 | 30 | 55 - 140 |
| n-Butylbenzene | 10.0 | 10.3 | 103 | 0.2 | 30 | 70 - 135 |
| n-Propylbenzene | 10.0 | 9.52 | 95 | 8 | 30 | 70 - 130 |
| o-Xylene | 10.0 | 10.4 | 104 | 3 | 30 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 9.03 | 90 | 11 | 30 | 75 - 130 |
| Propionitrile | 10.0 | 11.0 | 110 | 2 | 30 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 8.97 | 90 | 11 | 30 | 70 - 125 |
| Styrene | 10.0 | 9.54 | 95 | 7 | 30 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 10.8 | 108 | 9 | 30 | 70 - 130 |
| Tetrachloroethene | 10.0 | 11.3 | 113 | 8 | 30 | 45 - 150 |
| Toluene | 10.0 | 9.77 | 98 | 0.1 | 30 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 8.82 | 88 | 5 | 30 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 10.4 | 104 | 2 | 30 | 55 - 140 |
| Trichloroethene | 10.0 | 9.83 | 98 | 4 | 30 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 6.86 | 69 | 30 | 30 | 50 - 145 |
| Vinyl acetate | 20.0 | 17.5 | 88 | 10 | 30 | 75 - 125 |
| Vinyl chloride | 10.0 | 7.29 | 73 | 33 | 30 | 50 - 145 |

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (75 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 120) |
|---|---|---|---|---|
| 1010098-01 | 82 | 118 | 91 | 97 |
| 1010098-02 | 88 | 120 | 93 | 101 |
| 1010098-03 | 92 | 116 | 97 | 97 |
| 1010098-04 | 100 | 101 | 102 | 101 |
| 1010098-05 | 103 | 114 | 105 | 100 |
| 1010098-06 | 93 | 113 | 97 | 100 |
| 1010098-07 | 76 | 127* | 84* | 102 |
| 1010098-08 | 92 | 113 | 97 | 98 |
| 1010098-09 | 94 | 108 | 99 | 98 |
| 1010098-10 | 111 | 114 | 108 | 98 |
| 1010098-11 | 108 | 113 | 106 | 102 |
| 1010098-12 | 107 | 112 | 106 | 100 |
| 1010098-13 | 98 | 119 | 100 | 100 |
| B047031-BLK1 | 87 | 89 | 93 | 94 |
| B047031-BS1 | 91 | 104 | 96 | 97 |
| B047031-BSD1 | 101 | 97 | 101 | 94 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047019 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047019-CCV1 )** | | | *Lab File ID: B02890194.D* | | | *Analyzed: 11/03/10 08:23* | | | |
| 1,4-Difluorobenzene | 15336010 | 4.122 | 1.541656E+07 | 4.122 | 99 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 8451968 | 11.276 | 7201022 | 11.276 | 117 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 3069961 | 7.577 | 3291138 | 7.578 | 93 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 13821900 | 3.486 | 1.310695E+07 | 3.485 | 105 | 50 - 200 | 0.0010 | +/-0.50 | |
| **Blank (B047031-BLK1 )** | | | *Lab File ID: B02890195.D* | | | *Analyzed: 11/03/10 09:21* | | | |
| 1,4-Difluorobenzene | 18085690 | 4.125 | 15336010 | 4.122 | 118 | 50 - 200 | 0.0030 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5098805 | 11.286 | 8451968 | 11.276 | 60 | 50 - 200 | 0.0100 | +/-0.50 | |
| Chlorobenzene-d5 | 3248475 | 7.579 | 3069961 | 7.577 | 106 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 15787640 | 3.488 | 13821900 | 3.486 | 114 | 50 - 200 | 0.0020 | +/-0.50 | |
| **LCS (B047031-BS1 )** | | | *Lab File ID: B02890196.D* | | | *Analyzed: 11/03/10 09:48* | | | |
| 1,4-Difluorobenzene | 13514540 | 4.123 | 15336010 | 4.122 | 88 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7882399 | 11.275 | 8451968 | 11.276 | 93 | 50 - 200 | -0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2767001 | 7.578 | 3069961 | 7.577 | 90 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12159920 | 3.487 | 13821900 | 3.486 | 88 | 50 - 200 | 0.0010 | +/-0.50 | |
| **LCS Dup (B047031-BSD1 )** | | | *Lab File ID: B02890197.D* | | | *Analyzed: 11/03/10 10:15* | | | |
| 1,4-Difluorobenzene | 15279530 | 4.122 | 15336010 | 4.122 | 100 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7347054 | 11.275 | 8451968 | 11.276 | 87 | 50 - 200 | -0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2905967 | 7.577 | 3069961 | 7.577 | 95 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 13573610 | 3.486 | 13821900 | 3.486 | 98 | 50 - 200 | 0.0000 | +/-0.50 | |
| **GKHMS-TB-01 (1010098-07 )** | | | *Lab File ID: B02890199.D* | | | *Analyzed: 11/03/10 11:08* | | | |
| 1,4-Difluorobenzene | 17180380 | 4.124 | 15336010 | 4.122 | 112 | 50 - 200 | 0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5711319 | 11.286 | 8451968 | 11.276 | 68 | 50 - 200 | 0.0100 | +/-0.50 | |
| Chlorobenzene-d5 | 3619359 | 7.578 | 3069961 | 7.577 | 118 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 15143600 | 3.487 | 13821900 | 3.486 | 110 | 50 - 200 | 0.0010 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047019 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-002-1010 (1010098-01 )** | | | *Lab File ID: B02890200.D* | | | *Analyzed: 11/03/10 11:39* | | | |
| 1,4-Difluorobenzene | 18305930 | 4.123 | 15336010 | 4.122 | 119 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5741640 | 11.282 | 8451968 | 11.276 | 68 | 50 - 200 | 0.0060 | +/-0.50 | |
| Chlorobenzene-d5 | 3406390 | 7.578 | 3069961 | 7.577 | 111 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 15923320 | 3.486 | 13821900 | 3.486 | 115 | 50 - 200 | 0.0000 | +/-0.50 | |
| **GKHMS-GW-003-1010 (1010098-02 )** | | | *Lab File ID: B02890201.D* | | | *Analyzed: 11/03/10 12:06* | | | |
| 1,4-Difluorobenzene | 17992780 | 4.122 | 15336010 | 4.122 | 117 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6806907 | 11.279 | 8451968 | 11.276 | 81 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 3798225 | 7.578 | 3069961 | 7.577 | 124 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 15418380 | 3.485 | 13821900 | 3.486 | 112 | 50 - 200 | -0.0010 | +/-0.50 | |
| **GKHMS-GW-004-1010 (1010098-03 )** | | | *Lab File ID: B02890202.D* | | | *Analyzed: 11/03/10 12:32* | | | |
| 1,4-Difluorobenzene | 19185720 | 4.12 | 15336010 | 4.122 | 125 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6722849 | 11.279 | 8451968 | 11.276 | 80 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 3748422 | 7.578 | 3069961 | 7.577 | 122 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 16112130 | 3.483 | 13821900 | 3.486 | 117 | 50 - 200 | -0.0030 | +/-0.50 | |
| **GKHMS-GW-005-1010 (1010098-04 )** | | | *Lab File ID: B02890203.D* | | | *Analyzed: 11/03/10 12:59* | | | |
| 1,4-Difluorobenzene | 15217440 | 4.122 | 15336010 | 4.122 | 99 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6814902 | 11.28 | 8451968 | 11.276 | 81 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 3336657 | 7.578 | 3069961 | 7.577 | 109 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12580970 | 3.485 | 13821900 | 3.486 | 91 | 50 - 200 | -0.0010 | +/-0.50 | |
| **GKHMS-GW-006-1010 (1010098-05 )** | | | *Lab File ID: B02890204.D* | | | *Analyzed: 11/03/10 13:26* | | | |
| 1,4-Difluorobenzene | 17165150 | 4.123 | 15336010 | 4.122 | 112 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6647966 | 11.281 | 8451968 | 11.276 | 79 | 50 - 200 | 0.0050 | +/-0.50 | |
| Chlorobenzene-d5 | 3595109 | 7.578 | 3069961 | 7.577 | 117 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 14098610 | 3.486 | 13821900 | 3.486 | 102 | 50 - 200 | 0.0000 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047019 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-007-1010 (1010098-06 )** | | | *Lab File ID: B02890205.D* | | | *Analyzed: 11/03/10 13:53* | | | |
| 1,4-Difluorobenzene | 15760550 | 4.12 | 15336010 | 4.122 | 103 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6832544 | 11.278 | 8451968 | 11.276 | 81 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3314758 | 7.578 | 3069961 | 7.577 | 108 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 13147660 | 3.483 | 13821900 | 3.486 | 95 | 50 - 200 | -0.0030 | +/-0.50 | |
| **GKHMS-GW-008-1010 (1010098-08 )** | | | *Lab File ID: B02890206.D* | | | *Analyzed: 11/03/10 14:20* | | | |
| 1,4-Difluorobenzene | 15367030 | 4.121 | 15336010 | 4.122 | 100 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6309771 | 11.278 | 8451968 | 11.276 | 75 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3112270 | 7.578 | 3069961 | 7.577 | 101 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12903330 | 3.483 | 13821900 | 3.486 | 93 | 50 - 200 | -0.0030 | +/-0.50 | |
| **GKHMS-GW-009-1010 (1010098-09 )** | | | *Lab File ID: B02890207.D* | | | *Analyzed: 11/03/10 14:47* | | | |
| 1,4-Difluorobenzene | 15128580 | 4.122 | 15336010 | 4.122 | 99 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6374978 | 11.278 | 8451968 | 11.276 | 75 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3068152 | 7.578 | 3069961 | 7.577 | 100 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12519010 | 3.485 | 13821900 | 3.486 | 91 | 50 - 200 | -0.0010 | +/-0.50 | |
| **GKHMS-GW-010-1010 (1010098-10 )** | | | *Lab File ID: B02890208.D* | | | *Analyzed: 11/03/10 15:14* | | | |
| 1,4-Difluorobenzene | 14001870 | 4.122 | 15336010 | 4.122 | 91 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6184376 | 11.279 | 8451968 | 11.276 | 73 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 3017461 | 7.578 | 3069961 | 7.577 | 98 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11305450 | 3.484 | 13821900 | 3.486 | 82 | 50 - 200 | -0.0020 | +/-0.50 | |
| **GKHMS-GW-011-1010 (1010098-11 )** | | | *Lab File ID: B02890209.D* | | | *Analyzed: 11/03/10 15:41* | | | |
| 1,4-Difluorobenzene | 15583200 | 4.116 | 15336010 | 4.122 | 102 | 50 - 200 | -0.0060 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7499968 | 11.277 | 8451968 | 11.276 | 89 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3553130 | 7.578 | 3069961 | 7.577 | 116 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12585360 | 3.477 | 13821900 | 3.486 | 91 | 50 - 200 | -0.0090 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047019 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-012-1010 (1010098-12 )** | | | *Lab File ID: B02890210.D* | | | *Analyzed: 11/03/10 16:07* | | | |
| 1,4-Difluorobenzene | 16260420 | 4.113 | 15336010 | 4.122 | 106 | 50 - 200 | -0.0090 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7041408 | 11.277 | 8451968 | 11.276 | 83 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3506350 | 7.578 | 3069961 | 7.577 | 114 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 13141720 | 3.474 | 13821900 | 3.486 | 95 | 50 - 200 | -0.0120 | +/-0.50 | |
| **GKHMS-GW-013-1010 (1010098-13 )** | | | *Lab File ID: B02890211.D* | | | *Analyzed: 11/03/10 16:34* | | | |
| 1,4-Difluorobenzene | 15668410 | 4.121 | 15336010 | 4.122 | 102 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5921227 | 11.278 | 8451968 | 11.276 | 70 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3296708 | 7.578 | 3069961 | 7.577 | 107 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 13021390 | 3.484 | 13821900 | 3.486 | 94 | 50 - 200 | -0.0020 | +/-0.50 | |

# SW8270C SIM

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

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| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |
| Blank | B047044-BLK1 | D46159.D | 11/03/2010 | 16:15:00 |
| LCS | B047044-BS1 | D46160.D | 11/03/2010 | 16:39:00 |
| LCS Dup | B047044-BSD1 | D46161.D | 11/03/2010 | 17:04:00 |
| GKHMS-GW-002-1010 | 1010098-01 | D46162.D | 11/03/2010 | 17:28:00 |
| GKHMS-GW-004-1010 | 1010098-03 | D46164.D | 11/03/2010 | 18:17:00 |
| GKHMS-GW-005-1010 | 1010098-04 | D46165.D | 11/03/2010 | 18:41:00 |
| GKHMS-GW-006-1010 | 1010098-05 | D46166.D | 11/03/2010 | 19:05:00 |
| GKHMS-GW-007-1010 | 1010098-06 | D46167.D | 11/03/2010 | 19:30:00 |
| GKHMS-GW-008-1010 | 1010098-08 | D46168.D | 11/03/2010 | 19:54:00 |
| GKHMS-GW-009-1010 | 1010098-09 | D46169.D | 11/03/2010 | 20:18:00 |
| GKHMS-GW-010-1010 | 1010098-10 | D46170.D | 11/03/2010 | 20:43:00 |
| GKHMS-GW-011-1010 | 1010098-11 | D46171.D | 11/03/2010 | 21:07:00 |

IS

-003 -012 -013

-02 -12 -13

22:45

21:32

21:56

# INITIAL CALIBRATION STANDARDS

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046039 | Instrument: | GCMS-D |
| Calibration: | 0111602 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001979 | DFTPP050 WORKING STANDARD | S046039-TUN1 | D46148.D | 11/03/10 11:30 |
| 0001565 | SSTD001 8270LL 1/5ppm | S046039-CAL5 | D46149.D | 11/03/10 11:53 |
| 0001811 | SSTD00.05 8270LL 0.05/0.25ppm | S046039-CAL1 | D46150.D | 11/03/10 12:17 |
| 0001810 | SSTD00.1 8270LL 0.1/0.5ppm | S046039-CAL2 | D46151.D | 11/03/10 12:41 |
| 0001562 | SSTD00.2 8270LL 0.2/1ppm | S046039-CAL3 | D46152.D | 11/03/10 13:06 |
| 0001563 | SSTD00.5 8270LL 0.5/2.5ppm | S046039-CAL4 | D46153.D | 11/03/10 13:30 |
| 0001566 | SSTD02.5 8270LL 2.5/12.5ppm | S046039-CAL6 | D46154.D | 11/03/10 13:54 |
| 0001567 | SSTD005 8270LL 5/25ppm | S046039-CAL7 | D46155.D | 11/03/10 14:19 |
| 0001568 | SSTD010 8270LL 10/50ppm | S046039-CAL8 | D46156.D | 11/03/10 14:43 |
| 0001561 | SSTD020 8270LL 20/100ppm | S046039-CAL9 | D46157.D | 11/03/10 15:07 |
| 0002011 | SSTD02.5ICV 8270LL 2.5 PPM | S046039-SCV1 | D46158.D | 11/03/10 15:49 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# INITIAL CALIBRATION DATA

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6998678 | 0.6928788 | 0.7861832 | 0.7182898 | 0.7454438 | 0.61871 |
| Acenaphthene | 1.35609 | 1.360759 | 1.542331 | 1.393121 | 1.417282 | 1.167548 |
| Acenaphthylene | 2.086527 | 2.173511 | 2.491196 | 2.304639 | 2.469502 | 2.015595 |
| Anthracene | 1.149397 | 1.195438 | 1.414392 | 1.285541 | 1.359337 | 1.083758 |
| Benzo[a]anthracene | 1.729219 | 1.635469 | 1.813508 | 1.628326 | 1.718838 | 1.44421 |
| Benzo[a]pyrene | 2.070213 | 2.152228 | 2.357776 | 2.177479 | 2.432008 | 2.360145 |
| Benzo[b]fluoranthene | 2.246619 | 2.450026 | 2.745016 | 2.563208 | 2.684552 | 2.708263 |
| Benzo[g,h,i]perylene | 1.621029 | 1.623379 | 1.846475 | 1.621483 | 1.867722 | 1.766085 |
| Benzo[k]fluoranthene | 2.554631 | 2.745418 | 2.750892 | 2.509434 | 2.719822 | 2.637611 |
| Carbazole | | | | | | |
| Chrysene | 1.633828 | 1.648224 | 1.866568 | 1.657847 | 1.728138 | 1.451514 |
| Dibenz[a,h]anthracene | 1.483124 | 1.483425 | 1.698972 | 1.573097 | 1.820535 | 1.690607 |
| Fluoranthene | 1.147919 | 1.226292 | 1.417924 | 1.322613 | 1.35443 | 1.086918 |
| Fluorene | 1.312635 | 1.311524 | 1.539282 | 1.413423 | 1.529181 | 1.220159 |
| Indeno[1,2,3-cd]pyrene | 2.025178 | 2.055117 | 2.35135 | 2.143138 | 2.49272 | 2.320363 |
| Naphthalene | 1.206408 | 1.218463 | 1.346238 | 1.232176 | 1.223558 | 1.165698 |
| Phenanthrene | 1.297902 | 1.313994 | 1.460657 | 1.328181 | 1.32559 | 1.074443 |
| Pyrene | 2.116627 | 2.296767 | 2.490596 | 2.333519 | 2.284912 | 2.077411 |
| 2-Fluorobiphenyl | 1.610498 | 1.620703 | 1.860345 | 1.676616 | 1.680071 | 1.416445 |
| Nitrobenzene-d5 | 0.3799167 | 0.3872439 | 0.4331469 | 0.3960707 | 0.4245936 | 0.3431777 |
| Terphenyl-d14 | 0.981781 | 1.066537 | 1.231772 | 1.108824 | 1.08851 | 0.9848726 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6906016 | 0.6715998 | 0.6387307 | | | |
| Acenaphthene | 1.308477 | 1.243833 | 1.133641 | | | |
| Acenaphthylene | 2.290065 | 2.191529 | 1.97907 | | | |
| Anthracene | 1.242426 | 1.185892 | 1.132079 | | | |
| Benzo[a]anthracene | 1.562415 | 1.496959 | 1.418862 | | | |
| Benzo[a]pyrene | 2.31118 | 2.256053 | 2.168264 | | | |
| Benzo[b]fluoranthene | 2.449553 | 2.584195 | 2.489339 | | | |
| Benzo[g,h,i]perylene | 1.715931 | 1.685418 | 1.62047 | | | |
| Benzo[k]fluoranthene | 2.595031 | 2.355483 | 2.209489 | | | |
| Carbazole | | | | | | |
| Chrysene | 1.530943 | 1.447942 | 1.359459 | | | |
| Dibenz[a,h]anthracene | 1.653509 | 1.640184 | 1.593958 | | | |
| Fluoranthene | 1.235483 | 1.171686 | 1.152857 | | | |
| Fluorene | 1.408747 | 1.358794 | 1.264352 | | | |
| Indeno[1,2,3-cd]pyrene | 2.265913 | 2.244316 | 2.162238 | | | |
| Naphthalene | 1.271896 | 1.232873 | 1.173873 | | | |
| Phenanthrene | 1.227056 | 1.161614 | 1.111768 | | | |
| Pyrene | 2.143779 | 1.993386 | 1.77759 | | | |
| 2-Fluorobiphenyl | 1.592496 | 1.52104 | 1.347374 | | | |
| Nitrobenzene-d5 | 0.3923432 | 0.4061396 | 0.4113819 | | | |
| Terphenyl-d14 | 1.036812 | 0.9830102 | 0.8780064 | | | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46158.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S046039 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S046039-SCV1 | Injection Time: | 15:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 2500 | 2450 | 0.6958117 | 0.6817819 | | -2.0 | 20 |
| Acenaphthene | A | 2500 | 2370 | 1.324787 | 1.25343 | | -5.4 | 20 |
| Acenaphthylene | A | 2500 | 2390 | 2.222404 | 2.121 | | -4.6 | 20 |
| Anthracene | A | 2500 | 2380 | 1.227584 | 1.168661 | | -4.8 | 20 |
| Benzo[a]anthracene | A | 2500 | 2330 | 1.605312 | 1.496478 | | -6.8 | 20 |
| Benzo[a]pyrene | A | 2500 | 2370 | 2.253927 | 2.136756 | | -5.2 | 20 |
| Benzo[b]fluoranthene | A | 2500 | 2270 | 2.546752 | 2.312748 | | -9.2 | 20 |
| Benzo[g,h,i]perylene | A | 2500 | 2450 | 1.707555 | 1.675813 | | -1.9 | 20 |
| Benzo[k]fluoranthene | A | 2500 | 2380 | 2.564201 | 2.441688 | | -4.8 | 20 |
| Chrysene | A | 2500 | 2280 | 1.591607 | 1.453402 | | -8.7 | 20 |
| Dibenz[a,h]anthracene | A | 2500 | 2440 | 1.626379 | 1.584666 | | -2.6 | 20 |
| Fluoranthene | A | 2500 | 2350 | 1.235125 | 1.161404 | | -6.0 | 20 |
| Fluorene | A | 2500 | 2370 | 1.373122 | 1.301104 | | -5.2 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 2500 | 2260 | 2.228926 | 2.014394 | | -9.6 | 20 |
| Naphthalene | A | 2500 | 2480 | 1.230131 | 1.221897 | | -0.7 | 20 |
| Phenanthrene | A | 2500 | 2280 | 1.255689 | 1.144927 | | -8.8 | 20 |
| Pyrene | A | 2500 | 2400 | 2.168287 | 2.080985 | | -4.0 | 20 |
| 2-Fluorobiphenyl | A | 2500 | 2440 | 1.591732 | 1.552743 | | -2.4 | 20 |
| Nitrobenzene-d5 | A | 2500 | 2470 | 0.3971127 | 0.3917262 | | -1.4 | 20 |
| Terphenyl-d14 | A | 2500 | 2360 | 1.040014 | 0.9812326 | | -5.7 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047044-BLK1 | Batch: | B047044 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B047044-BSD1 | D46161.D | 17:04 |
| LCS | B047044-BS1 | D46160.D | 16:39 |
| GKHMS-GW-013-1010 | 1010098-13 | D46173.D | 21:56 |
| GKHMS-GW-012-1010 | 1010098-12 | D46172.D | 21:32 |
| GKHMS-GW-011-1010 | 1010098-11 | D46171.D | 21:07 |
| GKHMS-GW-010-1010 | 1010098-10 | D46170.D | 20:43 |
| GKHMS-GW-009-1010 | 1010098-09 | D46169.D | 20:18 |
| GKHMS-GW-008-1010 | 1010098-08 | D46168.D | 19:54 |
| GKHMS-GW-007-1010 | 1010098-06 | D46167.D | 19:30 |
| GKHMS-GW-006-1010 | 1010098-05 | D46166.D | 19:05 |
| GKHMS-GW-005-1010 | 1010098-04 | D46165.D | 18:41 |
| GKHMS-GW-004-1010 | 1010098-03 | D46164.D | 18:17 |
| GKHMS-GW-003-1010 | 1010098-02 | D46175.D | 22:45 |
| GKHMS-GW-002-1010 | 1010098-01 | D46162.D | 17:28 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047044-BLK1 | File ID: | D46159.D |
| Sampled: | | Prepared: | 11/03/10 09:15 | Analyzed: | 11/03/10 16:15 |
| Solids: | | Preparation: | 3520C Cont. | Dilution: | |
| Batch: | B047044 | Sequence: | S046039 | Calibration: | 0111602 |
| Column: | 1 | | | | |

Instrument: GCMS-D

| CAS NO. | COMPOUND | CONC. (ng/L) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 50.0 | U |
| 83-32-9 | Acenaphthene | 50.0 | U |
| 208-96-8 | Acenaphthylene | 50.0 | U |
| 120-12-7 | Anthracene | 50.0 | U |
| 56-55-3 | Benzo[a]anthracene | 50.0 | U |
| 50-32-8 | Benzo[a]pyrene | 50.0 | U |
| 205-99-2 | Benzo[b]fluoranthene | 50.0 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 50.0 | U |
| 207-08-9 | Benzo[k]fluoranthene | 50.0 | U |
| 218-01-9 | Chrysene | 50.0 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 50.0 | U |
| 206-44-0 | Fluoranthene | 50.0 | U |
| 86-73-7 | Fluorene | 50.0 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 50.0 | U |
| 91-20-3 | Naphthalene | 50.0 | U |
| 85-01-8 | Phenanthrene | 50.0 | U |
| 129-00-0 | Pyrene | 50.0 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B047044 | Laboratory ID: | B047044-BS1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 4320 | 86 | 45 - 105 |
| Acenaphthene | 5000 | 4220 | 84 | 45 - 110 |
| Acenaphthylene | 5000 | 4000 | 80 | 50 - 105 |
| Anthracene | 5000 | 4100 | 82 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4360 | 87 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5100 | 102 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5280 | 106 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 5590 | 112 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 4840 | 97 | 45 - 125 |
| Chrysene | 5000 | 4290 | 86 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 5330 | 107 | 40 - 125 |
| Fluoranthene | 5000 | 4280 | 86 | 55 - 115 |
| Fluorene | 5000 | 4260 | 85 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 5080 | 102 | 45 - 125 |
| Naphthalene | 5000 | 4000 | 80 | 40 - 100 |
| Phenanthrene | 5000 | 4140 | 83 | 50 - 115 |
| Pyrene | 5000 | 4380 | 88 | 50 - 130 |

| ANALYTE | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 4490 | 90 | 4 | 20 | 45 - 105 |
| Acenaphthene | 5000 | 4350 | 87 | 3 | 20 | 45 - 110 |
| Acenaphthylene | 5000 | 4150 | 83 | 3 | 20 | 50 - 105 |
| Anthracene | 5000 | 4230 | 85 | 3 | 20 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4550 | 91 | 4 | 20 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5360 | 107 | 5 | 20 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5390 | 108 | 2 | 20 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 6010 | 120 | 7 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 5130 | 103 | 6 | 20 | 45 - 125 |
| Chrysene | 5000 | 4480 | 90 | 4 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 5720 | 114 | 7 | 20 | 40 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B047044 | Laboratory ID: | B047044-BSD1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Fluoranthene | 5000 | 4410 | 88 | 3 | 20 | 55 - 115 |
| Fluorene | 5000 | 4390 | 88 | 3 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 5450 | 109 | 7 | 20 | 45 - 125 |
| Naphthalene | 5000 | 4150 | 83 | 4 | 20 | 40 - 100 |
| Phenanthrene | 5000 | 4280 | 86 | 3 | 20 | 50 - 115 |
| Pyrene | 5000 | 4560 | 91 | 4 | 20 | 50 - 130 |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-D |

| | 2FBPL (50 - 110) | NB-d5 (40 - 110) | TRPL-D14 (50 - 135) |
|---|---|---|---|
| 1010098-01 | 77 | 82 | 101 |
| 1010098-02 | 81 | 82 | 110 |
| 1010098-03 | 83 | 93 | 97 |
| 1010098-04 | 86 | 100 | 114 |
| 1010098-05 | 81 | 81 | 104 |
| 1010098-06 | 90 | 90 | 123 |
| 1010098-08 | 87 | 93 | 117 |
| 1010098-09 | 87 | 90 | 119 |
| 1010098-10 | 83 | 85 | 108 |
| 1010098-11 | 86 | 91 | 100 |
| 1010098-12 | 76 | 76 | 103 |
| 1010098-13 | 85 | 87 | 112 |
| B047044-BLK1 | 88 | 90 | 108 |
| B047044-BS1 | 85 | 89 | 102 |
| B047044-BSD1 | 86 | 91 | 103 |

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46149.D
Acq On : 3 Nov 2010 11:53
Operator : JI
Sample : SSTD001
Misc : SIMPAH CURVE HP#P JI
ALS Vial : 3 Sample Multiplier: 1

Cal. 5

Quant Time: Nov 16 14:27:01 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 12:25:35 2010
Response via : Initial Calibration

Internal Stds.

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.788 | 152 | 524277 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.077 | 136 | 1909751 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.910 | 164 | 890160 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.448 | 188 | 1402237 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.368 | 240 | 837431 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.105 | 264 | 457505 | 4000.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.357 | 82 | 202717 | 1215.34 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 121.53% | | | |
| 7) 2-Fluorobiphenyl | 6.164 | 172 | 373883 | 1270.63 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 127.06%# | | | |
| 17) Terphenyl-d14 | 10.044 | 244 | 227888 | 928.47 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 92.85% | | | |
| Target Compounds | | | | | | Qvalue |
| 4) Naphthalene | 5.097 | 128 | 584173 | 1046.89 | ug/L | 100 |
| 5) 2-Methylnaphthalene | 5.796 | 142 | 355903 | 1352.03 | ug/L | 100 |
| 8) Acenaphthylene | 6.758 | 152 | 549563 | 1210.23 | ug/L | 99 |
| 9) Acenaphthene | 6.945 | 153 | 315402 | 1166.87 | ug/L | 98 |
| 10) Fluorene | 7.464 | 166 | 340304 | 1296.10 | ug/L | 100 |
| 12) Phenanthrene | 8.471 | 178 | 464698 | 1185.19 | ug/L | 100 |
| 13) Anthracene | 8.518 | 178 | 476528 | 1199.78 | ug/L | 100 |
| 14) Fluoranthene | 9.715 | 202 | 474808 | 1595.90 | ug/L | 100 |
| 16) Pyrene | 9.966 | 202 | 478364 | 1258.45 | ug/L | 100 |
| 18) Benzo[a]anthracene | 11.337 | 228 | 359852 | 1514.19 | ug/L | 100 |
| 19) Chrysene | 11.404 | 228 | 361799 | 1427.48 | ug/L | 100 |
| 21) Benzo[b]fluoranthene | 13.224 | 252 | 307049 | 1264.66 | ug/L | 100 |
| 22) Benzo[k]fluoranthene | 13.267 | 252 | 311083 | 1260.59 | ug/L | 100 |
| 23) Benzo[a]pyrene | 13.972 | 252 | 278164 | 1363.45 | ug/L | 100 |
| 24) Indeno[1,2,3-cd]pyrene | 17.129 | 276 | 285108 | 1359.27 | ug/L | 100 |
| 25) Dibenz[a,h]anthracene | 17.129 | 278 | 208226 | 1262.45 | ug/L | 100 |
| 26) Benzo[g,h,i]perylene | 18.038 | 276 | 213623 | 1476.73 | ug/L | 100 |

Nap-d8
Acen-d10
phen-d10
chrysene-d12
perylene-d12

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46164.D
Acq On : 3 Nov 2010 18:17
Operator : JI
Sample : 1010098-03
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 18 Sample Multiplier: 1

GKHMS-GW-0004-1010

Quant Time: Dec 03 08:53:30 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.786 | 152 | 274932 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.078 | 136 | 927756 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.911 | 164 | 433042 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.448 | 188 | 653963 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.371 | 240 | 377124 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.118 | 264 | 198836 | 4000.00 | ug/L | 0.01 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.359 | 82 | 171424 | 1861.16 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 186.12%# | | | |
| 7) 2-Fluorobiphenyl | 6.165 | 172 | 285838 | 1658.75 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 165.88%# | | | |
| 17) Terphenyl-d14 | 10.044 | 244 | 190528 | 1943.10 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 194.31%# | | | |

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46166.D
Acq On : 3 Nov 2010 19:05
Operator : JI
Sample : 1010098-05
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 20 Sample Multiplier: 1

GKHMS-GW-006-1010

Quant Time: Dec 03 08:54:27 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.786 | 152 | 281351 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.082 | 136 | 971746 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.917 | 164 | 457781 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.448 | 188 | 686922 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.375 | 240 | 367197 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.120 | 264 | 189535 | 4000.00 | ug/L | 0.01 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.359 | 82 | 156143 | 1618.51 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 161.85%# | | | |
| 7) 2-Fluorobiphenyl | 6.169 | 172 | 294787 | 1618.23 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 161.82%# | | | |
| 17) Terphenyl-d14 | 10.044 | 244 | 199403 | 2088.59 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 208.86%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46167.D
Acq On : 3 Nov 2010 19:30
Operator : JI
Sample : 1010098-06
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 21 Sample Multiplier: 1

GKHMS-GW-0087-1010

Quant Time: Dec 03 08:55:13 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.786 | 152 | 279931 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.078 | 136 | 965128 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.917 | 164 | 449398 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.452 | 188 | 688134 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.375 | 240 | 381714 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.120 | 264 | 188834 | 4000.00 | ug/L | 0.01 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.359 | 82 | 172083 | 1795.97 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 179.60%# | | | |
| 7) 2-Fluorobiphenyl | 6.169 | 172 | 323646 | 1809.79 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 180.98%# | | | |
| 17) Terphenyl-d14 | 10.044 | 244 | 243244 | 2450.90 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 245.09%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46168.D
Acq On : 3 Nov 2010 19:54
Operator : JI
Sample : 1010098-08
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 22 Sample Multiplier: 1

GKHMS-GW-0008-1010

Quant Time: Dec 03 08:55:58 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.786 | 152 | 295445 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.081 | 136 | 1010256 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.917 | 164 | 471235 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.450 | 188 | 700426 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.376 | 240 | 404718 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.121 | 264 | 198765 | 4000.00 | ug/L | 0.02 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.358 | 82 | 186170 | 1856.20 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 185.62%# | | | |
| 7) 2-Fluorobiphenyl | 6.168 | 172 | 327823 | 1748.20 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 174.82%# | | | |
| 17) Terphenyl-d14 | 10.048 | 244 | 246813 | 2345.50 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 234.55%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46169.D
Acq On : 3 Nov 2010 20:18
Operator : JI
Sample : 1010098-09
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 23 Sample Multiplier: 1

GKHMS-GW-009-1010

Quant Time: Dec 03 08:56:37 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.785 | 152 | 299371 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.082 | 136 | 1053727 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.917 | 164 | 493657 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.449 | 188 | 734255 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.375 | 240 | 417134 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.124 | 264 | 194433 | 4000.00 | ug/L | 0.02 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.358 | 82 | 187488 | 1792.22 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 179.22%# | | | |
| 7) 2-Fluorobiphenyl | 6.169 | 172 | 342360 | 1742.80 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 174.28%# | | | |
| 17) Terphenyl-d14 | 10.048 | 244 | 258911 | 2387.24 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 238.72%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46162.D
Acq On : 3 Nov 2010 17:28
Operator : JI
Sample : 1010098-01
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Dec 03 08:53:00 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.782 | 152 | 353676 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.074 | 136 | 1186416 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.911 | 164 | 539697 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.448 | 188 | 802581 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.371 | 240 | 449572 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.108 | 264 | 243975 | 4000.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.355 | 82 | 192675 | 1635.82 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 163.58%# | | | |
| 7) 2-Fluorobiphenyl | 6.165 | 172 | 329192 | 1532.81 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 153.28%# | | | |
| 17) Terphenyl-d14 | 10.040 | 244 | 235117 | 2011.43 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 201.14%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46175.D
Acq On : 3 Nov 2010 22:45
Operator : JI
Sample : 1010098-02
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Dec 03 08:58:48 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.790 | 152 | 347608 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.086 | 136 | 1228741 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.923 | 164 | 583422 | 4000.00 | ug/L | 0.01 |
| 11) Phenanthrene-d10 | 8.457 | 188 | 910348 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.387 | 240 | 523200 | 4000.00 | ug/L | 0.02 |
| 20) Perylene-d12 | 14.140 | 264 | 243086 | 4000.00 | ug/L | 0.03 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.367 | 82 | 200758 | 1645.73 | ug/L | 0.01 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 164.57%# | | | |
| 7) 2-Fluorobiphenyl | 6.173 | 172 | 377771 | 1627.18 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 162.72%# | | | |
| 17) Terphenyl-d14 | 10.051 | 244 | 299940 | 2204.89 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 220.49%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46165.D
Acq On : 3 Nov 2010 18:41
Operator : JI
Sample : 1010098-04
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Dec 03 08:54:08 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.784 | 152 | 332118 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.079 | 136 | 1192344 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.911 | 164 | 570433 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.449 | 188 | 901650 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.375 | 240 | 581520 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.121 | 264 | 302831 | 4000.00 | ug/L | 0.02 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.356 | 82 | 237494 | 2006.31 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 200.63%# | | | |
| 7) 2-Fluorobiphenyl | 6.166 | 172 | 392022 | 1727.01 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 172.70%# | | | |
| 17) Terphenyl-d14 | 10.044 | 244 | 345615 | 2285.86 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 228.59%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46170.D
Acq On : 3 Nov 2010 20:43
Operator : JI
Sample : 1010098-10
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Dec 03 08:57:12 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.784 | 152 | 347172 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.079 | 136 | 1231549 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.912 | 164 | 582034 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.448 | 188 | 887154 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.375 | 240 | 503082 | 4000.00 | ug/L | 0.00 |
| 20) Perylene-d12 | 14.120 | 264 | 246421 | 4000.00 | ug/L | 0.01 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.356 | 82 | 208342 | 1704.01 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 170.40%# | | | |
| 7) 2-Fluorobiphenyl | 6.166 | 172 | 382481 | 1651.40 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 165.14%# | | | |
| 17) Terphenyl-d14 | 10.044 | 244 | 281445 | 2151.67 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 215.17%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46172.D
Acq On : 3 Nov 2010 21:32
Operator : JI
Sample : 1010098-12
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Dec 03 08:58:16 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.789 | 152 | 348382 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.082 | 136 | 1235413 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.917 | 164 | 582430 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.452 | 188 | 899968 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.383 | 240 | 505563 | 4000.00 | ug/L | 0.01 |
| 20) Perylene-d12 | 14.132 | 264 | 242921 | 4000.00 | ug/L | 0.03 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.361 | 82 | 187018 | 1524.82 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 152.48%# | | | |
| 7) 2-Fluorobiphenyl | 6.169 | 172 | 352496 | 1520.90 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 152.09%# | | | |
| 17) Terphenyl-d14 | 10.048 | 244 | 270915 | 2061.00 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 206.10%# | | | |
| Target Compounds | | | | | | Qvalue |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\D\110310\
Data File : D46173.D
Acq On : 3 Nov 2010 21:56
Operator : JI
Sample : 1010098-13
Misc : TETRATECH, WATER HP#P JI
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Dec 03 08:58:28 2010
Quant Method : C:\HPCHEM\2\METHODS\110310D.M
Quant Title : SIM PAH calibration
QLast Update : Wed Nov 03 15:43:53 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) 1,4-Dichlorobenzene-d4 | 3.790 | 152 | 369940 | 4000.00 | ug/L | 0.00 |
| 2) Naphthalene-d8 | 5.086 | 136 | 1304407 | 4000.00 | ug/L | 0.00 |
| 6) Acenaphthene-d10 | 6.917 | 164 | 618594 | 4000.00 | ug/L | 0.00 |
| 11) Phenanthrene-d10 | 8.456 | 188 | 947981 | 4000.00 | ug/L | 0.00 |
| 15) Chrysene-d12 | 11.379 | 240 | 514162 | 4000.00 | ug/L | 0.01 |
| 20) Perylene-d12 | 14.132 | 264 | 243286 | 4000.00 | ug/L | 0.03 |
| System Monitoring Compounds | | | | | | |
| 3) Nitrobenzene-d5 | 4.363 | 82 | 224510 | 1733.68 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 137 | | Recovery = 173.37%# | | | |
| 7) 2-Fluorobiphenyl | 6.173 | 172 | 419579 | 1704.50 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 23 - 110 | | Recovery = 170.45%# | | | |
| 17) Terphenyl-d14 | 10.047 | 244 | 299551 | 2240.74 | ug/L | 0.00 |
| Spiked Amount 1000.000 | Range 20 - 138 | | Recovery = 224.07%# | | | |

| Target Compounds | Qvalue |
|---|---|

(#) = qualifier out of range (m) = manual integration (+) = signals summed

# SW8081B

6 RP 11/15

## GC ANALYSIS LOG

**Instrument ID:** HP5890 # V **Reviewed by:** JR **Date:** 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp ( °C): | 180 / 200 / 240 |
| Detector Temp ( °C): | 300 |
| Oven Initial Temp ( °C): | 60 / 150 |
| Initial Time (min): | 0.0 / 0.50 / 1.0 |
| Ramp Rate ( °C/min) : | 11-220-4 / 6-250-4-18-300-7 |
| Final Temp ( °C): | 200 / 275 / 300 |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30 meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: ~~1025~~ 111010V.M (11/15) **Analyst:** RP

| File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|
| 111010V | | | | | |

Directory: h:\gcdata\v\111010

Injection Log

CAL

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316231.d | 1. | EVAL MIX 2087 | STD 8081 | 10 Nov 10 11:24 |
| 2 | v0316232.d | 1. | TOX-3 2094 | STD 8081 | 10 Nov 10 12:07 |
| 3 | v0316233.d | 1. | CHLOR-3 2104 | STD 8081 | 10 Nov 10 12:39 |
| 4 | v0316234.d | 1. | SEQ CAL6 PEST-6 17-20 | STD 8081 | 10 Nov 10 13:11 |
| 5 | v0316235.d | 1. | SEQ CAL5 PEST-5 17-21 | STD 8081 | 10 Nov 10 13:43 |
| 6 | v0316236.d | 1. | SEQ CAL4 PEST-4 17-22 | STD 8081 | 10 Nov 10 14:15 |
| 7 | v0316237.d | 1. | SEQ CAL3 PEST-3 17-23 mid use | STD 8081 | 10 Nov 10 14:47 |
| 8 | v0316238.d | 1. | SEQ CAL2 PEST-2 17-24 | STD 8081 | 10 Nov 10 15:19 |
| 7 | v0316239.d | 1. | SEQ CAL3 PEST-3 17-23 | STD 8081 | 10 Nov 10 16:23 |
| 9 | v0316240.d | 1. | SEQ SCV1 PEST-4 ICV 2087 RP 11/11 | STD 8081 | 10 Nov 10 16:55 |
| 10 | v0316241.d | 1. | EVAL MIX | STD 8081 | 10 Nov 10 17:27 |
| 11 | v0316242.d | 1. | BLK (BG47033) | BLK,W | 10 Nov 10 17:59 |
| 12 | v0316243.d | 1. | BS ↓ | BS,W | 10 Nov 10 18:31 |
| 13 | v0316244.d | 1. | BSD | BS,W | 10 Nov 10 19:03 |
| 14 | v0316245.d | 1. | 100406LCS067-02 | WATER | 10 Nov 10 19:36 |
| 15 | v0316246.d | 1. | RP SEQ CCV1 PEST-4 11/16 | TD | 10 Nov 10 20:07 |

RP 11/15/10

Comments: S046058 0111048.1

# INITIAL CALIBRATION STANDARDS

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046056 | Instrument: | GCECD-V |
| Calibration: | 0111108 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002096 | TOXAPHENE LE-3 | S046056-CAL6 | V0316232.D | 11/10/10 12:07 |
| 0002104 | CHLORDANE LE-3 | S046056-CAL7 | V0316233.D | 11/10/10 12:39 |
| 0001720 | PEST MIX LE-6 | S046056-CAL5 | V0316234.D | 11/10/10 13:11 |
| 0001721 | PEST MIX LE-5 | S046056-CAL4 | V0316235.D | 11/10/10 13:43 |
| 0001721 | PEST MIX LE-5 | S046056-CAL4 | V0316235.D | 11/10/10 13:43 |
| 0001722 | PEST MIX LE-4 | S046056-CAL3 | V0316236.D | 11/10/10 14:15 |
| 0001724 | PEST MIX LE-2 | S046056-CAL1 | V0316238.D | 11/10/10 15:19 |
| 0001723 | PEST MIX LE-3 | S046056-CAL2 | V0316239.D | 11/10/10 16:23 |
| 0001723 | PEST MIX LE-3 | S046056-CAL2 | V0316239.D | 11/10/10 16:23 |
| 0002066 | PEST LEVEL-4(ICV) | S046056-SCV1 | V0316240.D | 11/10/10 16:55 |

V0316231BRKDWN

Cal Eval Mix

| % BREAKDOWN | SIGNAL 1 RTx-CLP | SIGNAL 2 RTx-CLP2 |
|---|---|---|
| **ENDRIN** | **6.58** | **4.63** |
| **DDT** | **1.53** | **1.29** |

| | RAW RESPONSE | |
|---|---|---|
| ENDRIN KETONE | 8092017.00 | 11915024.00 |
| ENDRIN ALDEHYDE | 5794209.00 | 5002648.00 |
| **ENDRIN** | 197300000.00 | 348700000.00 |
| | | |
| DDE | 0.00 | 0.00 |
| DDD | 2229613.00 | 3545463.00 |
| **DDT** | 143600000.00 | 270800000.00 |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 3927132 | 12.80733 | 0.9931665 | | | |
| 4,4'-DDD [2C] | 7107345 | 9.49265 | 0.9953261 | | | |
| 4,4'-DDE | 4930684 | 7.136616 | 0.9957538 | | | |
| 4,4'-DDE [2C] | 9800288 | 5.974536 | 0.9975432 | | | |
| 4,4'-DDT | 4479399 | 5.376023 | 0.9976117 | | | |
| 4,4'-DDT [2C] | 8030693 | 6.567605 | 0.9967026 | | | |
| Aldrin | 6583499 | 2.916463 | 0.9986387 | | | |
| Aldrin [2C] | 1.159123E+07 | 6.790814 | 0.9987355 | | | |
| alpha-BHC | 7716550 | 6.557162 | 0.9958162 | | | |
| alpha-BHC [2C] | 1.261036E+07 | 7.470782 | 0.9972337 | | | |
| alpha-Chlordane | 6247204 | 4.939292 | 0.998986 | | | |
| alpha-Chlordane [2C] | 1.088866E+07 | 2.845215 | 0.9988789 | | | |
| beta-BHC | 7297870 | 4.555459 | 0.9967492 | | | |
| beta-BHC [2C] | 5176619 | 8.3482 | 0.9987438 | | | |
| Chlordane | | | 0 | | | |
| Chlordane [2C] | | | 0 | | | |
| delta-BHC | 6616362 | 10.30961 | 0.9974496 | | | |
| delta-BHC [2C] | 1.07974E+07 | 9.479932 | 0.9979358 | | | |
| Dieldrin | 6090391 | 3.179883 | 0.9985682 | | | |
| Dieldrin [2C] | 1.096383E+07 | 6.199808 | 0.9986072 | | | |
| Endosulfan I | 6244553 | 4.221736 | 0.9987476 | | | |
| Endosulfan I [2C] | 1.001925E+07 | 2.535149 | 0.9990434 | | | |
| Endosulfan II | 5350386 | 7.442338 | 0.9985825 | | | |
| Endosulfan II [2C] | 9402900 | 2.260476 | 0.9987657 | | | |
| Endosulfan sulfate | 5062108 | 8.324653 | 0.9978397 | | | |
| Endosulfan Sulfate [2C] | 8402078 | 10.15314 | 0.9973928 | | | |
| Endrin | 5312643 | 5.508657 | 0.9981912 | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Endrin [2C] | 9243818 | 5.289009 | 0.9983315 | | | |
| Endrin Aldehyde | 3560554 | 17.56286 | 0.9979873 | | | |
| Endrin Aldehyde [2C] | 5430906 | 6.052219 | 0.9937648 | | | |
| Endrin ketone | 5928980 | 5.741913 | 0.9981873 | | | |
| Endrin Ketone [2C] | 8895054 | 5.732912 | 0.9975023 | | | |
| gamma-BHC [2C] | 1.164672E+07 | 7.685229 | 0.9987495 | | | |
| gamma-Chlordane | 6144086 | 2.815292 | 0.9986504 | | | |
| gamma-Chlordane [2C] | 1.103789E+07 | 3.33242 | 0.9987641 | | | |
| Heptachlor | 6980938 | 5.827347 | 0.9991177 | | | |
| Heptachlor [2C] | 1.296502E+07 | 2.559587 | 0.9991483 | | | |
| Heptachlor Epoxide | 6437835 | 4.29548 | 0.9991091 | | | |
| Heptachlor Epoxide [2C] | 1.128674E+07 | 2.341002 | 0.9990929 | | | |
| Methoxychlor | 2351134 | 2.448607 | 0.998842 | | | |
| Methoxychlor [2C] | 4166551 | 5.240687 | 0.9970825 | | | |
| Toxaphene | | | 0 | | | |
| Toxaphene [2C] | | | 0 | | | |
| TCMX | 5103199 | 8.965449 | 0.9975621 | | | |
| TCMX [2C] | 7444112 | 8.3338 | 0.9937107 | | | |
| DCB | 3805969 | 11.49518 | 0.9968368 | | | |
| DCB [2C] | 5944703 | 13.0102 | 0.9962796 | | | |

# INITIAL CALIBRATION DATA

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | | | 4228003 | 3967186 | 4201500 | 3047132 |
| 4,4'-DDD [2C] | | | 7792208 | 7234494 | 7619482 | 6131764 |
| 4,4'-DDE | | | 5306430 | 4930815 | 4905410 | 4373280 |
| 4,4'-DDE [2C] | | | 1.05443E+07 | 9945321 | 1.001526E+07 | 8982652 |
| 4,4'-DDT | | | 4631770 | 4366302 | 4478454 | 4147808 |
| 4,4'-DDT [2C] | | | 8748053 | 8157576 | 8180418 | 7352604 |
| Aldrin | | | 6761234 | 6460819 | 6690681 | 6307220 |
| Aldrin [2C] | | | 1.240337E+07 | 1.180853E+07 | 1.200809E+07 | 1.139338E+07 |
| alpha-BHC | | | 8488671 | 7949527 | 7538186 | 7296800 |
| alpha-BHC [2C] | | | 1.382115E+07 | 1.306267E+07 | 1.252462E+07 | 1.23821E+07 |
| alpha-Chlordane | | | 6201309 | 5986639 | 6256260 | 6030841 |
| alpha-Chlordane [2C] | | | 1.12669E+07 | 1.08037E+07 | 1.114199E+07 | 1.05152E+07 |
| beta-BHC | | | 7843279 | 7387674 | 7101254 | 7049252 |
| beta-BHC [2C] | | | 4931394 | 4828646 | 5176968 | 5031416 |
| Chlordane | | 517678.6 | | | | |
| Chlordane [2C] | | 789094 | | | | |
| delta-BHC | | | 7277924 | 6853354 | 7136828 | 6118556 |
| delta-BHC [2C] | | | 1.176847E+07 | 1.112517E+07 | 1.157096E+07 | 1.020546E+07 |
| Dieldrin | | | 6341216 | 6042704 | 6217778 | 5841492 |
| Dieldrin [2C] | | | 1.170951E+07 | 1.119844E+07 | 1.14154E+07 | 1.031153E+07 |
| Endosulfan I | | | 6125407 | 6050284 | 6438542 | 6003184 |
| Endosulfan I [2C] | | | 1.02781E+07 | 9912386 | 1.028405E+07 | 9704388 |
| Endosulfan II | | | 5308187 | 5140706 | 5390746 | 4924880 |
| Endosulfan II [2C] | | | 9538840 | 9171726 | 9648252 | 9191232 |
| Endosulfan sulfate | | | 4958684 | 4760022 | 5120770 | 4713624 |
| Endosulfan Sulfate [2C] | | | 8230730 | 7832858 | 8416440 | 7694276 |
| Endrin | | | 5364980 | 5128918 | 5398841 | 4949464 |
| Endrin [2C] | | | 9751123 | 9321387 | 9634690 | 8577168 |
| Endrin Aldehyde | | | 3195252 | 3201460 | 3474004 | 3271235 |
| Endrin Aldehyde [2C] | | | 5327351 | 5133040 | 5899840 | 5162072 |
| Endrin ketone | | | 5942327 | 5673715 | 5995198 | 5581840 |

# INITIAL CALIBRATION DATA

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Endrin Ketone [2C] | | | 9014131 | 8514627 | 9035220 | 8302084 |
| gamma-BHC [2C] | | | 1.252149E+07 | 1.192095E+07 | 1.213754E+07 | 1.145081E+07 |
| gamma-Chlordane | | | 6252519 | 5972695 | 6205992 | 5951332 |
| gamma-Chlordane [2C] | | | 1.151052E+07 | 1.100949E+07 | 1.127758E+07 | 1.058262E+07 |
| Heptachlor | | | 6807055 | 6619332 | 6970796 | 6834228 |
| Heptachlor [2C] | | | 1.340323E+07 | 1.289744E+07 | 1.319733E+07 | 1.272744E+07 |
| Heptachlor Epoxide | | | 6403914 | 6186826 | 6435112 | 6265156 |
| Heptachlor Epoxide [2C] | | | 1.151958E+07 | 1.110571E+07 | 1.145404E+07 | 1.091235E+07 |
| Methoxychlor | | | 2362743 | 2303264 | 2444272 | 2306283 |
| Methoxychlor [2C] | | | 4258555 | 3976531 | 4070250 | 4020820 |
| Toxaphene | 143490.1 | | | | | |
| Toxaphene [2C] | 320181.4 | | | | | |
| TCMX | ~~9564832~~ | ~~5491488~~ | 5073178 | 4913595 | 4674152 | 4976984 |
| TCMX [2C] | ~~1.430665E+07~~ | ~~8436756~~ | 7528036 | 7276810 | 6532528 | 7642860 |
| DCB | ~~5687836~~ | ~~3319555~~ | 3684320 | 3457805 | 3733342 | 3588711 |
| DCB [2C] | ~~8540948~~ | ~~5219928~~ | 5719084 | 5322371 | 5733588 | 5652922 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 4191842 | | | | | |
| 4,4'-DDD [2C] | 6758776 | | | | | |
| 4,4'-DDE | 5137484 | | | | | |
| 4,4'-DDE [2C] | 9513908 | | | | | |
| 4,4'-DDT | 4772662 | | | | | |
| 4,4'-DDT [2C] | 7714816 | | | | | |
| Aldrin | 6697544 | | | | | |
| Aldrin [2C] | 1.034277E+07 | | | | | |
| alpha-BHC | 7309564 | | | | | |
| alpha-BHC [2C] | 1.126125E+07 | | | | | |
| alpha-Chlordane | 6760975 | | | | | |
| alpha-Chlordane [2C] | 1.071551E+07 | | | | | |
| beta-BHC | 7107892 | | | | | |
| beta-BHC [2C] | 5914674 | | | | | |
| Chlordane | | | | | | |
| Chlordane [2C] | | | | | | |
| delta-BHC | 5695150 | | | | | |
| delta-BHC [2C] | 9316952 | | | | | |
| Dieldrin | 6008766 | | | | | |
| Dieldrin [2C] | 1.018429E+07 | | | | | |
| Endosulfan I | 6605348 | | | | | |
| Endosulfan I [2C] | 9917316 | | | | | |
| Endosulfan II | 5987412 | | | | | |
| Endosulfan II [2C] | 9464448 | | | | | |
| Endosulfan sulfate | 5757440 | | | | | |
| Endosulfan Sulfate [2C] | 9836088 | | | | | |
| Endrin | 5721012 | | | | | |
| Endrin [2C] | 8934724 | | | | | |
| Endrin Aldehyde | 4660820 | | | | | |
| Endrin Aldehyde [2C] | 5632228 | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Endrin ketone | 6451818 | | | | | |
| Endrin Ketone [2C] | 9609206 | | | | | |
| gamma-BHC [2C] | 1.020279E+07 | | | | | |
| gamma-Chlordane | 6337892 | | | | | |
| gamma-Chlordane [2C] | 1.080924E+07 | | | | | |
| Heptachlor | 7673279 | | | | | |
| Heptachlor [2C] | 1.259966E+07 | | | | | |
| Heptachlor Epoxide | 6898168 | | | | | |
| Heptachlor Epoxide [2C] | 1.144202E+07 | | | | | |
| Methoxychlor | 2339110 | | | | | |
| Methoxychlor [2C] | 4506600 | | | | | |
| Toxaphene | | | | | | |
| Toxaphene [2C] | | | | | | |
| TCMX | 5878088 | | | | | |
| TCMX [2C] | 8240324 | | | | | |
| DCB | 4565668 | | | | | |
| DCB [2C] | 7295552 | | | | | |

# GC ANALYSIS LOG

**Instrument ID:** HP5890 # V **Reviewed by:** MV **Date:** 11/17/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp ( °C): | 180 / 200 / 240 |
| Detector Temp ( °C): | 300 |
| Oven Initial Temp ( °C): | 60 / 150 |
| Initial Time (min): | 0.0 / 0.50 / 1.0 |
| Ramp Rate ( °C/min) : | 11 / 220-4 / 15 / 250-4 / 15 / 300-7 |
| Final Temp ( °C): | 200 / 275 / 300 |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30 meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 111010V.m Analyst: RP

| File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|

111510

**Injection Log**

Directory: h:\gcdata\v\111510

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316258.d | 1. | EVAL MIX 2081 | STD 8081 | ~~15 Nov 10 10:54~~ |
| 2 | v0316259.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 15 Nov 10 11:26 |
| 3 | v0316260.d | 1. | TOX-3 2040 | STD 8081 | 15 Nov 10 12:04 |
| 4 | v0316261.d | 1. | CHLOR-3 2,4'-DCB | STD 8081 | 15 Nov 10 12:36 |
| 5 | v0316262.d | 1. | B046065-BLK1 | BLK,W | 15 Nov 10 13:08 |
| 6 | v0316263.d | 1. | B046065-BS1 | BS,W | 15 Nov 10 13:40 |
| 7 | v0316264.d | 1. | B046065-BSD1 | BS,W | 15 Nov 10 14:12 |
| 8 | v0316265.d | 1. | 1011015-01 | WATER | 15 Nov 10 14:44 |
| 9 | v0316266.d | 1. | 1011015-02 | WATER | 15 Nov 10 15:16 |
| 10 | v0316267.d | 1. | 1011015-03 | WATER | 15 Nov 10 15:48 |
| 11 | v0316268.d | 1. | B045083-BLK1 | WATER | 15 Nov 10 16:20 |
| 12 | v0316269.d | 1. | B045083-BS1 | BS WATER | 15 Nov 10 16:52 |
| 13 | v0316270.d | 1. | B045083-BSD1 R+Run | BSD WATER | 15 Nov 10 17:24 |
| 14 | v0316271.d | 1. | 1010098-04 | WATER | 15 Nov 10 17:56 |
| 15 | v0316272.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 15 Nov 10 18:28 |
| 16 | v0316273.d | 1. | 1010098-10 | WATER | 15 Nov 10 19:00 |
| 17 | v0316274.d | 1. | 1010098-11 | WATER | 15 Nov 10 19:32 |
| 18 | v0316275.d | 1. | 1011002-14 | WATER | 15 Nov 10 20:04 |
| 19 | v0316276.d | 1. | 1011002-15 | WATER | 15 Nov 10 20:36 |
| 20 | v0316277.d | 1. | 1011002-16 | WATER | 15 Nov 10 21:08 |
| 21 | v0316278.d | 1. | 1011003-05 | WATER | 15 Nov 10 21:40 |
| 22 | v0316279.d | 1. | 1011003-09 | WATER | 15 Nov 10 22:12 |
| 23 | v0316280.d | 1. | SEQ CCV3 PEST-4 1722 | STD | 15 Nov 10 22:44 |

111610

**Injection Log**

Directory: h:\gcdata\v\111610

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316281.d | 1. | EVAL MIX 2081 | STD 8081 | 16 Nov 10 09:48 |
| 2 | v0316282.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 16 Nov 10 10:35 |
| 3 | v0316283.d | 1. | B045083-BS1 | BS WATER | 16 Nov 10 11:48 |
| 4 | v0316284.d | 1. | B045083-BSD1 | WATER | 16 Nov 10 12:49 |
| 5 | v0316285.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 16 Nov 10 13:21 |
| 6 | v0316286.d | 1. | PEST-CHK 1932 | STD | 16 Nov 10 13:56 |

Comments: S049004

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.6 | 3927132 | 4056868 | | 3.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 51.2 | 7107345 | 7277152 | | 2.4 | 20 |
| 4,4'-DDE | L | 50.0 | 51.0 | 4930684 | 5028686 | | 2.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.8 | 9800288 | 9760268 | | -0.4 | 20 |
| 4,4'-DDT | L | 50.0 | 49.8 | 4479399 | 4464286 | | -0.3 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.8 | 8030693 | 8006086 | | -0.3 | 20 |
| Aldrin | L | 50.0 | 50.3 | 6583499 | 6623548 | | 0.6 | 20 |
| Aldrin [2C] | L | 50.0 | 50.9 | 1.159123E+07 | 1.179124E+07 | | 1.7 | 20 |
| alpha-BHC | L | 50.0 | 52.1 | 7716550 | 8040072 | | 4.2 | 20 |
| alpha-BHC [2C] | L | 50.0 | 52.3 | 1.261036E+07 | 1.318789E+07 | | 4.6 | 20 |
| alpha-Chlordane | L | 50.0 | 49.6 | 6247204 | 6196054 | | -0.8 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.3 | 1.088866E+07 | 1.073454E+07 | | -1.4 | 20 |
| beta-BHC | L | 50.0 | 52.1 | 7297870 | 7598910 | | 4.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.9 | 5176619 | 4956086 | | -4.3 | 20 |
| delta-BHC | L | 50.0 | 54.1 | 6616362 | 7156772 | | 8.2 | 20 |
| delta-BHC [2C] | L | 50.0 | 53.1 | 1.07974E+07 | 1.145907E+07 | | 6.1 | 20 |
| Dieldrin | L | 50.0 | 50.4 | 6090391 | 6138264 | | 0.8 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.4 | 1.096383E+07 | 1.10548E+07 | | 0.8 | 20 |
| Endosulfan I | L | 50.0 | 47.8 | 6244553 | 5963266 | | -4.5 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.3 | 1.001925E+07 | 9870438 | | -1.5 | 20 |
| Endosulfan II | L | 50.0 | 48.7 | 5350386 | 5211888 | | -2.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.8 | 9402900 | 9355800 | | -0.5 | 20 |
| Endosulfan sulfate | L | 50.0 | 49.7 | 5062108 | 5034586 | | -0.5 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.4 | 8402078 | 8129800 | | -3.2 | 20 |
| Endrin | L | 50.0 | 51.0 | 5312643 | 5415740 | | 1.9 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 51.7 | 9243818 | 9554568 | | 3.4 | 20 |
| Endrin Aldehyde | L | 50.0 | 46.6 | 3560554 | 3318566 | | -6.8 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 50.6 | 5430906 | 5501934 | | 1.3 | 20 |
| Endrin ketone | L | 50.0 | 49.0 | 5928980 | 5813120 | | -2.0 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 48.6 | 8895054 | 8652152 | | -2.7 | 20 |
| gamma-BHC [2C] | L | 50.0 | 51.6 | 1.164672E+07 | 1.202405E+07 | | 3.2 | 20 |
| gamma-Chlordane | L | 50.0 | 50.2 | 6144086 | 6163074 | | 0.3 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.2 | 1.103789E+07 | 1.087087E+07 | | -1.5 | 20 |
| Heptachlor | L | 50.0 | 49.0 | 6980938 | 6845460 | | -1.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.4 | 1.296502E+07 | 1.279548E+07 | | -1.3 | 20 |
| Heptachlor Epoxide | L | 50.0 | 49.4 | 6437835 | 6365172 | | -1.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.0 | 1.128674E+07 | 1.10573E+07 | | -2.0 | 20 |
| Methoxychlor | L | 50.0 | 51.8 | 2351134 | 2438070 | | 3.7 | 20 |
| Methoxychlor [2C] | L | 50.0 | 47.6 | 4166551 | 3963534 | | -4.9 | 20 |
| TCMX | L | 25.0 | 26.0 | 5103199 | 5303972 | | 3.9 | 20 |
| TCMX [2C] | L | 25.0 | 25.0 | 7444112 | 7455648 | | 0.2 | 20 |
| DCB | L | 25.0 | 24.7 | 3805969 | 3764899 | | -1.1 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5610868 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111510\V0316259.D\ECD1A.CH Vial: 2
Signal #2 : H:\GCDATA\V\111510\V0316259.D\ECD2B.CH
Acq On : 15 Nov 2010 11:26 Operator: RP
Sample : SEQ CCV1 PEST-4 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 15 11:55 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Thu Nov 11 08:31:21 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tetrachloro-m-xy | 5.68 | 6.46 | 132.6E6 | 186.4E6 | 25.984 | 25.039 |
| | Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 129.92% | 125.20% |
| 28) S | Decachlorobiphen | 22.14 | 24.09 | 94122484 | 140.3E6 | 24.730 | 23.596 |
| | Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 123.65% | 117.98% |
| | Target Compounds | | | | | | |
| 2) A | Hexachlorobenzen | 6.82 | 7.74 | 343.7E6 | 437.2E6 | 49.826 | 48.610 |
| 3) A | alpha-BHC | 7.24 | 8.10 | 402.0E6 | 659.4E6 | 52.096 | 52.290 |
| 4) MA | gamma-BHC (Linda | 8.05 | 9.06 | 379.9E6 | 601.2E6 | 52.063 | 51.620 |
| 5) MA | Heptachlor | 9.35 | 10.38 | 342.3E6 | 639.8E6 | 49.030 | 49.346 |
| 6) MB | Aldrin | 10.21 | 11.46 | 331.2E6 | 589.6E6 | 50.304 | 50.863 |
| 7) B | beta-BHC | 8.28 | 9.29 | 169.1E6 | 247.8E6 | 50.989 | 47.870 |
| 8) B | delta-BHC | 8.74 | 10.14 | 357.8E6 | 573.0E6 | 54.084 | 53.064 |
| 10) B | Heptachlor Epoxi | 12.14 | 13.41 | 318.3E6 | 552.9E6 | 49.436 | 48.984 |
| 11) A | Endosulfan I | 13.42 | 14.74 | 298.2E6 | 493.5E6 | 47.748 | 49.257 |
| 12) A | gamma-Chlordane | 12.56 | 14.07 | 308.2E6 | 543.5E6 | 50.155 | 49.243 |
| 13) A | alpha-Chlordane | 13.00 | 14.57 | 309.8E6 | 536.7E6 | 49.591 | 49.292 |
| 15) B | 4,4-DDE | 13.30 | 15.18 | 251.4E6 | 488.0E6 | 50.994 | 49.796 |
| 17) MA | Dieldrin | 14.23 | 15.66 | 306.9E6 | 552.7E6 | 50.393 | 50.415 |
| 19) MA | Endrin | 14.97 | 16.66 | 270.8E6 | 477.7E6 | 50.970 | 51.681 |
| 20) B | Endosulfan II | 15.70 | 17.41 | 260.6E6 | 467.8E6 | 48.706 | 49.750 |
| 21) A | 4,4-DDD | 15.26 | 17.14 | 202.8E6 | 363.9E6 | 51.652 | 51.195 |
| 22) MA | 4,4-DDT | 16.18 | 18.34 | 223.2E6 | 400.3E6 | 49.831 | 49.847 |
| 23) B | Endrin Aldehyde | 17.07 | 18.70 | 165.9E6 | 275.1E6 | 46.602 | 50.654 |
| 25) B | Endosulfan Sulfa | 18.67 | 19.61 | 251.7E6 | 406.5E6 | 49.728 | 48.380 |
| 26) A | Methoxychlor | 17.98 | 20.48 | 121.9E6 | 198.2E6 | 51.849 | 47.564 |
| 27) B | Endrin Ketone | 19.56 | 20.96 | 290.7E6 | 432.6E6 | 49.023 | 48.635 |
| Sum | Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average | Toxaphene | | | | | 0.000 | 0.000 |
| Sum | Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average | Chlordane | | | | | 0.000 | 0.000 |

2D 0.4 2D 2.8

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

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# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316272.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV2 | Injection Time: | 18:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.2 | 3927132 | 4017144 | | 2.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 52.6 | 7107345 | 7483022 | | 5.3 | 20 |
| 4,4'-DDE | L | 50.0 | 49.5 | 4930684 | 4879706 | | -1.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 50.4 | 9800288 | 9877784 | | 0.8 | 20 |
| 4,4'-DDT | L | 50.0 | 46.4 | 4479399 | 4160028 | | -7.1 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 50.0 | 8030693 | 8033248 | | 0.04 | 20 |
| Aldrin | L | 50.0 | 47.6 | 6583499 | 6265822 | | -4.8 | 20 |
| Aldrin [2C] | L | 50.0 | 51.4 | 1.159123E+07 | 1.192005E+07 | | 2.8 | 20 |
| alpha-BHC | L | 50.0 | 49.6 | 7716550 | 7650676 | | -0.9 | 20 |
| alpha-BHC [2C] | L | 50.0 | 53.0 | 1.261036E+07 | 1.33796E+07 | | 6.1 | 20 |
| alpha-Chlordane | L | 50.0 | 46.1 | 6247204 | 5763774 | | -7.7 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.9 | 1.088866E+07 | 1.087077E+07 | | -0.2 | 20 |
| beta-BHC | L | 50.0 | 48.7 | 7297870 | 3227424 | | -2.7 | 20 |
| beta-BHC [2C] | L | 50.0 | 48.3 | 5176619 | 4996522 | | -3.5 | 20 |
| delta-BHC | L | 50.0 | 51.8 | 6616362 | 6849552 | | 3.5 | 20 |
| delta-BHC [2C] | L | 50.0 | 54.3 | 1.07974E+07 | 1.171687E+07 | | 8.5 | 20 |
| Dieldrin | L | 50.0 | 47.7 | 6090391 | 5811592 | | -4.6 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.7 | 1.096383E+07 | 1.110888E+07 | | 1.3 | 20 |
| Endosulfan I | L | 50.0 | 44.9 | 6244553 | 5603772 | | -10.3 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.9 | 1.001925E+07 | 9990868 | | -0.3 | 20 |
| Endosulfan II | L | 50.0 | 45.9 | 5350386 | 4910082 | | -8.2 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.3 | 9402900 | 9277900 | | -1.3 | 20 |
| Endosulfan sulfate | L | 50.0 | 47.3 | 5062108 | 4788552 | | -5.4 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.6 | 8402078 | 8169674 | | -2.8 | 20 |
| Endrin | L | 50.0 | 49.1 | 5312643 | 5218246 | | -1.8 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316272.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV2 | Injection Time: | 18:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 52.5 | 9243818 | 9713220 | | 5.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 47.5 | 3560554 | 3380038 | | -5.1 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 49.7 | 5430906 | 5401690 | | -0.5 | 20 |
| Endrin ketone | L | 50.0 | 47.2 | 5928980 | 5599254 | | -5.6 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8763520 | | -1.5 | 20 |
| gamma-BHC [2C] | L | 50.0 | 52.3 | 1.164672E+07 | 1.219179E+07 | | 4.7 | 20 |
| gamma-Chlordane | L | 50.0 | 46.8 | 6144086 | 5745286 | | -6.5 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.8 | 1.103789E+07 | 1.098883E+07 | | -0.4 | 20 |
| Heptachlor | L | 50.0 | 41.9 | 6980938 | 5845736 | | -16.3 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.3 | 1.296502E+07 | 1.278192E+07 | | -1.4 | 20 |
| Heptachlor Epoxide | L | 50.0 | 46.4 | 6437835 | 5980800 | | -7.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.5 | 1.128674E+07 | 1.117517E+07 | | -1.0 | 20 |
| Methoxychlor | L | 50.0 | 47.2 | 2351134 | 2221906 | | -5.5 | 20 |
| Methoxychlor [2C] | L | 50.0 | 48.0 | 4166551 | 4001668 | | -4.0 | 20 |
| TCMX | L | 25.0 | 24.6 | 5103199 | 5011176 | | -1.8 | 20 |
| TCMX [2C] | L | 25.0 | 25.3 | 7444112 | 7544380 | | 1.4 | 20 |
| DCB | L | 25.0 | 23.2 | 3805969 | 3532432 | | -7.2 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5609424 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111510\V0316272.D\ECD1A.CH Vial: 15
Signal #2 : H:\GCDATA\V\111510\V0316272.D\ECD2B.CH
Acq On : 11-15-2010 18:28:42 Operator: RP
Sample : SEQ CCV2 PEST-4 Inst : GCECD-V
Misc : STD Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 16 7:46 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Thu Nov 11 08:31:21 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tetrachloro-m-xy | 5.67 | 6.46 | 125.3E6 | 188.6E6 | 24.549 | 25.337 |
| | Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 122.75% | 126.69% |
| 28) S | Decachlorobiphen | 22.14 | 24.09 | 88310796 | 140.2E6 | 23.203 | 23.590 |
| | Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 116.02% | 117.95% |
| | Target Compounds | | | | | | |
| 2) A | Hexachlorobenzen | 6.81 | 7.74 | 325.6E6 | 442.5E6 | 47.194 | 49.200 |
| 3) A | alpha-BHC | 7.23 | 8.10 | 382.5E6 | 669.0E6 | 49.573 | 53.050 |
| 4) MA | gamma-BHC (Linda | 8.04 | 9.05 | 363.2E6 | 609.6E6 | 49.771 | 52.340 |
| 5) MA | Heptachlor | 9.34 | 10.38 | 292.3E6 | 639.1E6 | 41.869 | 49.294 |
| 6) MB | Aldrin | 10.20 | 11.45 | 313.3E6 | 596.0E6 | 47.587 | 51.418 |
| 7) B | beta-BHC | 8.27 | 9.28 | 161.4E6 | 249.8E6 | 48.668 | 48.260 |
| 8) B | delta-BHC | 8.74 | 10.14 | 342.5E6 | 585.8E6 | 51.762 | 54.258 |
| 10) B | Heptachlor Epoxi | 12.13 | 13.40 | 299.0E6 | 558.8E6 | 46.450 | 49.506 |
| 11) A | Endosulfan I | 13.42 | 14.74 | 280.2E6 | 499.5E6 | 44.869 | 49.858 |
| 12) A | gamma-Chlordane | 12.55 | 14.06 | 287.3E6 | 549.4E6 | 46.755 | 49.778 |
| 13) A | alpha-Chlordane | 13.00 | 14.56 | 288.2E6 | 543.5E6 | 46.131 | 49.918 |
| 15) B | 4,4-DDE | 13.30 | 15.17 | 244.0E6 | 493.9E6 | 49.483 | 50.395 |
| 17) MA | Dieldrin | 14.22 | 15.66 | 290.6E6 | 555.4E6 | 47.711 | 50.662 |
| 19) MA | Endrin | 14.97 | 16.65 | 260.9E6 | 485.7E6 | 49.112 | 52.539 |
| 20) B | Endosulfan II | 15.69 | 17.41 | 245.5E6 | 463.9E6 | 45.885 | 49.335 |
| 21) A | 4,4-DDD | 15.25 | 17.13 | 200.9E6 | 374.2E6 | 51.146 | 52.643 |
| 22) MA | 4,4-DDT | 16.17 | 18.34 | 208.0E6 | 401.7E6 | 46.435 | 50.016 |
| 23) B | Endrin Aldehyde | 17.06 | 18.70 | 169.0E6 | 270.1E6 | 47.465 | 49.731 |
| 25) B | Endosulfan Sulfa | 18.66 | 19.61 | 239.4E6 | 408.5E6 | 47.298 | 48.617 |
| 26) A | Methoxychlor | 17.98 | 20.48 | 111.1E6 | 200.1E6 | 47.252 | 48.021 |
| 27) B | Endrin Ketone | 19.56 | 20.96 | 280.0E6 | 438.2E6 | 47.219 | 49.261 |
| Sum | Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average | Toxaphene | | | | | 0.000 | 0.000 |
| Sum | Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average | Chlordane | | | | | 0.000 | 0.000 |

%D 5.6 %D 1.6

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

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# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 48.0 | 3927132 | 3770986 | | -4.0 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 48.3 | 7107345 | 6866646 | | -3.4 | 20 |
| 4,4'-DDE | L | 50.0 | 46.6 | 4930684 | 4591422 | | -6.9 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 51.2 | 9800288 | 1.002769E+07 | | 2.3 | 20 |
| 4,4'-DDT | L | 50.0 | 42.2 | 4479399 | 3782032 | | -15.6 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.9 | 8030693 | 8018976 | | -0.1 | 20 |
| Aldrin | L | 50.0 | 43.2 | 6583499 | 5685812 | | -13.6 | 20 |
| Aldrin [2C] | L | 50.0 | 51.7 | 1.159123E+07 | 1.197679E+07 | | 3.3 | 20 |
| alpha-BHC | L | 50.0 | 45.6 | 7716550 | 7040958 | | -8.8 | 20 |
| alpha-BHC [2C] | L | 50.0 | 53.0 | 1.261036E+07 | 1.336872E+07 | | 6.0 | 20 |
| alpha-Chlordane | L | 50.0 | 41.8 | 6247204 | 5227724 | | -16.3 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 50.1 | 1.088866E+07 | 1.091461E+07 | | 0.2 | 20 |
| beta-BHC | L | 50.0 | 44.9 | 7297870 | 2980204 | | -10.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 48.6 | 5176619 | 5037110 | | -2.7 | 20 |
| delta-BHC | L | 50.0 | 47.8 | 6616362 | 6326490 | | -4.4 | 20 |
| delta-BHC [2C] | L | 50.0 | 55.0 | 1.07974E+07 | 1.188226E+07 | | 10.0 | 20 |
| Dieldrin | L | 50.0 | 43.4 | 6090391 | 5288288 | | -13.2 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.8 | 1.096383E+07 | 1.112931E+07 | | 1.5 | 20 |
| Endosulfan I | L | 50.0 | 40.2 | 6244553 | 5014186 | | -19.7 | 20 |
| Endosulfan I [2C] | L | 50.0 | 50.2 | 1.001925E+07 | 1.004955E+07 | | 0.3 | 20 |
| Endosulfan II | L | 50.0 | 42.2 | 5350386 | 4515086 | | -15.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 48.5 | 9402900 | 9122232 | | -3.0 | 20 |
| Endosulfan sulfate | L | 50.0 | 43.0 | 5062108 | 4358376 | | -13.9 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.5 | 8402078 | 8149176 | | -3.0 | 20 |
| Endrin | L | 50.0 | 45.2 | 5312643 | 4798624 | | -9.7 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Endrin [2C] | L | 50.0 | 48.9 | 9243818 | 9041360 | | -2.2 | 20 | |
| Endrin Aldehyde | L | 50.0 | 44.1 | 3560554 | 3138266 | | -11.9 | 20 | |
| Endrin Aldehyde [2C] | L | 50.0 | 48.4 | 5430906 | 5259008 | | -3.2 | 20 | |
| Endrin ketone | L | 50.0 | 43.4 | 5928980 | 5151682 | | -13.1 | 20 | |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8766434 | | -1.4 | 20 | |
| gamma-BHC [2C] | L | 50.0 | 52.4 | 1.164672E+07 | 1.220732E+07 | | 4.8 | 20 | |
| gamma-Chlordane | L | 50.0 | 42.3 | 6144086 | 5202852 | | -15.3 | 20 | |
| gamma-Chlordane [2C] | L | 50.0 | 50.1 | 1.103789E+07 | 1.105896E+07 | | 0.2 | 20 | |
| Heptachlor | L | 50.0 | 36.8 | 6980938 | 5139642 | | -26.4 | 20 | * |
| Heptachlor [2C] | L | 50.0 | 48.5 | 1.296502E+07 | 1.256813E+07 | | -3.1 | 20 | |
| Heptachlor Epoxide | L | 50.0 | 42.0 | 6437835 | 5412026 | | -15.9 | 20 | |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.8 | 1.128674E+07 | 1.123936E+07 | | -0.4 | 20 | |
| Methoxychlor | L | 50.0 | 44.1 | 2351134 | 2071848 | | -11.9 | 20 | |
| Methoxychlor [2C] | L | 50.0 | 47.4 | 4166551 | 3949076 | | -5.2 | 20 | |
| TCMX | L | 25.0 | 21.2 | 5103199 | 4336128 | | -15.0 | 20 | |
| TCMX [2C] | L | 25.0 | 25.5 | 7444112 | 7604768 | | 2.2 | 20 | |
| DCB | L | 25.0 | 21.8 | 3805969 | 3320276 | | -12.8 | 20 | |
| DCB [2C] | L | 25.0 | 24.6 | 5944703 | 5852540 | | -1.6 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B045083-BLK1 | Batch: | B045083 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B045083-BSD1 | V0316284.D | 12:49 |
| LCS | B045083-BS1 | V0316283.D | 11:48 |
| GKHMS-GW-011-1010 | 1010098-11 | V0316274.D | 19:32 |
| GKHMS-GW-010-1010 | 1010098-10 | V0316273.D | 19:00 |
| GKHMS-GW-005-1010 | 1010098-04 | V0316271.D | 17:56 |

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111510\V0316280.D\ECD1A.CH Vial: 23
Signal #2 : H:\GCDATA\V\111510\V0316280.D\ECD2B.CH
Acq On : 15 Nov 2010 22:44 Operator: RP
Sample : SEQ CCV3 PEST-4 Inst : GCECD-V
Misc : STD Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 16 7:44 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Thu Nov 11 08:31:21 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| | | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB | |
|---|---|---|---|---|---|---|---|---|---|
| | | System Monitoring Compounds | | | | | | | |
| 1) | S | Tetrachloro-m-xy | 5.67 | 6.45 | 108.4E6 | 190.1E6 | 21.242 | 25.540 | |
| | | Spiked Amount 20.000 | Range 50 - 130 | | | Recovery = | 106.21% | 127.70% | |
| 28) | S | Decachlorobiphen | 22.14 | 24.09 | 83006892 | 146.3E6 | 21.810 | 24.612 | |
| | | Spiked Amount 20.000 | Range 30 - 150 | | | Recovery = | 109.05% | 123.06% | |
| | | Target Compounds | | | | | | | |
| 2) | A | Hexachlorobenzen | 6.81 | 7.74 | 303.5E6 | 445.3E6 | 44.000 | 49.509 | |
| 3) | A | alpha-BHC | 7.23 | 8.09 | 352.0E6 | 668.4E6 | 45.622 | 53.007 | |
| 4) | MA | gamma-BHC (Linda | 8.04 | 9.05 | 329.6E6 | 610.4E6 | 45.169 | 52.407 | |
| 5) | MA | Heptachlor | 9.34 | 10.37 | 257.0E6 | 628.4E6 | 36.812 | 48.469 | # |
| 6) | MB | Aldrin | 10.20 | 11.45 | 284.3E6 | 598.8E6 | 43.182 | 51.663 | |
| 7) | B | beta-BHC | 8.26 | 9.28 | 149.0E6 | 251.9E6 | 44.940 | 48.653 | |
| 8) | B | delta-BHC | 8.73 | 10.13 | 316.3E6 | 594.1E6 | 47.809 | 55.024 | |
| 10) | B | Heptachlor Epoxi | 12.12 | 13.40 | 270.6E6 | 562.0E6 | 42.033 | 49.790 | |
| 11) | A | Endosulfan I | 13.41 | 14.73 | 250.7E6 | 502.5E6 | 40.148 | 50.151 | |
| 12) | A | gamma-Chlordane | 12.55 | 14.06 | 260.1E6 | 552.9E6 | 42.340 | 50.095 | |
| 13) | A | alpha-Chlordane | 12.99 | 14.56 | 261.4E6 | 545.7E6 | 41.841 | 50.119 | |
| 15) | B | 4,4-DDE | 13.29 | 15.17 | 229.6E6 | 501.4E6 | 46.560 | 51.160 | |
| 17) | MA | Dieldrin | 14.22 | 15.66 | 264.4E6 | 556.5E6 | 43.415 | 50.755 | |
| 19) | MA | Endrin | 14.97 | 16.65 | 239.9E6 | 452.1E6 | 45.162 | 48.905 | |
| 20) | B | Endosulfan II | 15.69 | 17.41 | 225.8E6 | 456.1E6 | 42.194 | 48.508 | |
| 21) | A | 4,4-DDD | 15.24 | 17.13 | 188.5E6 | 343.3E6 | 48.012 | 48.307 | |
| 22) | MA | 4,4-DDT | 16.17 | 18.33 | 189.1E6 | 400.9E6 | 42.216 | 49.927 | |
| 23) | B | Endrin Aldehyde | 17.06 | 18.70 | 156.9E6 | 263.0E6 | 44.070 | 48.417 | |
| 25) | B | Endosulfan Sulfa | 18.66 | 19.61 | 217.9E6 | 407.5E6 | 43.049 | 48.495 | |
| 26) | A | Methoxychlor | 17.97 | 20.48 | 103.6E6 | 197.5E6 | 44.061 | 47.390 | |
| 27) | B | Endrin Ketone | 19.55 | 20.96 | 257.6E6 | 438.3E6 | 43.445 | 49.277 | |
| | | Sum Toxaphene | | | 0 | 0 | N.D. | N.D. | |
| | | Average Toxaphene | | | | | 0.000 | 0.000 | |
| | | Sum Chlordane | | | 0 | 0 | N.D. | N.D. | |
| | | Average Chlordane | | | | | 0.000 | 0.000 | |

%D 12.8 %D 1.0

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

CENTAURI LABS™

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Column: | 1 | | | | |

Instrument: GCECD-V

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.050 | U |
| 72-55-9 | 4,4'-DDE | 0.050 | U |
| 50-29-3 | 4,4'-DDT | 0.050 | U |
| 309-00-2 | Aldrin | 0.050 | U |
| 319-84-6 | alpha-BHC | 0.050 | U |
| 5103-71-9 | alpha-Chlordane | 0.050 | U |
| 319-85-7 | beta-BHC | 0.050 | U |
| 57-74-9 | Chlordane | 1.00 | U |
| 319-86-8 | delta-BHC | 0.050 | U |
| 60-57-1 | Dieldrin | 0.050 | U |
| 959-98-8 | Endosulfan I | 0.050 | U |
| 33213-65-9 | Endosulfan II | 0.050 | U |
| 1031-07-8 | Endosulfan sulfate | 0.050 | U |
| 72-20-8 | Endrin | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde | 0.050 | U |
| 53494-70-5 | Endrin ketone | 0.050 | U |
| 58-89-9 | gamma-BHC | 0.050 | U |
| 5103-74-2 | gamma-Chlordane | 0.050 | U |
| 76-44-8 | Heptachlor | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide | 0.050 | U |
| 72-43-5 | Methoxychlor | 0.050 | U |
| 8001-35-2 | Toxaphene | 1.00 | U |
| 143-50-0 | Kepone | 0.050 | U |
| 143-50-0 | Kepone [2C] | 0.050 | U |
| 2385-85-5 | Mirex | 0.050 | U |
| 2385-85-5 | Mirex [2C] | 0.050 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1010098 | |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS | |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Instrument: | GCECD-V | | | | |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 0.050 | U |
| 118-74-1 | Hexachlorobenzene [2C] | 0.050 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Column: | 2 | | | | |

Instrument: GCECD-V

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD [2C] | 0.050 | U |
| 72-55-9 | 4,4'-DDE [2C] | 0.050 | U |
| 50-29-3 | 4,4'-DDT [2C] | 0.050 | U |
| 309-00-2 | Aldrin [2C] | 0.050 | U |
| 319-84-6 | alpha-BHC [2C] | 0.050 | U |
| 5103-71-9 | alpha-Chlordane [2C] | 0.050 | U |
| 319-85-7 | beta-BHC [2C] | 0.050 | U |
| 57-74-9 | Chlordane [2C] | 1.00 | U |
| 319-86-8 | delta-BHC [2C] | 0.050 | U |
| 60-57-1 | Dieldrin [2C] | 0.050 | U |
| 959-98-8 | Endosulfan I [2C] | 0.050 | U |
| 33213-65-9 | Endosulfan II [2C] | 0.050 | U |
| 1031-07-8 | Endosulfan Sulfate [2C] | 0.050 | U |
| 72-20-8 | Endrin [2C] | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde [2C] | 0.050 | U |
| 53494-70-5 | Endrin Ketone [2C] | 0.050 | U |
| 58-89-9 | gamma-BHC [2C] | 0.050 | U |
| 5103-74-2 | gamma-Chlordane [2C] | 0.050 | U |
| 76-44-8 | Heptachlor [2C] | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide [2C] | 0.050 | U |
| 72-43-5 | Methoxychlor [2C] | 0.050 | U |
| 8001-35-2 | Toxaphene [2C] | 1.00 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.500 | 100 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.482 | 96 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.434 | 87 | 45 - 140 |
| Aldrin | 0.500 | 0.480 | 96 | 25 - 140 |
| alpha-BHC | 0.500 | 0.502 | 100 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.463 | 93 | 65 - 125 |
| beta-BHC | 0.500 | 0.491 | 98 | 65 - 125 |
| delta-BHC | 0.500 | 0.488 | 98 | 45 - 135 |
| Dieldrin | 0.500 | 0.474 | 95 | 60 - 130 |
| Endosulfan I | 0.500 | 0.446 | 89 | 50 - 110 |
| Endosulfan II | 0.500 | 0.463 | 93 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.456 | 91 | 55 - 135 |
| Endrin | 0.500 | 0.487 | 97 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.448 | 90 | 55 - 135 |
| Endrin ketone | 0.500 | 0.462 | 92 | 75 - 125 |
| gamma-BHC | 0.500 | 0.506 | 101 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.469 | 94 | 60 - 125 |
| Heptachlor | 0.500 | 0.431 | 86 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.466 | 93 | 60 - 130 |
| Methoxychlor | 0.500 | 0.449 | 90 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.506 | 101 | 1 | 20 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.503 | 101 | 4 | 20 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.444 | 89 | 2 | 20 | 45 - 140 |
| Aldrin | 0.500 | 0.530 | 106 | 10 | 20 | 25 - 140 |
| alpha-BHC | 0.500 | 0.548 | 110 | 9 | 20 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.480 | 96 | 4 | 20 | 65 - 125 |
| beta-BHC | 0.500 | 0.499 | 100 | 2 | 20 | 65 - 125 |
| delta-BHC | 0.500 | 0.515 | 103 | 5 | 20 | 45 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BSD1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Dieldrin | 0.500 | 0.489 | 98 | 3 | 20 | 60 - 130 |
| Endosulfan I | 0.500 | 0.474 | 95 | 6 | 20 | 50 - 110 |
| Endosulfan II | 0.500 | 0.468 | 94 | 1 | 20 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.462 | 92 | 1 | 20 | 55 - 135 |
| Endrin | 0.500 | 0.504 | 101 | 3 | 20 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.456 | 91 | 2 | 20 | 55 - 135 |
| Endrin ketone | 0.500 | 0.460 | 92 | 0.5 | 20 | 75 - 125 |
| gamma-BHC | 0.500 | 0.534 | 107 | 6 | 20 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.488 | 98 | 4 | 20 | 60 - 125 |
| Heptachlor | 0.500 | 0.449 | 90 | 4 | 20 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.486 | 97 | 4 | 20 | 60 - 130 |
| Methoxychlor | 0.500 | 0.443 | 89 | 1 | 20 | 55 - 150 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.488 | 98 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.467 | 93 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.450 | 90 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.492 | 98 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.509 | 102 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.471 | 94 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.468 | 94 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.487 | 97 | 45 - 135 |
| Dieldrin [2C] | 0.500 | 0.476 | 95 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.472 | 94 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.474 | 95 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.449 | 90 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.497 | 99 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.485 | 97 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.463 | 93 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.506 | 101 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.472 | 94 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.480 | 96 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.472 | 94 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.434 | 87 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.497 | 99 | 2 | 20 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.485 | 97 | 4 | 20 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.463 | 93 | 3 | 20 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.516 | 103 | 5 | 20 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.543 | 109 | 6 | 20 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.490 | 98 | 4 | 20 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.493 | 99 | 5 | 20 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.516 | 103 | 6 | 20 | 45 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BSD1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Dieldrin [2C] | 0.500 | 0.493 | 99 | 3 | 20 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.491 | 98 | 4 | 20 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.482 | 96 | 2 | 20 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.457 | 91 | 2 | 20 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.514 | 103 | 3 | 20 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.498 | 100 | 3 | 20 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.467 | 93 | 0.8 | 20 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.537 | 107 | 6 | 20 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.493 | 99 | 4 | 20 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.507 | 101 | 6 | 20 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.494 | 99 | 5 | 20 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.439 | 88 | 1 | 20 | 55 - 150 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.424 | 85 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.421 | 84 | 50 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.421 | 84 | 0.7 | 30 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.449 | 90 | 7 | 30 | 50 - 150 |

# SURROGATE SUMMARY SHEET

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-V |

| | DCB [2C] (30 - 135) | DCB (30 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| 1010098-04 | 66 | 65 | 97 | 107 |
| 1010098-10 | 67 | 67 | 89 | 126 |
| 1010098-11 | 62 | 63 | 108 | 167* |
| B045083-BLK1 | 87 | 83 | 93 | 91 |
| B045083-BS1 | 101 | 104 | 104 | 105 |
| B045083-BSD1 | 98 | 101 | 110 | 104 |

# SW8082

## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: MM Date: 11/7/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | 180 / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 18-300-7 |
| Final Temp(oC): | 200 / 275 / 300 |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 1014101U.M / 1014101UA.M Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 102410 | U0324366 | SEQ CCV1 AR1242-3 | — | STD | 102910 | 2124 |
| | U 67 | SEQ CAL5 AR1660-5 | | | | 2116 |
| | U 68 | CAL4 -4 | | | | 2117 |
| | U 69 | CAL3 -3 | | | | 2118 |
| | U 70 | CAL2 -2 | | | | 2119 |
| | U 71 | CAL1 -1 | | | | 2120 |
| | U 72 | AR1660-3 CV | | | | 2140 |
| | U 73 | BLK | 1.0 | water | | |
| | U 74 | BKS | | | | |
| | U 75 | BKSD | | | | |
| | U 76 | BLK | | soil | | |
| | U 77 | BS | | | | |
| | U 78 | 10100092-83 | | W | | |
| | U 79 | -AN | | | | |
| | U 80 | 89 | | soil | | |
| | U 81 | 8072 11/3/10 | | | | |
| | U 82 | 8475 | | | | |
| | U 83 | SEQ CCV1 AR1660-3 | — | STD | | 2118 |
| | U 84 | 10100092 9079 | | S | | |
| | U 85 | 9560 | | | | |
| | U 86 | 9984 | | | | |
| | U 87 | AF87 | | | | |
| | U 88 | AF85 90 | | | 103010 | |

Comments: RP 11/3/10

S046052 - ICAL NOC 011103

# INITIAL CALIBRATION STANDARDS

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046052 | Instrument: | GCECD-U |
| Calibration: | 0111103 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002118 | AR1660 LE-3 | S046052-CAL9 | U0324323.D | 10/14/10 11:01 |
| 0002112 | AR1248 LE-3 | S046052-CAL8 | U0324324.D | 10/14/10 11:33 |
| 0002130 | AR1232 LE-3 | S046052-CAL7 | U0324325.D | 10/14/10 12:06 |
| 0002136 | AR2154 LE-3 | S046052-CAL6 | U0324326.D | 10/14/10 12:38 |
| 0002122 | AR1242 LE-5 | S046052-CAL5 | U0324327.D | 10/14/10 13:10 |
| 0002123 | AR1242 LE-4 | S046052-CAL4 | U0324328.D | 10/14/10 13:42 |
| 0002124 | AR1242 LE-3 | S046052-CAL3 | U0324329.D | 10/14/10 14:14 |
| 0002125 | AR1242 LE-2 | S046052-CAL2 | U0324330.D | 10/14/10 14:46 |
| 0002126 | AR1242 LE-1 | S046052-CAL1 | U0324331.D | 10/14/10 15:18 |
| 0002148 | AR1242 LE-3 ICV(ACCU) | S046052-SCV1 | U0324332.D | 10/14/10 15:50 |
| 0002116 | AR1160 LE-5 | S046052-CALA | U0324367.D | 10/29/10 12:02 |
| 0002117 | AR1660 LE-4 | S046052-CALB | U0324368.D | 10/29/10 12:34 |
| 0002118 | AR1660 LE-3 | S046052-CALC | U0324369.D | 10/29/10 13:06 |
| 0002119 | AR1660 LE-2 | S046052-CALD | U0324370.D | 10/29/10 13:38 |
| 0002120 | AR1160 LE-1 | S046052-CALE | U0324371.D | 10/29/10 14:10 |
| 0002140 | AR1660 LE-3 ICV(ACCU) | S046052-SCV2 | U0324372.D | 10/29/10 14:54 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111103 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 2:46:38PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| PCB-1016 | 12075.8 | 8.566025 | | | 20 | |
| PCB-1016 [2C] | 3937.657 | 13.28868 | | | 20 | |
| PCB-1221 | | | | | 20 | |
| PCB-1221 [2C] | | | | | 20 | |
| PCB-1232 | | | | | 20 | |
| PCB-1232 [2C] | | | | | 20 | |
| PCB-1242 | 8074.333 | 11.21551 | | | 20 | |
| PCB-1242 [2C] | 3192.754 | 14.34754 | | | 20 | |
| PCB-1248 | | | | | 20 | |
| PCB-1248 [2C] | | | | | 20 | |
| PCB-1254 | | | | | 20 | |
| PCB-1254 [2C] | | | | | 20 | |
| PCB-1260 | 31974.47 | 4.749315 | | | 20 | |
| PCB-1260 [2C] | 11271.14 | 8.013692 | | | 20 | |
| TCMX | 540967.2 | 5.496186 | | | 20 | |
| TCMX [2C] | 215389.7 | 7.246717 | | | 20 | |
| DCB | 557860.6 | 11.70303 | | | 20 | |
| DCB [2C] | 191768.3 | 17.64599 | | | 20 | |

Single Point

Single Point

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Single Point

# INITIAL CALIBRATION DATA

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111103 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 2:46:38PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| PCB-1016 | ~~11667.68~~ | | | | | |
| PCB-1016 [2C] | ~~3742.742~~ | | | | | |
| PCB-1221 | | | | ~~6640.43~~ | | |
| PCB-1221 [2C] | | | | ~~2714.852~~ | | |
| PCB-1232 | | | 4592.482 | | | |
| PCB-1232 [2C] | | | 1635.813 | | | |
| PCB-1242 | | | | | 6831.269 | 7461.344 |
| PCB-1242 [2C] | | | | | 2648.593 | 2887.199 |
| PCB-1248 | | 8602.448 | | | | |
| PCB-1248 [2C] | | 4045.542 | | | | |
| PCB-1254 | | | | ~~27502.26~~ | | |
| PCB-1254 [2C] | | | | ~~8677.596~~ | | |
| PCB-1260 | ~~33823.68~~ | | | | | |
| PCB-1260 [2C] | ~~11890.15~~ | | | | | |
| TCMX | ~~499278.4~~ | ~~542283.6~~ | ~~506125.2~~ | ~~517626.8~~ | 519850.2 | 558057.6 |
| TCMX [2C] | ~~187237.9~~ | ~~207237~~ | ~~199538.5~~ | ~~198100.8~~ | 195248.7 | 207448.5 |
| DCB | ~~430261.6~~ | ~~549001.6~~ | ~~439026~~ | ~~443306.8~~ | 467307.4 | 547545.6 |
| DCB [2C] | ~~138227.4~~ | ~~173421~~ | ~~154697.5~~ | ~~140383.5~~ | 155446.6 | 177043.7 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111103 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 2:46:38PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| PCB-1016 | | | | 10787.98 | ~~11209.76~~ | 12042.67 |
| PCB-1016 [2C] | | | | 3367.892 | ~~3407.247~~ | 3730.234 |
| PCB-1221 | | | | | | |
| PCB-1221 [2C] | | | | | | |
| PCB-1232 | | | | | | |
| PCB-1232 [2C] | | | | | | |
| PCB-1242 | 8406.014 | 8627.416 | 9045.624 | | | |
| PCB-1242 [2C] | 3111.642 | 3587.172 | 3729.164 | | | |
| PCB-1248 | | | | | | |
| PCB-1248 [2C] | | | | | | |
| PCB-1254 | | | | | | |
| PCB-1254 [2C] | | | | | | |
| PCB-1260 | | | | 29735.45 | 31057.95 | 33205.16 |
| PCB-1260 [2C] | | | | 10091.2 | 10614.39 | 11469.62 |
| TCMX | 540226 | 580675.2 | 506027 | ~~467983.2~~ | ~~461517.1~~ | ~~487077.2~~ |
| TCMX [2C] | 212037.2 | 231601.4 | 230612.8 | ~~173304.6~~ | ~~173684.3~~ | ~~183894.5~~ |
| DCB | 534340.4 | 604995.1 | 635114.8 | ~~388759.6~~ | ~~394981.6~~ | ~~421854~~ |
| DCB [2C] | 170922.1 | 224144.6 | 231284.8 | ~~135652.8~~ | ~~134131.4~~ | ~~170032.4~~ |

## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: JR Date: 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | 180 / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 18-300-2 |
| Final Temp(oC): | 200 / 275 / 300 / |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | | |
|---|---|---|
| Column: | RTX-CLP | 30meter |
| ID: | 0.32 mm | |

**Detector B**

| | | |
|---|---|---|
| Column: | RTX-CLP2 | 30 meter |
| ID: | 0.32 mm | |

ICAL Method: 101410u.m Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 110410 | U | | | | | |
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**Injection Log**

Directory: h:\gcdata\u\110410

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | u0324406.d | 1. | SEQ CCV 1AR1242-3 2124 | STD | 4 Nov 10 10:14 |
| 2 | u0324407.d | 1. | B045035-BLK-1 | BLK,W | 4 Nov 10 11:08 |
| 3 | u0324408.d | 1. | B045035-BS-1 | BS,W | 4 Nov 10 11:41 |
| 4 | u0324409.d | 1. | B045035-BSD-1 | BS,W | 4 Nov 10 12:13 |
| 5 | u0324410.d | 1. | 1010079-02 | WATER | 4 Nov 10 12:45 |
| 6 | u0324411.d | 1. | 1010079-04 | WATER | 4 Nov 10 13:17 |
| 7 | u0324412.d | 1. | BLK (B046145) | BLK,WATER | 4 Nov 10 13:56 |
| 8 | u0324413.d | 1. | BS | BLK,WATER | 4 Nov 10 14:28 |
| 9 | u0324414.d | 1. | BSD | BLK,WATER | 4 Nov 10 15:00 |
| 10 | u0324415.d | 1. | 1010098-04 | WATER | 4 Nov 10 15:32 |
| 11 | u0324416.d | 1. | 1010098-10 | WATER | 4 Nov 10 16:04 |
| 12 | u0324417.d | 1. | SEQ CCV2 AR1242-3 2124 | STD | 4 Nov 10 16:37 |
| 13 | u0324418.d | 1. | 1010098-11 | WATER | 4 Nov 10 17:09 |
| 14 | u0324419.d | 1. | 1011002-14 | WATER | 4 Nov 10 17:41 |
| 15 | u0324420.d | 1. | 1011002-15 | WATER | 4 Nov 10 18:13 |
| 16 | u0324421.d | 1. | 1011002-16 | WATER | 4 Nov 10 18:45 |
| 17 | u0324422.d | 1. | 1011003-09 | WATER | 4 Nov 10 19:17 |
| 18 | u0324423.d | 1. | 1011003-05 | WATER | 4 Nov 10 19:49 |
| 19 | u0324424.d | 1. | SEQ CCV3 AR1242-3 2121 | STD | 4 Nov 10 20:22 |

RP 11/10/10

Comments: SO42017

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324406.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV1 | Injection Time: | 10:14 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 498 | 8074.333 | 7962.836 | | -1.4 | 20 |
| PCB-1242 [2C] | A | 500 | 452 | 3192.754 | 2875.162 | | -9.9 | 20 |
| TCMX | A | 25.0 | 23.4 | 540967.2 | 507237.2 | | -6.2 | 20 |
| TCMX [2C] | A | 25.0 | 23.6 | 215389.7 | 203194.2 | | -5.7 | 20 |
| DCB | A | 25.0 | 22.8 | 557860.6 | 508900 | | -8.8 | 20 |
| DCB [2C] | A | 25.0 | 21.1 | 191768.3 | 162150.4 | | -15.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324417.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV2 | Injection Time: | 16:37 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 483 | 8074.333 | 7590.648 | | -6.0 | 20 |
| PCB-1242 [2C] | A | 500 | 475 | 3192.754 | 3015.672 | | -5.5 | 20 |
| TCMX | A | 25.0 | 24.4 | 540967.2 | 526981.2 | | -2.6 | 20 |
| TCMX [2C] | A | 25.0 | 24.5 | 215389.7 | 211427.7 | | -1.8 | 20 |
| DCB | A | 25.0 | 25.0 | 557860.6 | 556967.6 | | -0.2 | 20 |
| DCB [2C] | A | 25.0 | 22.4 | 191768.3 | 172092.7 | | -10.3 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324424.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV3 | Injection Time: | 20:22 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 480 | 8074.333 | 7586.302 | | -6.0 | 20 |
| PCB-1242 [2C] | A | 500 | 489 | 3192.754 | 3127.35 | | -2.0 | 20 |
| TCMX | A | 25.0 | 24.7 | 540967.2 | 533532 | | -1.4 | 20 |
| TCMX [2C] | A | 25.0 | 24.5 | 215389.7 | 211402.7 | | -1.9 | 20 |
| DCB | A | 25.0 | 25.5 | 557860.6 | 568225.2 | | 1.9 | 20 |
| DCB [2C] | A | 25.0 | 22.9 | 191768.3 | 175832.2 | | -8.3 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046145-BLK1 | Batch: | B046145 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B046145-BSD1 | U0324414.D | 15:00 |
| LCS | B046145-BS1 | U0324413.D | 14:28 |
| GKHMS-GW-011-1010 | 1010098-11 | U0324418.D | 17:09 |
| GKHMS-GW-010-1010 | 1010098-10 | U0324416.D | 16:04 |
| GKHMS-GW-005-1010 | 1010098-04 | U0324415.D | 15:32 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B046145-BLK1 | File ID: | U0324412.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 13:56 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 |
| Column: | 1 | | | | |

Instrument: GCECD-U

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B046145-BLK1 | File ID: | U0324412.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 13:56 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 |
| Column: | 2 | | | | |

Instrument: GCECD-U

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 [2C] | 1.00 | U |
| 11104-28-2 | PCB-1221 [2C] | 1.00 | U |
| 11141-16-5 | PCB-1232 [2C] | 1.00 | U |
| 53469-21-9 | PCB-1242 [2C] | 1.00 | U |
| 12672-29-6 | PCB-1248 [2C] | 1.00 | U |
| 11097-69-1 | PCB-1254 [2C] | 1.00 | U |
| 11096-82-5 | PCB-1260 [2C] | 1.00 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046145 | Laboratory ID: | B046145-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 | 5.00 | 5.54 | 111 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 | 5.00 | 4.37 | 87 | 23 | 30 | 25 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046145 | Laboratory ID: | B046145-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 5.00 | 100 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 5.05 | 101 | 1 | 30 | 25 - 125 |

# SURROGATE SUMMARY SHEET

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1010098 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-U |

| | DCB [2C] (40 - 135) | DCB (40 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| **1010098-04** | 55 | 61 | 73 | 70 |
| **1010098-10** | 64 | 69 | 76 | 70 |
| **1010098-11** | 52 | 60 | 65 | 84 |
| **B046145-BLK1** | 94 | 94 | 87 | 84 |
| **B046145-BS1** | 87 | 91 | 86 | 85 |
| **B046145-BSD1** | 82 | 89 | 69 | 62 |

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1010098

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles
1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.

Semivolatile PAHs
1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

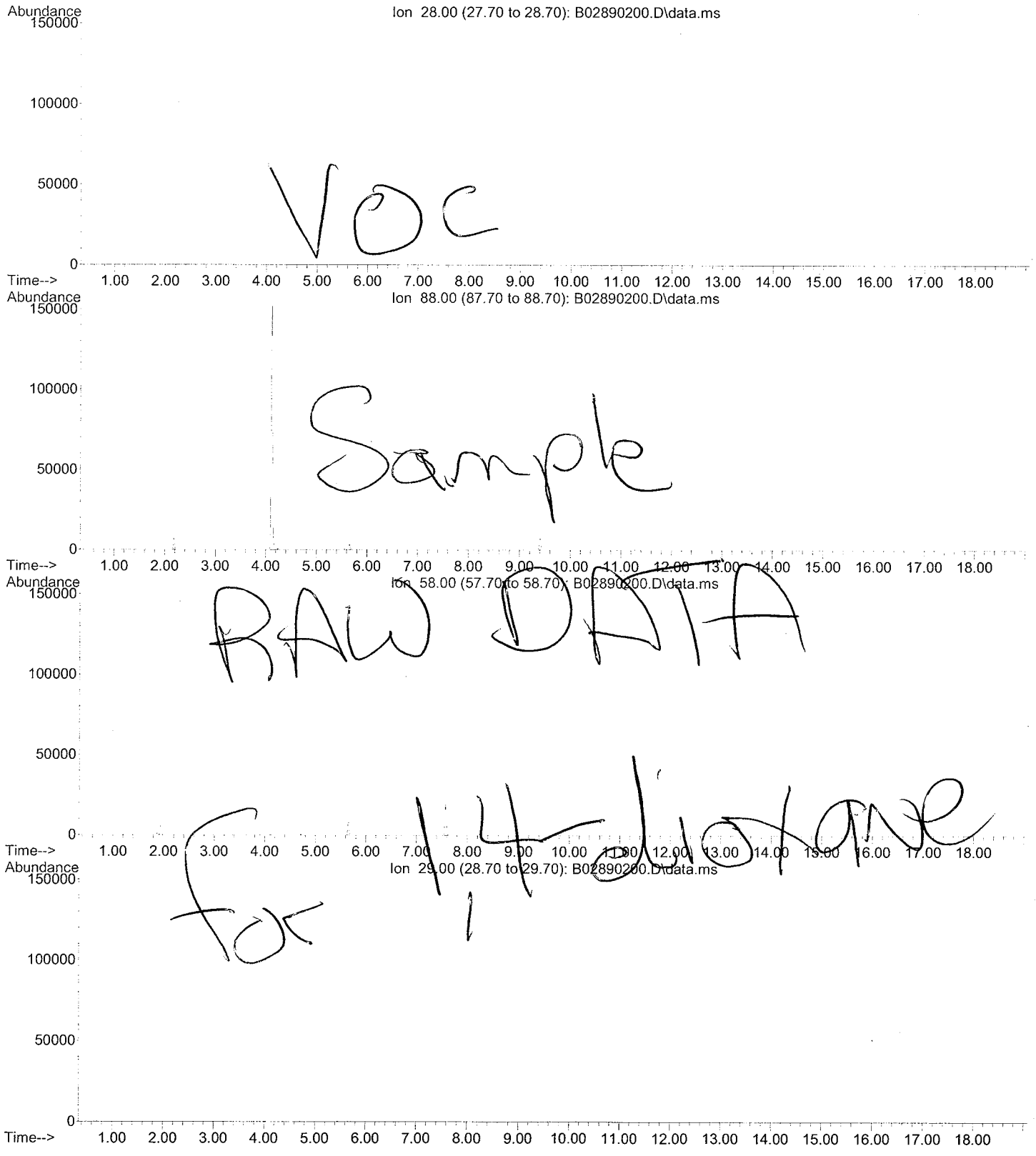
Pesticides
Raw data and evaluation reports for Chlordane and Toxaphene daily continuing check standards are provided.

PCBs
Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Mercury
Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director 2/4/2011
Chemtech

File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890200.D
Operator : MP
Acquired : 3 Nov 2010 11:39 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-01
Misc Info : TETRA TECH, WATER
Vial Number: 9



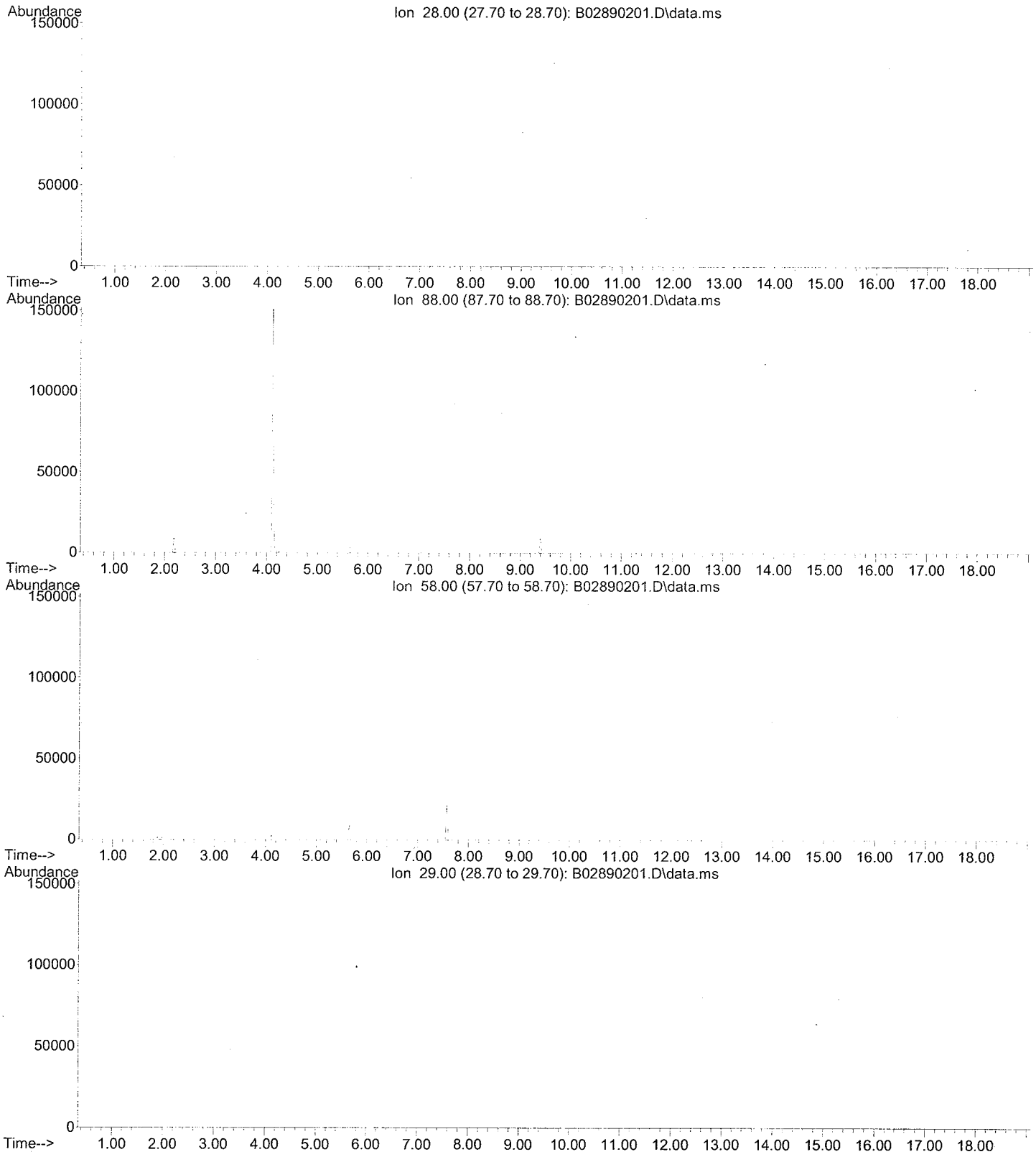

VOC

Sample

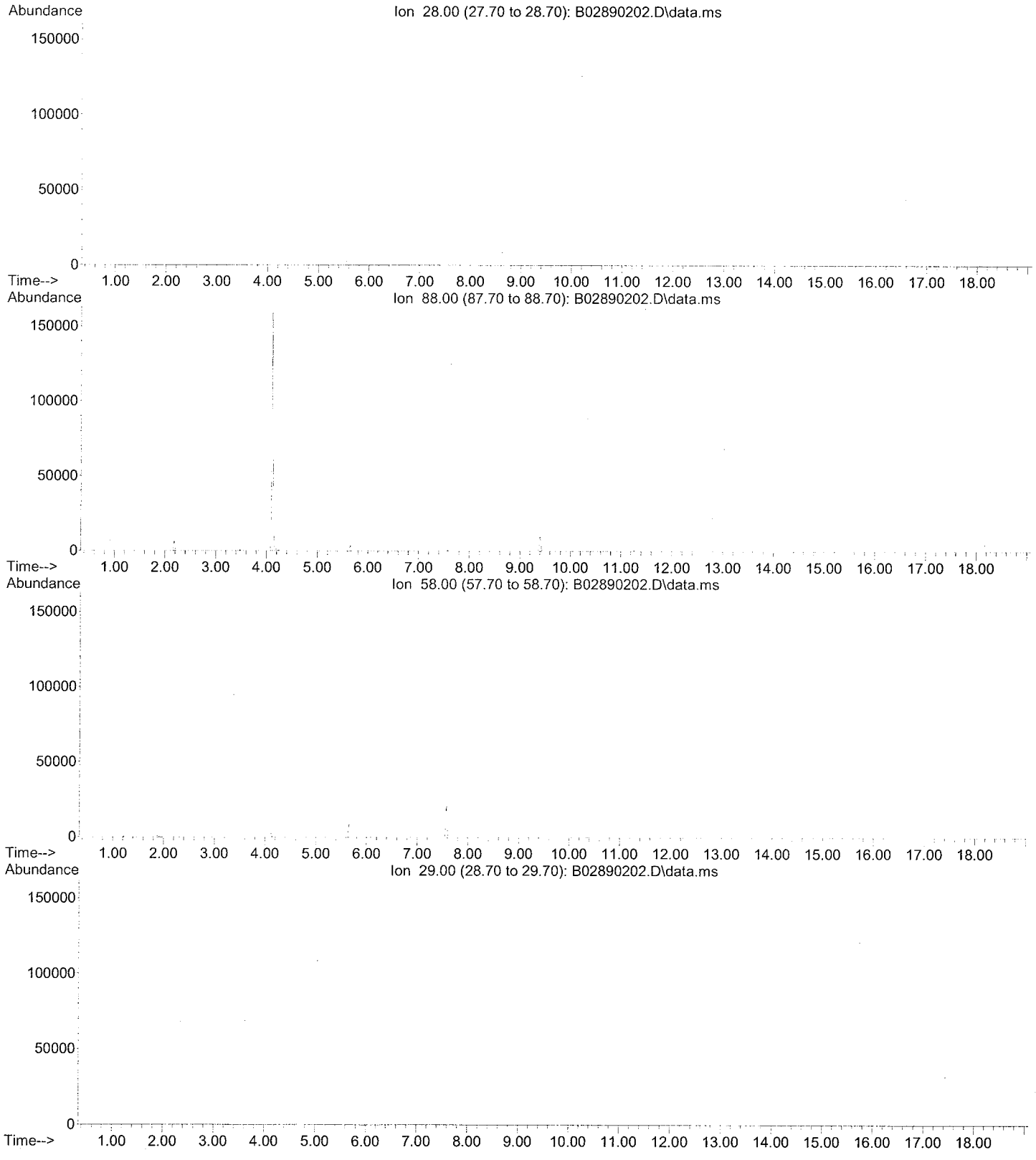
RAW DATA

for 1,4-Dioxane

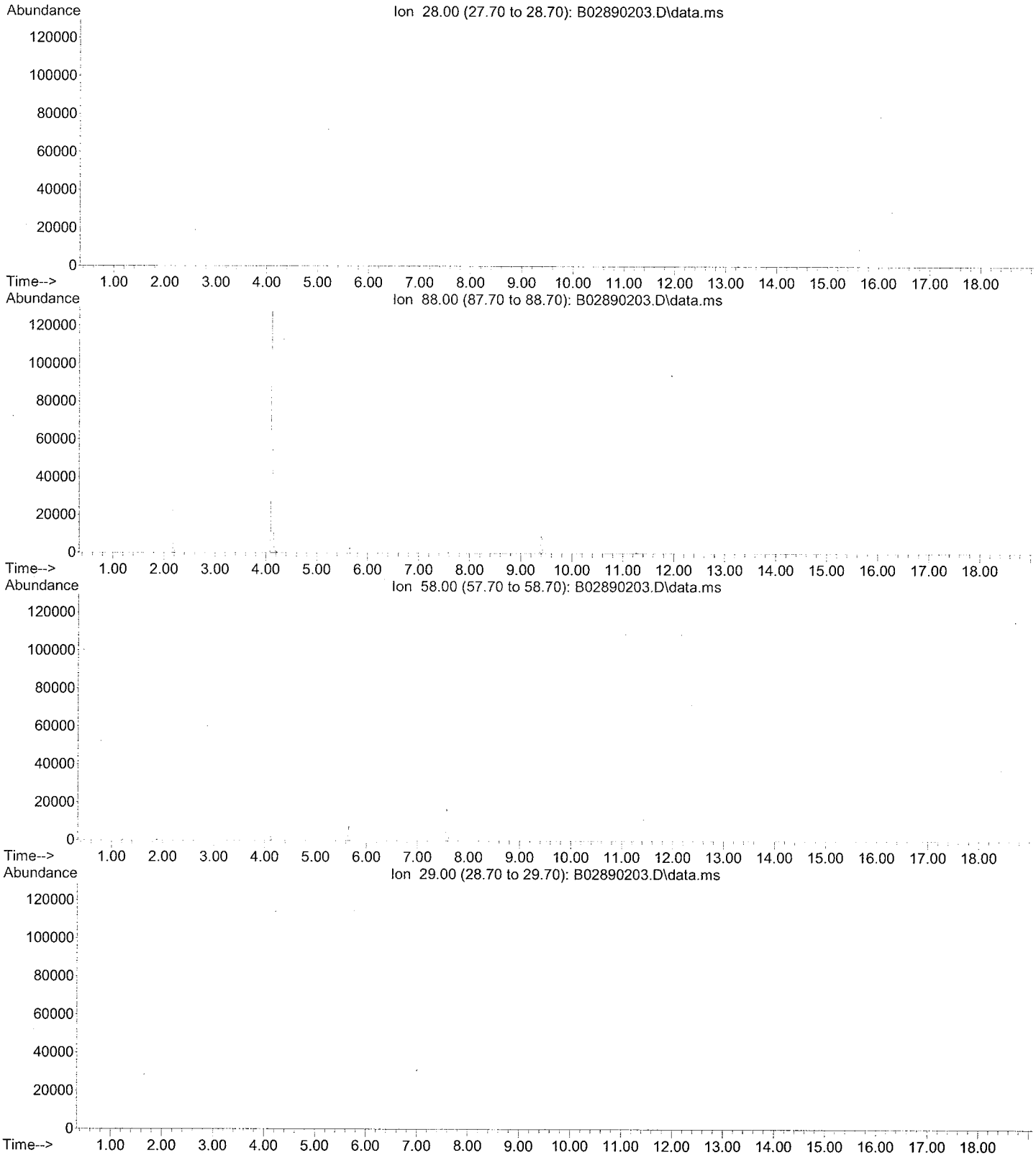
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890201.D
Operator : MP
Acquired : 3 Nov 2010 12:06 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-02
Misc Info : TETRA TECH, WATER
Vial Number: 10



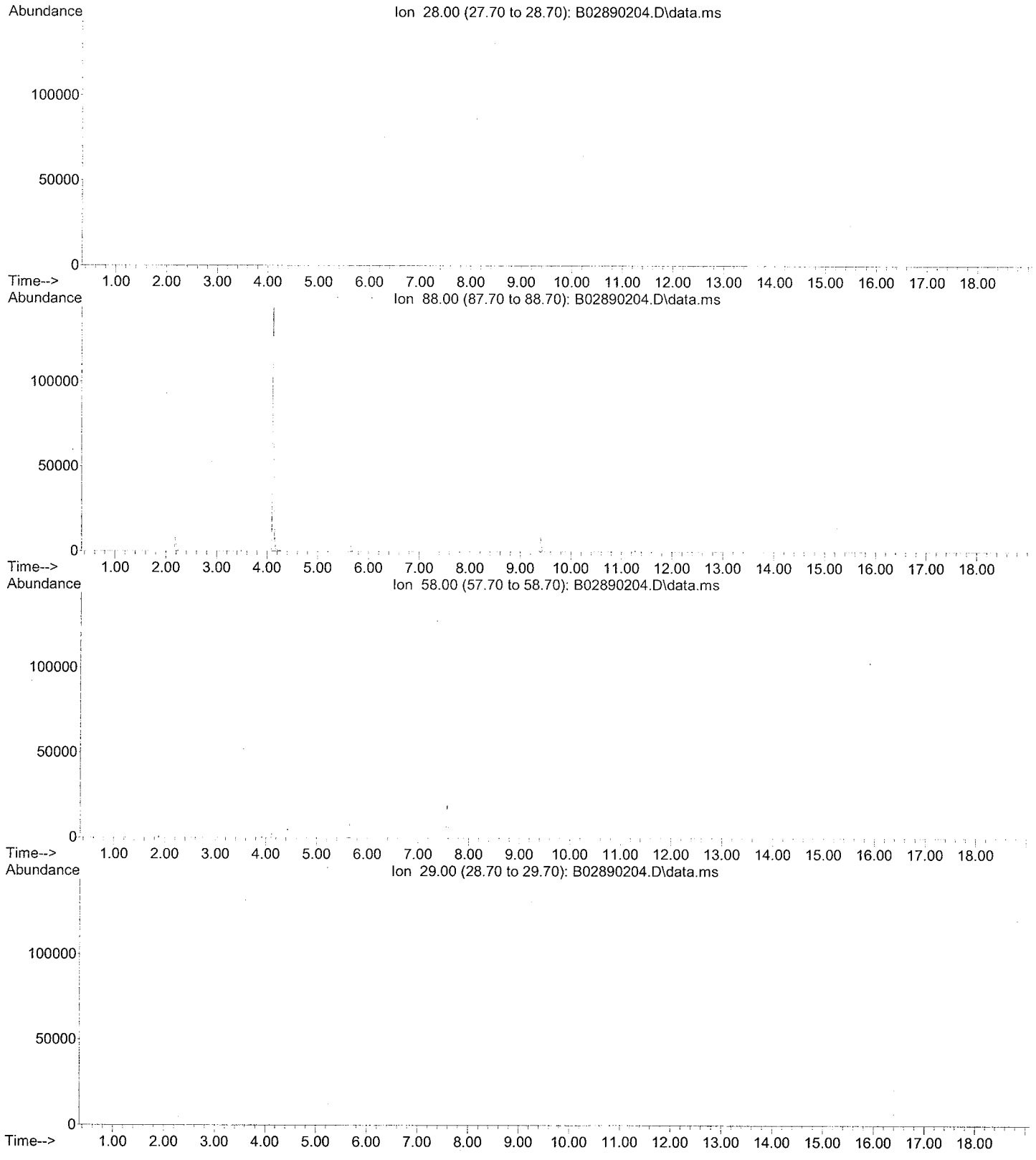
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890202.D
Operator : MP
Acquired : 3 Nov 2010 12:32 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-03
Misc Info : TETRA TECH, WATER
Vial Number: 11



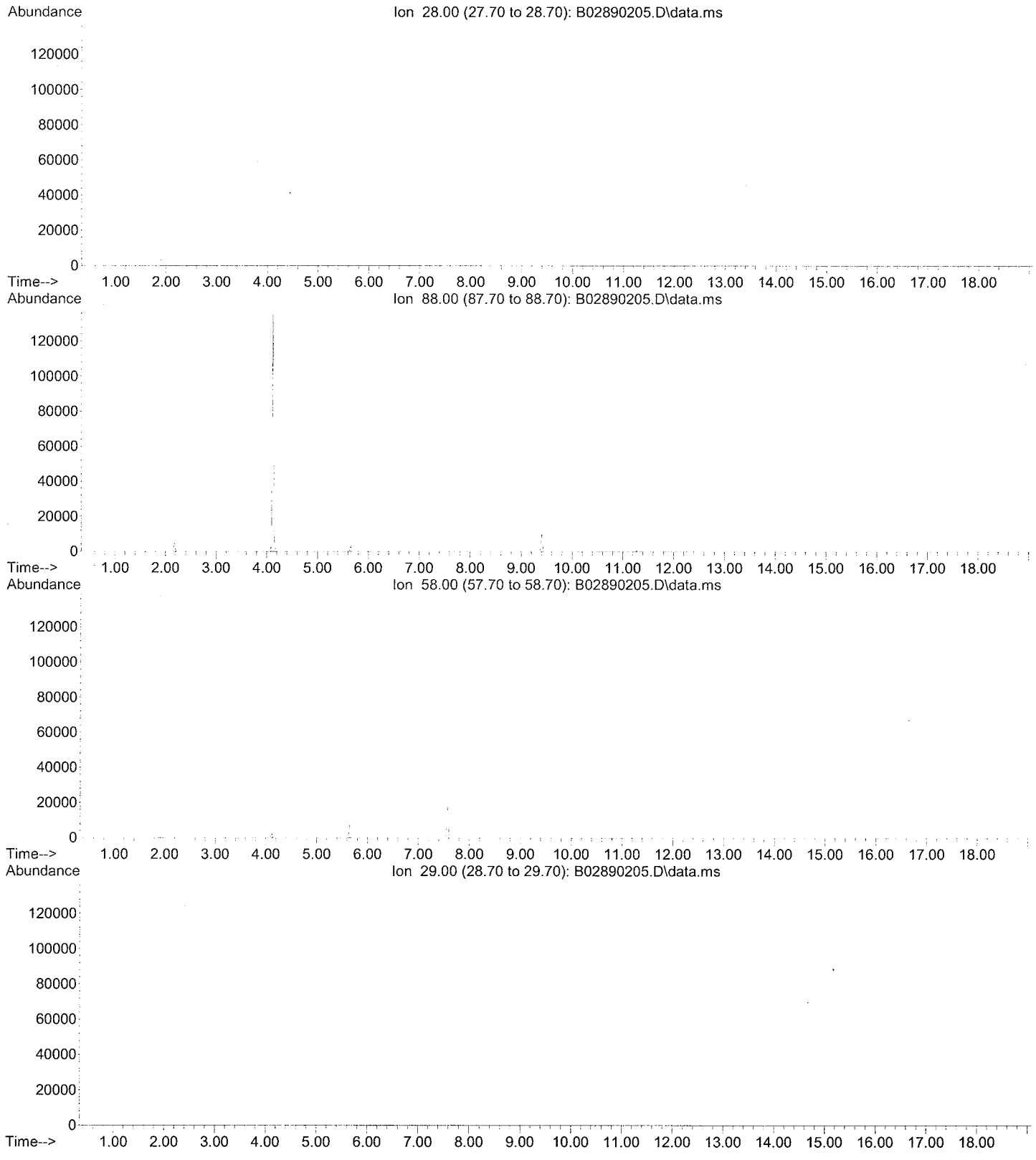
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890203.D
Operator : MP
Acquired : 3 Nov 2010 12:59 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-04
Misc Info : TETRA TECH, WATER
Vial Number: 12



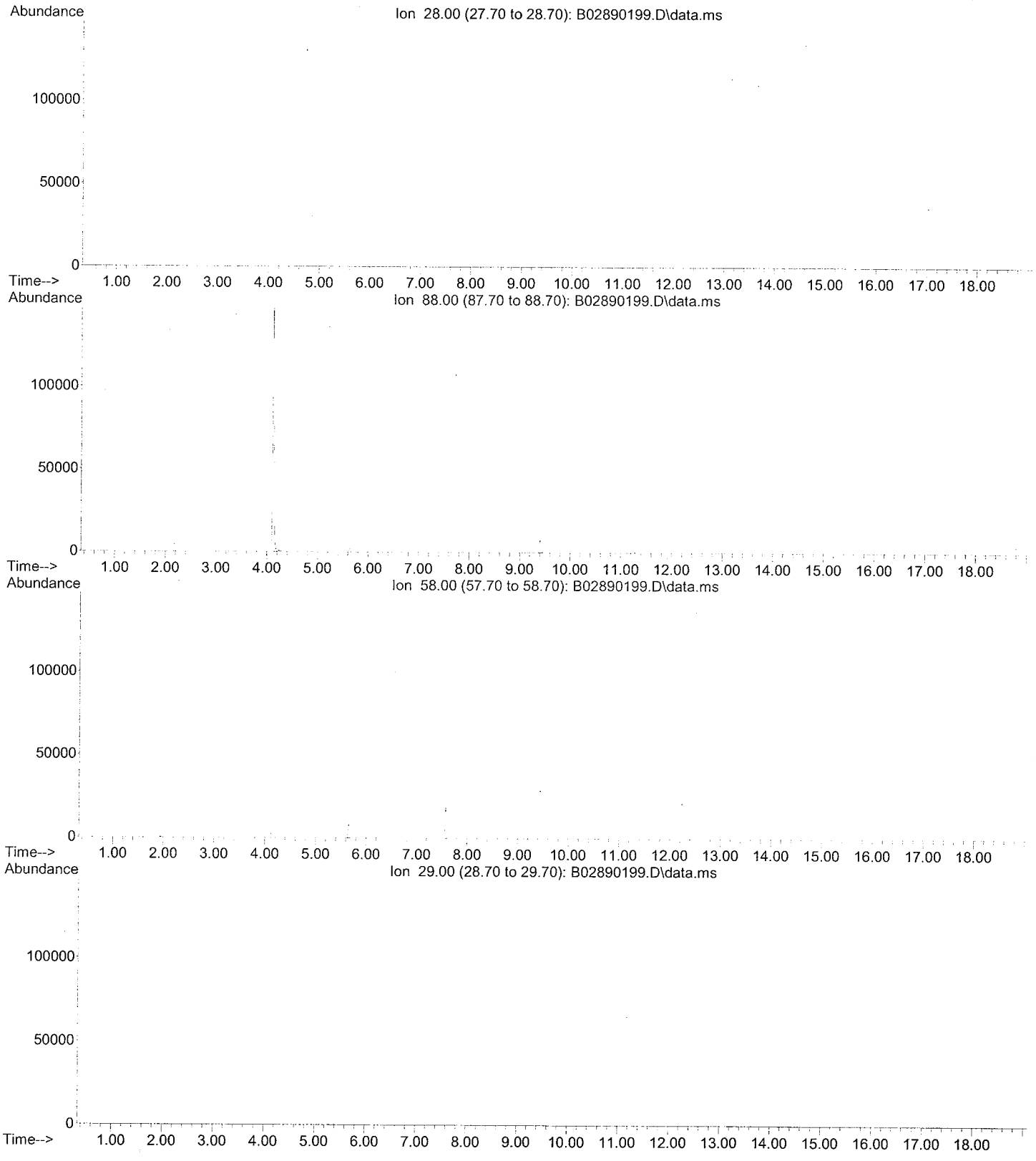
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890204.D
Operator : MP
Acquired : 3 Nov 2010 1:26 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-05
Misc Info : TETRA TECH, WATER
Vial Number: 13



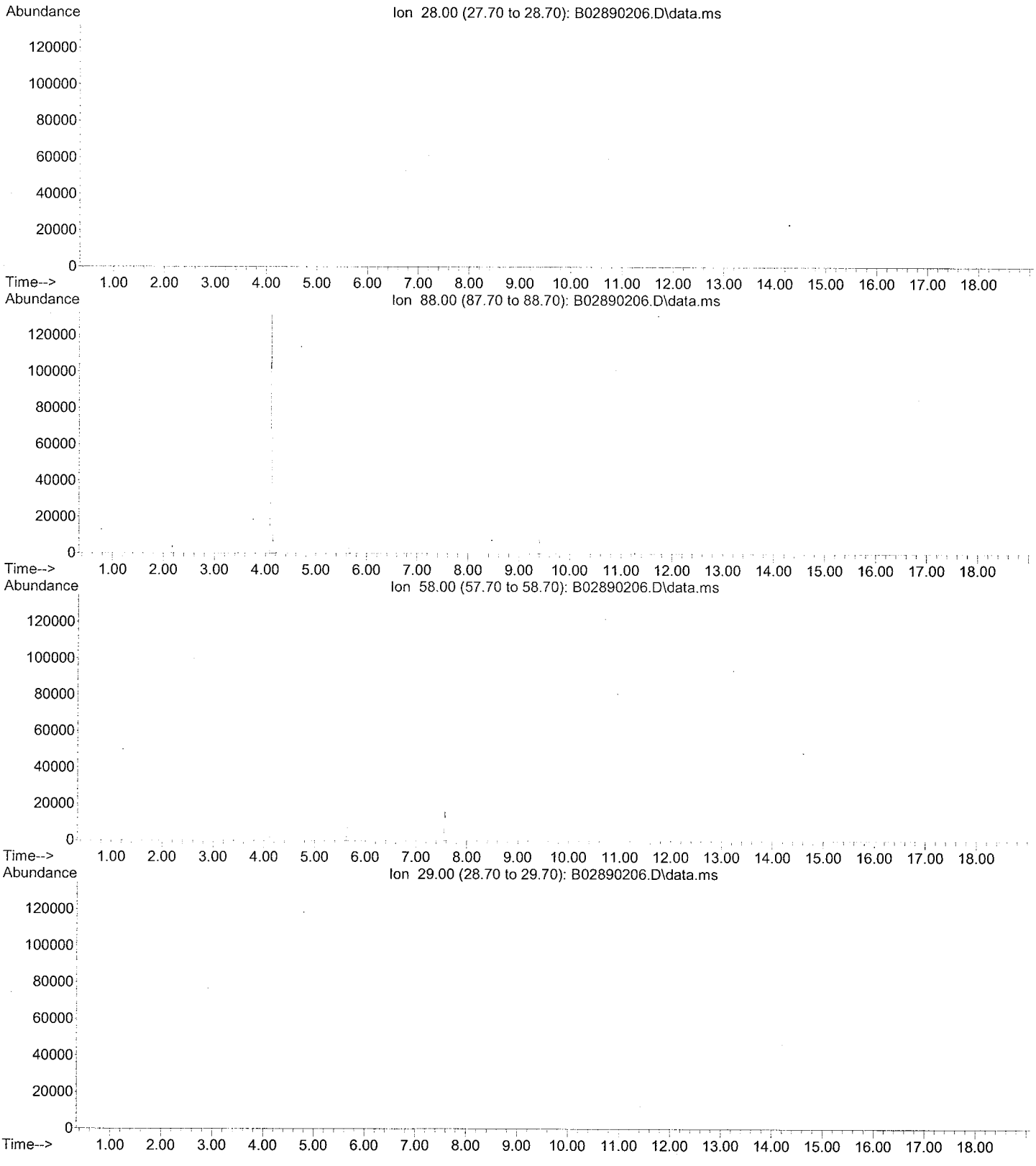
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890205.D
Operator : MP
Acquired : 3 Nov 2010 1:53 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-06
Misc Info : TETRA TECH, WATER
Vial Number: 14



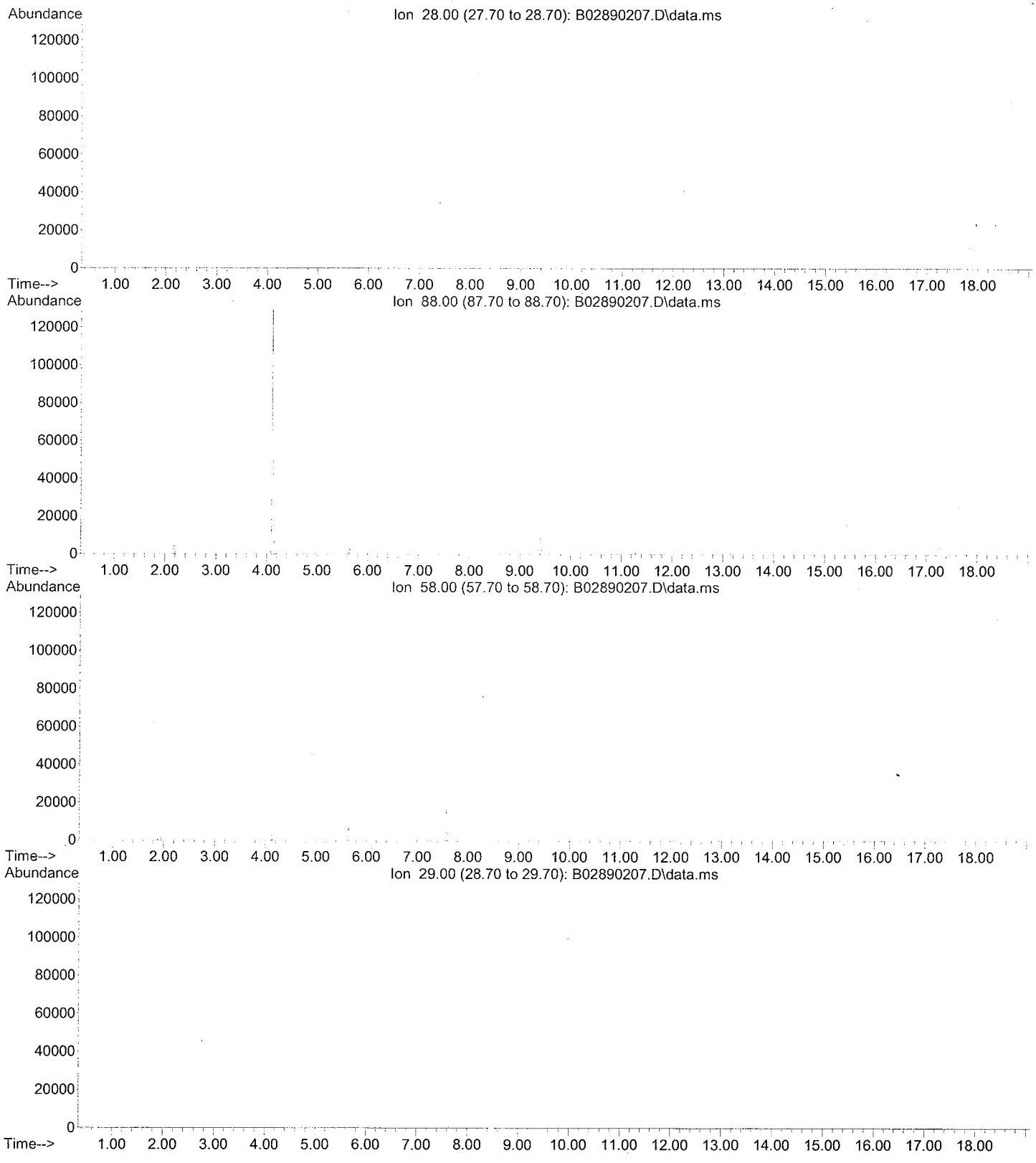
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890199.D
Operator : MP
Acquired : 3 Nov 2010 11:08 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-07
Misc Info : TETRA TECH, WATER
Vial Number: 8



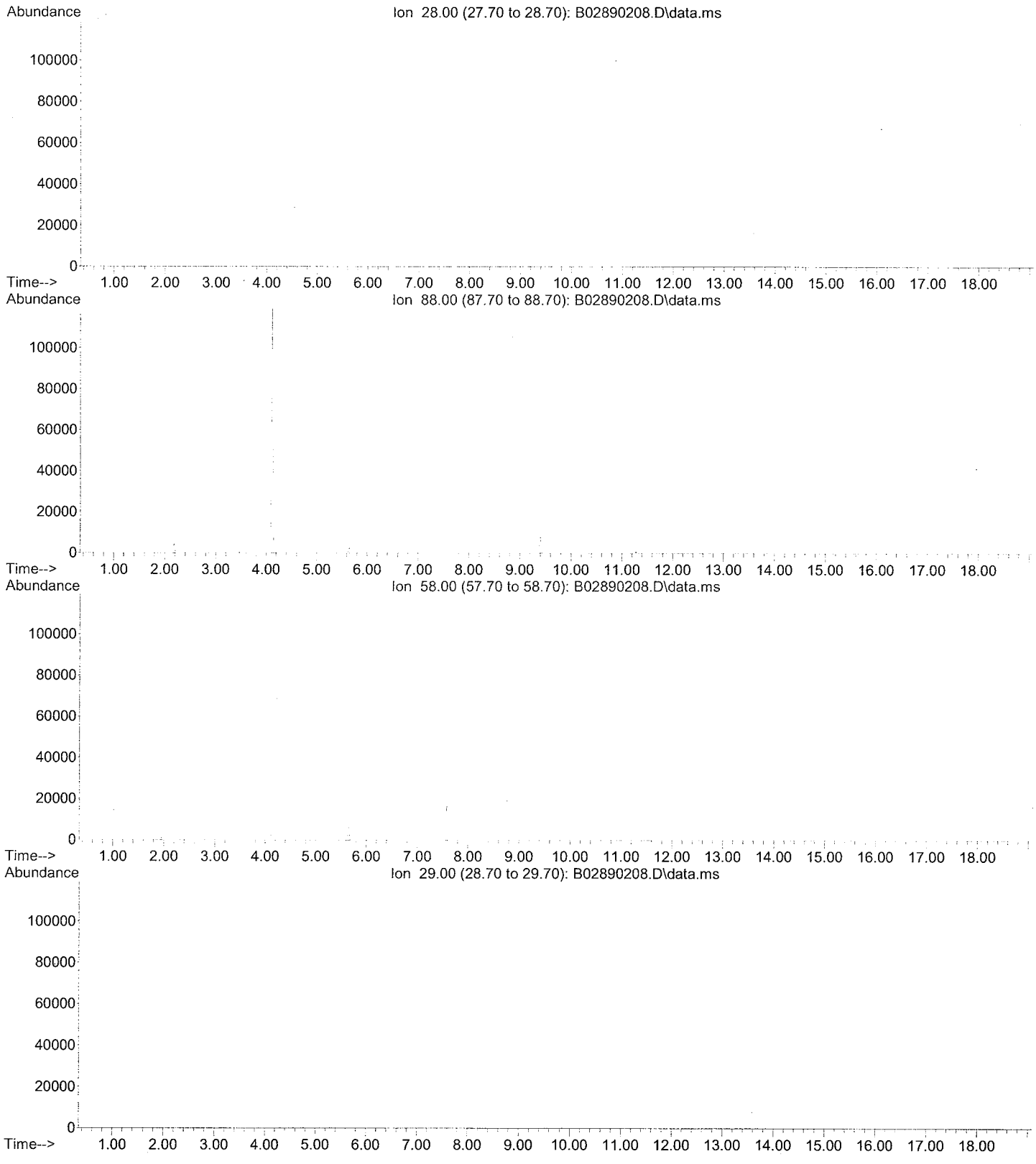
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890206.D
Operator : MP
Acquired : 3 Nov 2010 2:20 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-08
Misc Info : TETRA TECH, WATER
Vial Number: 15



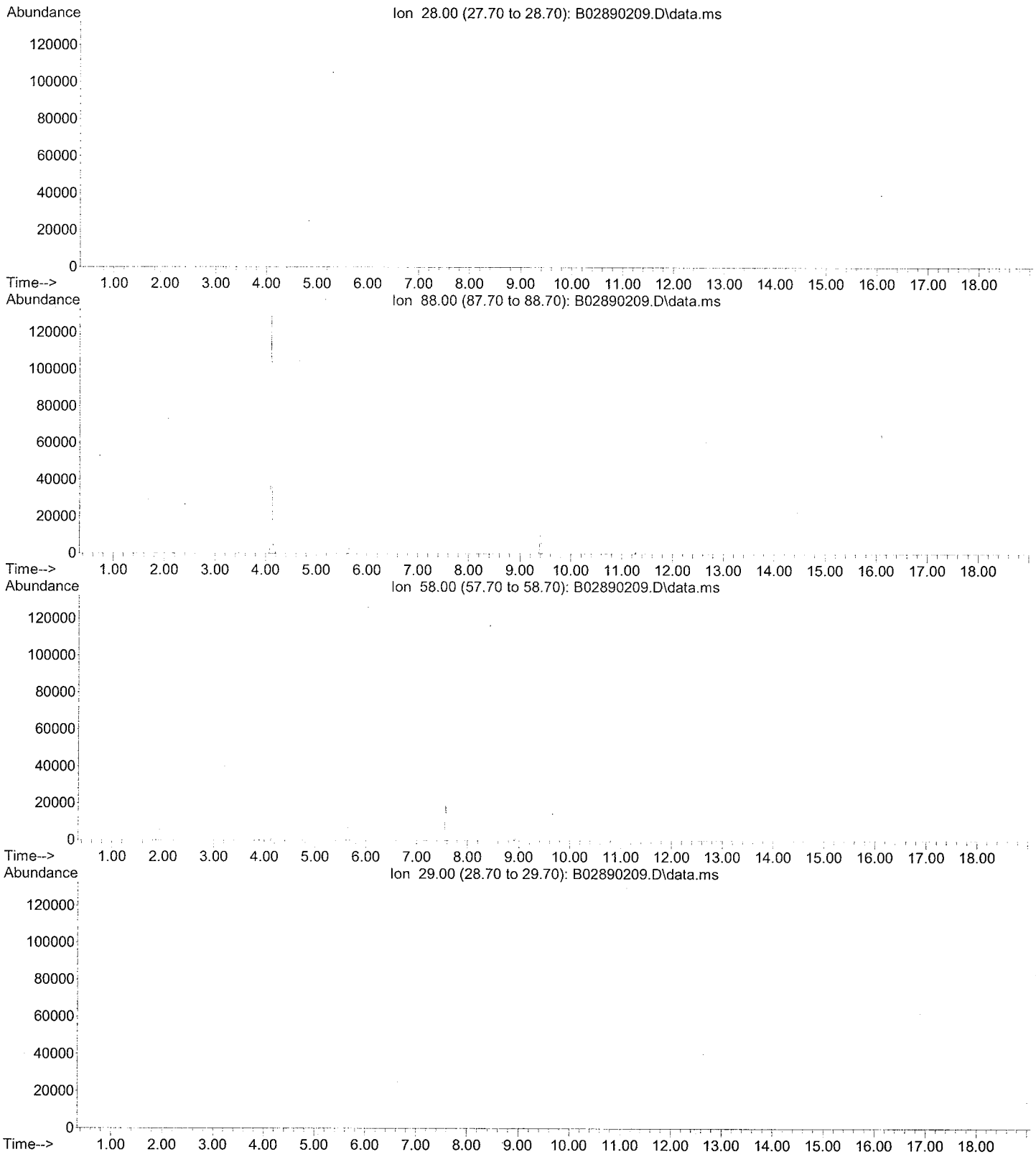
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890207.D
Operator : MP
Acquired : 3 Nov 2010 2:47 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-09
Misc Info : TETRA TECH, WATER
Vial Number: 16



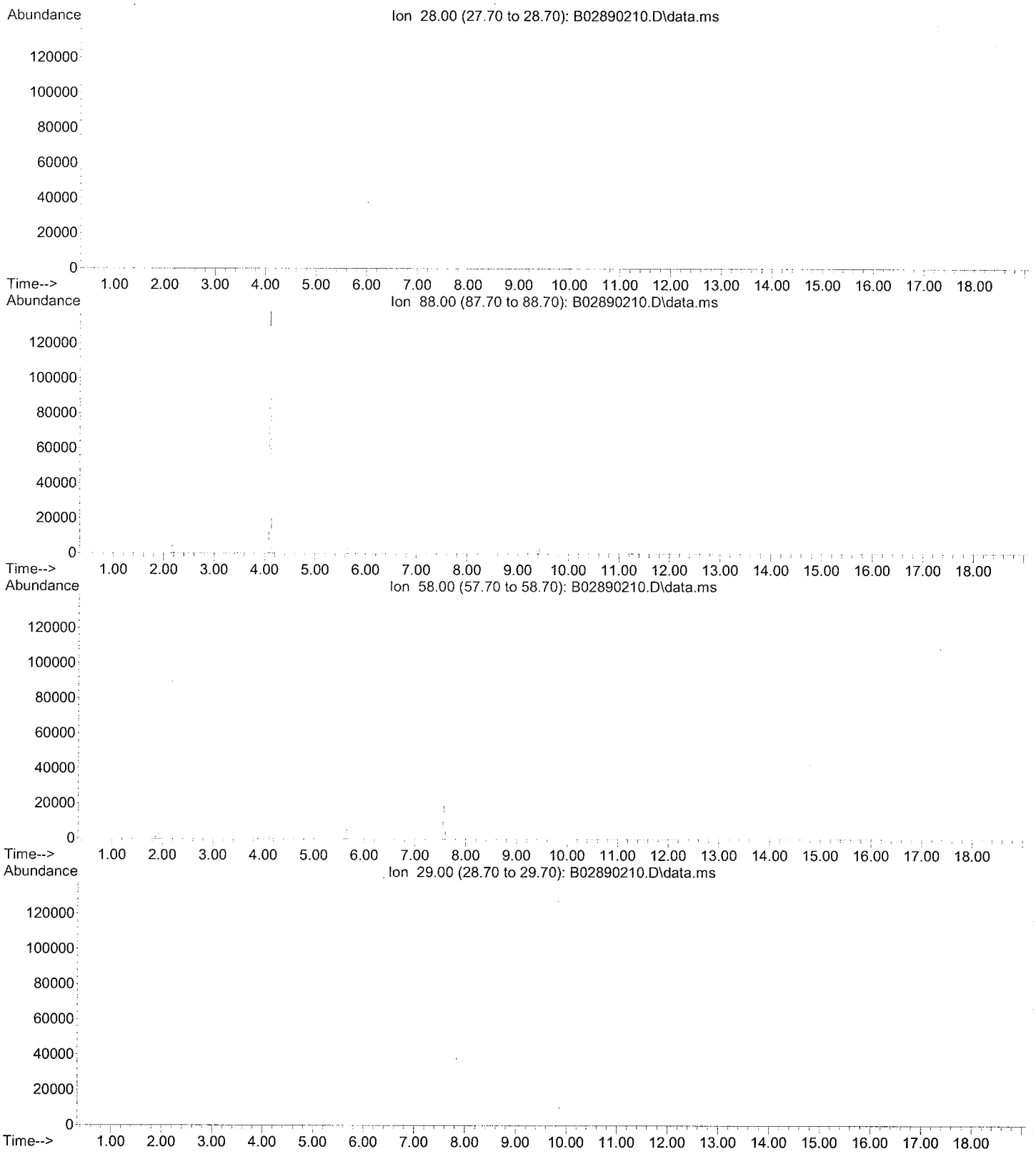
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890208.D
Operator : MP
Acquired : 3 Nov 2010 3:14 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-10
Misc Info : TETRA TECH, WATER
Vial Number: 17



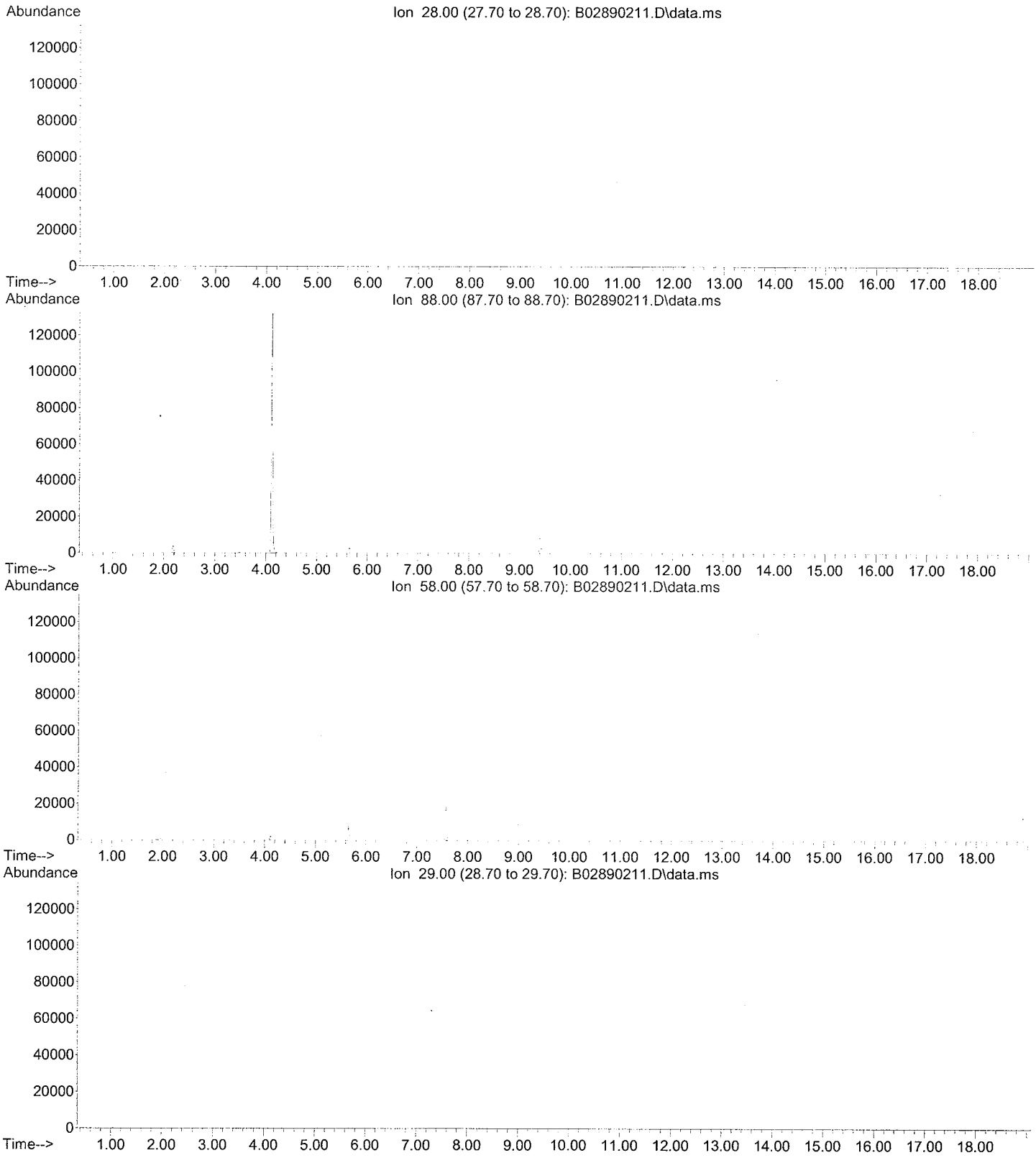
File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890209.D
Operator : MP
Acquired : 3 Nov 2010 3:41 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-11
Misc Info : TETRA TECH, WATER
Vial Number: 18



File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890210.D
Operator : MP
Acquired : 3 Nov 2010 4:07 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-12
Misc Info : TETRA TECH, WATER
Vial Number: 19



File :H:\VOL1\GCMSDATA\B\Sequence\110310\B02890211.D
Operator : MP
Acquired : 3 Nov 2010 4:34 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1010098-13
Misc Info : TETRA TECH, WATER
Vial Number: 20



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-002-1010

Sample Date/Time: 10/28/10 09:50

File ID: D46162.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-01

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 17:28

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

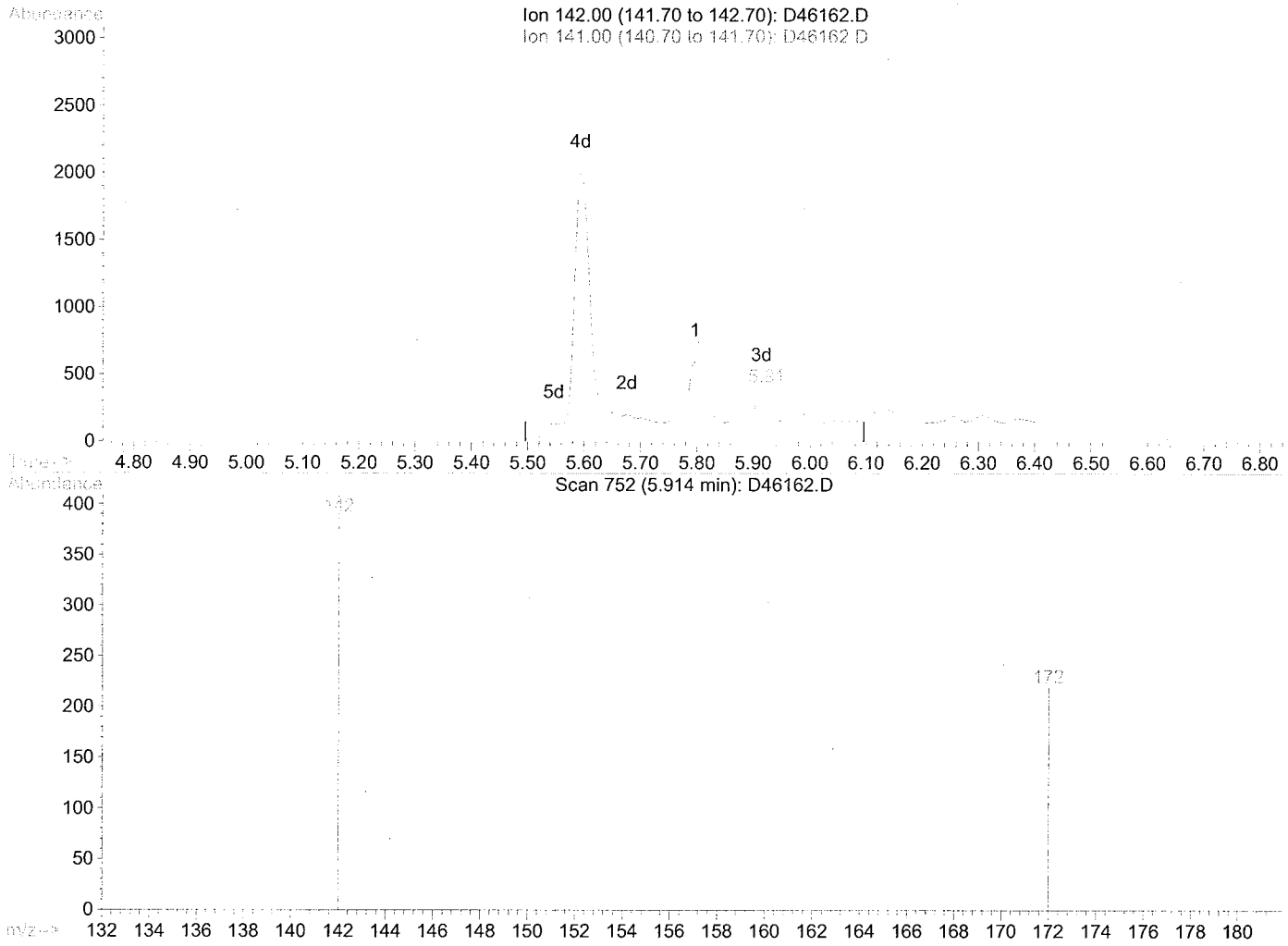
PAH evaluations of 1-methylnaphthalene

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46162.D Vial: 16
Acq On : 3 Nov 2010 17:28 Operator: JI
Sample : 1010098-01 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:27 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46162.D

(5) 2-Methylnaphthalene (T)

5.91min 1.86ug/L m

response 384

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-003-1010

Sample Date/Time: 10/28/10 09:20

File ID: D46163.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-02

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 17:52

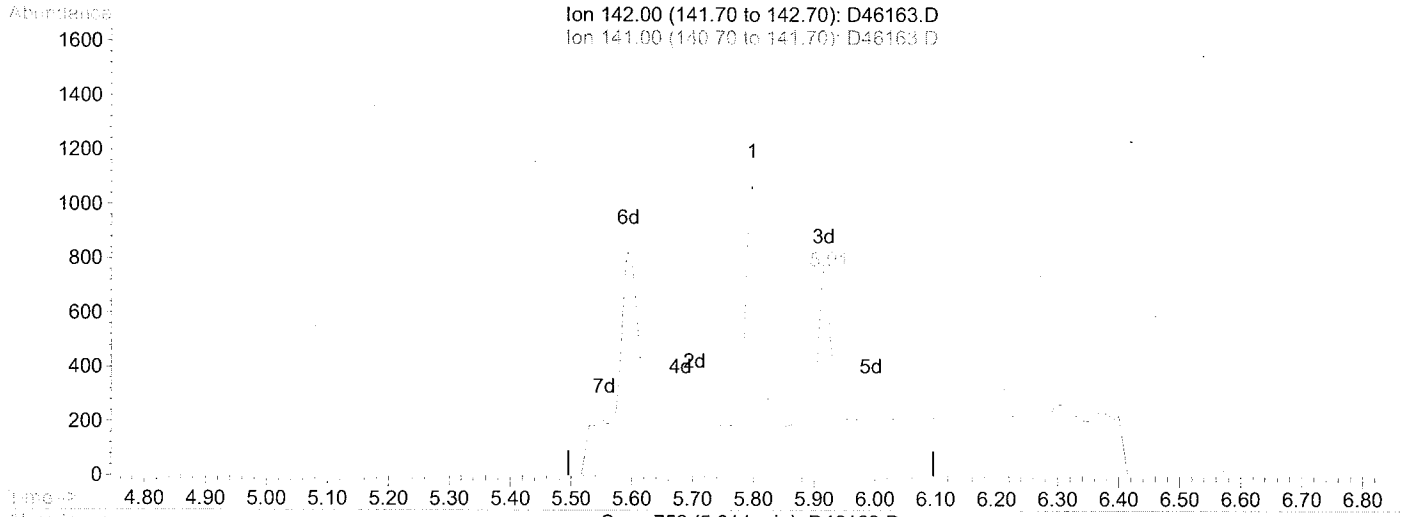
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

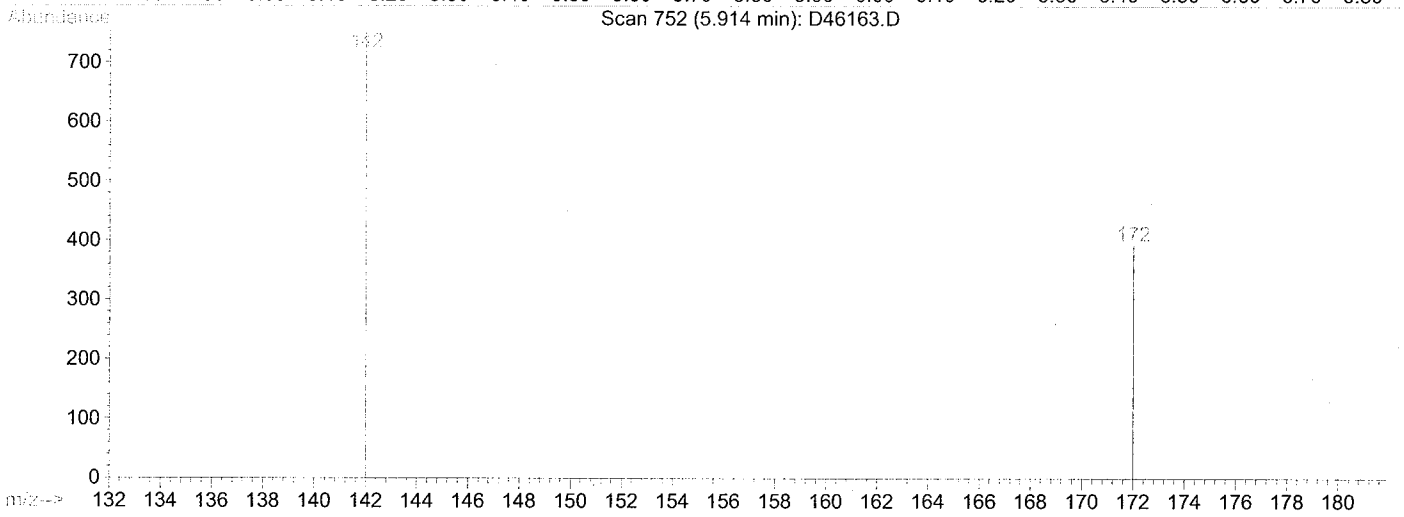
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46163.D Vial: 17
Acq On : 3 Nov 2010 17:52 Operator: JI
Sample : 1010098-02 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:28 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46163.D

(5) 2-Methylnaphthalene (T)

5.91min 4.71ug/L m

response 833

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-004-1010

Sample Date/Time: 10/28/10 11:20

File ID: D46164.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-03

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 18:17

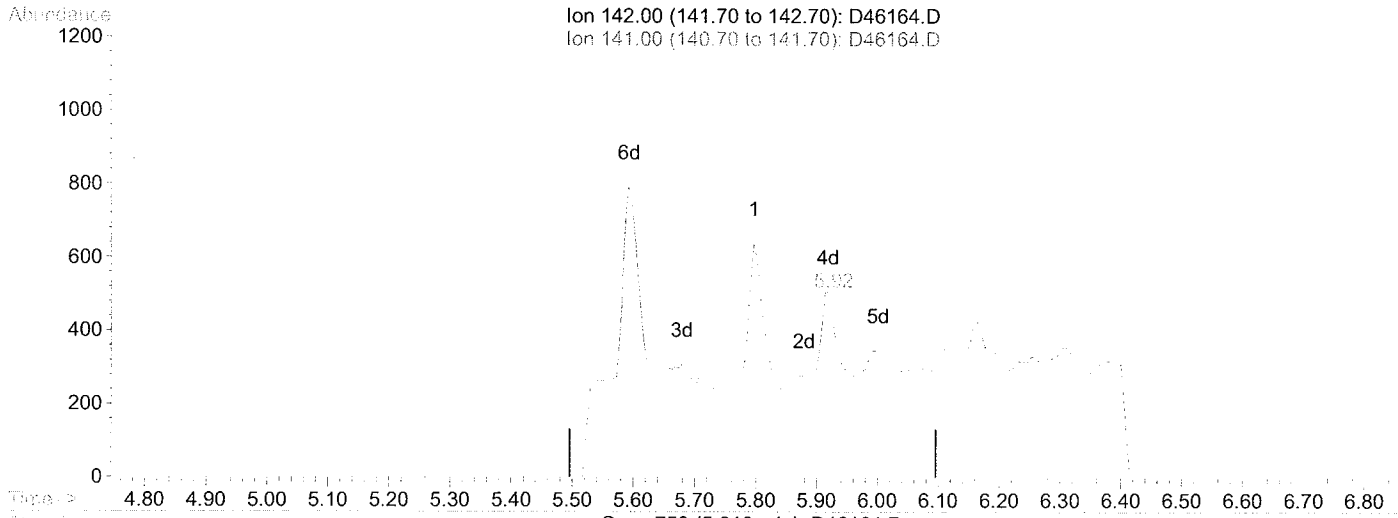
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

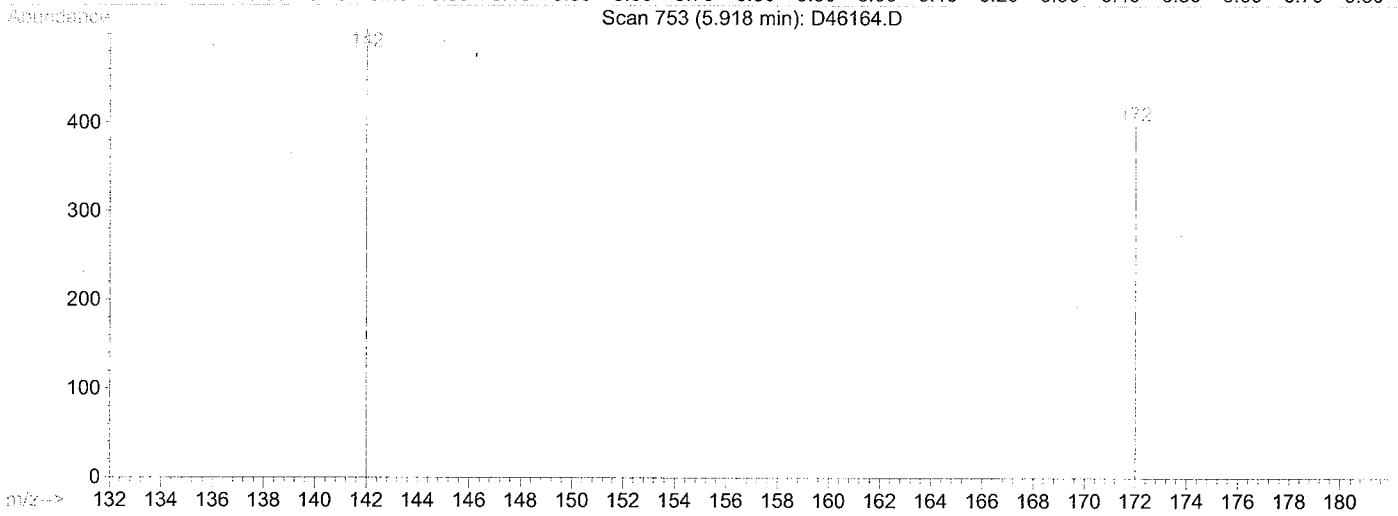
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46164.D Vial: 18
Acq On : 3 Nov 2010 18:17 Operator: JI
Sample : 1010098-03 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:28 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46164.D

(5) 2-Methylnaphthalene (T)

5.92min 2.42ug/L m

response 391

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-005-1010

Sample Date/Time: 10/28/10 14:30

File ID: D46165.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-04

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 19:05

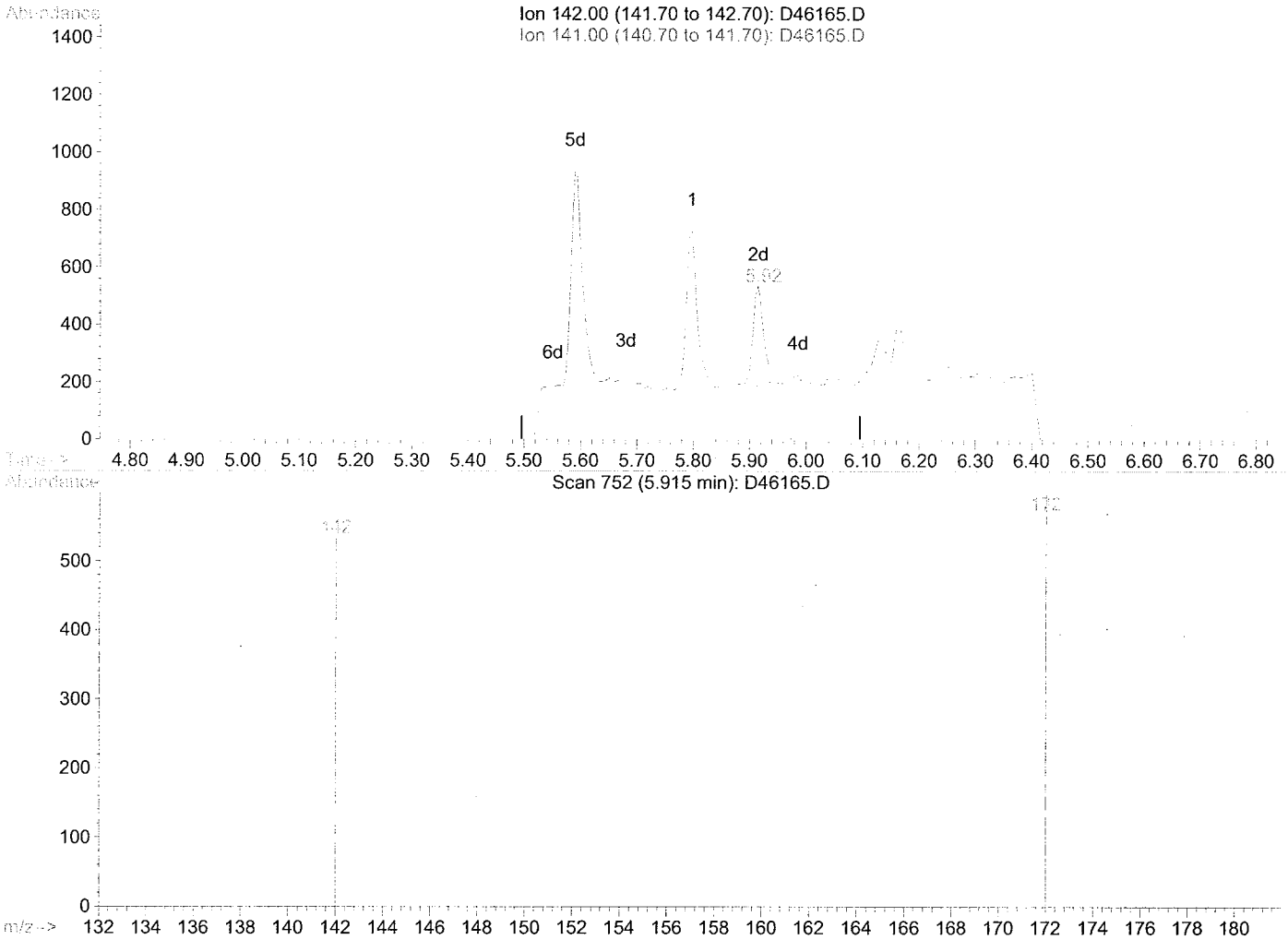
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46165.D Vial: 19
Acq On : 3 Nov 2010 18:41 Operator: JI
Sample : 1010098-04 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:28 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




(5) 2-Methylnaphthalene (T)

5.92min 2.31ug/L m

response 479

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-006-1010

Sample Date/Time: 10/28/10 14:30

File ID: D46166.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-05

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 19:05

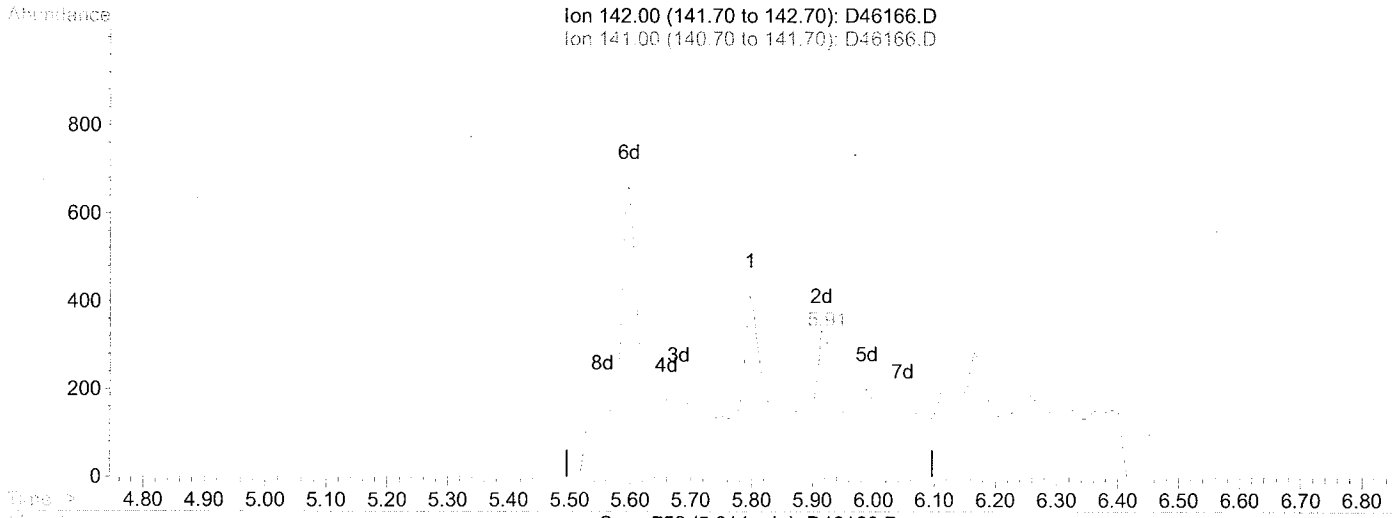
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

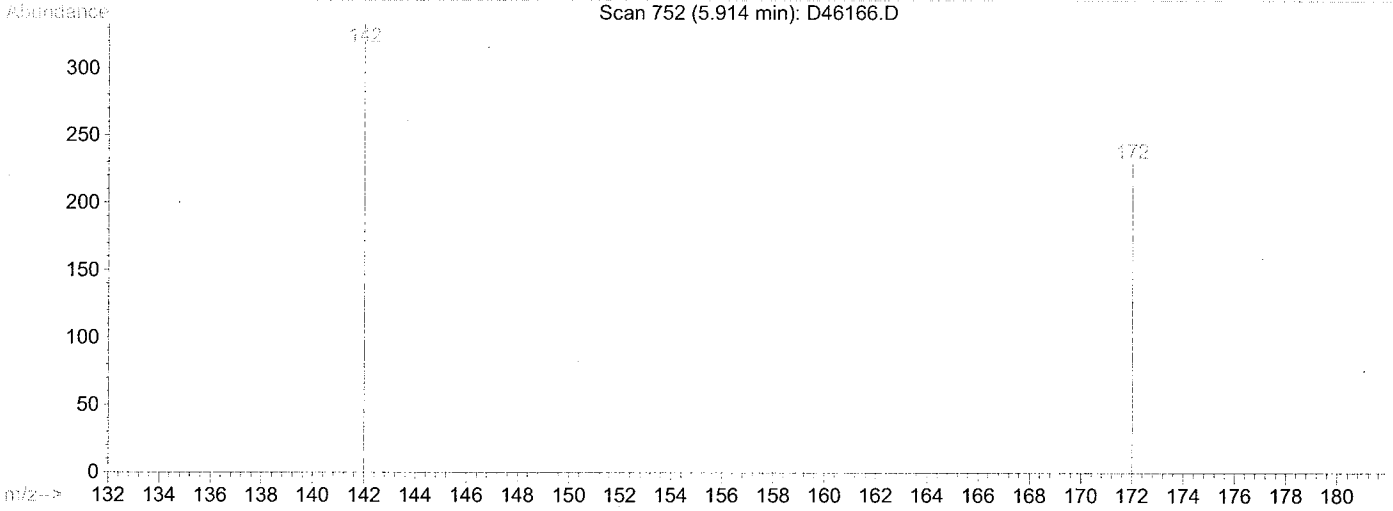
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46166.D Vial: 20
Acq On : 3 Nov 2010 19:05 Operator: JI
Sample : 1010098-05 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:28 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46166.D

(5) 2-Methylnaphthalene (T)

5.91min 1.86ug/L m

response 315

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-007-1010

Sample Date/Time: 10/28/10 15:40

File ID: D46167.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-06

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 19:30

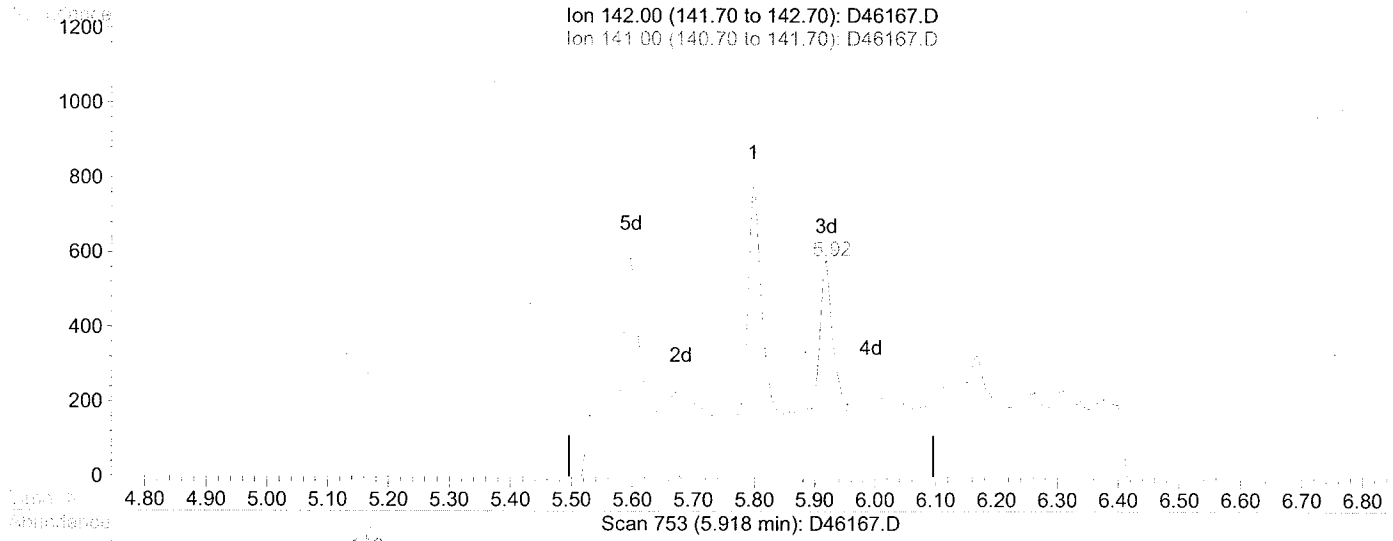
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46167.D Vial: 21
Acq On : 3 Nov 2010 19:30 Operator: JI
Sample : 1010098-06 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:28 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46167.D

(5) 2-Methylnaphthalene (T)

5.92min 3.48ug/L m

response 584

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-008-1010

Sample Date/Time: 10/29/10 08:40

File ID: D46168.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-08

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 19:54

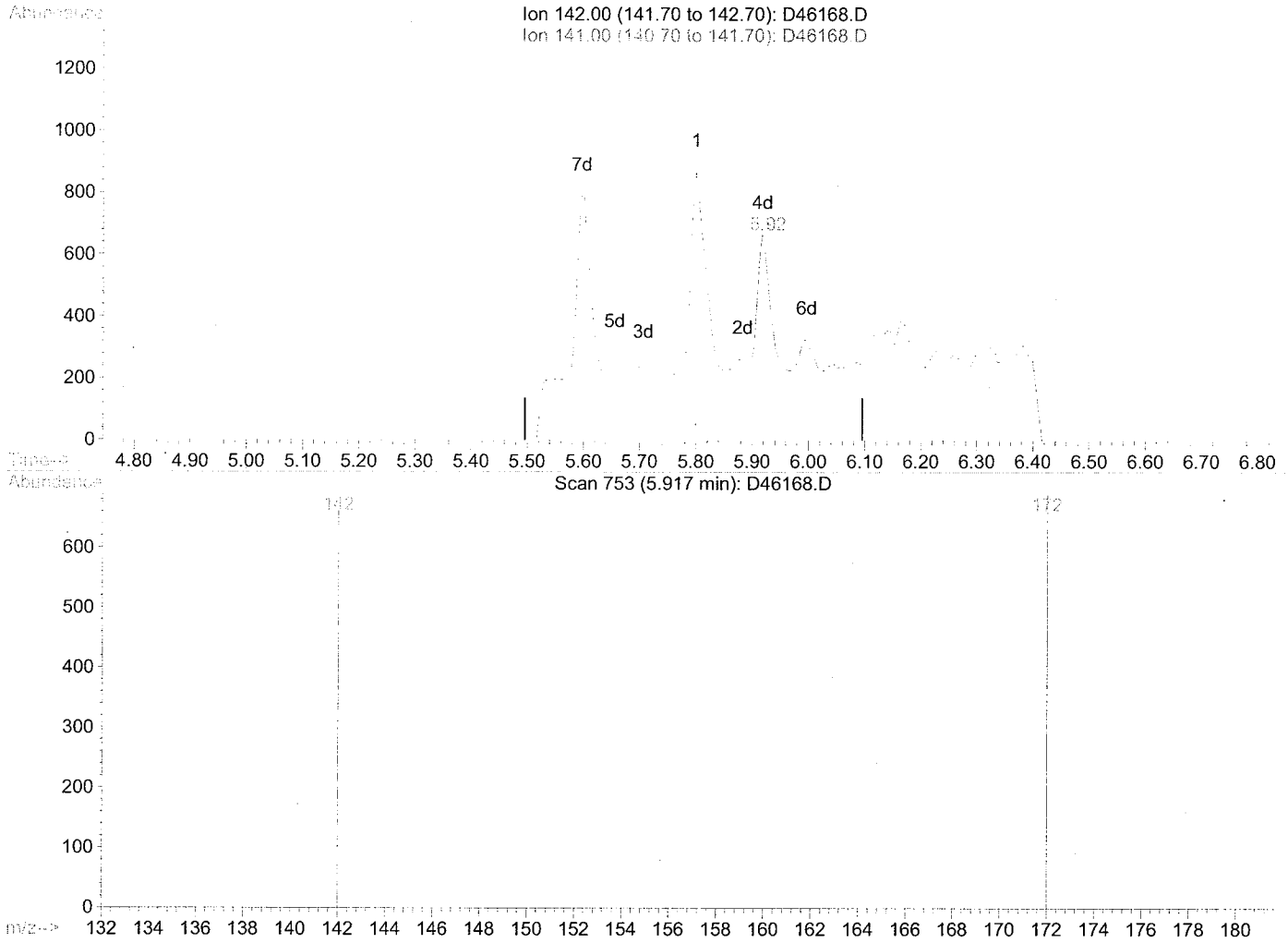
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46168.D Vial: 22
Acq On : 3 Nov 2010 19:54 Operator: JI
Sample : 1010098-08 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:28 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46168.D

(5) 2-Methylnaphthalene (T)

5.92min 3.81ug/L m

response 670

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-009-1010

Sample Date/Time: 10/29/10 09:20

File ID: D46169.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-09

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 20:18

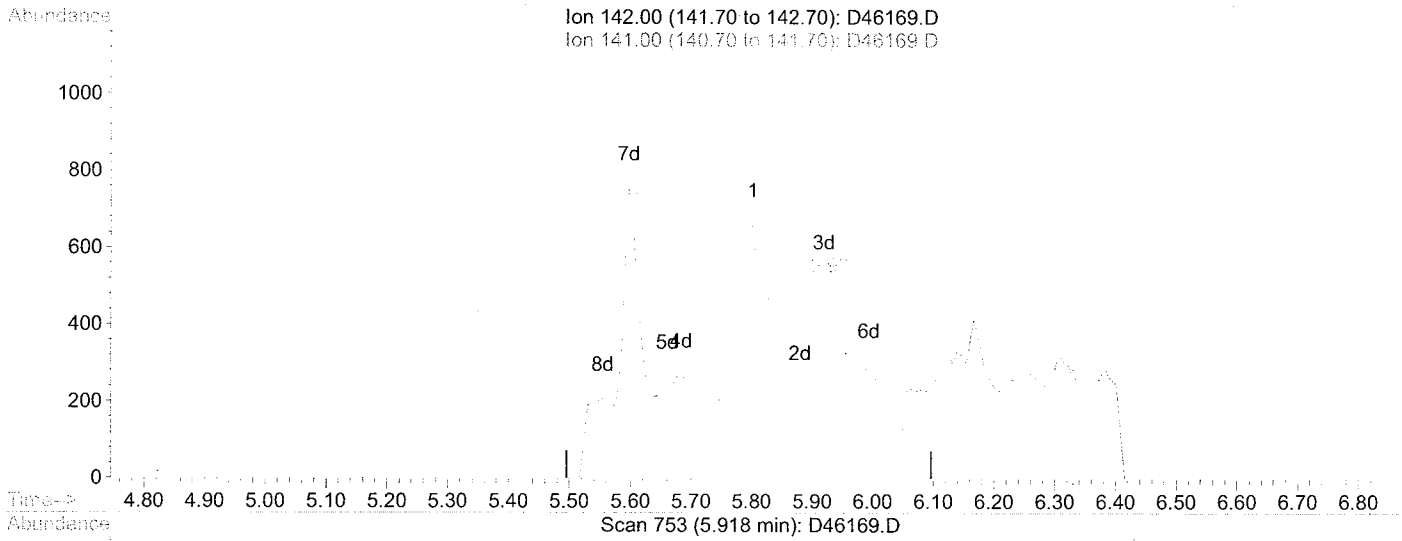
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

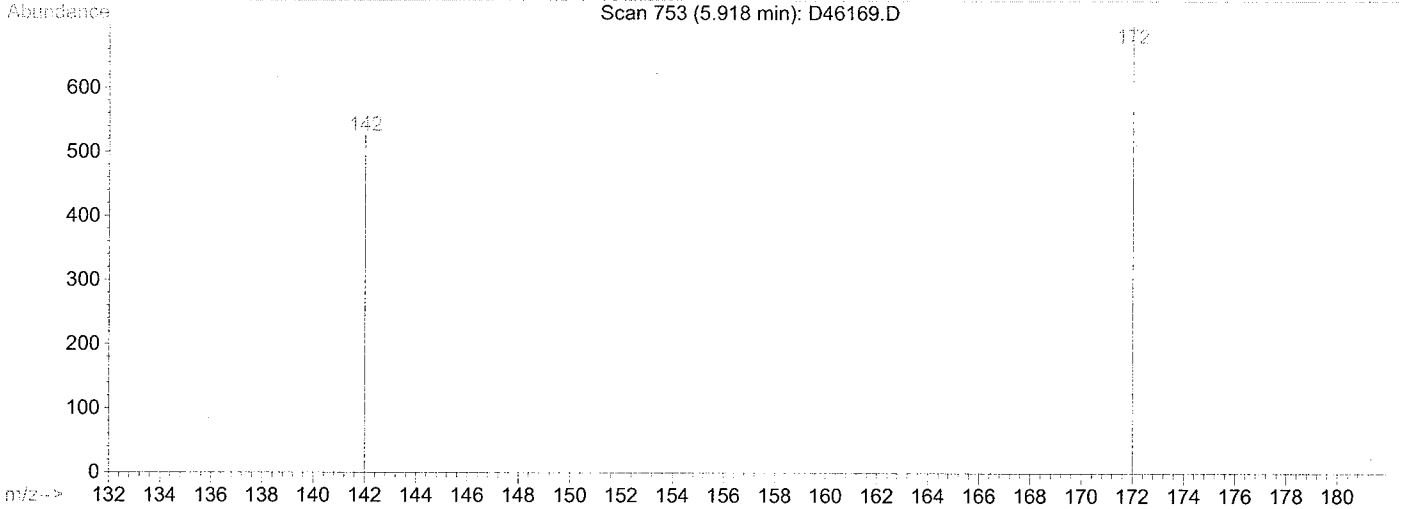
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46169.D Vial: 23
Acq On : 3 Nov 2010 20:18 Operator: JI
Sample : 1010098-09 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:28 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46169.D

(5) 2-Methylnaphthalene (T)

5.92min 2.65ug/L m

response 485

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-010-1010

Sample Date/Time: 10/29/01 11:30

File ID: D46170.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-10

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 20:43

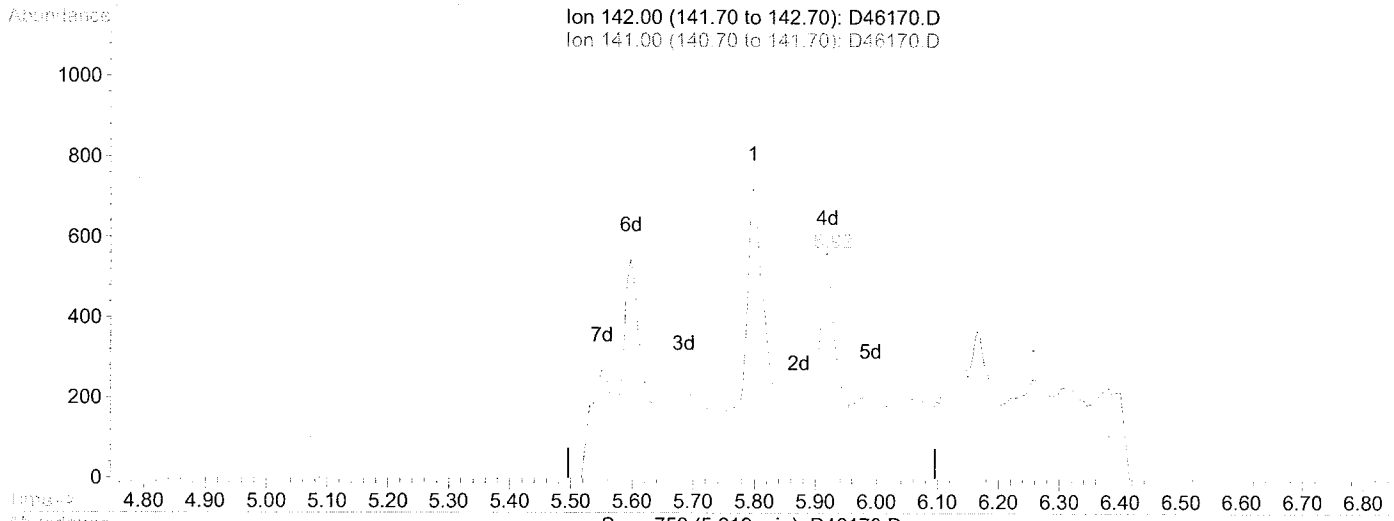
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

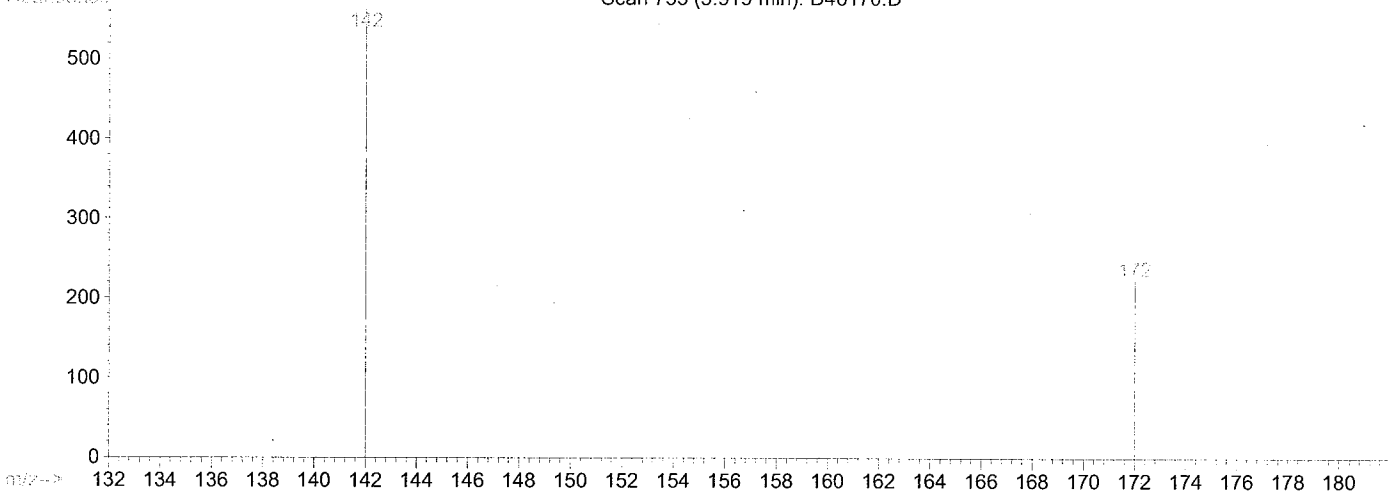
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46170.D Vial: 24
Acq On : 3 Nov 2010 20:43 Operator: JI
Sample : 1010098-10 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:29 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46170.D

(5) 2-Methylnaphthalene (T)

5.92min 2.69ug/L m

response 576

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-011-1010

Sample Date/Time: 10/28/10 11:20

File ID: D46171.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-11

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 21:07

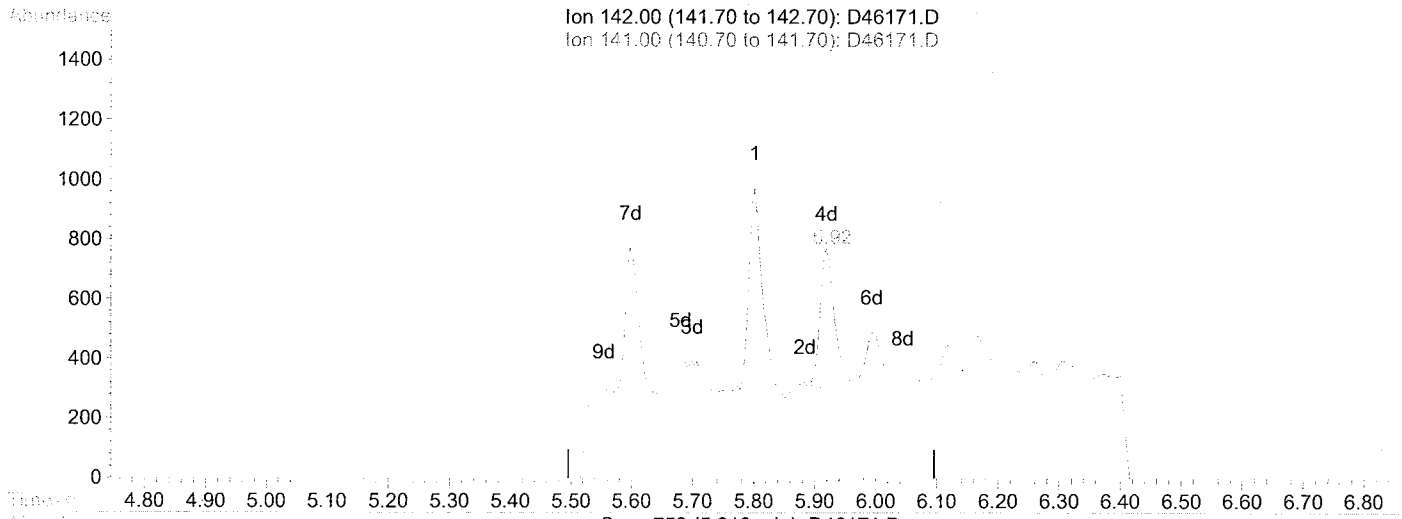
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

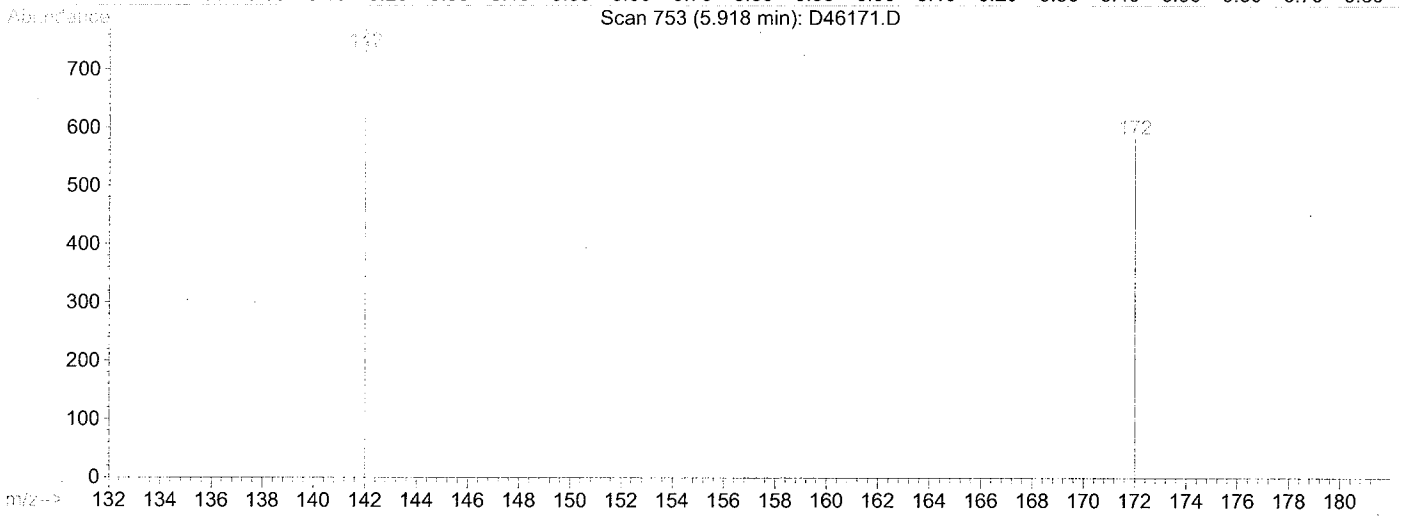
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46171.D Vial: 25
Acq On : 3 Nov 2010 21:07 Operator: JI
Sample : 1010098-11 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:29 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46171.D

(5) 2-Methylnaphthalene (T)

5.92min 3.85ug/L m

response 748

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-012-1010

Sample Date/Time: 10/29/10 10:00

File ID: D46172.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-12

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 21:32

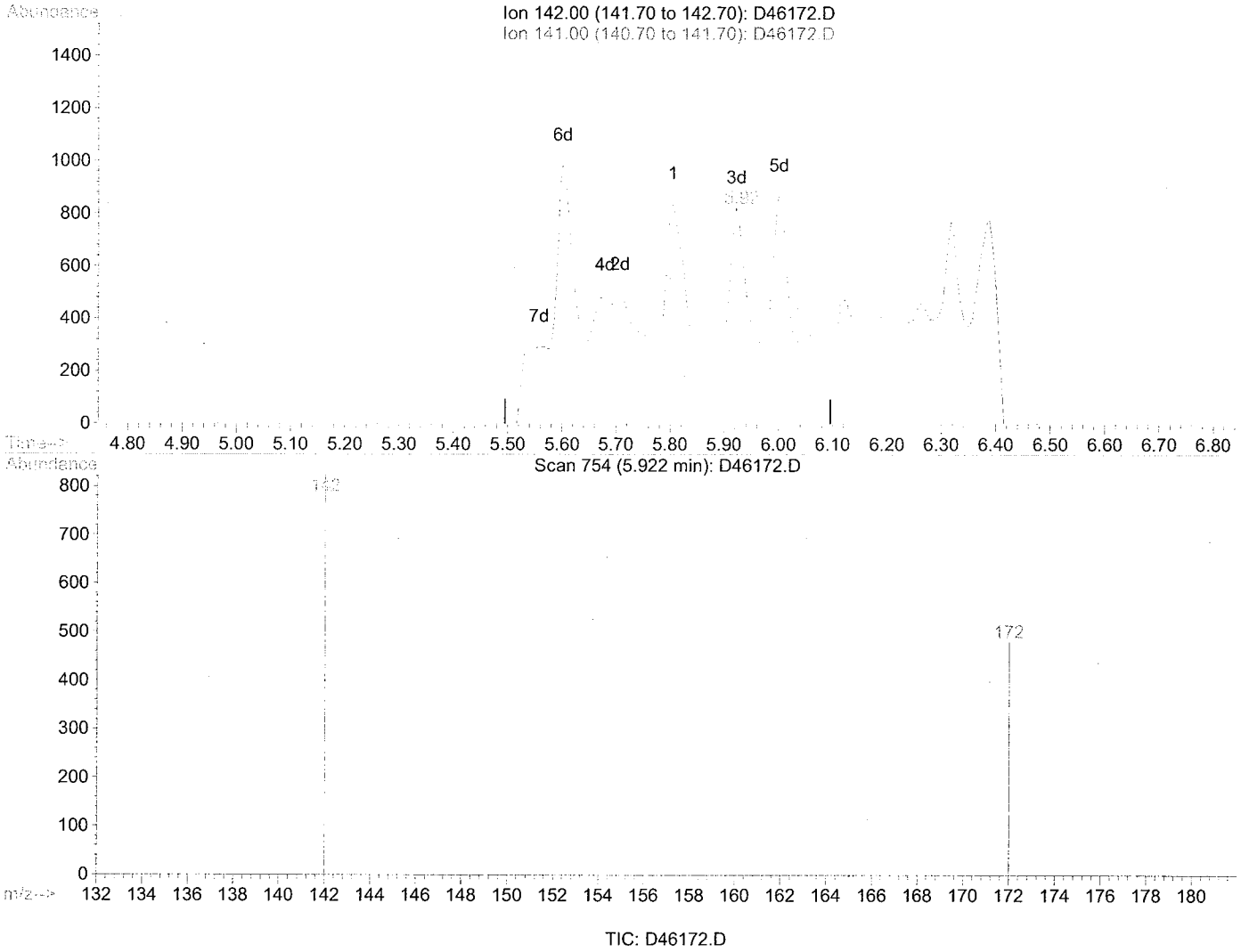
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46172.D Vial: 26
Acq On : 3 Nov 2010 21:32 Operator: JI
Sample : 1010098-12 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:29 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46172.D

(5) 2-Methylnaphthalene (T)

5.92min 4.23ug/L m

response 909

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-013-1010

Sample Date/Time: 10/29/10 13:50

File ID: D46173.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1010098-13

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/03/10 09:15

Analyzed Date/Time: 11/03/10 21:56

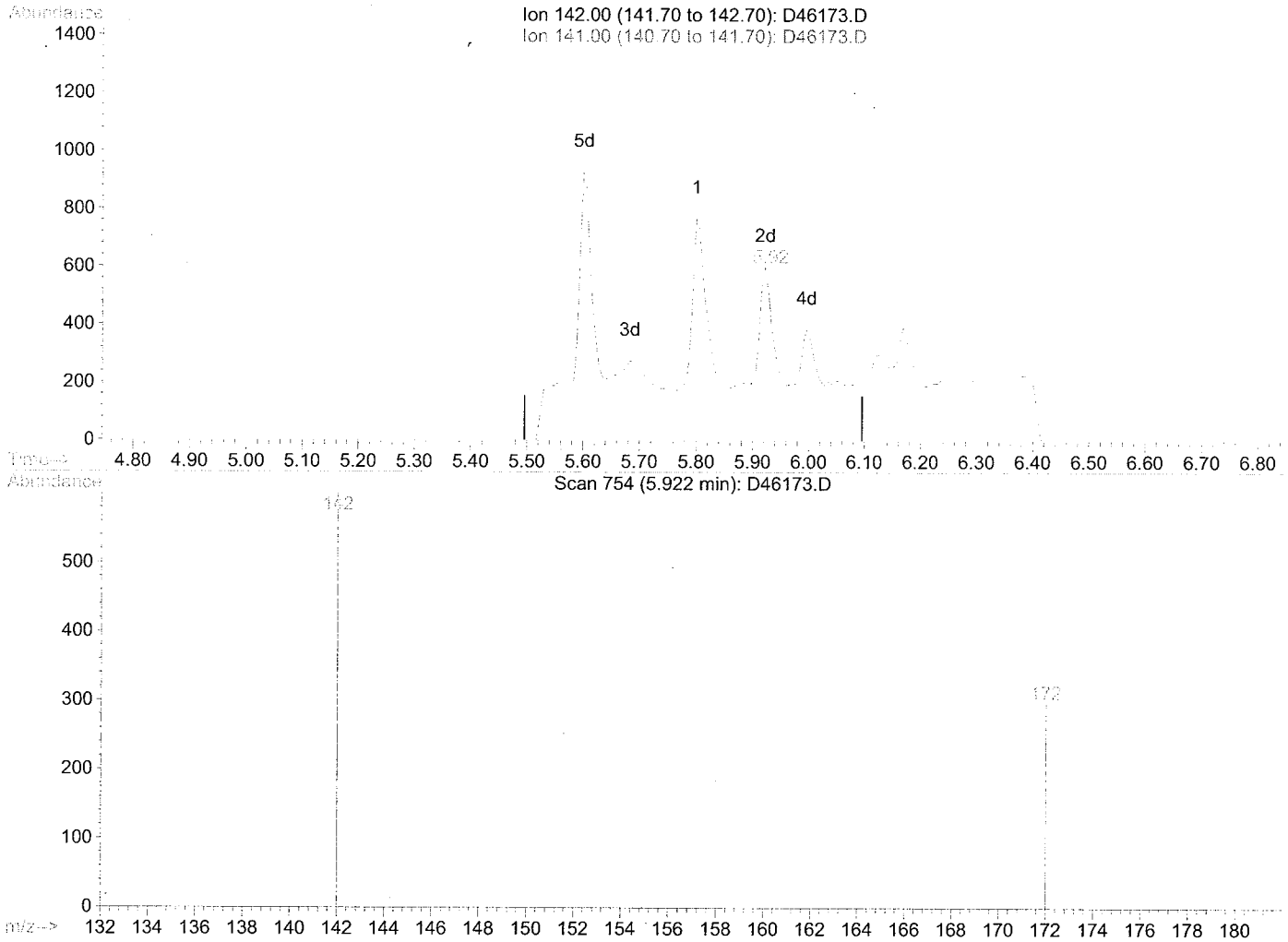
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\110310\D46173.D Vial: 27
Acq On : 3 Nov 2010 21:56 Operator: JI
Sample : 1010098-13 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 12:29 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46173.D

(5) 2-Methylnaphthalene (T)

5.92min 2.55ug/L m

response 579

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

ADDENDUM PESTICIDE INFORMATION

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Tox & Chlordane addendum

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 5.103 | 5.480 | E6 | -7.4 | 117 |
| 2 | A | Hexachlorobenzene | 6.898 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 7.717 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 7.298 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 6.981 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 6.583 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 3.316 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 6.616 | 0.000 | E6 | 100.0# | -0# |
| 9 | A | 2,4-DDE | 0.000 | 891648.133 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 6.438 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 6.245 | 0.000 | E6 | 100.0# | -0# |
| 12 | A | gamma-Chlordane | 6.144 | 0.000 | E6 | 100.0# | -0# |
| 13 | A | alpha-Chlordane | 6.247 | 0.000 | E6 | 100.0# | -0# |
| 14 | B | Trans-Nonachlor | 0.000 | 10596299.210 | | 0.0 | 0# |
| 15 | B | 4,4-DDE | 4.931 | 0.000 | E6 | 100.0# | -0# |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# |
| 17 | MA | Dieldrin | 6.090 | 0.000 | E6 | 100.0# | -0# |
| 18 | MA | 2,4-DDT | 0.000 | 667655.967 | | 0.0 | 0# |
| 19 | MA | Endrin | 5.313 | 0.000 | E6 | 100.0# | -0# |
| 20 | B | Endosulfan II | 5.350 | 0.000 | E6 | 100.0# | -0# |
| 21 | A | 4,4-DDD | 3.927 | 0.000 | E6 | 100.0# | -0# |
| 22 | MA | 4,4-DDT | 4.479 | 0.000 | E6 | 100.0# | -0# |
| 23 | B | Endrin Aldehyde | 3.561 | 0.000 | E6 | 100.0# | -0# |
| 24 | B | Mirex | 0.000 | 0.000 | | 0.0 | 0# |
| 25 | B | Endosulfan Sulfate | 5.062 | 0.000 | E6 | 100.0# | -0# |
| 26 | A | Methoxychlor | 2.351 | 0.000 | E6 | 100.0# | -0# |
| 27 | B | Endrin Ketone | 5.929 | 0.000 | E6 | 100.0# | -0# |
| 28 | S | Decachlorobiphenyl | 3.806 | 3.806 | E6 | 0.0 | 102 |
| 29 | L8 | Toxaphene | 61.471 | 87.739 | E3 | -42.7# | 165# |
| 30 | L8 | Toxaphene (2) | 181.672 | 351.816 | E3 | -93.7# | 195# |
| 31 | L8 | Toxaphene (3) | 147.757 | 259.378 | E3 | -75.5# | 177# |
| 32 | L8 | Toxaphene (4) | 88.473 | 190.215 | E3 | -115.0# | 216# |
| 33 | L8 | Toxaphene (5) | 138.766 | 230.284 | E3 | -66.0# | 166# |
| 34 | L9 | Chlordane | 369.780 | 375.816 | E3 | -1.6 | 96 |
| 35 | L9 | Chlordane (2) | 263.821 | 308.850 | E3 | -17.1 | 94 |
| 36 | L9 | Chlordane (3) | 799.046 | 796.095 | E3 | 0.4 | 93 |
| 37 | L9 | Chlordane (4) | 1.265 | 1.060 | E6 | 16.2 | 93 |
| 38 | L9 | Chlordane (5) | 201.968 | 224.288 | E3 | -11.1 | 94 |

AVG. 78.66

AVG. 9.3%

Signal #2
Continuing Calibration File: V0316261.D

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 7.444 | 8.714 | E6 | -17.1 | 133 |
| 2 | A | Hexachlorobenzene | 8.994 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 12.610 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 11.647 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 12.965 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 11.591 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 5.177 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 10.797 | 0.000 | E6 | 100.0# | -0# |
| 9 | B | 2,4-DDE | 0.000 | 0.000 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 11.287 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 10.019 | 0.000 | E6 | 100.0# | -0# |

(#) = Out of

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_1CAL\111010VC.M (Chemstation Integ.
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% | |
|---|---|---|---|---|---|---|---|---|
| 12 | A | gamma-Chlordane | 11.038 | 0.000 | E6 | 100.0# | -0# | |
| 13 | A | alpha-Chlordane | 10.889 | 0.000 | E6 | 100.0# | -0# | |
| 14 | B | Trans-Nonachlor | 0.000 | 693284.806 | | 0.0 | | 0# |
| 15 | B | 4,4-DDE | 9.800 | 0.000 | E6 | 100.0# | -0# | |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# | |
| 17 | MA | Dieldrin | 10.964 | 0.000 | E6 | 100.0# | -0# | |
| 18 | MA | 2,4-DDT | 0.000 | 0.000 | | 0.0 | 0# | |
| 19 | MA | Endrin | 9.244 | 0.000 | E6 | 100.0# | -0# | |
| 20 | B | Endosulfan II | 9.403 | 0.000 | E6 | 100.0# | -0# | |
| 21 | A | 4,4-DDD | 7.107 | 0.000 | E6 | 100.0# | -0# | |
| 22 | MA | 4,4-DDT | 8.031 | 0.000 | E6 | 100.0# | -0# | |
| 23 | B | Endrin Aldehyde | 5.431 | 0.000 | E6 | 100.0# | -0# | |
| 24 | B | Mirex | 0.000 | 218320.266 | | 0.0 | | 0# |
| 25 | B | Endosulfan Sulfate | 8.402 | 0.000 | E6 | 100.0# | -0# | |
| 26 | A | Methoxychlor | 4.167 | 0.000 | E6 | 100.0# | -0# | |
| 27 | B | Endrin Ketone | 8.895 | 0.000 | E6 | 100.0# | -0# | |
| 28 | S | Decachlorobiphenyl | 5.945 | 5.745 | E6 | 3.4 | 100 | |
| 29 | L8 | Toxaphene | 157.914 | 277.443 | E3 | -75.7# | 177# | |
| 30 | L8 | Toxaphene {2} | 225.226 | 400.309 | E3 | -77.7# | 177# | |
| 31 | L8 | Toxaphene {3} | 402.433 | 755.677 | E3 | -87.8# | 192# | |
| 32 | L8 | Toxaphene {4} | 230.642 | 406.774 | E3 | -76.4# | 177# | |
| 33 | L8 | Toxaphene {5} | 214.962 | 342.157 | E3 | -59.2# | 153# | |
| 34 | L9 | Chlordane | 637.234 | 668.034 | E3 | -4.8 | 99 | |
| 35 | L9 | Chlordane {2} | 377.539 | 469.046 | E3 | -24.2# | 97 | |
| 36 | L9 | Chlordane {3} | 1.258 | 1.357 | E6 | -7.8 | 97 | |
| 37 | L9 | Chlordane {4} | 979.278 | 1156.718 | E3 | -18.1 | 97 | |
| 38 | L9 | Chlordane {5} | 316.875 | 369.008 | E3 | -16.5 | 98 | |

AVG (64)

AVG 12.7%

(#) = Out of ge SP out = 0 CCC's ou 0
V0316261.D 0VC.M Thu Jan 2 :32:20 2011 Page 2

Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD1A.CH Vial: 4
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD2B.CH
Acq On : 15 Nov 2010 12:36 pm Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:30 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

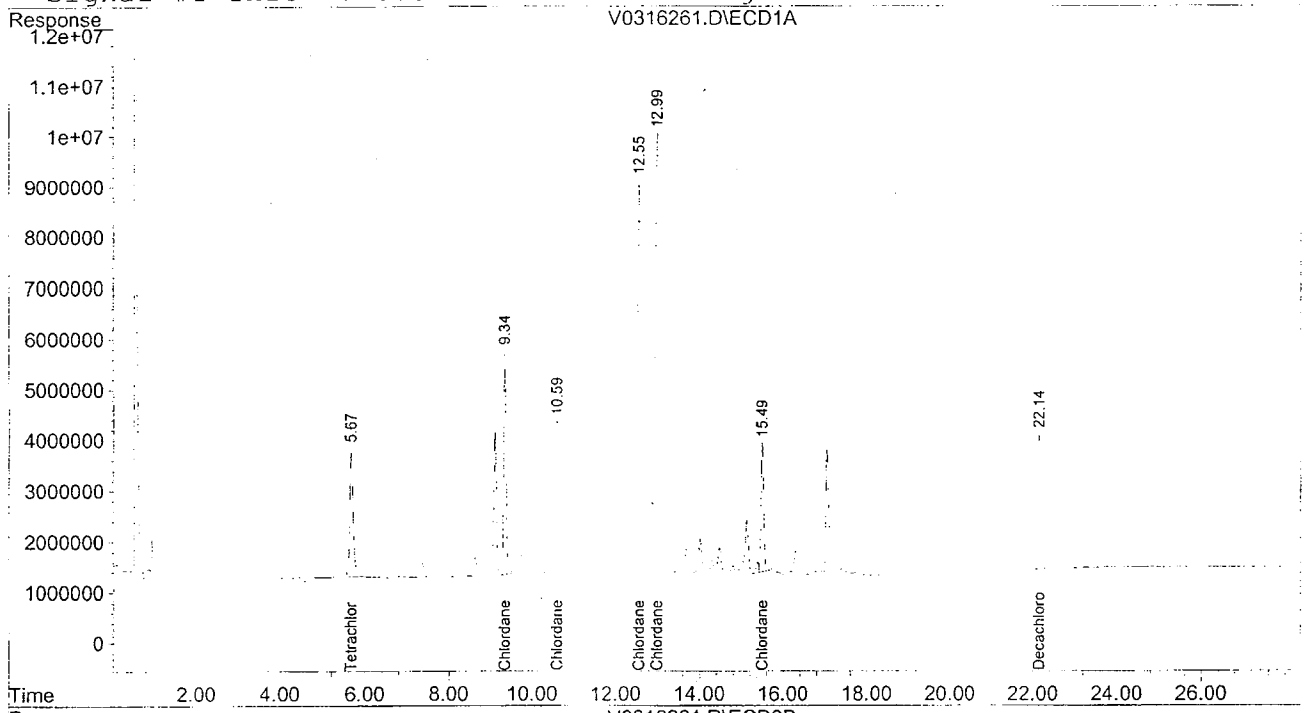
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.67f | 6.46 | 137.0E6 | 217.8E6 | 26.848 | 29.264 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 134.24%# | 146.32%# |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 95143598 | 143.6E6 | 24.999 | 24.160 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 120.80% |
| Target Compounds | | | | | | |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| 34) L9 Chlordane | 9.34 | 10.38 | 187.9E6 | 334.0E6 | 508.162 | 524.167 |
| 35) L9 Chlordane (2) | 10.59 | 11.96 | 154.4E6 | 234.5E6 | 585.340 | 621.188 |
| 36) L9 Chlordane (3) | 12.56 | 14.07 | 398.0E6 | 678.3E6 | 498.154 | 539.171 |
| 37) L9 Chlordane (4) | 12.99 | 14.56 | 529.8E6 | 578.4E6 | 418.808 | 590.598 # |
| 38) L9 Chlordane (5) | 15.49 | 17.59 | 112.1E6 | 184.5E6 | 555.256 | 582.261 |
| Sum Chlordane | | | 1382.3E6 | 2009.7E6 | 2565.719 | 2857.386 |
| Average Chlordane | | | | | 513.144 | 571.477 |

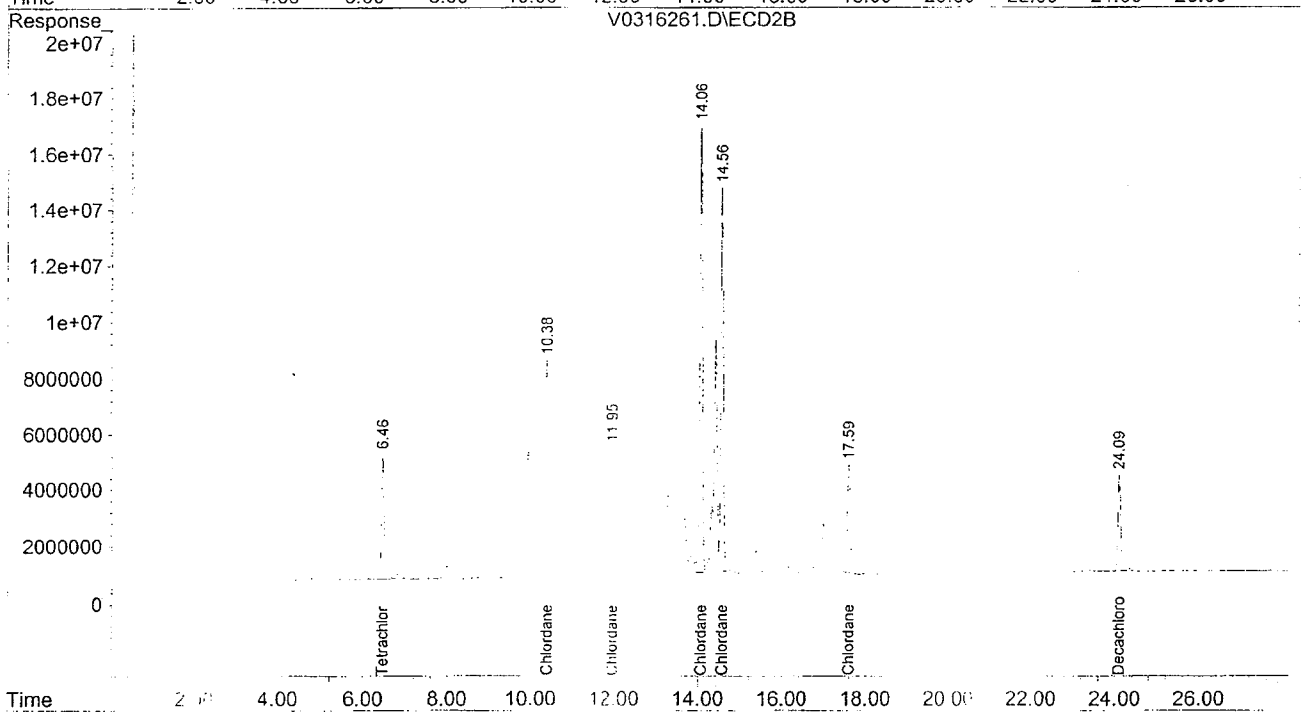
Quantitation Report

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD1A.CH Vial: 4
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD2B.CH
Acq On : 15 Nov 2010 12:36 pm Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:30 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32



Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD1A.CH Vial: 3
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD2B.CH
Acq On : 15 Nov 2010 12:04 pm Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:28 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

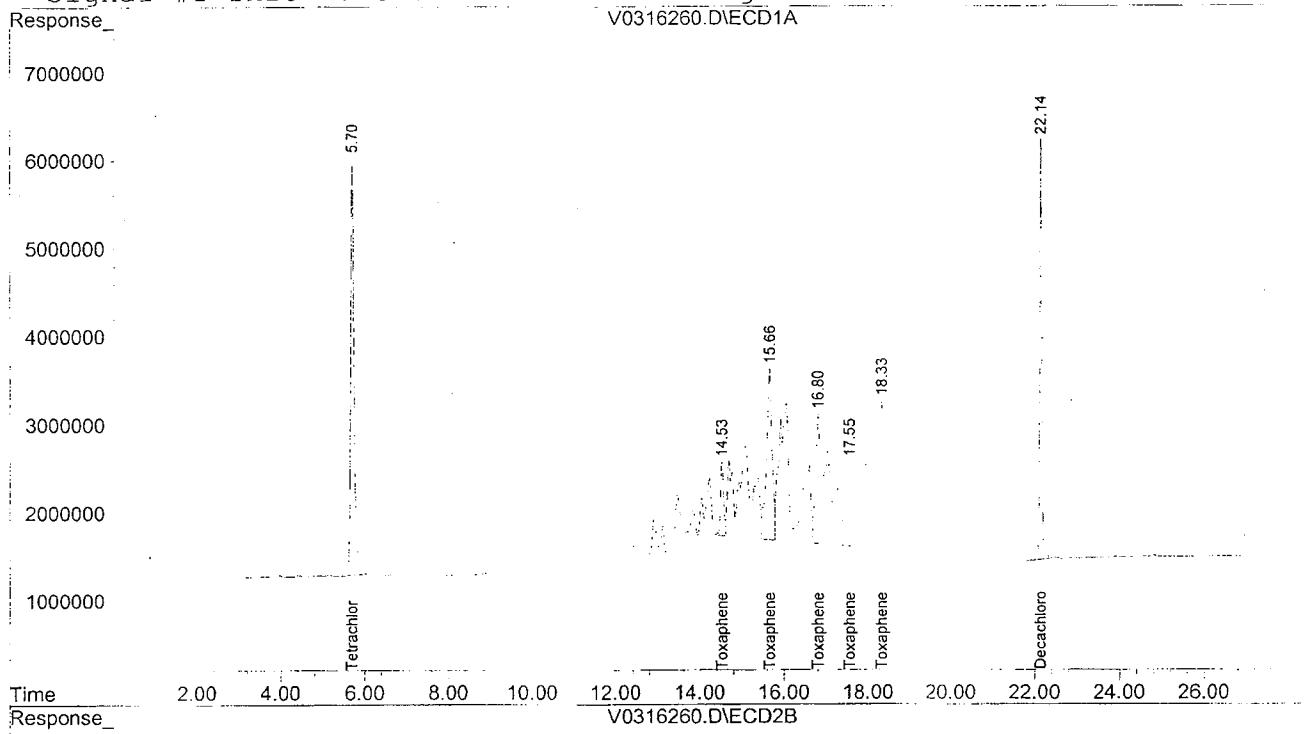
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.70f | 6.46 | 254.7E6 | 366.8E6 | 49.909 | 49.280 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 249.55%# | 246.40%# |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 167.2E6 | 245.7E6 | 43.941 | 41.335 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 219.71%# | 206.68%# |
| Target Compounds | | | | | | |
| 29) L8 Toxaphene | 14.53 | 15.59 | 43869686 | 138.7E6 | 713.662 | 878.462 |
| 30) L8 Toxaphene {2} | 15.66 | 17.38 | 175.9E6 | 200.2E6 | 968.273 | 888.684 |
| 31) L8 Toxaphene {3} | 16.80 | 17.74 | 129.7E6 | 377.8E6 | 877.722 | 938.885 |
| 32) L8 Toxaphene {4} | 17.55 | 18.78 | 95107616 | 203.4E6 | 1074.985 | 881.829 |
| 33) L8 Toxaphene {5} | 18.33 | 20.28 | 115.1E6 | 171.1E6 | 829.759 | 795.855 |
| Sum Toxaphene | | | 559.7E6 | 1091.2E6 | 4464.401 | 4383.715 |
| Average Toxaphene | | | | | 892.880 | 876.743 |
| Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average Chlordane | | | | | 0.000 | 0.000 |

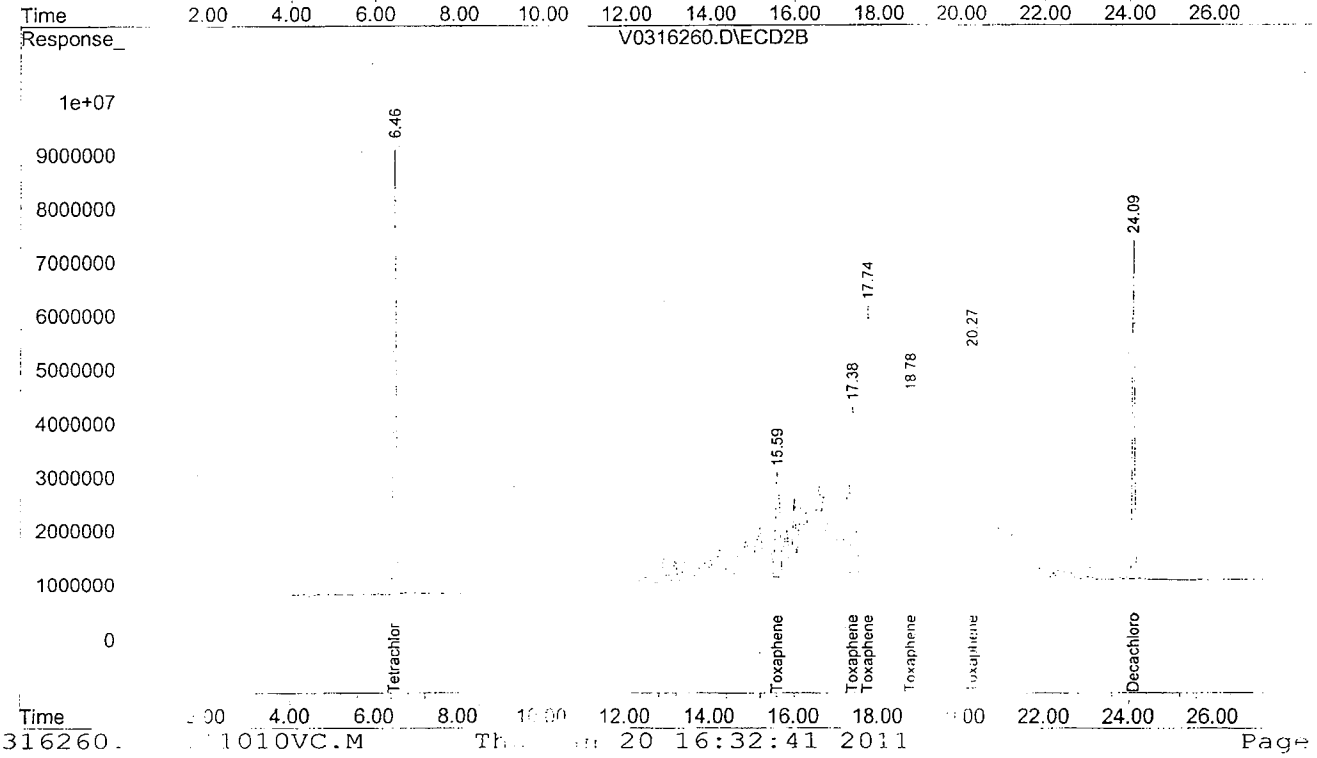
Quantitation Report

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD1A.CH Vial: 3
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD2B.CH
Acq On : 15 Nov 2010 12:04 pm Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:26 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32



ADDENDUM PCB PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-005-1010

Sample Date/Time: 10/28/10 12:00

File ID: U0324415.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1010098-04

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 15:33

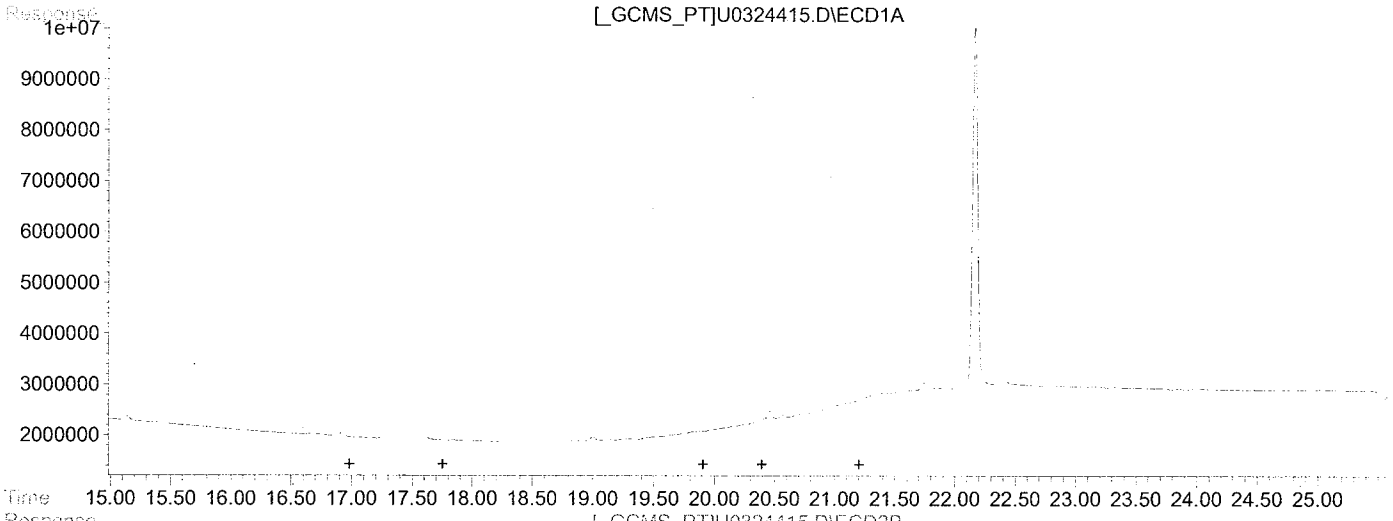
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

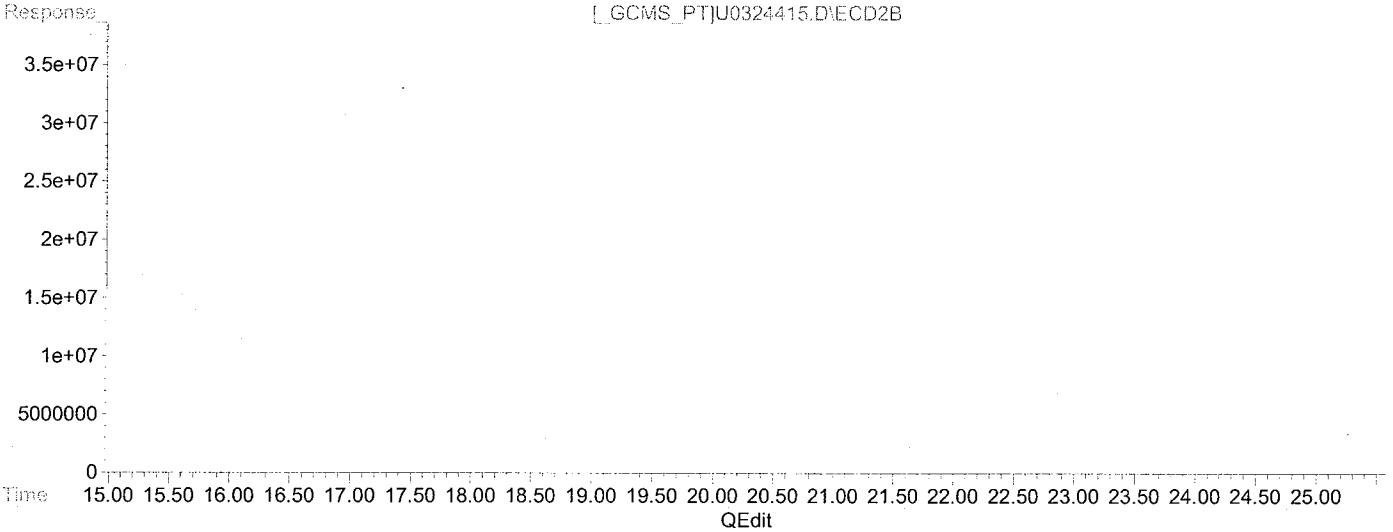
The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324415.D\ECD1A.CH Vial: 10
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324415.D\ECD2B.CH
Acq On : 11-4-2010 15:32:47 Operator: RP
Sample : 1010098-04 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:50 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




QEdit

(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

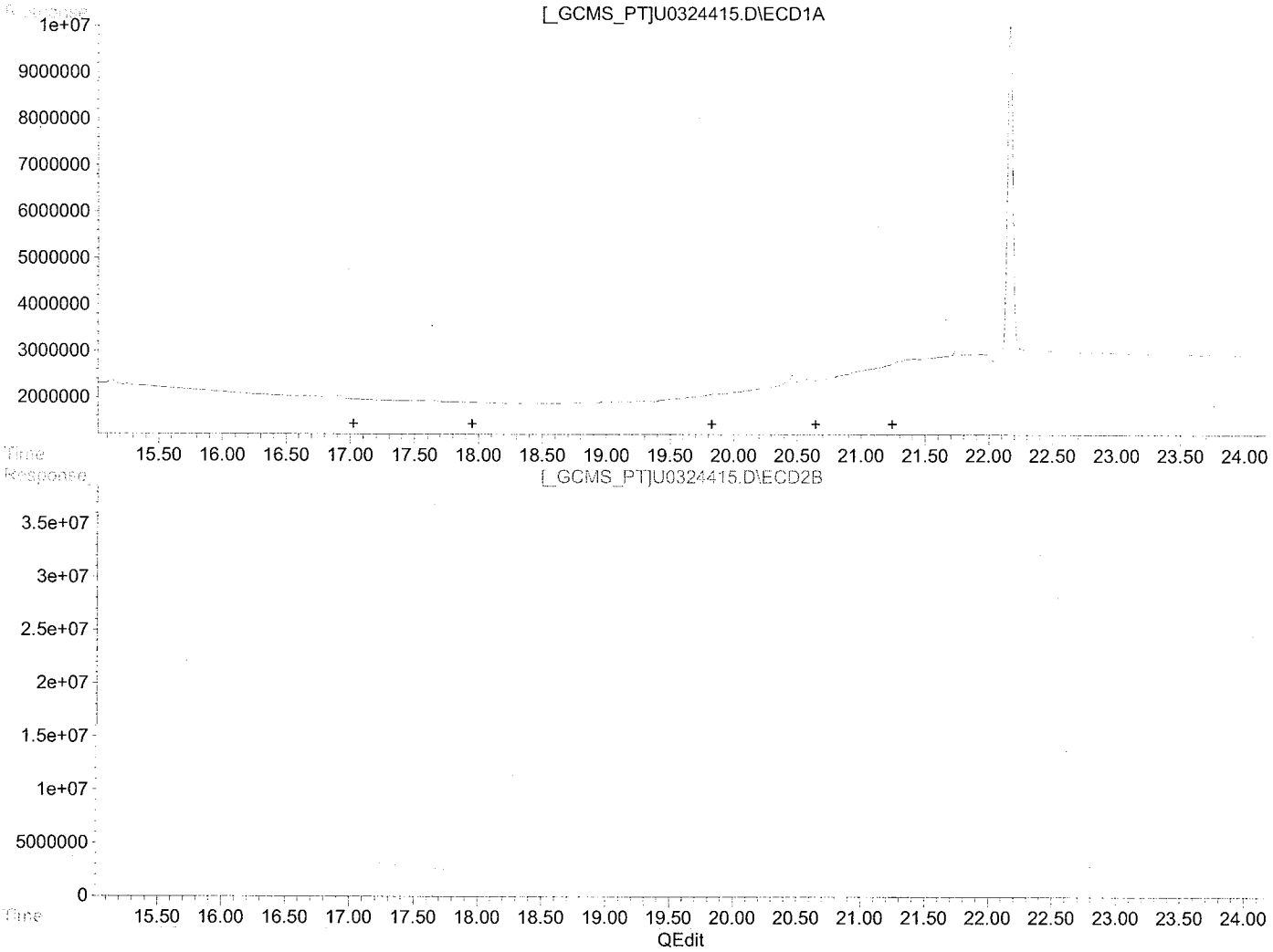
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324415.D\ECD1A.CH Vial: 10
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324415.D\ECD2B.CH
Acq On : 11-4-2010 15:32:47 Operator: RP
Sample : 1010098-04 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:50 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-010-1010

Sample Date/Time: 10/29/10 11:30

File ID: U0324416.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1010098-10

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 16:05

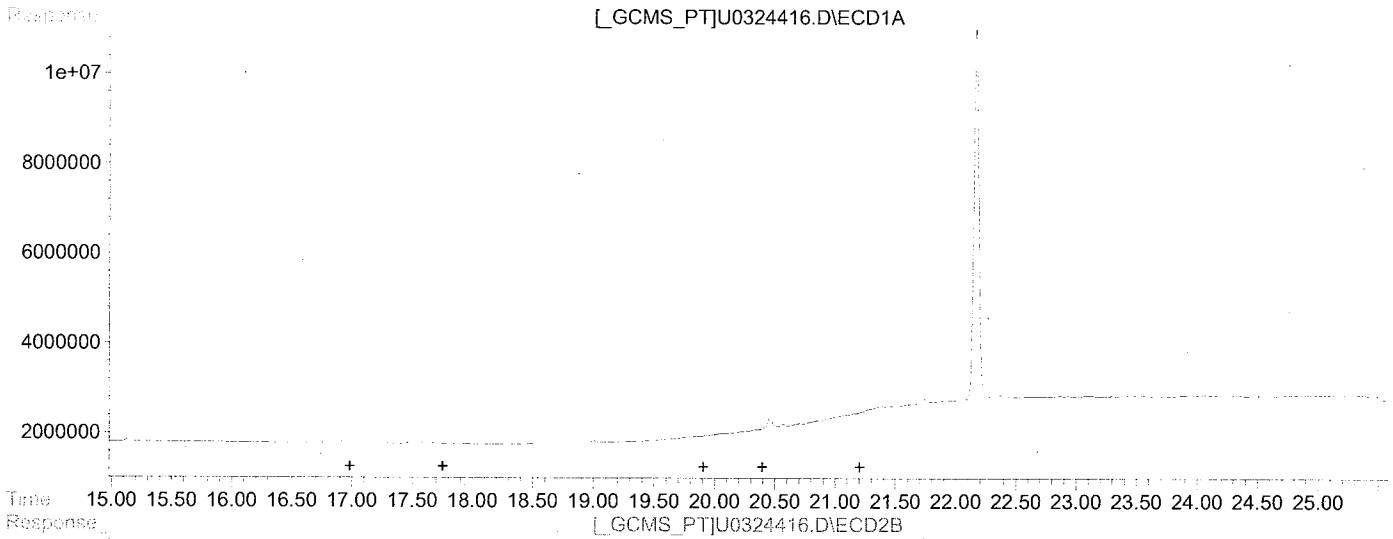
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

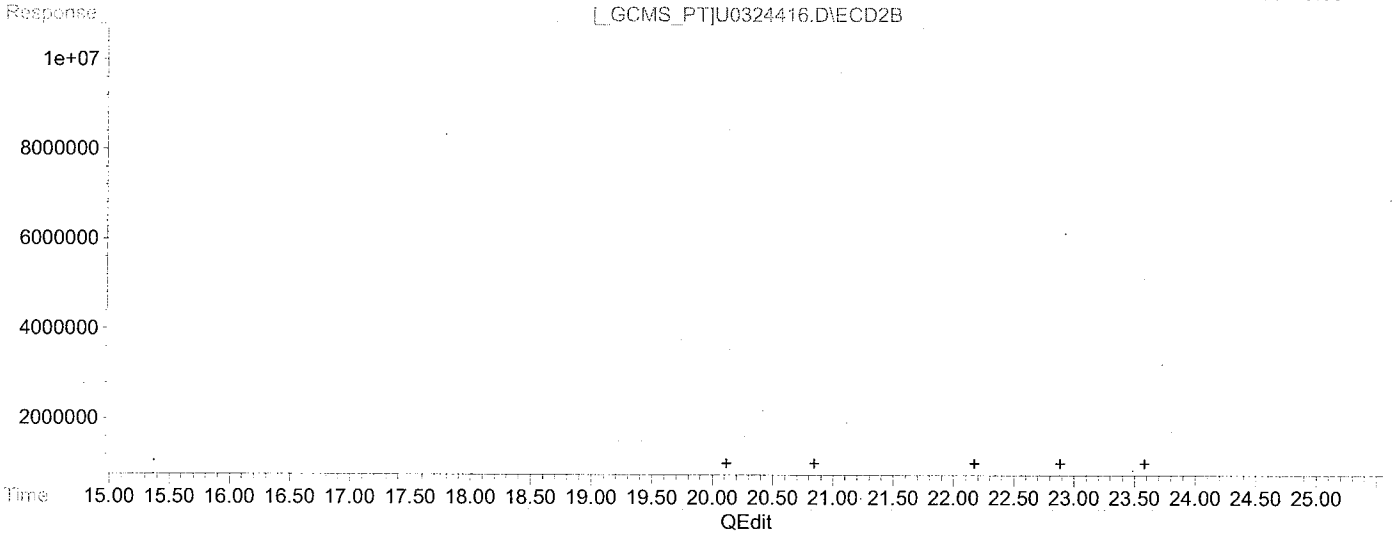
The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324416.D\ECD1A.CH Vial: 11
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324416.D\ECD2B.CH
Acq On : 11-4-2010 16:04:59 Operator: RP
Sample : 1010098-10 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:50 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




QEdit

(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

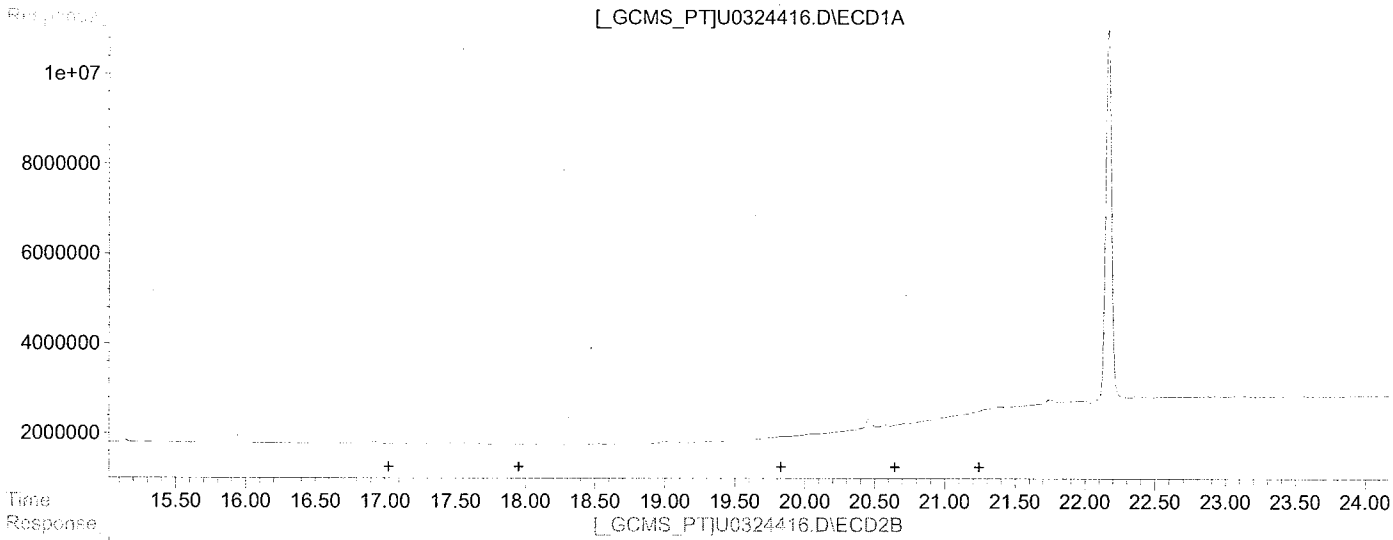
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

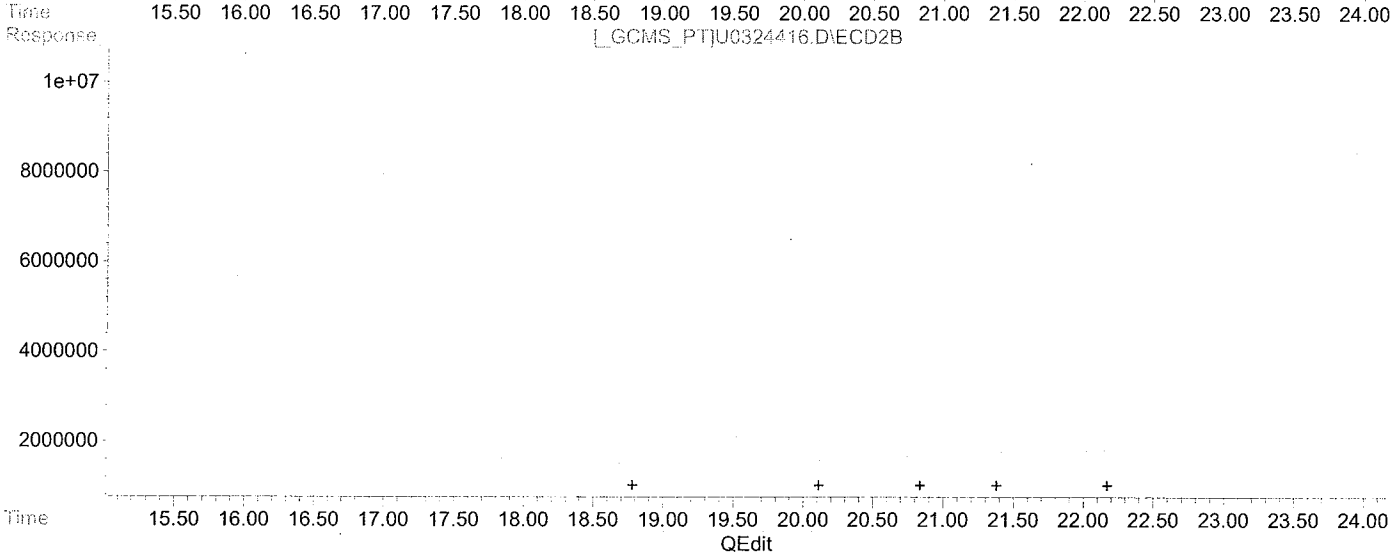
(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324416.D\ECD1A.CH Vial: 11
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324416.D\ECD2B.CH
Acq On : 11-4-2010 16:04:59 Operator: RP
Sample : 1010098-10 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:50 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

# TIC Report

CHEMTECH

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-011-1010

Sample Date/Time: 10/29/10 10:40

File ID: U0324418.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1010098-11

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 17:09

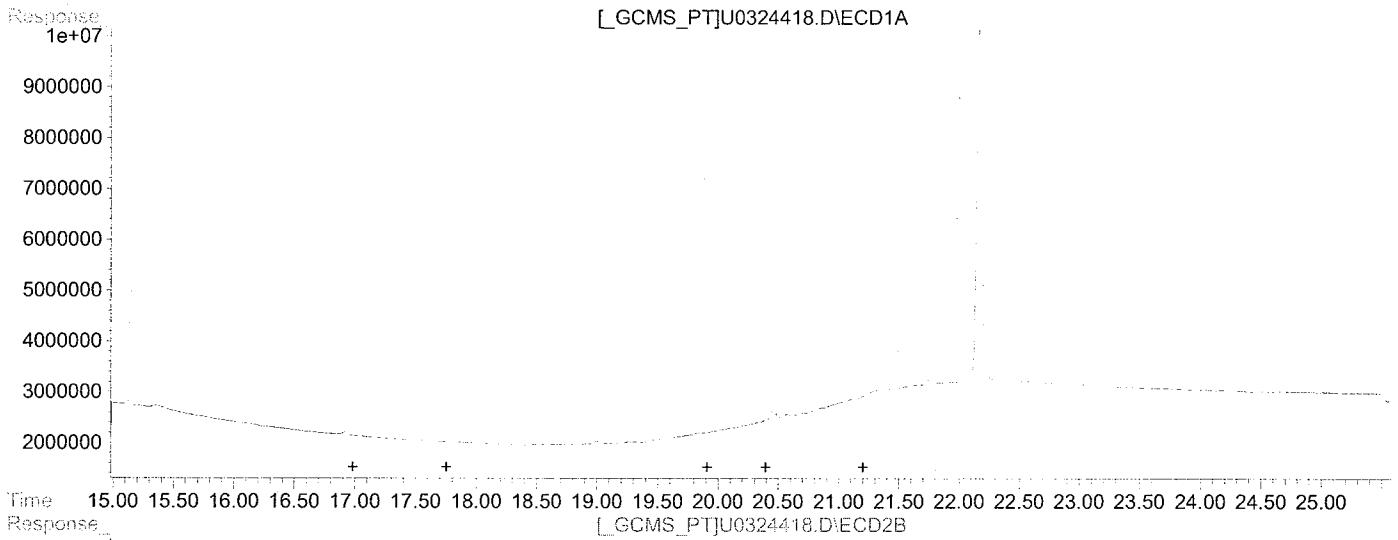
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

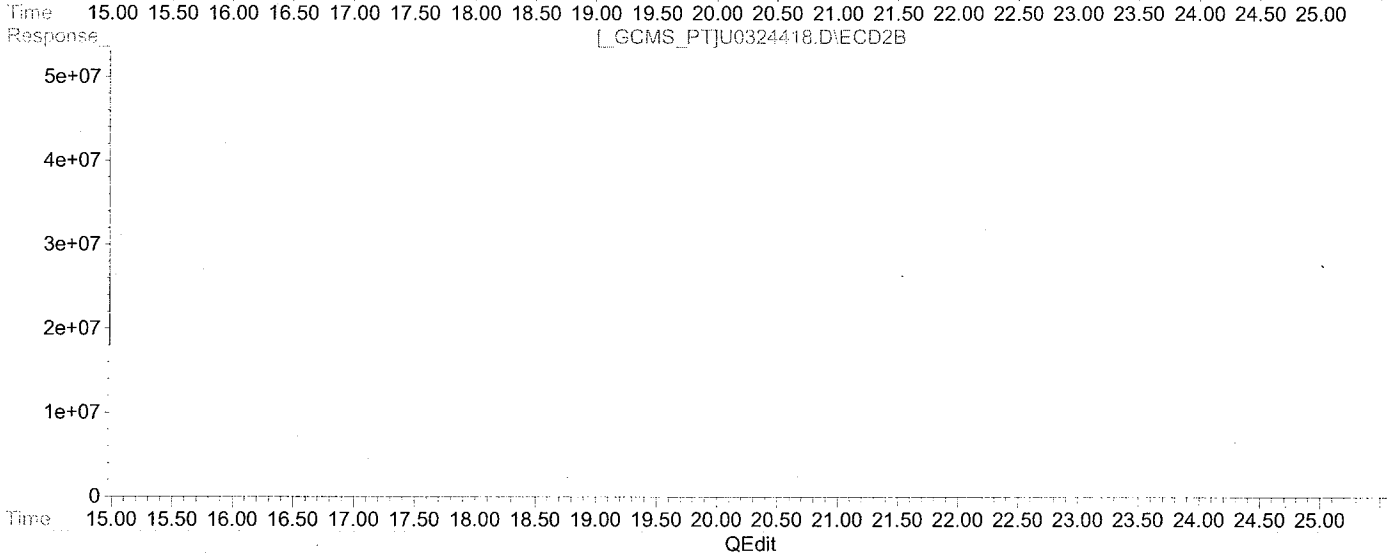
The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324418.D\ECD1A.CH Vial: 13
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324418.D\ECD2B.CH
Acq On : 11-4-2010 17:09:14 Operator: RP
Sample : 1010098-11 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:51 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

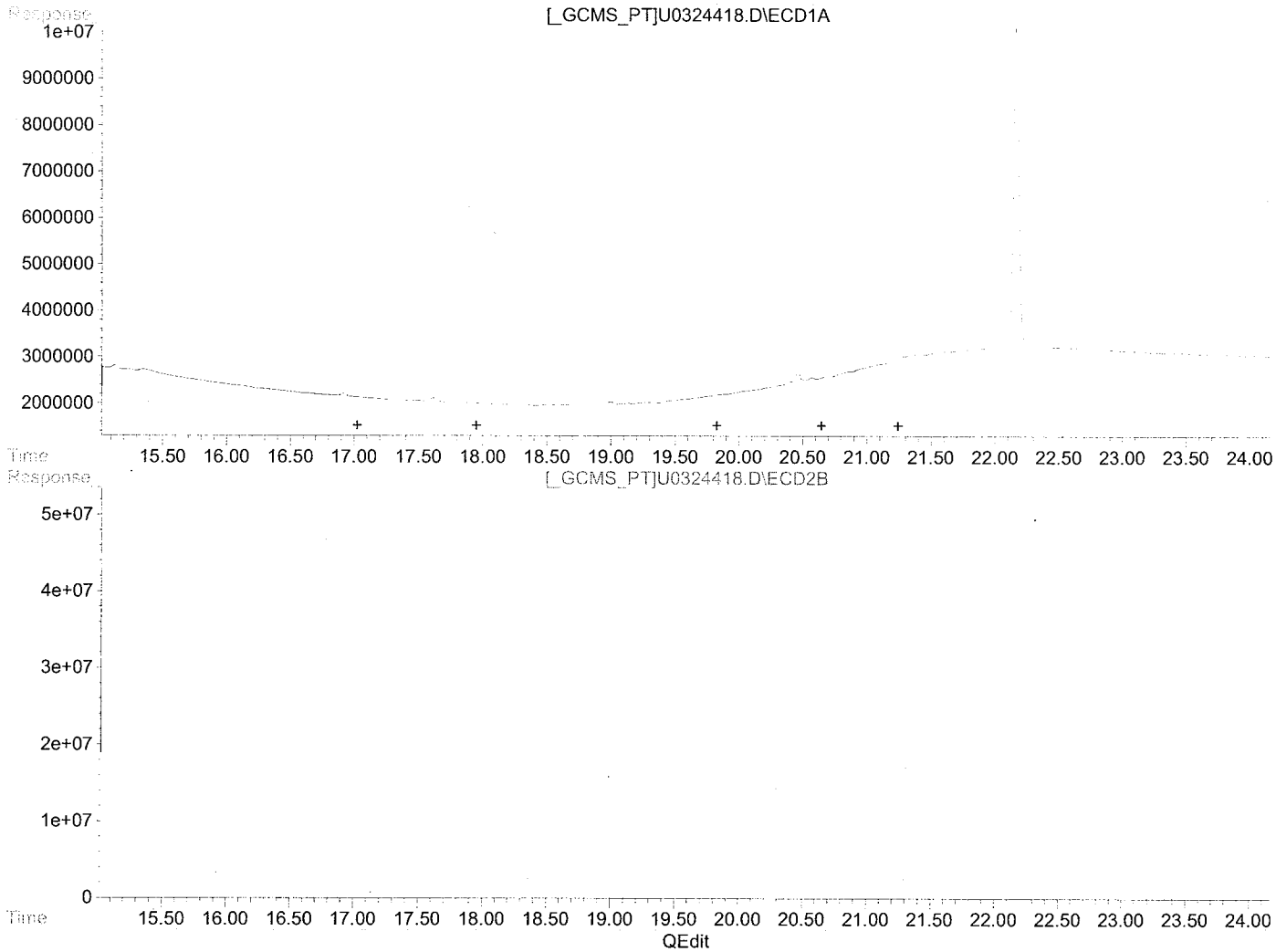
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324418.D\ECD1A.CH Vial: 13
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324418.D\ECD2B.CH
Acq On : 11-4-2010 17:09:14 Operator: RP
Sample : 1010098-11 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:51 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: February 15, 2011**

**FROM:** **MEGAN CARSON** **COPIES:** **DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – Mercury**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – 1010098**

**SAMPLES:** 12/Water/

| | |
|---|---|
| GKHMS-GW-002-1010 | GKHMS-GW-003-1010 |
| GKHMS-GW-004-1010 | GKHMS-GW-005-1010 |
| GKHMS-GW-006-1010 | GKHMS-GW-007-1010 |
| GKHMS-GW-008-1010 | GKHMS-GW-009-1010 |
| GKHMS-GW-010-1010 | GKHMS-GW-011-1010 |
| GKHMS-GW-012-1010 | GKHMS-GW-013-1010 |

Overview

The sample set for NAS Key West, CTO JM16, SDG 1010098, consists of twelve (12) water environmental samples. This SDG contained no field duplicates.

All samples were analyzed for mercury. The samples were collected by Tetra Tech NUS on October 28th and 29th, 2010 and analyzed by Centuri Laboratories and submitted/amended by Chemtech under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Mercury analyses were conducted using SW-846 method 7470.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
• Laboratory Method / Preparation Blank Analyses
* • Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Control Sample Recoveries
* • ICP Serial Dilution Results
* • Field Duplicate Results
* • Detection Limits

* = All quality control criteria were met for this parameter.

**MERCURY:**

The following contaminant was detected in the laboratory calibration blank at the following maximum concentration:

| Analyte | Maximum Concentration | Action Level |
|---|---|---|
| Mercury | 0.01 ug/L | 0.05 ug/L |

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Only samples GKHMS-GW-008-1010, GKHMS-GW-009-1010, GKHMS-GW-010-1010, GKHMS-GW-011-1010, GKHMS-GW-012-1010, and GKHMS-GW-013-1010 were affected. Positive mercury result for sample GKHMS-GW-011-1010 was qualified as non-detected.

Notes:

Executive Summary

**Laboratory Performance:** Calibration blank contamination resulted in the qualification of a sample result as non-detected.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

| | | |
|---|---|---|
| A | = | Lab Blank Contamination |
| B | = | Field Blank Contamination |
| C | = | Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.) |
| C01 | = | GC/MS Tuning Noncompliance |
| D | = | MS/MSD Recovery Noncompliance |
| E | = | LCS/LCSD Recovery Noncompliance |
| F | = | Lab Duplicate Imprecision |
| G | = | Field Duplicate Imprecision |
| H | = | Holding Time Exceedance |
| I | = | ICP Serial Dilution Noncompliance |
| J | = | GFAA PDS - GFAA MSA's $r < 0.995$ |
| K | = | ICP Interference - includes ICS % R Noncompliance |
| L | = | Instrument Calibration Range Exceedance |
| M | = | Sample Preservation Noncompliance |
| N | = | Internal Standard Noncompliance |
| N01 | = | Internal Standard Recovery Noncompliance Dioxins |
| N02 | = | Recovery Standard Noncompliance Dioxins |
| N03 | = | Clean-up Standard Noncompliance Dioxins |
| O | = | Poor Instrument Performance (e.g. base-line drifting) |
| P | = | Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics) |
| Q | = | Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.) |
| R | = | Surrogates Recovery Noncompliance |
| S | = | Pesticide/PCB Resolution |
| T | = | % Breakdown Noncompliance for DDT and Endrin |
| U | = | % Difference between columns/detectors >25% for positive results determined via GC/HPLC |
| V | = | Non-linear calibrations; correlation coefficient $r < 0.995$ |
| W | = | EMPC result |
| X | = | Signal to noise response drop |
| Y | = | Percent solids <30% |
| Z | = | Uncertainty at 2 sigma deviation is greater than sample activity |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-01 | | | 1010098-02 | | | 1010098-03 | | | 1010098-04 | | |
| FRACTION: M | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.041 | J | P | 0.0114 | U | | 0.029 | J | P | 0.0114 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-05 | | | 1010098-06 | | | 1010098-08 | | | 1010098-09 | | |
| FRACTION: M | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.0114 | U | | 0.048 | J | P | 0.0114 | U | | 0.0114 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1010098 | LAB_ID | 1010098-10 | | | 1010098-11 | | | 1010098-12 | | | 1010098-13 | | |
| FRACTION: M | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.0114 | U | | 0.039 | U | A | 0.0114 | U | | 0.0114 | U | |

# APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-002-1010
Sample Date/Time: 10/28/10 09:50
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-01
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0410 | J | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:47 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-003-1010
Sample Date/Time: 10/28/10 09:20
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-02
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:56 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-004-1010
Sample Date/Time: 10/28/10 11:20
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-03
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0290 | J | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:58 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-005-1010
Sample Date/Time: 10/28/10 12:00
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-04
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:01 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 10/28/10 14:30
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-05
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:04 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-007-1010
Sample Date/Time: 10/28/10 15:40
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-06
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0480 | J | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:06 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-008-1010
Sample Date/Time: 10/29/10 08:40
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-08
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:16 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-009-1010
Sample Date/Time: 10/29/10 09:20
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-09
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:19 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-010-1010
Sample Date/Time: 10/29/10 11:30
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-10
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:21 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-011-1010
Sample Date/Time: 10/29/10 10:40
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-11
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0390 | J | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:24 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-012-1010
Sample Date/Time: 10/29/10 10:00
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-12
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:27 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-013-1010
Sample Date/Time: 10/29/10 13:50
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1010098-13
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:29 |

# APPENDIX C

## SUPPORT DOCUMENTATION

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1010098

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

Pesticides

Raw data and evaluation reports for Chlordane and Toxaphene daily continuing check standards are provided.

PCBs

Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Mercury

Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director
Chemtech

2/4/2011

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-GW-002-1010 | 1010098-01 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-003-1010 | 1010098-02 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-004-1010 | 1010098-03 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-005-1010 | 1010098-04 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-006-1010 | 1010098-05 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-007-1010 | 1010098-06 | SW7470A | Water | 10/28/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-008-1010 | 1010098-08 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-009-1010 | 1010098-09 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-010-1010 | 1010098-10 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-011-1010 | 1010098-11 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-012-1010 | 1010098-12 | SW7470A | Water | 10/29/2010 | 10/30/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |

| | | | | | |
|---|---|---|---|---|---|
| GKHMS-GW-013-1010 | 1010098-13 | SW7470A<br>SW8260B<br>SW8270C SIM | Water | 10/29/2010 | 10/30/2010 |
| GKHMS-TB-01 | 1010098-07 | SW8260B | Water | 10/28/2010 | 10/30/2010 |

**SDG** 1010098

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | | GKHMS-GW-005-1010 | 1010098-04 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| HG | UG/L | GKHMS-GW-011-1010 | 1010098-11 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-012-1010 | 1010098-12 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-010-1010 | 1010098-10 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-009-1010 | 1010098-09 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-008-1010 | 1010098-08 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| HG | UG/L | GKHMS-GW-007-1010 | 1010098-06 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-006-1010 | 1010098-05 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-004-1010 | 1010098-03 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-003-1010 | 1010098-02 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-002-1010 | 1010098-01 | NM | 10/28/2010 | 11/17/2010 | 11/17/2010 | 20 | 0 | 20 |
| HG | UG/L | GKHMS-GW-013-1010 | 1010098-13 | NM | 10/29/2010 | 11/17/2010 | 11/17/2010 | 19 | 0 | 19 |
| OV | UG/L | GKHMS-GW-012-1010 | 1010098-12 | NM | 10/29/2010 | 11/03/2010 | 11/03/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-002-1010 | 1010098-01 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |
| OV | UG/L | GKHMS-GW-003-1010 | 1010098-02 | NM | 10/28/2010 | 11/03/2010 | 11/03/2010 | 6 | 0 | 6 |

# Mercury Digestion Log

Method: (7470A) 7471A (245.1) ILM05.3 / ILM05.4

B047045

Digestion Date: 11-17-2010 Batch No: 1 of 1

Reviewed By / Date: Analyst: D.S.S.

Spike Witness: RRM

| Centauri Labs Workorder | Frac | Client ID | Matrix | SIZE (mL / g) | VOL (mL) | Spk.A. (mL) | KMnO4 (mL) |
|---|---|---|---|---|---|---|---|
| | | S-0.0 \| ICB \| CCB | Wtr | 100 | 100 | — | 1.5 |
| | | S-0.2 \| CRA | | | | 0.2 | |
| | | S-0.5 | | | | 0.5 | |
| | | S-1.0 | | | | 1.0 | |
| | | S-5.0 (CCV) | | | | 5.0 | |
| | | S-10.0 | | | | 10.0 | |
| | | ICV | | | | 3.0 | |
| | | BLK - B047045 | | | | — | |
| | | BKS - B047045 | | | | 1.0 | |
| 1010098 | -01 \| 01-D | | | | | | |
| | | MS | | | | | |
| | | MSD | | | | | |
| | -02 \| 02-D | | | | | | |
| | -03 \| 03-D | | | | | | |
| | -04 \| 04-D | | | | | | |
| | -05 \| 05-D | | | | | | |
| | -06 \| 06-D | | | | | | |
| | -08 \| 08-D | | | | | | |
| | -09 \| 09-D | | | | | | |
| | -10 \| 10-D | | | | | | |
| | -11 \| 11-D | | | | | | |
| | -12 \| 12-D | | | | | | |
| | -13 \| 13-D | | | | | | |
| 1011022 | -01 \| 01-D | | | | | | |
| | -02 \| 02-D | | | | | | |
| | -03 \| 03-D | | | | | | |

50% Aqua regia: —

$HNO_3$: 2163

$H_2SO_4$: 2165

Pipette ID: V-06 \| V-017 \| V-023

Balance ID: —

Thermometer ID: V-02

Comments:

Acid in paper # 1852

$KMnO_4$: 1939

$K_2S_2O_8$: 2186

$NH_2OH*HCl$:

Boiling Chip ID: —

Spiking Solution Conc: 0.1 PPM Hg

Std/CRA/BKS/Spk: 1564 ( 02233 )

(2nd source) ICV: 1126 \| 02234 ) lh

$H_2O$ Bath Temp: 95°C In Time: 11:50 a.m.

$H_2O$ Bath Temp: 95°C Out Time: 1:50 p.m.

$H_2O$ Bath Temp: ✓ In Time: —

$H_2O$ Bath Temp: — Out Time: —

# Mercury Digestion Log

B-047046

Method: (7470A) / 7471A (245.1) / ILM05.3 / ILM05.4

Batch No: 1 of 1

Digestion Date: 11-17-2011 Analyst: D.S.

Reviewed By / Date: Spike Witness: PRM

| Centauri Labs Workorder | Frac | Client ID | Matrix | SIZE (mL) / g | VOL (mL) | Spk.A. (mL) | KMnO4 (mL) |
|---|---|---|---|---|---|---|---|
| | | BLK - B047046 | Wate | 100 | 100 | — | 1.5 |
| | | BKS-1 B047046 | | | | 1.0 | " |
| | | BKS-2 B047046 | | | | 1.0 | |
| 1011026 -01 | 01-D | ✓ | | | | — | |
| -02 | 02-D | | | | | | |
| -03 | 03-D | | | | | | |
| -04 | 04-D | | | | | | |
| -05 | 05-J | | | | | — | |
| | | MS | | | | 1.0 | |
| | | MSD | | | | 1.0 | |
| -06 | 06-D | | | | | — | |
| -07 | 07-D | | | | | | |
| 1011015 -01 | 01-D | ✓ | | | | | |
| -02 | 02-D | | | | | | |
| -03 | 03-D | | | | | | |
| 1011023 -03 | 03-A | ✓ | | | | | |
| -06 | 06-D | | | | | | |
| 5.1 1011044 -02 | 02-A | | | | | | |
| 1011047 -02 | 02-A | | | | | | |
| 20 1011047 -02 | 02-A | ✓ | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 50% Aqua regia: | — | KMnO4: | 1939 | Spiking Solution Conc: | 0.1 PPM Hg |
| HNO3: | 2163 | K2S2O8: | 2186 | Std/CRA/BKS/Spk: | 1564 (02233) |
| H2SO4: | 2165 | NH2OH*HCl: | | (2nd source) ICV: | 1126 (02234) |
| Pipette ID: | M-06 / M-17 / M-23 | | | H2O Bath Temp: 95°C | In Time: 12:00 P.M |
| Balance ID: | — | Boiling Chip ID: | — | H2O Bath Temp: 95°C | Out Time: 2:00 P.M. |
| Thermometer ID: | M-02 | | | H2O Bath Temp: — | In Time: — |
| Comments: | | | | H2O Bath Temp: — | Out Time: — |

Followup Paper # 1852

ratories, LLC

# MERCURY ANALYSIS LOG

*Document Control No: GP_M_244*

| | | | | |
|---|---|---|---|---|
| HYDRA AA | Method: 7470/245.1 | Start Seq #: 73 | Traceability-Solutions | |
| 999987 | Data File: Hg101117 | End Seq #: 132 | Rinse 10% HCL Bath: | 21026 |
| Sample: 10185168 | Rack 1: 047045, 047046 | Folder: Hg | Stannous CL 10%: | 2-481 |
| 8.260 V | Rack 2: | Batch Name: Hg 101117 | 047045, 047046 | |

| Lab Number | Analyzed |
|---|---|
| 1010098-02 | 17 Nov 10 17:56:00 |
| 1010098-03 | 17 Nov 10 17:58:34 |
| 1010098-04 | 17 Nov 10 18:01:12 |
| 1010098-05 | 17 Nov 10 18:04:07 |
| 1010098-06 | 17 Nov 10 18:06:46 |
| 1010098-08 | 17 Nov 10 18:16:15 |
| 1010098-09 | 17 Nov 10 18:19:01 |
| 1010098-10 | 17 Nov 10 18:21:41 |
| 1010098-11 | 17 Nov 10 18:24:16 |
| 1010098-12 | 17 Nov 10 18:27:02 |
| 1010098-13 | 17 Nov 10 18:29:36 |
| 1011015-01 | 17 Nov 10 17:22:19 |
| 1011015-02 | 17 Nov 10 17:24:56 |
| 1011015-03 | 17 Nov 10 17:27:33 |
| 1011022-01 | 17 Nov 10 18:32:41 |
| 1011022-02 | 17 Nov 10 18:35:27 |
| 1011022-03 | 17 Nov 10 18:38:16 |
| 1011023-03 | 17 Nov 10 17:30:10 |
| 1011023-06 | 17 Nov 10 17:33:07 |
| 1011026-01 | 17 Nov 10 16:50:56 |
| 1011026-02 | 17 Nov 10 16:53:36 |
| 1011026-03 | 17 Nov 10 16:56:44 |
| 1011026-04 | 17 Nov 10 16:59:25 |
| 1011026-05 | 17 Nov 10 17:07:21 |
| 1011026-06 | 17 Nov 10 17:16:39 |
| 1011026-07 | 17 Nov 10 17:19:34 |
| 1011044-02 | 17 Nov 10 16:42:43 |
| 1011047-02 | 17 Nov 10 16:45:39 |
| 1011047-03 | 17 Nov 10 16:48:18 |
| B047045-BLK1 | 17 Nov 10 17:41:39 |
| B047045-BS1 | 17 Nov 10 17:45:00 |
| B047045-MS1 | 17 Nov 10 17:50:23 |
| B047045-MSD1 | 17 Nov 10 17:53:02 |
| B047046-BLK1 | 17 Nov 10 16:34:47 |
| B047046-BS1 | 17 Nov 10 16:37:33 |
| B047046-BS2 | 17 Nov 10 16:40:07 |
| B047046-MS1 | 17 Nov 10 17:10:07 |
| B047046-MSD1 | 17 Nov 10 17:12:44 |
| SEQ-CAL1 | 17 Nov 10 15:57:19 |
| SEQ-CAL2 | 17 Nov 10 16:00:37 |
| SEQ-CAL3 | 17 Nov 10 16:03:44 |
| SEQ-CAL4 | 17 Nov 10 16:06:30 |

| Lab Number | Analyzed |
|---|---|
| SEQ-CAL5 | 17 Nov 10 16:09:36 |
| SEQ-CAL5 | 17 Nov 10 16:12:57 |
| 1011107 | 08 Nov 10 10:22:48 |
| SEQ-ICV | 17 Nov 10 16:15:54 |
| SEQ-ICB | 17 Nov 10 16:18:14 |
| SEQ-CRL | 17 Nov 10 16:26:41 |
| SEQ-CCV | 17 Nov 10 16:29:27 |
| SEQ-CCV | 17 Nov 10 17:02:00 |
| SEQ-CCV | 17 Nov 10 17:35:44 |
| SEQ-CCV | 17 Nov 10 18:09:22 |
| SEQ-CCV | 17 Nov 10 18:41:44 |
| SEQ-CCB | 17 Nov 10 16:32:02 |
| SEQ-CCB | 17 Nov 10 17:04:35 |
| SEQ-CCB | 17 Nov 10 17:38:50 |
| SEQ-CCB | 17 Nov 10 18:13:09 |
| SEQ-CCB | 17 Nov 10 18:44:39 |

| Workorders | Dilutions/Reanalyses/Comments | Source Solutions | |
|---|---|---|---|
| 1010098 | 7470 | Stds | Numbers |
| 1011022 | 7470 | S0 | |
| 1011015 | 7470 | S1 | |
| 1011023 | 7470 | S2 | |
| 1011026 | 7470 | S3 | |
| 1011044 | 245.1 | S4 | |
| 1011047 | 245.1 / 7470 | S5 | |
| | | CRA | |
| | | ICV | |
| | | CCV | |
| | | | |

Analyst: KVW Date: 11/17/10 Reviewed: RM Date: 11/18/10

# Metals
## - 10 -
## METHOD DETECTION LIMITS

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Analyte | Wave- length (nm) | MDL ug/L | CRQL ug/L | Date: |
|---|---|---|---|---|
| Mercury | 253.70 | 0.0114 | 0.2000 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD

**SDG No.:** 101117A

**Contract:**

**Lab Code:** CHEM

**Method:** CV

**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047045 | | | | | | |
| PBW2 | PBW02 | MB | WATER | | 100.0 | 100.0 | |
| LCSW3 | LCSW03 | LCS | WATER | | 100.0 | 100.0 | |
| 1010098-01 | GKHMS-GW-002-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-01S | GKHMS-GW-002-1010S | MS | WATER | | 100.0 | 100.0 | |
| 1010098-01SD | GKHMS-GW-002-1010SD | MSD | WATER | | 100.0 | 100.0 | |
| 1010098-02 | GKHMS-GW-003-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-03 | GKHMS-GW-004-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-04 | GKHMS-GW-005-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-05 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-06 | GKHMS-GW-007-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-08 | GKHMS-GW-008-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-09 | GKHMS-GW-009-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-10 | GKHMS-GW-010-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-11 | GKHMS-GW-011-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-12 | GKHMS-GW-012-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-13 | GKHMS-GW-013-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-01 | G01-MW-01-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-02 | G01-MW-02-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-04 | G01-MW-04-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD

**SDG No.:** 101117A

**Contract:**

**Lab Code:** CHEM

**Method:** CV

**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047046 | | | | | | |
| PBW1 | PBW1 | MB | WATER | | 100.0 | 100.0 | |
| LCSW1 | LCSW1 | LCS | WATER | | 100.0 | 100.0 | |
| LCSW2 | LCSW2 | LCS | WATER | | 100.0 | 100.0 | |
| 1011026-05 | 1011026-05 | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MS | 1011026-05MS | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MSD | 1011026-05MSD | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-01 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-02 | GKHMS-GW-09-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-03 | GKHMS-GW-10-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals
## - 3b -
## PREPARATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Instrument:** CV5

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | MDL ug/L | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **PBW2** | | **WATER** | | **Batch Number:** | | **B047045** | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 17:41 | HG101117a |
| **PBW1** | | **WATER** | | **Batch Number:** | | **B047046** | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 16:34 | HG101117a |

# Metals
## - 5a -
## MATRIX SPIKE SUMMARY

**Client:** Chemtech MD **Level:** LOW **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Matrix:** WATER **Sample ID:** 1010098-01 **Client ID:** GKHMS-GW-002-1010S

**Percent Solids for Sample:** 0.00 **Spiked ID:** 1010098-01S **Percent Solids for Spike Sample:** 0.00

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 75 - 125 | 1.0100 | | 0.0410 | | 1.00 | 96.9 | | CV |

# Metals

- 5a -

## MATRIX SPIKE DUPLICATE SUMMARY

**Client:** Chemtech MD **Level:** LOW **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Matrix:** WATER **Sample ID:** 1010098-01 **Client ID:** GKHMS-GW-002-1010SD

**Percent Solids for Sample:** 0.00 **Spiked ID:** 1010098-01SD **Percent Solids for Spike Sample:** 0.00

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 75 - 125 | 1.0300 | | 0.0400 | | 1.00 | 99.0 | | CV |

# Metals
- 6 -
## DUPLICATE SAMPLE SUMMARY

**Client:** Chemtech MD **Level:** LOW **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Matrix:** WATER **Sample ID:** 1010098-01S **Client ID:** GKHMS-GW-002-1010SD

**Percent Solids for Sample:** 0.00 **Duplicate ID:** 1010098-01SD **Percent Solids for Duplicate:** 0.00

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | | 1.0100 | | 1.0300 | | 2.0 | | CV |

# Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Aqueous LCS Source:** PLASMA-PURE **Solid LCS Source:**

| Sample ID | Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|---|
| LCSW1 | | | | | | | | |
| | Mercury | ug/L | 1.000 | 1.060 | | 106.0 | 80.0 - 120.0 | CV |

# Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Aqueous LCS Source:** PLASMA-PURE **Solid LCS Source:**

| Sample ID | Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|---|
| LCSW2 | | | | | | | | |
| | Mercury | ug/L | 1.000 | 1.020 | | 102.0 | 80.0 - 120.0 | CV |

# Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Aqueous LCS Source:** PLASMA-PURE **Solid LCS Source:**

| Sample ID | Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|---|
| LCSW3 | | | | | | | | |
| | Mercury | ug/L | 1.000 | 0.968 | | 96.8 | 80.0 - 120.0 | CV |

# Metals
## 14
## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| S0 | 1.00 | 1557 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.2 | 1.00 | 1600 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.5 | 1.00 | 1603 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S1.0 | 1.00 | 1606 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S5.0 | 1.00 | 1609 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S10.0 | 1.00 | 1612 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICV01 | 1.00 | 1615 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICB01 | 1.00 | 1618 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CRI01 | 1.00 | 1626 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV01 | 1.00 | 1629 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB01 | 1.00 | 1632 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW1 | 1.00 | 1634 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW1 | 1.00 | 1637 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW2 | 1.00 | 1640 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1642 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1645 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1648 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1650 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1653 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1656 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1659 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV02 | 1.00 | 1702 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB02 | 1.00 | 1704 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05 | 1.00 | 1707 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MS | 1.00 | 1710 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MSD | 1.00 | 1712 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1716 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1719 | | | | | | | | | | | | | | | | | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1722 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-09-1010 | 1.00 | 1724 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-10-1010 | 1.00 | 1727 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1730 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1733 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV03 | 1.00 | 1735 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB03 | 1.00 | 1738 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW02 | 1.00 | 1741 | | | | | | | | | | | | | | | | X | | | | | | | | |

# Metals

14

## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| LCSW03 | 1.00 | 1745 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010 | 1.00 | 1747 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010S | 1.00 | 1750 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010SD | 1.00 | 1753 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-003-1010 | 1.00 | 1756 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-004-1010 | 1.00 | 1758 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-005-1010 | 1.00 | 1801 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1804 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-007-1010 | 1.00 | 1806 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV04 | 1.00 | 1809 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB04 | 1.00 | 1813 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-008-1010 | 1.00 | 1816 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-009-1010 | 1.00 | 1819 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-010-1010 | 1.00 | 1821 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-011-1010 | 1.00 | 1824 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-012-1010 | 1.00 | 1827 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-013-1010 | 1.00 | 1829 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GC1-MW-01-1010 | 1.00 | 1832 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GC1-MW-02-1010 | 1.00 | 1835 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GC1-MW-04-1010 | 1.00 | 1838 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV05 | 1.00 | 1841 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB05 | 1.00 | 1844 | | | | | | | | | | | | | | | | X | | | | | | | | |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICV01** | | | | | | | | | |
| | Mercury | 3.06 | 3.0 | 102.0 | 90.0 - 110.0 | CV | 11/17/2010 | 16:15 | HG101117a |
| **CCV01** | | | | | | | | | |
| | Mercury | 5.17 | 5.0 | 103.4 | 90.0 - 110.0 | CV | 11/17/2010 | 16:29 | HG101117a |
| **CCV02** | | | | | | | | | |
| | Mercury | 5.18 | 5.0 | 103.6 | 90.0 - 110.0 | CV | 11/17/2010 | 17:02 | HG101117a |
| **CCV03** | | | | | | | | | |
| | Mercury | 5.05 | 5.0 | 101.0 | 90.0 - 110.0 | CV | 11/17/2010 | 17:35 | HG101117a |
| **CCV04** | | | | | | | | | |
| | Mercury | 4.88 | 5.0 | 97.6 | 90.0 - 110.0 | CV | 11/17/2010 | 18:09 | HG101117a |
| **CCV05** | | | | | | | | | |
| | Mercury | 4.66 | 5.0 | 93.2 | 90.0 - 110.0 | CV | 11/17/2010 | 18:41 | HG101117a |

# Metals

## - 2b -

## CRDL STANDARD FOR AA & ICP

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**AA CRDL Standard Source:** PLASMA-PURE

**ICP CRDL Standard Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Advisory Limits (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CRI01** | | | | | | | | | |
| | Mercury | 0.21 | 0.2 | 105.0 | 70 - 130 | CV | 11/17/20 | 16:26 | HG101117 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | MDL | CRQL | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **ICB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:18 | HG101117a |
| **CCB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:32 | HG101117a |
| **CCB02** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:04 | HG101117a |
| **CCB03** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:38 | HG101117a |
| **CCB04** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 18:13 | HG101117a |
| **CCB05** | Mercury | 0.01 | +/-0.20 | J | 0.01 | 0.20 | CV | 11/17/2010 | 18:44 | HG101117a |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 10, 2011**

**FROM:** **EDWARD SEDLMYER** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – VOC, PAH, PEST, PCB**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – 1011002**

**SAMPLES:** 17 / Aqueous / VOC / PAH

| | | |
|---|---|---|
| GKHMS-GW-014-1010 | GKHMS-GW-015-1010 | GKHMS-GW-016-1010 |
| GKHMS-GW-020-1010 | GKHMS-GW-021-1010 | GKHMS-GW-024-1010 |
| GKHMS-GW-025-1010 | GKHMS-GW-026-1010 | GKHMS-GW-027-1010 |
| GKHMS-GW-028-1010 | GKHMS-GW-029-1010 | GKHMS-GW-030-1010 |
| GKHMS-GW-031-1010 | GKHMS-GW-032D-1010 | GKHMS-GW-033D-1010 |
| GKHMS-GW-034D-1010 | GKHMS-TB-02 | |

3 / Aqueous / PEST / PCB

| | | |
|---|---|---|
| GKHMS-GW-021-1010 | GKHMS-GW-031-1010 | GKHMS-GW-032D-1010 |

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011002 consisted of sixteen (16) aqueous environmental samples and one (1) trip blank. The samples were analyzed for volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PAH), pesticides (PEST), and polychlorinated biphenyls (PCB) as indicated above. The trip blank was analyzed for VOCs only.

The samples were collected by Tetra Tech NUS on October 30, 31, and November 1, 2010 and analyzed by Centauri Labs. The analyses were conducted in accordance with SW-846 Methods 8260B, 8270C SIM, 8081B, and 8082 analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

- Data Completeness
- * Holding Times/Sample Preservation
- * GC/MS Instrument Tuning and System Performance
- Initial/Continuing Calibrations
- * Laboratory Method Blank Results
- Blank Spike/Blank Spike Duplicate Results
- * Internal Standard Recoveries
- Surrogate Recoveries
- Compound Identification
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The laboratory control sample laboratory control sample duplicate (LCS/LCSD) associated with batch B047032 had percent recoveries for 2-hexanone and acetone greater than the quality control limits and low recoveries for methyl iodide and methyl acetate in the LCS and LCSD. The compounds chloromethane, dichlorodifluoromethane, trichlorofluoromethane, vinyl acetate, and vinyl chloride had low recoveries in the LCS or LCSD. In addition, the relative percent difference (RPD) for bromomethane, chloromethane, dichlorodifluoromethane, trichlorofluoromethane, and vinyl chloride exceeded the quality control limits. The nondetected results for methyl iodide and methyl acetate in all samples have been qualified as estimated (UJ). No action was taken on the other compounds because either the LCS or LCSD had acceptable recoveries and all results were nondetected.

The initial and continuing calibration relative response factors (RRFs) for 1,2-dibromo-3-chloropropane and acetone were less than the 0.05 quality control limit on instrument GCMS-B. The nondetected 1,2-dibromo-3-chloropropane and acetone results were qualified as rejected (UR).

The initial calibration relative standard deviation (RSD) was greater than the 15% quality control limit for several target compounds on November 12, 2010 on instrument GCMS-B. The target compounds were 1,1,2-trichloroethane, 1,1-dichloropropene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2-dibromo-3-chloropropane, 1,2-dichloroethane, 1,2-dichloropropane, 2-butanone, benzene, bromodichloromethane, cis-1,3-dichloropropene, cyclohexane, dibromomethane, ethy methacrylate, 1,1,2-trichlorotrifluorethane, hexachlorobutadiene, isobutanol, methacrylonitrile, methyl acetate, methylcyclohexane, methyl methacrylate, naphthalene, propionitrile, toluene, trans-1,3-dichlrorpropene, trichloroethene and vinyl acetate.The positive and nondetected results, not previously qualified as rejected, for the aforementioned target compounds were qualified as estimated (J) and (UJ), respectively.

The continuing calibration relative response factor (RRF) for bromomethane was less than the 0.05 quality control limit on instrument GCMS-B on11/04/10 @14:58 affecting all samples. The nondetected bromomethane results were qualified as rejected (UR).

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for 1,1,2-trichloroethane, 1,1-dichloropropene, 1,2-dichloroethane, 1,2-dichloropropane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-butanone, benzene, bromodichloromethane, bromoform, chloroethane, cis-1,3-dichloropropene, dibromomethane, hexachlorobutadiene, toluene, trans-1,3-dichlrorpropene, and trichloroethene for instrument GCMS-B on 11/04/10 @14:58 affecting all samples. The positive methyl cyclohexane, naphthalene, cyclohexane and n-butylbenzene results were qualified as estimated (J). The nondetected results for the aforementioned target compounds were qualified as estimated (UJ).

Methylene chloride was detected in the trip blank sample (GKHMS-TB-02). No action was taken on this basis because methylene chloride was not detected in the associated samples.

Isobutanol was only reported for samples GKHMS-GW-014-1010 and GKHMS-GW-015-1010. No action was taken on this basis but is noted for completeness only.

PAH

The LCS/LCSD associated with batch B048005 had percent recoveries for 2-methylnaphthalene, benzo(a)pyrene, and benzo(g,h,i)perylene greater than the quality control limits in the LCSD. No action was taken on this basis because the LCS recoveries were acceptable.

The surrogate percent recovery for nitrobenzene-d5 was greater than the quality control limit for sample GKHMS-GW-021-1010. No action was taken on this basis because only one surrogate in the fraction was out of control limits.

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The retention time and response factor for 1-methylnaphthalene are very similar to 2-methylnaphthalene. The positive and nondetected 1-methylnaphthalene results were reported to the reporting limit and qualified as estimated (J) and (UJ).

PEST

The surrogate percent recovery for tetrachloro-m-xylene was greater than the quality control limit on the primary column for sample GKHMS-GW-032D-1010. No action was taken on this basis because all other surrogate recoveries were acceptable.

The initial calibration performed on 11/11/10 on instrument GCECD-V had correlation coefficients less than the 0.995 quality control limit for 4,4'-DDD on the primary column and endrin aldehyde on the secondary column. No action was taken on this basis because the other column had an acceptable correlation coefficient and all results were nondetect.

PCB

No qualification of the data was necessary.

Additional Comments

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information. In this data package. The former Centauri Laboratory was later purchased by Chem Tech Laboratories. Chem Tech went back to data originally produced by Centauri to try and recover missing data from the original data package such as missing calibrations and compounds not originally reported by Centauri. Chem Tech then sent an addendum package that is included in its entirety in Appendix C of the data validation report.

The following tables outline the discrepancies between the compounds reported/not reported by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC |
| 1-methylnaphthalene | PAH |
| Aroclor-1262 | PCB |
| Aroclor-1268 | PCB |

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |
| 1,2,3-trichloropropane |

| |
|---|
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Isobutanol |
| Methacrylonitrile |
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

| **Compounds Reported by the Lab not listed in the SAP in the Pesticide Fraction** |
|---|
| Chlordane |
| Hexachlorobenzene |
| Kepone |
| Mirex |

The laboratory was contacted in regards to these four target compounds. 1,4-dioxane in the VOC fraction was looked for in the chromatograms as a Tentatively Identified Compound in Method 8260B. There were no positive detections of 1,4-dioxane. 1,4-dioxane was not calibrated. Therefore, the nondetected 1,4-dioxane results were not added to the database.

The laboratory was able to provide the missing results of Aroclor-1262 and Aroclor-1268. The laboratory did not calibrate for these PCBs. The nondetected Aroclor-1262 and Aroclor-1268 results were not added to the database.

Positive results less than the reporting limit but greater than the method detection limit have been qualified as estimated (J).

## Executive Summary

**Laboratory Performance:** Laboratory control sample recovery noncompliances resulted in the qualification of results in the VOC fraction. VOC initial and continuing calibration relative response factor, %RSD, or %D noncompliances resulted in the rejection or qualification of results.

**Other Factors Affecting Data Quality:** The closing of Centauri Laboratories caused the data to be delayed and missing data difficult to obtain affecting the quality of data received. Positive results reported below the reporting limit but above the method detection limit were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site specific Sampling and Analysis Plan, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

## Appendix A

Qualified Analytical Results

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | | GKHMS-GW-020-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-01 | | | 1011002-02 | | | 1011002-03 | | | 1011002-13 | | |
| FRACTION: OV | SAMP_DATE | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | U | | 0.48 | U | | 0.48 | U | | 0.48 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| 2,2-DICHLOROPROPANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| ACRYLONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | | GKHMS-GW-026-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-14 | | | 1011002-04 | | | 1011002-05 | | | 1011002-07 | | |
| FRACTION: OV | SAMP_DATE | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | U | | 0.48 | U | | 0.48 | U | | 0.48 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| 2,2-DICHLOROPROPANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| ACRYLONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | | GKHMS-GW-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-08 | | | 1011002-09 | | | 1011002-10 | | | 1011002-11 | | |
| FRACTION: OV | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | U | | 0.48 | U | | 0.48 | U | | 0.48 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| 2,2-DICHLOROPROPANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| ACRYLONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | | GKHMS-GW-034D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-15 | | | 1011002-16 | | | 1011002-12 | | | 1011002-06 | | |
| FRACTION: OV | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | | 10/30/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | U | | 0.48 | U | | 0.48 | U | | 0.48 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C | 0.44 | UJ | C |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| 2,2-DICHLOROPROPANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| ACRYLONITRILE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-02 |
|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-16 |
| FRACTION: OV | SAMP_DATE | 10/30/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 1,1,1,2-TETRACHLOROETHANE | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | 0.18 | U | |
| 1,1-DICHLOROETHENE | 0.28 | U | |
| 1,1-DICHLOROPROPENE | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | 0.48 | U | |
| 1,2,4-TRIMETHYLBENZENE | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | 0.21 | U | |
| 1,2-DICHLOROBENZENE | 0.3 | U | |
| 1,2-DICHLOROETHANE | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | 0.45 | U | |
| 1,3-DICHLOROBENZENE | 0.44 | UJ | C |
| 1,3-DICHLOROPROPANE | 0.23 | U | |
| 1,4-DICHLOROBENZENE | 1 | UJ | C |
| 2,2-DICHLOROPROPANE | 0.21 | U | |
| 2-BUTANONE | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | 0.38 | U | |
| 2-HEXANONE | 0.31 | U | |
| 4-CHLOROTOLUENE | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | 0.55 | U | |
| 4-METHYL-2-PENTANONE | 0.23 | U | |
| ACETONE | 0.8 | UR | C |
| ACETONITRILE | 1 | U | |
| ACRYLONITRILE | 1 | U | |
| BENZENE | 0.21 | UJ | C |
| BROMOBENZENE | 0.31 | U | |
| BROMOCHLOROMETHANE | 0.24 | U | |
| BROMODICHLOROMETHANE | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | | GKHMS-GW-020-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-01 | | | 1011002-02 | | | 1011002-03 | | | 1011002-13 | | |
| FRACTION: OV | SAMP_DATE | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| BROMOMETHANE | | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | 1 | UJ | C | 1 | UJ | C | | | | | | |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| METHYLENE CHLORIDE | | 0.17 | U | | 0.17 | U | | 0.17 | U | | 0.17 | U | |
| NAPHTHALENE | | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | U | | 0.54 | U | | 0.54 | U | | 0.54 | U | |
| N-PROPYLBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | U | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | | GKHMS-GW-026-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-14 | | | 1011002-04 | | | 1011002-05 | | | 1011002-07 | | |
| FRACTION: OV | SAMP_DATE | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| BROMOMETHANE | | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 4.63 | | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | | | | | | | | | | | | |
| ISOPROPYLBENZENE | | 3.41 | | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| METHYLENE CHLORIDE | | 0.17 | U | | 0.17 | U | | 0.17 | U | | 0.17 | U | |
| NAPHTHALENE | | 17.4 | J | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-BUTYLBENZENE | | 2.15 | | | 0.54 | U | | 0.54 | U | | 0.54 | U | |
| N-PROPYLBENZENE | | 3.41 | | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 2.08 | | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 1.7 | | | 0.42 | U | | 0.42 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | | GKHMS-GW-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-08 | | | 1011002-09 | | | 1011002-10 | | | 1011002-11 | | |
| FRACTION: OV | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| BROMOMETHANE | | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | | | | | | | | | | | | |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| METHYLENE CHLORIDE | | 0.17 | U | | 0.17 | U | | 0.17 | U | | 0.17 | U | |
| NAPHTHALENE | | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | U | | 0.54 | U | | 0.54 | U | | 0.54 | U | |
| N-PROPYLBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | U | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | | GKHMS-GW-034D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-15 | | | 1011002-16 | | | 1011002-12 | | | 1011002-06 | | |
| FRACTION: OV | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | | 10/30/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| BROMOMETHANE | | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | | | | | | | | | | | | |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E | 1 | UJ | E |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| METHYLENE CHLORIDE | | 0.17 | U | | 0.17 | U | | 0.17 | U | | 0.17 | U | |
| NAPHTHALENE | | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | U | | 0.54 | U | | 0.54 | U | | 0.54 | U | |
| N-PROPYLBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | U | | 0.5 | U | | 0.5 | U | | 0.5 | U | |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-02 |
|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-16 |
| FRACTION: OV | SAMP_DATE | 10/30/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| BROMOFORM | 0.24 | UJ | C |
| BROMOMETHANE | 0.39 | UR | C |
| CARBON DISULFIDE | 0.29 | U | |
| CARBON TETRACHLORIDE | 0.26 | U | |
| CHLOROBENZENE | 0.24 | U | |
| CHLORODIBROMOMETHANE | 0.26 | U | |
| CHLOROETHANE | 0.23 | UJ | C |
| CHLOROFORM | 0.18 | U | |
| CHLOROMETHANE | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | 0.21 | UJ | C |
| CYCLOHEXANE | 1 | UJ | C |
| DIBROMOMETHANE | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | 0.42 | U | |
| ETHYL METHACRYLATE | 1 | UJ | C |
| ETHYLBENZENE | 0.28 | U | |
| HEXACHLOROBUTADIENE | 0.58 | UJ | C |
| ISOBUTANOL | | | |
| ISOPROPYLBENZENE | 0.37 | U | |
| M+P-XYLENES | 0.67 | U | |
| METHACRYLONITRILE | 1 | UJ | C |
| METHYL ACETATE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | 0.43 | UJ | C |
| METHYL IODIDE | 1 | UJ | E |
| METHYL METHACRYLATE | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | 0.25 | U | |
| METHYLENE CHLORIDE | 1 | | |
| NAPHTHALENE | 0.54 | UJ | C |
| N-BUTYLBENZENE | 0.54 | U | |
| N-PROPYLBENZENE | 0.44 | U | |
| O-XYLENE | 0.29 | U | |
| PROPIONITRILE | 1 | UJ | C |
| SEC-BUTYLBENZENE | 0.5 | U | |
| STYRENE | 0.36 | U | |
| TERT-BUTYLBENZENE | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | | GKHMS-GW-020-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-01 | | | 1011002-02 | | | 1011002-03 | | | 1011002-13 | | |
| FRACTION: OV | SAMP_DATE | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | | GKHMS-GW-026-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-14 | | | 1011002-04 | | | 1011002-05 | | | 1011002-07 | | |
| FRACTION: OV | SAMP_DATE | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | | GKHMS-GW-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-08 | | | 1011002-09 | | | 1011002-10 | | | 1011002-11 | | |
| FRACTION: OV | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | | GKHMS-GW-034D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-15 | | | 1011002-16 | | | 1011002-12 | | | 1011002-06 | | |
| FRACTION: OV | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | | 10/30/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-02 |
|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-16 |
| FRACTION: OV | SAMP_DATE | 10/30/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| TETRACHLOROETHENE | 0.38 | U | |
| TOLUENE | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | 0.24 | U | |
| TRANS-1,3-DICHLOROPROPENE | 0.22 | UJ | C |
| TRICHLOROETHENE | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | 0.35 | U | |
| VINYL ACETATE | 0.29 | UJ | C |
| VINYL CHLORIDE | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | | GKHMS-GW-020-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-01 | | | 1011002-02 | | | 1011002-03 | | | 1011002-13 | | |
| FRACTION: PAH | SAMP_DATE | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0302 | J | P |
| PHENANTHRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | | GKHMS-GW-026-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-14 | | | 1011002-04 | | | 1011002-05 | | | 1011002-07 | | |
| FRACTION: PAH | SAMP_DATE | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 21 | J | Q | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 14 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHENE | | 7.09 | | | 0.0257 | J | P | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHYLENE | | 1.53 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ANTHRACENE | | 0.696 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | | 0.0761 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | | 6.47 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | | 5.75 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PHENANTHRENE | | 7.8 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PYRENE | | 0.14 | | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | | GKHMS-GW-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-08 | | | 1011002-09 | | | 1011002-10 | | | 1011002-11 | | |
| FRACTION: PAH | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | | 0.0167 | U | | 0.0229 | J | P | 0.0167 | U | | 0.0248 | J | P |
| PHENANTHRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | | GKHMS-GW-034D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-15 | | | 1011002-16 | | | 1011002-12 | | | 1011002-06 | | |
| FRACTION: PAH | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | | 10/30/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PHENANTHRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |

| PROJ_NO: 02607<br>SDG: 1011002<br>FRACTION: PCB<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1011002-14 | | | 1011002-15 | | | 1011002-16 | | |
| | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 11/1/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| AROCLOR-1016 | | 0.094 | U | | 0.094 | U | | 0.094 | U | |
| AROCLOR-1221 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1232 | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| AROCLOR-1242 | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| AROCLOR-1248 | | 0.13 | U | | 0.13 | U | | 0.13 | U | |
| AROCLOR-1254 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1260 | | 0.058 | U | | 0.058 | U | | 0.058 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011002 | LAB_ID | 1011002-14 | | | 1011002-15 | | | 1011002-16 | | |
| FRACTION: PEST | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| 4,4'-DDE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| 4,4'-DDT | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| ALDRIN | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| ALPHA-BHC | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| ALPHA-CHLORDANE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| BETA-BHC | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| CHLORDANE | | 0.017 | U | | 0.017 | U | | 0.017 | U | |
| DELTA-BHC | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| DIELDRIN | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN I | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN II | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN SULFATE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDRIN ALDEHYDE | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| ENDRIN KETONE | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| GAMMA-BHC (LINDANE) | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| GAMMA-CHLORDANE | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| HEPTACHLOR | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| HEPTACHLOR EPOXIDE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| HEXACHLOROBENZENE | | 0.01 | U | | 0.01 | U | | 0.01 | U | |
| KEPONE | | 0.015 | U | | 0.015 | U | | 0.015 | U | |
| METHOXYCHLOR | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| MIREX | | 0.015 | U | | 0.015 | U | | 0.015 | U | |
| TOXAPHENE | | 0.017 | U | | 0.017 | U | | 0.017 | U | |

## Appendix B

Results as Reported by the Laboratory

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-014-1010
Sample Date/Time: 10/30/10 09:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 17:43

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 17:43 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 17:43 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 17:43 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 17:43 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 17:43 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 17:43 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 17:43 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-014-1010
Sample Date/Time: 10/30/10 09:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 17:43

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/4/10 17:43 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 17:43 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 17:43 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-014-1010
Sample Date/Time: 10/30/10 09:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 17:43

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 17:43 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:43 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 86 % | 70-120 | 1 | 11/4/10 17:43 |
| 4-Bromofluorobenzene | 460-00-4 | 89 % | 75-120 | 1 | 11/4/10 17:43 |
| Dibromofluoromethane | 1868-53-7 | 112 % | 85-115 | 1 | 11/4/10 17:43 |
| Toluene-d8 | 2037-26-5 | 95 % | 85-120 | 1 | 11/4/10 17:43 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-014-1010
Sample Date/Time: 10/30/10 09:30
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-01
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 13:38 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 79 % | 50-110 | 1 | 11/17/10 13:38 |
| Nitrobenzene-d5 | 4165-60-0 | 88 % | 40-110 | 1 | 11/17/10 13:38 |
| Terphenyl-d14 | 1718-51-0 | 95 % | 50-135 | 1 | 11/17/10 13:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-015-1010
Sample Date/Time: 10/30/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 18:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 18:10 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 18:10 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 18:10 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 18:10 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 18:10 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 18:10 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 18:10 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-015-1010
Sample Date/Time: 10/30/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 18:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 18:10 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 18:10 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-015-1010
Sample Date/Time: 10/30/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 18:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 18:10 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:10 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 90 % | 70-120 | 1 | 11/4/10 18:10 |
| 4-Bromofluorobenzene | 460-00-4 | 89 % | 75-120 | 1 | 11/4/10 18:10 |
| Dibromofluoromethane | 1868-53-7 | 115 % | 85-115 | 1 | 11/4/10 18:10 |
| Toluene-d8 | 2037-26-5 | 94 % | 85-120 | 1 | 11/4/10 18:10 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-015-1010
Sample Date/Time: 10/30/10 10:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-02
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:02 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 83 % | 50-110 | 1 | 11/17/10 14:02 |
| Nitrobenzene-d5 | 4165-60-0 | 84 % | 40-110 | 1 | 11/17/10 14:02 |
| Terphenyl-d14 | 1718-51-0 | 101 % | 50-135 | 1 | 11/17/10 14:02 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-016-1010
Sample Date/Time: 10/30/10 10:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 18:36

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 18:36 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 18:36 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 18:36 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 18:36 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 18:36 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 18:36 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 18:36 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-016-1010
Sample Date/Time: 10/30/10 10:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 18:36

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 18:36 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 18:36 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-016-1010
Sample Date/Time: 10/30/10 10:30
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 18:36

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 18:36 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 18:36 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 91 % | 70-120 | 1 | 11/4/10 18:36 |
| 4-Bromofluorobenzene | 460-00-4 | 87 % | 75-120 | 1 | 11/4/10 18:36 |
| Dibromofluoromethane | 1868-53-7 | 98 % | 85-115 | 1 | 11/4/10 18:36 |
| Toluene-d8 | 2037-26-5 | 96 % | 85-120 | 1 | 11/4/10 18:36 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-016-1010
Sample Date/Time: 10/30/10 10:30
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-03
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:26 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 85 % | 50-110 | 1 | 11/17/10 14:26 |
| Nitrobenzene-d5 | 4165-60-0 | 83 % | 40-110 | 1 | 11/17/10 14:26 |
| Terphenyl-d14 | 1718-51-0 | 91 % | 50-135 | 1 | 11/17/10 14:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-020-1010
Sample Date/Time: 11/01/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-13
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:05

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 23:05 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 23:05 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 23:05 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 23:05 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 23:05 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 23:05 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 23:05 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-020-1010
Sample Date/Time: 11/01/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-13
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:05

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 23:05 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 23:05 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-020-1010
Sample Date/Time: 11/01/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-13
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:05

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:05 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:05 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99 % | 70-120 | 1 | 11/4/10 23:05 |
| 4-Bromofluorobenzene | 460-00-4 | 96 % | 75-120 | 1 | 11/4/10 23:05 |
| Dibromofluoromethane | 1868-53-7 | 103 % | 85-115 | 1 | 11/4/10 23:05 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/4/10 23:05 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-020-1010
Sample Date/Time: 11/01/10 10:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-13
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Naphthalene | 91-20-3 | 30.2 | J | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:30 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 85 % | 50-110 | 1 | 11/17/10 18:30 |
| Nitrobenzene-d5 | 4165-60-0 | 86 % | 40-110 | 1 | 11/17/10 18:30 |
| Terphenyl-d14 | 1718-51-0 | 85 % | 50-135 | 1 | 11/17/10 18:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-021-1010
Sample Date/Time: 11/01/10 11:00
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011002-14
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 20:04 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 20:04 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 20:04 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 20:04 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 91 % | 25-140 | 1 | 11/15/10 20:04 |
| DCB | 2051-24-3 | 39 % | 30-135 | 1 | 11/15/10 20:04 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-021-1010
Sample Date/Time: 11/01/10 11:00
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011002-14
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 17:41 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 17:41 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 17:41 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 17:41 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 17:41 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 17:41 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 17:41 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 80 % | 25-140 | 1 | 11/4/10 17:41 |
| DCB | 2051-24-3 | 52 % | 40-135 | 1 | 11/4/10 17:41 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-021-1010
Sample Date/Time: 11/01/10 11:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-14
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 23:32 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 23:32 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 23:32 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 23:32 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 23:32 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 23:32 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 23:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-021-1010
Sample Date/Time: 11/01/10 11:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-14
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Ethylbenzene | 100-41-4 | 4.63 | | 0.280 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Isopropylbenzene | 98-82-8 | 3.41 | | 0.370 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Naphthalene | 91-20-3 | 17.4 | | 0.540 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| n-Butylbenzene | 104-51-8 | 2.15 | | 0.540 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| n-Propylbenzene | 103-65-1 | 3.41 | | 0.440 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 23:32 |
| sec-Butylbenzene | 135-98-8 | 2.08 | | 0.500 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| tert-Butylbenzene | 98-06-6 | 1.70 | | 0.420 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 23:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-021-1010
Sample Date/Time: 11/01/10 11:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-14
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:32 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 98 % | 70-120 | 1 | 11/4/10 23:32 |
| 4-Bromofluorobenzene | 460-00-4 | 104 % | 75-120 | 1 | 11/4/10 23:32 |
| Dibromofluoromethane | 1868-53-7 | 101 % | 85-115 | 1 | 11/4/10 23:32 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-120 | 1 | 11/4/10 23:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-021-1010
Sample Date/Time: 11/01/10 11:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-14
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 14000 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Acenaphthene | 83-32-9 | 7090 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Acenaphthylene | 208-96-8 | 1530 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Anthracene | 120-12-7 | 696 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Fluoranthene | 206-44-0 | 76.1 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Fluorene | 86-73-7 | 6470 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Naphthalene | 91-20-3 | 5750 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Phenanthrene | 85-01-8 | 7800 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |
| Pyrene | 129-00-0 | 140 | | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:54 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 78 % | 50-110 | 1 | 11/17/10 18:54 |
| Nitrobenzene-d5 | 4165-60-0 | 131 % | 40-110 | 1 | 11/17/10 18:54 |
| Terphenyl-d14 | 1718-51-0 | 98 % | 50-135 | 1 | 11/17/10 18:54 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-024-1010
Sample Date/Time: 10/30/10 13:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:03

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 19:03 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 19:03 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 19:03 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 19:03 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 19:03 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 19:03 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 19:03 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-024-1010
Sample Date/Time: 10/30/10 13:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:03

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 19:03 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 19:03 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-024-1010
Sample Date/Time: 10/30/10 13:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:03

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:03 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:03 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 92 % | 70-120 | 1 | 11/4/10 19:03 |
| 4-Bromofluorobenzene | 460-00-4 | 89 % | 75-120 | 1 | 11/4/10 19:03 |
| Dibromofluoromethane | 1868-53-7 | 98 % | 85-115 | 1 | 11/4/10 19:03 |
| Toluene-d8 | 2037-26-5 | 102 % | 85-120 | 1 | 11/4/10 19:03 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-024-1010
Sample Date/Time: 10/30/10 13:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-04
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Acenaphthene | 83-32-9 | 25.7 | J | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 14:50 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 83 % | 50-110 | 1 | 11/17/10 14:50 |
| Nitrobenzene-d5 | 4165-60-0 | 88 % | 40-110 | 1 | 11/17/10 14:50 |
| Terphenyl-d14 | 1718-51-0 | 92 % | 50-135 | 1 | 11/17/10 14:50 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-025-1010
Sample Date/Time: 10/30/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 19:30 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 19:30 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 19:30 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 19:30 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 19:30 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 19:30 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 19:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-025-1010
Sample Date/Time: 10/30/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 19:30 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 19:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-025-1010
Sample Date/Time: 10/30/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:30 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:30 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 89 % | 70-120 | 1 | 11/4/10 19:30 |
| 4-Bromofluorobenzene | 460-00-4 | 88 % | 75-120 | 1 | 11/4/10 19:30 |
| Dibromofluoromethane | 1868-53-7 | 96 % | 85-115 | 1 | 11/4/10 19:30 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-120 | 1 | 11/4/10 19:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-025-1010
Sample Date/Time: 10/30/10 11:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-05
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:15 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 81 % | 50-110 | 1 | 11/17/10 15:15 |
| Nitrobenzene-d5 | 4165-60-0 | 82 % | 40-110 | 1 | 11/17/10 15:15 |
| Terphenyl-d14 | 1718-51-0 | 93 % | 50-135 | 1 | 11/17/10 15:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-026-1010
Sample Date/Time: 10/31/10 10:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 20:24

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 20:24 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 20:24 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 20:24 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 20:24 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 20:24 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 20:24 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 20:24 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-026-1010
Sample Date/Time: 10/31/10 10:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 20:24

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 20:24 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 20:24 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-026-1010
Sample Date/Time: 10/31/10 10:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 20:24

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 20:24 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:24 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 96 % | 70-120 | 1 | 11/4/10 20:24 |
| 4-Bromofluorobenzene | 460-00-4 | 90 % | 75-120 | 1 | 11/4/10 20:24 |
| Dibromofluoromethane | 1868-53-7 | 102 % | 85-115 | 1 | 11/4/10 20:24 |
| Toluene-d8 | 2037-26-5 | 101 % | 85-120 | 1 | 11/4/10 20:24 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-026-1010
Sample Date/Time: 10/31/10 10:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-07
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:04 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 82 % | 50-110 | 1 | 11/17/10 16:04 |
| Nitrobenzene-d5 | 4165-60-0 | 86 % | 40-110 | 1 | 11/17/10 16:04 |
| Terphenyl-d14 | 1718-51-0 | 80 % | 50-135 | 1 | 11/17/10 16:04 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-027-1010
Sample Date/Time: 10/31/10 12:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 20:50

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 20:50 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 20:50 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 20:50 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 20:50 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 20:50 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 20:50 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 20:50 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-027-1010
Sample Date/Time: 10/31/10 12:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 20:50

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 20:50 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 20:50 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-027-1010
Sample Date/Time: 10/31/10 12:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 20:50

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 20:50 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 20:50 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 93 % | 70-120 | 1 | 11/4/10 20:50 |
| 4-Bromofluorobenzene | 460-00-4 | 90 % | 75-120 | 1 | 11/4/10 20:50 |
| Dibromofluoromethane | 1868-53-7 | 100 % | 85-115 | 1 | 11/4/10 20:50 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/4/10 20:50 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-027-1010
Sample Date/Time: 10/31/10 12:20
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-08
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:28 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 50-110 | 1 | 11/17/10 16:28 |
| Nitrobenzene-d5 | 4165-60-0 | 75 % | 40-110 | 1 | 11/17/10 16:28 |
| Terphenyl-d14 | 1718-51-0 | 95 % | 50-135 | 1 | 11/17/10 16:28 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-028-1010
Sample Date/Time: 10/31/10 15:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 21:17

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 21:17 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 21:17 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 21:17 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 21:17 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 21:17 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 21:17 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 21:17 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-028-1010
Sample Date/Time: 10/31/10 15:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 21:17

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 21:17 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 21:17 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-028-1010
Sample Date/Time: 10/31/10 15:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 21:17

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 21:17 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:17 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 92 % | 70-120 | 1 | 11/4/10 21:17 |
| 4-Bromofluorobenzene | 460-00-4 | 98 % | 75-120 | 1 | 11/4/10 21:17 |
| Dibromofluoromethane | 1868-53-7 | 99 % | 85-115 | 1 | 11/4/10 21:17 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/4/10 21:17 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-028-1010
Sample Date/Time: 10/31/10 15:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-09
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Naphthalene | 91-20-3 | 22.9 | J | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 16:53 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 83 % | 50-110 | 1 | 11/17/10 16:53 |
| Nitrobenzene-d5 | 4165-60-0 | 85 % | 40-110 | 1 | 11/17/10 16:53 |
| Terphenyl-d14 | 1718-51-0 | 89 % | 50-135 | 1 | 11/17/10 16:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-029-1010
Sample Date/Time: 10/31/10 13:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-10
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 21:44

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 21:44 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 21:44 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 21:44 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 21:44 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 21:44 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 21:44 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 21:44 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-029-1010
Sample Date/Time: 10/31/10 13:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-10
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 21:44

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 21:44 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 21:44 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-029-1010
Sample Date/Time: 10/31/10 13:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-10
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 21:44

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 21:44 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 21:44 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99 % | 70-120 | 1 | 11/4/10 21:44 |
| 4-Bromofluorobenzene | 460-00-4 | 96 % | 75-120 | 1 | 11/4/10 21:44 |
| Dibromofluoromethane | 1868-53-7 | 102 % | 85-115 | 1 | 11/4/10 21:44 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/4/10 21:44 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-029-1010
Sample Date/Time: 10/31/10 13:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-10
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:17 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 50-110 | 1 | 11/17/10 17:17 |
| Nitrobenzene-d5 | 4165-60-0 | 91 % | 40-110 | 1 | 11/17/10 17:17 |
| Terphenyl-d14 | 1718-51-0 | 93 % | 50-135 | 1 | 11/17/10 17:17 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-030-1010
Sample Date/Time: 10/31/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-11
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 22:11

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 22:11 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 22:11 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 22:11 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 22:11 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 22:11 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 22:11 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 22:11 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-030-1010
Sample Date/Time: 10/31/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-11
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 22:11

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 22:11 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 22:11 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-030-1010
Sample Date/Time: 10/31/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-11
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 22:11

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 22:11 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:11 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 98 % | 70-120 | 1 | 11/4/10 22:11 |
| 4-Bromofluorobenzene | 460-00-4 | 98 % | 75-120 | 1 | 11/4/10 22:11 |
| Dibromofluoromethane | 1868-53-7 | 104 % | 85-115 | 1 | 11/4/10 22:11 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/4/10 22:11 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-030-1010
Sample Date/Time: 10/31/10 11:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-11
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Naphthalene | 91-20-3 | 24.8 | J | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 17:41 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 88 % | 50-110 | 1 | 11/17/10 17:41 |
| Nitrobenzene-d5 | 4165-60-0 | 89 % | 40-110 | 1 | 11/17/10 17:41 |
| Terphenyl-d14 | 1718-51-0 | 109 % | 50-135 | 1 | 11/17/10 17:41 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-031-1010
Sample Date/Time: 11/01/10 09:20
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011002-15
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 20:36 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 20:36 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 20:36 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 20:36 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 98 % | 25-140 | 1 | 11/15/10 20:36 |
| DCB | 2051-24-3 | 38 % | 30-135 | 1 | 11/15/10 20:36 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-031-1010
Sample Date/Time: 11/01/10 09:20
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011002-15
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 18:13 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 18:13 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 18:13 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 18:13 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 18:13 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 18:13 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 18:13 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 70 % | 25-140 | 1 | 11/4/10 18:13 |
| DCB | 2051-24-3 | 41 % | 40-135 | 1 | 11/4/10 18:13 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-031-1010
Sample Date/Time: 11/01/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-15
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 23:59 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 23:59 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 23:59 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 23:59 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 23:59 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 23:59 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 23:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-031-1010
Sample Date/Time: 11/01/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-15
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 23:59 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 23:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-031-1010
Sample Date/Time: 11/01/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-15
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 23:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 23:59 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 23:59 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99 % | 70-120 | 1 | 11/4/10 23:59 |
| 4-Bromofluorobenzene | 460-00-4 | 97 % | 75-120 | 1 | 11/4/10 23:59 |
| Dibromofluoromethane | 1868-53-7 | 100 % | 85-115 | 1 | 11/4/10 23:59 |
| Toluene-d8 | 2037-26-5 | 95 % | 85-120 | 1 | 11/4/10 23:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-031-1010
Sample Date/Time: 11/01/10 09:20
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-15
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 11:55 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 89 % | 50-110 | 1 | 11/18/10 11:55 |
| Nitrobenzene-d5 | 4165-60-0 | 89 % | 40-110 | 1 | 11/18/10 11:55 |
| Terphenyl-d14 | 1718-51-0 | 94 % | 50-135 | 1 | 11/18/10 11:55 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-032D-1010
Sample Date/Time: 11/01/10 08:40
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011002-16
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 21:08 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 21:08 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 21:08 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 21:08 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 158 % | 25-140 | 1 | 11/15/10 21:08 |
| DCB | 2051-24-3 | 46 % | 30-135 | 1 | 11/15/10 21:08 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-032D-1010
Sample Date/Time: 11/01/10 08:40
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011002-16
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 18:45 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 18:45 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 18:45 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 18:45 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 18:45 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 18:45 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 18:45 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 108 % | 25-140 | 1 | 11/4/10 18:45 |
| DCB | 2051-24-3 | 63 % | 40-135 | 1 | 11/4/10 18:45 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-032D-1010
Sample Date/Time: 11/01/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-16
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 00:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 0:26 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 0:26 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 0:26 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 0:26 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 0:26 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 0:26 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 0:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-032D-1010
Sample Date/Time: 11/01/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-16
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 00:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 0:26 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 0:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-032D-1010
Sample Date/Time: 11/01/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-16
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 00:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 0:26 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 0:26 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 106 % | 70-120 | 1 | 11/5/10 0:26 |
| 4-Bromofluorobenzene | 460-00-4 | 100 % | 75-120 | 1 | 11/5/10 0:26 |
| Dibromofluoromethane | 1868-53-7 | 105 % | 85-115 | 1 | 11/5/10 0:26 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/5/10 0:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-032D-1010
Sample Date/Time: 11/01/10 08:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-16
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 12:19 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 50-110 | 1 | 11/18/10 12:19 |
| Nitrobenzene-d5 | 4165-60-0 | 95 % | 40-110 | 1 | 11/18/10 12:19 |
| Terphenyl-d14 | 1718-51-0 | 85 % | 50-135 | 1 | 11/18/10 12:19 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-033D-1010
Sample Date/Time: 10/31/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-12
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 22:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 22:38 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 22:38 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 22:38 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 22:38 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 22:38 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 22:38 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 22:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-033D-1010
Sample Date/Time: 10/31/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-12
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 22:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 22:38 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 22:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-033D-1010
Sample Date/Time: 10/31/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-12
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 22:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 22:38 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 22:38 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 112 % | 70-120 | 1 | 11/4/10 22:38 |
| 4-Bromofluorobenzene | 460-00-4 | 96 % | 75-120 | 1 | 11/4/10 22:38 |
| Dibromofluoromethane | 1868-53-7 | 111 % | 85-115 | 1 | 11/4/10 22:38 |
| Toluene-d8 | 2037-26-5 | 95 % | 85-120 | 1 | 11/4/10 22:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-033D-1010
Sample Date/Time: 10/31/10 10:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-12
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 18:06 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 82 % | 50-110 | 1 | 11/17/10 18:06 |
| Nitrobenzene-d5 | 4165-60-0 | 78 % | 40-110 | 1 | 11/17/10 18:06 |
| Terphenyl-d14 | 1718-51-0 | 93 % | 50-135 | 1 | 11/17/10 18:06 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-034D-1010
Sample Date/Time: 10/30/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:57

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 19:57 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 19:57 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 19:57 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 19:57 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 19:57 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 19:57 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 19:57 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-034D-1010
Sample Date/Time: 10/30/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:57

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 19:57 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 19:57 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-034D-1010
Sample Date/Time: 10/30/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 19:57

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 19:57 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 19:57 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 102 % | 70-120 | 1 | 11/4/10 19:57 |
| 4-Bromofluorobenzene | 460-00-4 | 89 % | 75-120 | 1 | 11/4/10 19:57 |
| Dibromofluoromethane | 1868-53-7 | 103 % | 85-115 | 1 | 11/4/10 19:57 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-120 | 1 | 11/4/10 19:57 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-034D-1010
Sample Date/Time: 10/30/10 08:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011002-06
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 12:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/17/10 15:39 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 84 % | 50-110 | 1 | 11/17/10 15:39 |
| Nitrobenzene-d5 | 4165-60-0 | 83 % | 40-110 | 1 | 11/17/10 15:39 |
| Terphenyl-d14 | 1718-51-0 | 93 % | 50-135 | 1 | 11/17/10 15:39 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-02
Sample Date/Time: 10/30/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-17
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 17:16

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/4/10 17:16 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/4/10 17:16 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/4/10 17:16 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/4/10 17:16 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 17:16 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/4/10 17:16 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/4/10 17:16 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-02
Sample Date/Time: 10/30/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-17
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 17:16

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Methylene Chloride | 75-09-2 | 1.00 | | 0.170 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/4/10 17:16 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/4/10 17:16 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-02
Sample Date/Time: 10/30/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011002-17
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/04/10 17:16

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/4/10 17:16 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/4/10 17:16 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 89 % | 70-120 | 1 | 11/4/10 17:16 |
| 4-Bromofluorobenzene | 460-00-4 | 94 % | 75-120 | 1 | 11/4/10 17:16 |
| Dibromofluoromethane | 1868-53-7 | 114 % | 85-115 | 1 | 11/4/10 17:16 |
| Toluene-d8 | 2037-26-5 | 94 % | 85-120 | 1 | 11/4/10 17:16 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-014-1010

Sample Date/Time: 10/30/10 09:30

File ID: D46301.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-01

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 13:38

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-015-1010

Sample Date/Time: 10/30/10 10:00

File ID: D46302.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-02

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 14:02

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-016-1010

Sample Date/Time: 10/30/10 10:30

File ID: D46303.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-03

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 14:26

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-024-1010

Sample Date/Time: 10/30/10 13:00

File ID: D46304.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-04

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 14:50

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-025-1010

Sample Date/Time: 10/30/10 11:40

File ID: D46305.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-05

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 15:15

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-034D-1010

Sample Date/Time: 10/30/10 08:40

File ID: D46306.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-06

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 15:39

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-026-1010

Sample Date/Time: 10/31/10 10:40

File ID: D46307.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-07

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 16:04

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-027-1010

Sample Date/Time: 10/31/10 12:20

File ID: D46308.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-08

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 16:28

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-028-1010

Sample Date/Time: 10/31/10 15:00

File ID: D46309.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-09

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 16:53

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-029-1010

Sample Date/Time: 10/31/10 13:00

File ID: D46310.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-10

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 17:17

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-030-1010

Sample Date/Time: 10/31/10 11:40

File ID: D46311.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-11

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 17:41

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-033D-1010

Sample Date/Time: 10/31/10 10:00

File ID: D46312.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-12

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 18:06

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-020-1010

Sample Date/Time: 11/1/2010

File ID: D46313.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-13

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 18:30

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-021-1010

Sample Date/Time: 11/1/10 09:30

File ID: D46314.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-14

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 18:54

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 21000 | J | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-031-1010

Sample Date/Time: 10/1/2010 09:20

File ID: D46315.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-15

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 19:19

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-032D-1010

Sample Date/Time: 11/1/10 08:40

File ID: D46316.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011002-16

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 12:35

Analyzed Date/Time: 11/17/10 19:43

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

**Appendix C**

Support Documentation

HOLDTIME

**SDG** 1011002

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | % | GKHMS-GW-033D-1010 | 1011002-12 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| OV | % | GKHMS-GW-016-1010 | 1011002-03 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | % | GKHMS-GW-020-1010 | 1011002-13 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| OV | % | GKHMS-GW-024-1010 | 1011002-04 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | % | GKHMS-GW-027-1010 | 1011002-08 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | % | GKHMS-GW-026-1010 | 1011002-07 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | % | GKHMS-GW-026-1010 | 1011002-07 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| OV | % | GKHMS-GW-014-1010 | 1011002-01 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | % | GKHMS-GW-015-1010 | 1011002-02 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | % | GKHMS-GW-034D-1010 | 1011002-06 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | % | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| OV | % | GKHMS-GW-033D-1010 | 1011002-12 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | % | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/18/2010 | 11/18/2010 | 17 | 0 | 17 |
| OV | % | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| OV | % | GKHMS-GW-030-1010 | 1011002-11 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | % | GKHMS-GW-030-1010 | 1011002-11 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | % | GKHMS-GW-029-1010 | 1011002-10 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | % | GKHMS-GW-028-1010 | 1011002-09 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| OV | % | GKHMS-GW-028-1010 | 1011002-09 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | % | GKHMS-TB-02 | 1011002-16 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | % | GKHMS-GW-025-1010 | 1011002-05 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-025-1010 | 1011002-05 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-033D-1010 | 1011002-12 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | UG/L | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-030-1010 | 1011002-11 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | UG/L | GKHMS-GW-029-1010 | 1011002-10 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | UG/L | GKHMS-GW-028-1010 | 1011002-09 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | UG/L | GKHMS-TB-02 | 1011002-16 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-026-1010 | 1011002-07 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | UG/L | GKHMS-GW-034D-1010 | 1011002-06 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-024-1010 | 1011002-04 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-020-1010 | 1011002-13 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | UG/L | GKHMS-GW-016-1010 | 1011002-03 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-015-1010 | 1011002-02 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-014-1010 | 1011002-01 | NM | 10/30/2010 | 11/04/2010 | 11/04/2010 | 5 | 0 | 5 |
| OV | UG/L | GKHMS-GW-027-1010 | 1011002-08 | NM | 10/31/2010 | 11/04/2010 | 11/04/2010 | 4 | 0 | 4 |
| OV | UG/L | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/05/2010 | 11/05/2010 | 4 | 0 | 4 |
| SIM | % | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/17/2010 | 11/17/2010 | 16 | 0 | 16 |
| SIM | % | GKHMS-GW-030-1010 | 1011002-11 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-029-1010 | 1011002-10 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-028-1010 | 1011002-09 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-027-1010 | 1011002-08 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-026-1010 | 1011002-07 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-024-1010 | 1011002-04 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | % | GKHMS-GW-034D-1010 | 1011002-06 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-020-1010 | 1011002-13 | NM | 11/01/2010 | 11/17/2010 | 11/17/2010 | 16 | 0 | 16 |
| SIM | % | GKHMS-GW-016-1010 | 1011002-03 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | % | GKHMS-GW-015-1010 | 1011002-02 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | % | GKHMS-GW-014-1010 | 1011002-01 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | % | GKHMS-GW-033D-1010 | 1011002-12 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| SIM | % | GKHMS-GW-034D-1010 | 1011002-06 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | % | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/18/2010 | 11/18/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/18/2010 | 11/18/2010 | 17 | 0 | 17 |
| SIM | % | GKHMS-GW-025-1010 | 1011002-05 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | NG/L | GKHMS-GW-014-1010 | 1011002-01 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | NG/L | GKHMS-GW-033D-1010 | 1011002-12 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/18/2010 | 11/18/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/18/2010 | 11/18/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-030-1010 | 1011002-11 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-029-1010 | 1011002-10 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-028-1010 | 1011002-09 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-027-1010 | 1011002-08 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-026-1010 | 1011002-07 | NM | 10/31/2010 | 11/17/2010 | 11/17/2010 | 17 | 0 | 17 |
| SIM | NG/L | GKHMS-GW-025-1010 | 1011002-05 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | NG/L | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/17/2010 | 11/17/2010 | 16 | 0 | 16 |
| SIM | NG/L | GKHMS-GW-015-1010 | 1011002-02 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | NG/L | GKHMS-GW-034D-1010 | 1011002-06 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| SIM | NG/L | GKHMS-GW-016-1010 | 1011002-03 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| SIM | NG/L | GKHMS-GW-020-1010 | 1011002-13 | NM | 11/01/2010 | 11/17/2010 | 11/17/2010 | 16 | 0 | 16 |
| SIM | NG/L | GKHMS-GW-024-1010 | 1011002-04 | NM | 10/30/2010 | 11/17/2010 | 11/17/2010 | 18 | 0 | 18 |
| PCB | % | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| PCB | % | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| PCB | % | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| PCB | UG/L | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| PCB | UG/L | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| PCB | UG/L | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/04/2010 | 11/04/2010 | 3 | 0 | 3 |
| PEST | % | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/15/2010 | 11/15/2010 | 14 | 0 | 14 |
| PEST | % | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/15/2010 | 11/15/2010 | 14 | 0 | 14 |
| PEST | % | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/15/2010 | 11/15/2010 | 14 | 0 | 14 |
| PEST | UG/L | GKHMS-GW-021-1010 | 1011002-14 | NM | 11/01/2010 | 11/15/2010 | 11/15/2010 | 14 | 0 | 14 |
| PEST | UG/L | GKHMS-GW-031-1010 | 1011002-15 | NM | 11/01/2010 | 11/15/2010 | 11/15/2010 | 14 | 0 | 14 |
| PEST | UG/L | GKHMS-GW-032D-1010 | 1011002-16 | NM | 11/01/2010 | 11/15/2010 | 11/15/2010 | 14 | 0 | 14 |

CENTAURI LABS™

# Analytical Results for 1011002

for

Tetra Tech NUS, Inc

Project Manager: Shauna Stotler-Hardy

Project Name: KEY WEST NAS

Kendra Van Wyck For Chino Ortiz

Laboratory Director

Project Manager

CENTAURI LABS™

# CASE NARRATIVE

Tetra Tech NUS, Inc
KEY WEST NAS
Work Order: 1011002

**SAMPLE RECIEPT**

Seventeen water samples were received on 11/02/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/06/2010.

**8260**

Seventeen water samples were analyzed for volatile organic compounds by the SW846 Method 8260B..
The samples were analyzed within the holding time.

All surrogate recoveries and internal standard responses were within the QC limits.

Duplicate laboratory control samples were analyzed along with the batch.

Recovery of two compounds in the LCS and three compounds in the LCSD were above the QC limits. Because none of the compounds were detected above the reporting limit in the associated client samples, there is no effect on the results reported. Recovery of six compounds in the LCS and three compounds in the LCSD were below QC limits. Because none of the compounds were detected above the method detection limit in the associated client samples, there is no effect on the results reported. The % RPD for five compounds was above the QC limits for the pair.

The response for four compounds was above QC limits and two compounds were below the QC limits in the daily CCV. None of those compounds were detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

**SW8270LL-PAH SIM**

Sixteen water samples were extracted by method 3520C. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
Sample GKHMS-GW-021-1010 had one surrogate recovery above the QC limits. All other surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were not performed due to insufficient sample volume. Instead two laboratory control samples were extracted and analyzed with this batch. Three spike recoveries were slightly

above the QC.

**PCBs**

Three water samples were extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead, a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

**PESTICIDES**

Three water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. All recoveries were within the QC limits.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-GW-014-1010 | 1011002-01 | SW8260B | Water | 10/30/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-015-1010 | 1011002-02 | SW8260B | Water | 10/30/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-016-1010 | 1011002-03 | SW8260B | Water | 10/30/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-020-1010 | 1011002-13 | SW8260B | Water | 11/1/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-021-1010 | 1011002-14 | SW8081B | Water | 11/1/2010 | 11/2/2010 |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-024-1010 | 1011002-04 | SW8260B | Water | 10/30/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-025-1010 | 1011002-05 | SW8260B | Water | 10/30/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-026-1010 | 1011002-07 | SW8260B | Water | 10/31/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-027-1010 | 1011002-08 | SW8260B | Water | 10/31/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-028-1010 | 1011002-09 | SW8260B | Water | 10/31/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-029-1010 | 1011002-10 | SW8260B | Water | 10/31/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-030-1010 | 1011002-11 | SW8260B | Water | 10/31/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-031-1010 | 1011002-15 | SW8081B | Water | 11/1/2010 | 11/2/2010 |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-032D-1010 | 1011002-16 | SW8081B | Water | 11/1/2010 | 11/2/2010 |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-033D-1010 | 1011002-12 | SW8260B | Water | 10/31/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-034D-1010 | 1011002-06 | SW8260B | Water | 10/30/2010 | 11/2/2010 |
| | | SW8270C SIM | | | |
| GKHMS-TB-02 | 1011002-17 | SW8260B | Water | 10/30/2010 | 11/2/2010 |

## Subcontracted Analyses

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1011002-01 | 6020A QSM TAL |
| 1011002-01 | 8270D LL SVOC TCL |
| 1011002-01 | Mercury, Total 7470A |
| 1011002-02 | 6020A QSM TAL |
| 1011002-02 | 8270D LL SVOC TCL |
| 1011002-02 | Mercury, Total 7470A |
| 1011002-03 | 6020A QSM TAL |
| 1011002-03 | 8270D LL SVOC TCL |
| 1011002-03 | Mercury, Total 7470A |
| 1011002-04 | 6020A QSM TAL |
| 1011002-04 | 8270D LL SVOC TCL |
| 1011002-04 | Mercury, Total 7470A |
| 1011002-05 | 6020A QSM TAL |
| 1011002-05 | 8270D LL SVOC TCL |
| 1011002-05 | Mercury, Total 7470A |
| 1011002-06 | 6020A QSM TAL |
| 1011002-06 | 8270D LL SVOC TCL |
| 1011002-06 | Mercury, Total 7470A |
| 1011002-07 | 6020A QSM TAL |
| 1011002-07 | 8270D LL SVOC TCL |
| 1011002-07 | Mercury, Total 7470A |
| 1011002-08 | 6020A QSM TAL |
| 1011002-08 | 8270D LL SVOC TCL |
| 1011002-08 | Mercury, Total 7470A |
| 1011002-09 | 6020A QSM TAL |
| 1011002-09 | 8270D LL SVOC TCL |
| 1011002-09 | Mercury, Total 7470A |
| 1011002-10 | 6020A QSM TAL |
| 1011002-10 | 8270D LL SVOC TCL |
| 1011002-10 | Mercury, Total 7470A |
| 1011002-11 | 6020A QSM TAL |
| 1011002-11 | 8270D LL SVOC TCL |
| 1011002-11 | Mercury, Total 7470A |
| 1011002-12 | 6020A QSM TAL |
| 1011002-12 | 8270D LL SVOC TCL |
| 1011002-12 | Mercury, Total 7470A |
| 1011002-13 | 6020A QSM TAL |
| 1011002-13 | 8270D LL SVOC TCL |
| 1011002-13 | Mercury, Total 7470A |
| 1011002-14 | 6020A QSM TAL |
| 1011002-14 | 8270D LL SVOC TCL |
| 1011002-14 | Mercury, Total 7470A |
| 1011002-15 | 6020A QSM TAL |
| 1011002-15 | 8270D LL SVOC TCL |
| 1011002-15 | Mercury, Total 7470A |
| 1011002-16 | 6020A QSM TAL |
| 1011002-16 | 8270D LL SVOC TCL |
| 1011002-16 | Mercury, Total 7470A |

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1011002 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 11/2/2010 10:18:00AM |
| Date Received: | 11/2/2010 10:00:00AM | Logged In By: | Chino Ortiz |
| Received By: | Chino Ortiz | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

| | |
|---|---|
| Shipping Container in good condition? | Y |
| Custody seals present on shipping container? | N |
| Condition: | |
| Chain-of-Custody present? | Y |
| COC agrees with sample labels? | Y |
| COC signed? | Y |
| Packing present in shipping container? | Y |
| Custody seals present on sample bottles? | Y |
| Condition: | |
| Samples intact? | Y |
| Sufficient volume for requested tests? | Y |
| Preservation confirmed? | Y |
| Are there Volatiles samples present? | N |
| Has Zero Headspace? | N/A |
| Total number of bottles: | |
| Total number of samples: | 17 |

Comments:

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-3

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/2010 | GKHMS-GW-014-1010 | 09:30 | **SW846 8260B** | GKHMS-GW014 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-014-1010 | 09:30 | **SW846 8720D/8270DSIM** | GKHMS-GW014 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-014-1010 | 09:30 | **SW846 6020A** | GKHMS-GW014 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-015-1010 | 10:00 | **SW846 8260B** | GKHMS-GW015 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-015-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW015 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-015-1010 | 10:00 | **SW846 6020A** | GKHMS-GW015 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-016-1010 | 10:30 | **SW846 8260B** | GKHMS-GW016 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-016-1010 | 10:30 | **SW846 8720D/8270DSIM** | GKHMS-GW016 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-016-1010 | 10:30 | **SW846 6020A** | GKHMS-GW016 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-024-1010 | 13:00 | **SW846 8260B** | GKHMS-GW024 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-024-1010 | 13:00 | **SW846 8720D/8270DSIM** | GKHMS-GW024 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-024-1010 | 13:00 | **SW846 6020A** | GKHMS-GW024 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-025-1010 | 11:40 | **SW846 8260B** | GKHMS-GW025 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-025-1010 | 11:40 | **SW846 8720D/8270DSIM** | GKHMS-GW025 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-025-1010 | 11:40 | **SW846 6020A** | GKHMS-GW025 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-034D-1010 | 08:40 | **SW846 8260B** | GKHMS-GW034D | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-034D-1010 | 08:40 | **SW846 8720D/8270DSIM** | GKHMS-GW034D | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-034D-1010 | 08:40 | **SW846 6020A** | GKHMS-GW034D | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-TB-02 | 08:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 10/31/2010 | GKHMS-GW-026-1010 | 10:40 | **SW846 8260B** | GKHMS-GW026 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-026-1010 | 10:40 | **SW846 8720D/8270DSIM** | GKHMS-GW026 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-026-1010 | 10:40 | **SW846 6020A** | GKHMS-GW026 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |

1011002

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/31/2010 | GKHMS-GW-027-1010 | 12:20 | **SW846 8260B** | GKHMS-GW027 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-027-1010 | 12:20 | **SW846 8720D/8270DSIM** | GKHMS-GW027 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-027-1010 | 12:20 | **SW846 6020A** | GKHMS-GW027 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-028-1010 | 15:00 | **SW846 8260B** | GKHMS-GW028 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-028-1010 | 15:00 | **SW846 8720D/8270DSIM** | GKHMS-GW028 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-028-1010 | 15:00 | **SW846 6020A** | GKHMS-GW028 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-029-1010 | 13:00 | **SW846 8260B** | GKHMS-GW029 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-029-1010 | 13:00 | **SW846 8720D/8270DSIM** | GKHMS-GW029 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-029-1010 | 13:00 | **SW846 6020A** | GKHMS-GW029 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-030-1010 | 11:40 | **SW846 8260B** | GKHMS-GW030 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-030-1010 | 11:40 | **SW846 8720D/8270DSIM** | GKHMS-GW030 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-030-1010 | 11:40 | **SW846 6020A** | GKHMS-GW030 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-033D-1010 | 10:00 | **SW846 8260B** | GKHMS-GW033D | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-033D-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW033D | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-033D-1010 | 10:00 | **SW846 6020A** | GKHMS-GW033D | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-020-1010 | 10:00 | **SW846 8260B** | GKHMS-GW020 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-020-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW020 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-020-1010 | 10:00 | **SW846 6020A** | GKHMS-GW020 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8260B** | GKHMS-GW021 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8720D/8270DSIM** | GKHMS-GW021 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 6020A** | GKHMS-GW021 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8082A** | GKHMS-GW021 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8081B** | GKHMS-GW021 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8260B** | GKHMS-GW031 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8720D/8270DSIM** | GKHMS-GW031 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 6020A** | GKHMS-GW031 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8082A** | GKHMS-GW031 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8081B** | GKHMS-GW031 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-032D-1010 | 08:40 | **SW846 8260B** | GKHMS-GW032D | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-032D-1010 | 08:40 | **SW846 8720D/8270DSIM** | GKHMS-GW032D | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-032D-1010 | 08:40 | **SW846 6020A** | GKHMS-GW032D | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/01/2010 | 16:30 | **Federal Express** | 11/01/2010 | 17:00 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Fed Ex | 11-2-10 | | | 11/2/10 | 10:00 |

| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| Comments: | | | | | |

CENTAURI LABS™

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (75 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 120) |
|---|---|---|---|---|
| 1011002-01 | 86 | 89 | 112 | 95 |
| 1011002-02 | 90 | 89 | 115 | 94 |
| 1011002-03 | 91 | 87 | 98 | 96 |
| 1011002-04 | 92 | 89 | 98 | 102 |
| 1011002-05 | 89 | 88 | 96 | 99 |
| 1011002-06 | 102 | 89 | 103 | 99 |
| 1011002-07 | 96 | 90 | 102 | 101 |
| 1011002-08 | 93 | 90 | 100 | 98 |
| 1011002-09 | 92 | 98 | 99 | 97 |
| 1011002-10 | 99 | 96 | 102 | 97 |
| 1011002-11 | 98 | 98 | 104 | 97 |
| 1011002-12 | 112 | 96 | 111 | 95 |
| 1011002-13 | 99 | 96 | 103 | 97 |
| 1011002-14 | 98 | 104 | 101 | 99 |
| 1011002-15 | 99 | 97 | 100 | 95 |
| 1011002-16 | 106 | 100 | 105 | 98 |
| 1011002-17 | 89 | 94 | 114 | 94 |
| B047032-BLK1 | 86 | 96 | 92 | 96 |
| B047032-BS1 | 99 | 109 | 100 | 100 |
| B047032-BSD1 | 94 | 104 | 96 | 98 |

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047032-BLK1 | Batch: | B047032 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-GW-027-1010 | 1011002-08 | B02890233.D | 20:50 |
| LCS Dup | B047032-BSD1 | B02890224.D | 16:49 |
| GKHMS-TB-02 | 1011002-17 | B02890225.D | 17:16 |
| GKHMS-GW-014-1010 | 1011002-01 | B02890226.D | 17:43 |
| GKHMS-GW-015-1010 | 1011002-02 | B02890227.D | 18:10 |
| GKHMS-GW-016-1010 | 1011002-03 | B02890228.D | 18:36 |
| GKHMS-GW-024-1010 | 1011002-04 | B02890229.D | 19:03 |
| GKHMS-GW-025-1010 | 1011002-05 | B02890230.D | 19:30 |
| LCS | B047032-BS1 | B02890223.D | 16:22 |
| GKHMS-GW-026-1010 | 1011002-07 | B02890232.D | 20:24 |
| GKHMS-GW-032D-1010 | 1011002-16 | B02890241.D | 00:26 |
| GKHMS-GW-028-1010 | 1011002-09 | B02890234.D | 21:17 |
| GKHMS-GW-029-1010 | 1011002-10 | B02890235.D | 21:44 |
| GKHMS-GW-030-1010 | 1011002-11 | B02890236.D | 22:11 |
| GKHMS-GW-033D-1010 | 1011002-12 | B02890237.D | 22:38 |
| GKHMS-GW-020-1010 | 1011002-13 | B02890238.D | 23:05 |
| GKHMS-GW-021-1010 | 1011002-14 | B02890239.D | 23:32 |
| GKHMS-GW-031-1010 | 1011002-15 | B02890240.D | 23:59 |
| GKHMS-GW-034D-1010 | 1011002-06 | B02890231.D | 19:57 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047032-BLK1 | File ID: | B02890222.D |
| Sampled: | | Prepared: | 11/04/10 15:55 | Analyzed: | 11/04/10 15:55 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047032 | Sequence: | S047020 | Calibration: | 0111603 |
| Instrument: | GCMS-B | | | | |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.00 | U |
| 78-93-3 | 2-Butanone | 5.00 | U |
| 95-49-8 | 2-Chlorotoluene | 1.00 | U |
| 591-78-6 | 2-Hexanone | 5.00 | U |
| 106-43-4 | 4-Chlorotoluene | 1.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.00 | U |

CENTAURI LABS ™

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | B047032-BLK1 | File ID: | B02890222.D | | |
| Sampled: | | Prepared: | 11/04/10 15:55 | Analyzed: | 11/04/10 15:55 | | |
| Solids: | | Preparation: | EPA 5030B | Dilution: | | | |
| Batch: | B047032 | Sequence: | S047020 | Calibration: | 0111603 | Instrument: | GCMS-B |
| Column: | 1 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.00 | U |
| 75-05-8 | Acetonitrile | 10.0 | U |
| 107-13-1 | Acrylonitrile | 5.00 | U |
| 71-43-2 | Benzene | 1.00 | U |
| 108-86-1 | Bromobenzene | 1.00 | U |
| 74-97-5 | Bromochloromethane | 1.00 | U |
| 75-27-4 | Bromodichloromethane | 1.00 | U |
| 75-25-2 | Bromoform | 1.00 | U |
| 74-83-9 | Bromomethane | 1.00 | U |
| 75-15-0 | Carbon disulfide | 1.00 | U |
| 56-23-5 | Carbon tetrachloride | 1.00 | U |
| 108-90-7 | Chlorobenzene | 1.00 | U |
| 124-48-1 | Chlorodibromomethane | 1.00 | U |
| 75-00-3 | Chloroethane | 1.00 | U |
| 67-66-3 | Chloroform | 1.00 | U |
| 74-87-3 | Chloromethane | 1.00 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U |
| 110-82-7 | Cyclohexane | 1.00 | U |
| 74-95-3 | Dibromomethane | 1.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U |
| 97-63-2 | Ethyl methacrylate | 1.00 | U |
| 100-41-4 | Ethylbenzene | 1.00 | U |
| 76-13-1 | Freon 113 | 1.00 | U |
| 87-68-3 | Hexachlorobutadiene | 1.00 | U |
| 74-88-4 | Iodomethane | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047032-BLK1 | File ID: | B02890222.D |
| Sampled: | | Prepared: | 11/04/10 15:55 | Analyzed: | 11/04/10 15:55 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047032 | Sequence: | S047020 | Calibration: | 0111603 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 98-82-8 | Isopropylbenzene | 1.00 | U |
| | m,p-Xylenes | 1.00 | U |
| 126-98-7 | Methacrylonitrile | 1.00 | U |
| 76-20-9 | Methyl Acetate | 1.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 1.00 | U |
| 108-87-2 | Methylcyclohexane | 1.00 | U |
| 75-09-2 | Methylene Chloride | 1.00 | U |
| 80-62-6 | Methylmethacrylate | 1.00 | U |
| 91-20-3 | Naphthalene | 1.00 | U |
| 104-51-8 | n-Butylbenzene | 1.00 | U |
| 103-65-1 | n-Propylbenzene | 1.00 | U |
| 95-47-6 | o-Xylene | 1.00 | U |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U |
| 107-12-0 | Propionitrile | 10.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.00 | U |
| 100-42-5 | Styrene | 1.00 | U |
| 98-06-6 | tert-Butylbenzene | 1.00 | U |
| 127-18-4 | Tetrachloroethene | 1.00 | U |
| 108-88-3 | Toluene | 1.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.00 | U |
| 79-01-6 | Trichloroethene | 1.00 | U |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U |
| 108-05-4 | Vinyl acetate | 1.00 | U |
| 75-01-4 | Vinyl chloride | 1.00 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047032 | Laboratory ID: | B047032-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 9.78 | 98 | | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 10.0 | 100 | | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.9 | 109 | | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.5 | 105 | | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 9.15 | 92 | | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 9.91 | 99 | | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.5 | 115 | | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 10.5 | 105 | | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 10.5 | 105 | | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 10.4 | 104 | | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 10.5 | 105 | | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 9.02 | 90 | | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 10.0 | 100 | | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 9.82 | 98 | | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 10.0 | 100 | | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 10.4 | 104 | | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.8 | 118 | | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 12.3 | 123 | | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 9.25 | 92 | | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 12.4 | 124 | | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 11.1 | 111 | | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 11.4 | 114 | | 75 - 125 |
| 2-Hexanone | 10.0 | 14.2 | 142 | * | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 11.8 | 118 | | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 11.7 | 117 | | 60 - 135 |
| Acetone | 10.0 | 20.2 | 202 | * | 40 - 140 |
| Acetonitrile | 100 | 120 | 120 | | 75 - 125 |
| Acrylonitrile | 10.0 | 8.16 | 82 | | 75 - 125 |
| Benzene | 10.0 | 10.4 | 104 | | 80 - 120 |
| Bromobenzene | 10.0 | 11.1 | 111 | | 75 - 125 |
| Bromochloromethane | 10.0 | 10.2 | 102 | | 65 - 130 |
| Bromodichloromethane | 10.0 | 9.62 | 96 | | 75 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047032 | Laboratory ID: | B047032-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 8.53 | 85 | 70 - 130 |
| Bromomethane | 10.0 | 3.19 | 32 | 30 - 145 |
| Carbon disulfide | 10.0 | 10.0 | 100 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 9.24 | 92 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.4 | 104 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 8.88 | 89 | 60 - 135 |
| Chloroethane | 10.0 | 8.61 | 86 | 60 - 135 |
| Chloroform | 10.0 | 9.58 | 96 | 65 - 135 |
| Chloromethane | 10.0 | 2.97 | 30 L * | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 11.2 | 112 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 10.1 | 101 | 70 - 130 |
| Cyclohexane | 10.0 | 9.63 | 96 | 75 - 125 |
| Dibromomethane | 10.0 | 10.2 | 102 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 2.38 | 24 L * | 30 - 155 |
| Ethyl methacrylate | 10.0 | 10.3 | 103 | 75 - 125 |
| Ethylbenzene | 10.0 | 10.6 | 106 | 75 - 125 |
| Freon 113 | 10.0 | 10.6 | 106 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 9.85 | 98 | 50 - 140 |
| Iodomethane | 10.0 | 5.16 | 52 L * | 75 - 125 |
| Isopropylbenzene | 10.0 | 12.0 | 120 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.2 | 111 | 75 - 130 |
| Methacrylonitrile | 10.0 | 9.83 | 98 | 75 - 125 |
| Methyl Acetate | 10.0 | 7.14 | 71 L * | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.0 | 100 | 65 - 125 |
| Methylcyclohexane | 10.0 | 9.93 | 99 | 75 - 125 |
| Methylene Chloride | 10.0 | 10.9 | 109 | 55 - 140 |
| Methylmethacrylate | 10.0 | 9.56 | 96 | 75 - 125 |
| Naphthalene | 10.0 | 9.01 | 90 | 55 - 140 |
| n-Butylbenzene | 10.0 | 10.6 | 106 | 70 - 135 |
| n-Propylbenzene | 10.0 | 11.1 | 111 | 70 - 130 |
| o-Xylene | 10.0 | 10.5 | 105 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 10.8 | 108 | 75 - 130 |

CENTAURI LABS ™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047032 | Laboratory ID: | B047032-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Propionitrile | 10.0 | 11.3 | 113 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 10.7 | 107 | 70 - 125 |
| Styrene | 10.0 | 10.5 | 105 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 11.4 | 114 | 70 - 130 |
| Tetrachloroethene | 10.0 | 11.7 | 117 | 45 - 150 |
| Toluene | 10.0 | 10.4 | 104 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 8.79 | 88 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 10.1 | 101 | 55 - 140 |
| Trichloroethene | 10.0 | 9.80 | 98 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 3.08 | 31 L * | 50 - 145 |
| Vinyl acetate | 20.0 | 16.6 | 83 | 75 - 125 |
| Vinyl chloride | 10.0 | 3.22 | 32 L * | 50 - 145 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 9.86 | 99 | 0.8 | 30 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 10.1 | 101 | 0.7 | 30 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.0 | 100 | 8 | 30 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.1 | 101 | 4 | 30 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 8.85 | 88 | 3 | 30 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 9.92 | 99 | 0.1 | 30 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.4 | 114 | 0.3 | 30 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 10.5 | 105 | 0.5 | 30 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 9.78 | 98 | 7 | 30 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 10.7 | 107 | 3 | 30 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 9.90 | 99 | 6 | 30 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 8.81 | 88 | 2 | 30 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 9.90 | 99 | 1 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 9.95 | 100 | 1 | 30 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 9.64 | 96 | 4 | 30 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 10.1 | 101 | 2 | 30 | 75 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047032 | Laboratory ID: | B047032-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | 10.0 | 11.2 | 112 | 5 | 30 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.2 | 112 | 9 | 30 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 9.19 | 92 | 0.7 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 11.1 | 111 | 11 | 30 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 10.7 | 107 | 4 | 30 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 10.9 | 109 | 4 | 30 | 75 - 125 |
| 2-Hexanone | 10.0 | 13.5 | 135 * | 5 | 30 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 11.2 | 112 | 5 | 30 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 11.2 | 112 | 4 | 30 | 60 - 135 |
| Acetone | 10.0 | 18.8 | 188 * | 7 | 30 | 40 - 140 |
| Acetonitrile | 100 | 111 | 111 | 8 | 30 | 75 - 125 |
| Acrylonitrile | 10.0 | 7.60 | 76 | 7 | 30 | 75 - 125 |
| Benzene | 10.0 | 10.2 | 102 | 2 | 30 | 80 - 120 |
| Bromobenzene | 10.0 | 10.4 | 104 | 6 | 30 | 75 - 125 |
| Bromochloromethane | 10.0 | 9.82 | 98 | 4 | 30 | 65 - 130 |
| Bromodichloromethane | 10.0 | 9.27 | 93 | 4 | 30 | 75 - 120 |
| Bromoform | 10.0 | 8.35 | 84 | 2 | 30 | 70 - 130 |
| Bromomethane | 10.0 | 4.35 | 44 | 31 | 30 | 30 - 145 |
| Carbon disulfide | 10.0 | 9.85 | 98 | 2 | 30 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 9.27 | 93 | 0.3 | 30 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.4 | 104 | 0.6 | 30 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 8.72 | 87 | 2 | 30 | 60 - 135 |
| Chloroethane | 10.0 | 10.7 | 107 | 22 | 30 | 60 - 135 |
| Chloroform | 10.0 | 9.47 | 95 | 1 | 30 | 65 - 135 |
| Chloromethane | 10.0 | 6.30 | 63 | 72 | 30 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 11.0 | 110 | 1 | 30 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 9.66 | 97 | 5 | 30 | 70 - 130 |
| Cyclohexane | 10.0 | 9.55 | 96 | 0.8 | 30 | 75 - 125 |
| Dibromomethane | 10.0 | 9.83 | 98 | 4 | 30 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 7.16 | 72 | 100 | 30 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 9.69 | 97 | 6 | 30 | 75 - 125 |
| Ethylbenzene | 10.0 | 10.8 | 108 | 1 | 30 | 75 - 125 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047032 | Laboratory ID: | B047032-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Freon 113 | 10.0 | 13.4 | 134 | * | 23 | 30 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.6 | 106 | | 7 | 30 | 50 - 140 |
| Iodomethane | 10.0 | 5.08 | 51 L | * | 2 | 30 | 75 - 125 |
| Isopropylbenzene | 10.0 | 12.0 | 120 | | 0.2 | 30 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.2 | 111 | | 0.2 | 30 | 75 - 130 |
| Methacrylonitrile | 10.0 | 9.22 | 92 | | 6 | 30 | 75 - 125 |
| Methyl Acetate | 10.0 | 6.73 | 67 L | * | 6 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 8.85 | 88 | | 13 | 30 | 65 - 125 |
| Methylcyclohexane | 10.0 | 9.92 | 99 | | 0.1 | 30 | 75 - 125 |
| Methylene Chloride | 10.0 | 9.95 | 100 | | 9 | 30 | 55 - 140 |
| Methylmethacrylate | 10.0 | 9.47 | 95 | | 0.9 | 30 | 75 - 125 |
| Naphthalene | 10.0 | 9.52 | 95 | | 6 | 30 | 55 - 140 |
| n-Butylbenzene | 10.0 | 11.1 | 111 | | 4 | 30 | 70 - 135 |
| n-Propylbenzene | 10.0 | 10.8 | 108 | | 2 | 30 | 70 - 130 |
| o-Xylene | 10.0 | 10.4 | 104 | | 1 | 30 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 10.1 | 101 | | 6 | 30 | 75 - 130 |
| Propionitrile | 10.0 | 10.8 | 108 | | 5 | 30 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 10.2 | 102 | | 5 | 30 | 70 - 125 |
| Styrene | 10.0 | 10.6 | 106 | | 0.2 | 30 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 10.9 | 109 | | 5 | 30 | 70 - 130 |
| Tetrachloroethene | 10.0 | 13.2 | 132 | | 12 | 30 | 45 - 150 |
| Toluene | 10.0 | 10.3 | 103 | | 1 | 30 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 8.54 | 85 | | 3 | 30 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 9.66 | 97 | | 5 | 30 | 55 - 140 |
| Trichloroethene | 10.0 | 9.83 | 98 | | 0.3 | 30 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 8.91 | 89 | | 97 | 30 | 50 - 145 |
| Vinyl acetate | 20.0 | 14.8 | 74 L | * | 11 | 30 | 75 - 125 |
| Vinyl chloride | 10.0 | 8.75 | 88 | | 92 | 30 | 50 - 145 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890183.D | Injection Date: | 11/02/10 |
| Instrument ID: | GCMS-B | Injection Time: | 16:48 |
| Sequence: | S047018 | Lab Sample ID: | S047018-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 20.9 | PASS |
| 75 | 30 - 60% of 95 | 51 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.48 | PASS |
| 173 | Less than 2% of 174 | 0.0442 | PASS |
| 174 | 50 - 200% of 95 | 94.8 | PASS |
| 175 | 5 - 9% of 174 | 7.27 | PASS |
| 176 | 95 - 101% of 174 | 96.3 | PASS |
| 177 | 5 - 9% of 176 | 6.45 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047018-CAL1 | B02890184.D | 11/02/2010 | 17:14:00 |
| Cal Standard | S047018-CAL2 | B02890185.D | 11/02/2010 | 17:41:00 |
| Cal Standard | S047018-CAL3 | B02890186.D | 11/02/2010 | 18:08:00 |
| Cal Standard | S047018-CAL4 | B02890187.D | 11/02/2010 | 18:34:00 |
| Cal Standard | S047018-CAL5 | B02890188.D | 11/02/2010 | 19:01:00 |
| Cal Standard | S047018-CAL6 | B02890189.D | 11/02/2010 | 19:28:00 |
| Cal Standard | S047018-CAL7 | B02890190.D | 11/02/2010 | 19:54:00 |
| Cal Standard | S047018-CAL8 | B02890191.D | 11/02/2010 | 20:21:00 |
| Secondary Cal Check | S047018-SCV1 | B02890193.D | 11/03/2010 | 7:56:00 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.137718 | 1.080758 | 0.9242545 | 1.054373 | 1.196939 | 1.244954 |
| 1,1,1-Trichloroethane | 0.6321166 | 0.6338306 | 0.5623216 | 0.6294249 | 0.7143744 | 0.7353097 |
| 1,1,2,2-Tetrachloroethane | 0.6463594 | 0.5723211 | 0.4608509 | 0.4430741 | 0.512564 | 0.5088101 |
| 1,1,2-Trichloroethane | 0.370786 | 0.307751 | 0.2132762 | 0.2156686 | 0.2102087 | 0.1782096 |
| 1,1-Dichloroethane | 0.9244567 | 0.8779312 | 0.7340727 | 0.7625004 | 0.8038319 | 0.7567345 |
| 1,1-Dichloroethene | 0.4102824 | 0.3960432 | 0.3431403 | 0.3889274 | 0.4186355 | 0.3851871 |
| 1,1-Dichloropropene | 1.535436 | 1.402195 | 0.9870536 | 1.10091 | 1.050578 | 0.9003959 |
| 1,2,3-Trichlorobenzene | 4.444535E-02 | 4.992828E-02 | 0.0459218 | 6.772354E-02 | 0.1153055 | 0.1542084 |
| 1,2,3-Trichloropropane | 0.5402641 | ~~0.4894522~~ | 0.4079534 | 0.3956316 | 0.4569117 | 0.4584619 |
| 1,2,4-Trichlorobenzene | 6.058071E-02 | 6.835081E-02 | 5.678809E-02 | 0.1036737 | 0.1624796 | 0.2118533 |
| 1,2,4-Trimethylbenzene | 3.789265 | 4.299713 | 4.095353 | 4.642616 | 5.541918 | 6.08496 |
| 1,2-Dibromo-3-chloropropane | ~~0~~ | ~~3.039843E-03~~ | 7.344711E-03 | 8.308987E-03 | 1.067826E-02 | 0.0111616 |
| 1,2-Dibromoethane | 0.5538098 | 0.4947838 | 0.4114293 | 0.4330405 | 0.4768849 | 0.4816186 |
| 1,2-Dichlorobenzene | 0.3172798 | 0.3342637 | 0.3247484 | 0.335396 | 0.3889955 | 0.4083953 |
| 1,2-Dichloroethane | 0.9471049 | 0.741011 | 0.4910138 | 0.4793356 | 0.4471924 | 0.3734511 |
| 1,2-Dichloroethene (total) | 0.5525286 | 0.5446109 | 0.4699761 | 0.4977293 | 0.5358538 | 0.5181266 |
| 1,2-Dichloropropane | 0.9053525 | 0.7539747 | 0.5198543 | 0.5511534 | 0.5161694 | 0.4445078 |
| 1,3,5-Trimethylbenzene | ~~4.659586~~ | 5.162566 | 4.792872 | 5.305948 | 6.378154 | 6.787983 |
| 1,3-Dichlorobenzene | 2.143837 | 2.225036 | 2.010944 | 2.143708 | 2.537025 | 2.775413 |
| 1,3-Dichloropropane | 1.279034 | 1.164588 | 0.9333275 | 0.9723014 | 1.094678 | 1.128046 |
| 1,4-Dichlorobenzene | 2.199035 | 2.214173 | 1.958956 | 2.086143 | 2.486161 | 2.69695 |
| 2,2-Dichloropropane | 0.3589357 | 0.3401283 | 0.2798627 | 0.3072379 | 0.3447387 | 0.3524 |
| 2-Butanone | ~~0.1625636~~ | 0.1157366 | 8.246859E-02 | 7.652483E-02 | 6.955589E-02 | 5.526651E-02 |
| 2-Chloroethylvinyl Ether | ~~0~~ | 0 | 12370.25 | 11024.1 | 10527.95 | 9784.1 |
| 2-Chlorotoluene | 4.463599 | 4.553371 | 3.930855 | 4.153768 | 4.84237 | 5.032948 |
| 2-Hexanone | 0.2348535 | 0.2151137 | 0.1951663 | 0.2002392 | 0.2254449 | 0.2304904 |
| 4-Chlorotoluene | 4.358868 | 4.596561 | 4.182945 | 4.486703 | 5.342988 | 5.656096 |
| 4-Methyl-2-pentanone | 0.717645 | 0.5268999 | 0.372503 | 0.3501974 | 0.3783573 | 0.3659338 |
| Acetone | 7.932622E-02 | 5.819789E-02 | 4.484222E-02 | 4.055833E-02 | 3.859258E-02 | 3.152554E-02 |
| Acetonitrile | 24429.4 | 17991.5 | 17819.8 | 17315.12 | 16905.35 | 17043.86 |
| Acrylonitrile | ~~48394.4~~ | 39541.8 | 40025.1 | 41381.72 | 43518.7 | 45597.29 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Benzene | 4.192009 | 3.70764 | 2.599532 | 2.788104 | 2.667674 | 2.27032 |
| Bromobenzene | 1.34629 | 1.320823 | 1.111461 | 1.145827 | 1.303878 | 1.312086 |
| Bromochloromethane | 0.1154854 | 0.1180547 | 9.977108E-02 | 9.794437E-02 | 0.1072293 | 9.930819E-02 |
| Bromodichloromethane | 0.9481987 | 0.8229535 | 0.5723709 | 0.6039304 | 0.5658161 | 0.4893361 |
| Bromoform | 0.3812644 | ~~0.368309~~ | 0.3118722 | 0.3269331 | 0.3882584 | 0.3938927 |
| Bromomethane | 0.1091412 | 0.1174927 | 9.259139E-02 | 8.300619E-02 | 6.665446E-02 | 0.0581632 |
| Carbon disulfide | 1.39458 | 1.358362 | 1.187775 | 1.341659 | 1.438331 | 1.268423 |
| Carbon tetrachloride | ~~2.27554~~ | ~~1.397602~~ | 0.9233567 | 0.7612746 | 0.7422998 | 0.7139435 |
| Chlorobenzene | 4.079421 | 3.871055 | 3.215587 | 3.452899 | 3.757074 | 3.785151 |
| Chlorodibromomethane | 0.7241622 | ~~0.6521599~~ | 0.5744324 | 0.6220073 | 0.704879 | 0.7279689 |
| Chloroethane | 0.4146973 | 0.3777388 | 0.3124114 | 0.2977452 | 0.2908577 | ~~0.1652325~~ |
| Chloroform | 0.6778612 | 0.6488071 | 0.5571636 | 0.5765395 | 0.6038434 | 0.6206726 |
| Chloromethane | ~~0.6367654~~ | 0.6515399 | 0.541889 | 0.4961354 | 0.5190944 | 0.4470201 |
| cis-1,2-Dichloroethene | 0.4031365 | 0.3865564 | 0.3441134 | 0.3636593 | 0.3938112 | 0.3905888 |
| cis-1,3-Dichloropropene | 0.5281696 | 0.4934648 | 0.3674466 | 0.4009856 | 0.4008292 | 0.3473361 |
| Cyclohexane | 844524 | 802192 | 868510 | 1253787 | 1391769 | 1675181 |
| Dibromomethane | 0.2896865 | 0.2411977 | 0.1639727 | 0.1612166 | 0.1557729 | 0.1273626 |
| Dichlorodifluoromethane | 0.4176431 | 0.4024295 | 0.3474427 | 0.375663 | 0.3832135 | 0.3222187 |
| Ethyl methacrylate | 153122 | ~~137576~~ | 157596 | 182532.4 | 203014.4 | 235087.7 |
| Ethylbenzene | 7.23388 | 7.168635 | 6.289067 | 7.140819 | 8.201071 | 8.490902 |
| Freon 113 | 1131932 | 1048244 | 1063729 | 1299291 | 1351340 | 1487695 |
| Hexachlorobutadiene | 0.1441284 | 0.1908431 | 0.2061281 | 0.2621121 | 0.3069986 | 0.3635383 |
| Iodomethane | ~~2908628~~ | ~~2711920~~ | 2770712 | 3517012 | 3739903 | 3938156 |
| Isobutyl alcohol | 0 | 5053.55 | 5331.05 | 5510.57 | 5711.12 | 6341.158 |
| Isopropylbenzene | 6.11879 | 6.505924 | 6.010448 | 6.762518 | 7.887533 | 8.224195 |
| m,p-Xylenes | 2.836991 | 2.878909 | 2.539297 | 2.840677 | 3.302768 | 3.352229 |
| Methacrylonitrile | 41186 | 42685 | 43175.5 | 46394.2 | 53240.2 | 61969.5 |
| Methyl Acetate | ~~0~~ | ~~26205~~ | 27256 | 26192.2 | 30089.8 | 33124.1 |
| Methyl tert-Butyl Ether | 0.5841319 | 0.5135229 | 0.4291903 | 0.3843388 | 0.4212384 | 0.3913302 |
| Methylcyclohexane | 707878 | 702377 | 750711.5 | 1130364 | 1219879 | 1460349 |
| Methylene Chloride | ~~0.8522035~~ | 0.6279542 | 0.4094029 | 0.3490936 | 0.3340957 | 0.2772488 |

CENTAURI LABS™

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Methylmethacrylate | 505896 | 476064 | 500459 | 720506 | 788441.2 | 944835 |
| Naphthalene | ~~5.762227E-02~~ | 7.264312E-02 | 6.104463E-02 | 6.400494E-02 | 9.291294E-02 | 0.1379258 |
| n-Butylbenzene | 1.864631 | 2.490591 | 2.979331 | 4.291665 | 5.416215 | 6.509997 |
| n-Propylbenzene | 7.179015 | 7.68441 | 7.091864 | 7.998169 | 9.40427 | 9.88256 |
| o-Xylene | 2.315662 | 2.399768 | 2.112624 | 2.344121 | 2.685407 | 2.734282 |
| p-Isopropyltoluene | 4.23615 | 4.75218 | 4.751699 | 5.60829 | 6.706934 | 7.511985 |
| Propionitrile | ~~0~~ | 7930 | 12056 | 14559.4 | 15532.9 | 17460.95 |
| sec-Butylbenzene | 6.024264 | 6.686108 | 6.507132 | 7.501995 | 8.903931 | 9.69139 |
| Styrene | 3.357025 | 3.590958 | 3.220363 | 3.518982 | 4.130541 | 4.249643 |
| tert-Butylbenzene | 4.028291 | 4.402848 | 4.207443 | 4.677052 | 5.49207 | 5.859534 |
| Tetrachloroethene | 1.992649 | 1.962984 | 1.650873 | 2.000693 | 2.26959 | 2.437969 |
| Toluene | 2.625611 | 2.307793 | 1.648618 | 1.716929 | 1.625029 | 1.363502 |
| trans-1,2-Dichloroethene | 0.7019206 | 0.7026653 | 0.5958387 | 0.6317993 | 0.6778965 | 0.6456645 |
| trans-1,3-Dichloropropene | 0.5281696 | 0.4934648 | 0.3674466 | 0.4009856 | 0.4008292 | 0.3473361 |
| Trichloroethene | 1.153216 | 1.192551 | 0.6802427 | 0.7119551 | 0.678534 | 0.5920085 |
| Trichlorofluoromethane | 1.029739 | 1.00263 | 0.8513793 | 0.9384542 | 0.9785098 | 0.8833728 |
| Vinyl acetate | 233845 | 175818.5 | 170431.8 | 226746.4 | 244818.5 | 293572.8 |
| Vinyl chloride | 0.4243422 | 0.4715637 | 0.4275189 | 0.4662773 | 0.4961119 | 0.4291982 |
| Xylene (Total) | 2.663215 | 2.719196 | 2.397072 | 2.675158 | 3.096981 | 3.146246 |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | | |
|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS |
| Calibration: | 0111603 | | Instrument: | GCMS-B |
| | | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.146845 | 1.146031 | | | | |
| 1,1,1-Trichloroethane | 0.6681914 | 0.7240292 | | | | |
| 1,1,2,2-Tetrachloroethane | 0.4875366 | 0.4545363 | | | | |
| 1,1,2-Trichloroethane | 0.1326528 | 0.1986011 | | | | |
| 1,1-Dichloroethane | 0.6417875 | 0.6728711 | | | | |
| 1,1-Dichloroethene | 0.309983 | 0.3169922 | | | | |
| 1,1-Dichloropropene | 0.6614118 | 1.058379 | | | | |
| 1,2,3-Trichlorobenzene | 0.2004096 | ~~0.1934626~~ | | | | |
| 1,2,3-Trichloropropane | 0.4451584 | 0.4269999 | | | | |
| 1,2,4-Trichlorobenzene | 0.2755314 | ~~0.2639965~~ | | | | |
| 1,2,4-Trimethylbenzene | 6.38353 | 6.081748 | | | | |
| 1,2-Dibromo-3-chloropropane | 1.233261E-02 | 1.102678E-02 | | | | |
| 1,2-Dibromoethane | 0.4467425 | 0.4725344 | | | | |
| 1,2-Dichlorobenzene | ~~0.4326207~~ | ~~0.3851788~~ | | | | |
| 1,2-Dichloroethane | 0.2720649 | 0.4456735 | | | | |
| 1,2-Dichloroethene (total) | 0.4443942 | 0.4588481 | | | | |
| 1,2-Dichloropropane | 0.3317182 | 0.5241441 | | | | |
| 1,3,5-Trimethylbenzene | 6.877292 | 6.361025 | | | | |
| 1,3-Dichlorobenzene | 2.914371 | 2.751748 | | | | |
| 1,3-Dichloropropane | 1.052159 | 1.105116 | | | | |
| 1,4-Dichlorobenzene | 2.757223 | 2.597132 | | | | |
| 2,2-Dichloropropane | 0.3300635 | 0.3790149 | | | | |
| 2-Butanone | 4.105142E-02 | 6.636826E-02 | | | | |
| 2-Chloroethylvinyl Ether | 9740.188 | ~~14224.43~~ | | | | |
| 2-Chlorotoluene | 5.116078 | 4.962837 | | | | |
| 2-Hexanone | 0.2195226 | 0.2313825 | | | | |
| 4-Chlorotoluene | 5.701094 | 5.319067 | | | | |
| 4-Methyl-2-pentanone | 0.3475591 | 0.3617943 | | | | |
| Acetone | 2.663043E-02 | ~~2.464636E-02~~ | | | | |
| Acetonitrile | 16772.16 | 18492.47 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Acrylonitrile | 44068.54 | 51841.04 | | | | |
| Benzene | 1.699583 | 2.629998 | | | | |
| Bromobenzene | 1.347468 | 1.339111 | | | | |
| Bromochloromethane | 8.762257E-02 | 9.221822E-02 | | | | |
| Bromodichloromethane | 0.3671 | 0.6071681 | | | | |
| Bromoform | 0.3884717 | 0.3883963 | | | | |
| Bromomethane | 5.521866E-02 | 5.946826E-02 | | | | |
| Carbon disulfide | 1.068738 | 1.031147 | | | | |
| Carbon tetrachloride | 0.6376776 | 0.6868978 | | | | |
| Chlorobenzene | 3.667434 | 3.764755 | | | | |
| Chlorodibromomethane | 0.6893892 | 0.7392875 | | | | |
| Chloroethane | ~~5.854633E-02~~ | ~~6.183004E-02~~ | | | | |
| Chloroform | 0.5665204 | 0.6197786 | | | | |
| Chloromethane | 0.434183 | 0.4687976 | | | | |
| cis-1,2-Dichloroethene | 0.3510586 | 0.3741284 | | | | |
| cis-1,3-Dichloropropene | 0.267889 | 0.4373949 | | | | |
| Cyclohexane | 1597908 | 1906565 | | | | |
| Dibromomethane | 9.147151E-02 | 0.1497874 | | | | |
| Dichlorodifluoromethane | 0.2818643 | 0.3163105 | | | | |
| Ethyl methacrylate | 250144.3 | 296612.4 | | | | |
| Ethylbenzene | 8.092514 | 7.984863 | | | | |
| Freon 113 | 1341143 | 1624420 | | | | |
| Hexachlorobutadiene | 0.4261812 | ~~0.4007819~~ | | | | |
| Iodomethane | 3591655 | 4038614 | | | | |
| Isobutyl alcohol | 6353.516 | 7769.473 | | | | |
| Isopropylbenzene | 8.230303 | 7.999815 | | | | |
| m,p-Xylenes | 3.090347 | 2.961936 | | | | |
| Methacrylonitrile | 62907.77 | 76639.66 | | | | |
| Methyl Acetate | 32221.82 | 39352.96 | | | | |
| Methyl tert-Butyl Ether | 0.3508026 | 0.3704173 | | | | |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Methylcyclohexane | 1468681 | 1708431 | | | | |
| Methylene Chloride | 0.2290044 | 0.2278979 | | | | |
| Methylmethacrylate | 884195.2 | 1050111 | | | | |
| Naphthalene | 0.1920554 | ~~0.1908091~~ | | | | |
| n-Butylbenzene | 6.844577 | ~~6.341841~~ | | | | |
| n-Propylbenzene | 9.976176 | 9.309088 | | | | |
| o-Xylene | 2.681401 | 2.643483 | | | | |
| p-Isopropyltoluene | 7.799253 | 7.24682 | | | | |
| Propionitrile | 18030.47 | 20792.8 | | | | |
| sec-Butylbenzene | 9.953442 | 9.116488 | | | | |
| Styrene | 4.129297 | 4.09286 | | | | |
| tert-Butylbenzene | 6.039186 | 5.797349 | | | | |
| Tetrachloroethene | 2.341865 | 2.449281 | | | | |
| Toluene | 1.043303 | 1.614309 | | | | |
| trans-1,2-Dichloroethene | 0.5377297 | 0.543568 | | | | |
| trans-1,3-Dichloropropene | 0.267889 | 0.4373949 | | | | |
| Trichloroethene | 0.4531898 | 0.7291313 | | | | |
| Trichlorofluoromethane | 0.7337462 | 0.763379 | | | | |
| Vinyl acetate | 275147.8 | 313925.4 | | | | |
| Vinyl chloride | 0.3840682 | 0.420793 | | | | |
| Xylene (Total) | 2.954033 | 2.855786 | | | | |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.116484 | 8.78287 | | | 15 | |
| 1,1,1-Trichloroethane | 0.6624498 | 8.964297 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.5107566 | 13.43412 | | | 15 | |
| 1,1,2-Trichloroethane | 0.2283942 | 33.04235 | | | 15 | * |
| 1,1-Dichloroethane | 0.7717732 | 12.39146 | | | 15 | |
| 1,1-Dichloroethene | 0.3711489 | 11.32993 | | | 15 | |
| 1,1-Dichloropropene | 1.087045 | 25.28223 | | | 15 | * |
| 1,2,3-Trichlorobenzene | 9.684893E-02 | 63.57313 | 0.9832031 | | | |
| 1,2,3-Trichloropropane | 0.4473402 | 10.60114 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.1341797 | 63.44623 | 0.9839389 | | | |
| 1,2,4-Trimethylbenzene | 5.114888 | 20.03623 | 0.9985987 | | | |
| 1,2-Dibromo-3-chloropropane | 1.014216E-02 | 18.75626 | | | 15 | * |
| 1,2-Dibromoethane | 0.4713555 | 9.195251 | | | 15 | |
| 1,2-Dichlorobenzene | 0.3515131 | 10.70968 | | 0.9992979 | | |
| 1,2-Dichloroethane | 0.5246059 | 41.2223 | | | 15 | * |
| 1,2-Dichloroethene (total) | 0.5027585 | 8.233519 | | | 15 | |
| 1,2-Dichloropropane | 0.5683593 | 31.66195 | | | 15 | * |
| 1,3,5-Trimethylbenzene | 5.952263 | 14.20284 | | | 15 | |
| 1,3-Dichlorobenzene | 2.43776 | 14.29359 | | | 15 | |
| 1,3-Dichloropropane | 1.091156 | 9.968286 | | | 15 | |
| 1,4-Dichlorobenzene | 2.374472 | 12.58217 | | | 15 | |
| 2,2-Dichloropropane | 0.3365477 | 9.227036 | | | 15 | |
| 2-Butanone | 7.242459E-02 | 32.46569 | | | 15 | * |
| 2-Chloroethylvinyl Ether | 8907.764 | 50.18028 | 0.9980411 | | | |
| 2-Chlorotoluene | 4.631978 | 9.316767 | | | 15 | |
| 2-Hexanone | 0.2190266 | 6.713678 | | | 15 | |
| 4-Chlorotoluene | 4.95554 | 12.37025 | | | 15 | |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.4276112 | 30.61629 | 0.9991402 | | | |
| Acetone | 0.0456676 | 39.26457 | | 0.9996086 | | |
| Acetonitrile | 18346.21 | 13.78049 | 0.9962317 | | | |
| Acrylonitrile | 43710.6 | 9.625617 | | | 15 | |
| Benzene | 2.819357 | 27.91782 | | | 15 | * |
| Bromobenzene | 1.278368 | 7.367428 | | | 15 | |
| Bromochloromethane | 0.1022042 | 10.4447 | | | 15 | |
| Bromodichloromethane | 0.6221092 | 29.48529 | | | 15 | * |
| Bromoform | 0.3684413 | 9.2223 | | | 15 | |
| Bromomethane | 0.080217 | 30.2169 | 0.9964676 | | | |
| Carbon disulfide | 1.261127 | 12.00646 | | | 15 | |
| Carbon tetrachloride | 0.7442417 | 13.15656 | | | 15 | |
| Chlorobenzene | 3.699172 | 7.113433 | | | 15 | |
| Chlorodibromomethane | 0.6831609 | 9.045344 | 0.9979304 | | | |
| Chloroethane | 0.3386901 | 16.14272 | 0.9998514 | | | |
| Chloroform | 0.6088983 | 6.842336 | | | 15 | |
| Chloromethane | 0.5083799 | 14.52575 | | | 15 | |
| cis-1,2-Dichloroethene | 0.3758816 | 5.663625 | | | 15 | |
| cis-1,3-Dichloropropene | 0.4054395 | 20.34171 | | | 15 | * |
| Cyclohexane | 1292555 | 32.68008 | | | 15 | * |
| Dibromomethane | 0.1725585 | 36.68483 | | | 15 | * |
| Dichlorodifluoromethane | 0.3558482 | 13.16741 | | | 15 | |
| Ethyl methacrylate | 211158.5 | 24.84804 | | | 15 | * |
| Ethylbenzene | 7.575219 | 9.713854 | | | 15 | |
| Freon 113 | 1293474 | 15.78787 | | | 15 | * |
| Hexachlorobutadiene | 0.2714185 | 37.07245 | | | 15 | * |
| Iodomethane | 3599342 | 12.55451 | | | 15 | |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 5258.805 | 43.50744 | | | 15 | * |
| Isopropylbenzene | 7.217441 | 13.32835 | | | 15 | |
| m,p-Xylenes | 2.975394 | 8.976698 | | | 15 | |
| Methacrylonitrile | 53524.73 | 23.64737 | | | 15 | * |
| Methyl Acetate | 31372.81 | 15.14661 | | | 15 | * |
| Methyl tert-Butyl Ether | 0.4306216 | 18.45499 | 0.9976476 | | | |
| Methylcyclohexane | 1143584 | 34.18692 | 0.9910474 | | | |
| Methylene Chloride | 0.3506711 | 39.63032 | | 0.9978228 | | |
| Methylmethacrylate | 733813.5 | 30.1738 | | | 15 | * |
| Naphthalene | 0.1034311 | 50.15162 | 0.9766376 | | | |
| n-Butylbenzene | 4.34243 | 45.61511 | 0.9977579 | | | |
| n-Propylbenzene | 8.565694 | 14.07401 | | | 15 | |
| o-Xylene | 2.489593 | 9.112564 | 0.9996328 | | | |
| p-Isopropyltoluene | 6.076664 | 23.19845 | 0.9973411 | | | |
| Propionitrile | 15194.65 | 27.87815 | | | 15 | * |
| sec-Butylbenzene | 8.048094 | 19.26544 | 0.9965027 | | | |
| Styrene | 3.786209 | 10.74699 | | | 15 | |
| tert-Butylbenzene | 5.062972 | 16.1811 | 0.9990533 | | | |
| Tetrachloroethene | 2.138238 | 13.15271 | | | 15 | |
| Toluene | 1.743137 | 28.86084 | | | 15 | * |
| trans-1,2-Dichloroethene | 0.6296353 | 10.42258 | | | 15 | |
| trans-1,3-Dichloropropene | 0.4054395 | 20.34171 | | | 15 | * |
| Trichloroethene | 0.7738535 | 33.79619 | | | 15 | * |
| Trichlorofluoromethane | 0.8976513 | 12.19688 | | | 15 | |
| Vinyl acetate | 241788.3 | 21.39966 | | | 15 | * |
| Vinyl chloride | 0.4399842 | 8.081486 | | | 15 | |
| Xylene (Total) | 2.813461 | 8.877199 | | | 15 | |

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# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 11.3 | 1.116484 | 1.261601 | | 13.0 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.5 | 0.6624498 | 0.697089 | | 5.2 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 10.7 | 0.5107566 | 0.5448295 | | 6.7 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 10.3 | 0.2283942 | 0.2104327 | | -7.9 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 8.87 | 0.7717732 | 0.6838138 | | -11.4 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 9.94 | 0.3711489 | 0.3685955 | | -0.7 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 11.6 | 1.087045 | 1.14185 | | 5.0 | 20 | |
| 1,2,3-Trichlorobenzene | L | 10.0 | 9.73 | 9.684893E-02 | 0.1166532 | | -2.7 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 10.4 | 0.4473402 | 0.1617811 | | -63.8 | 20 | * |
| 1,2,4-Trichlorobenzene | L | 10.0 | 9.72 | 0.1341797 | 0.1615187 | | -2.8 | 20 | |
| 1,2,4-Trimethylbenzene | L | 10.0 | 11.6 | 5.114888 | 5.932434 | | 16.0 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 11.9 | 1.014216E-02 | 1.139088E-02 | | 12.3 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 10.6 | 0.4713555 | 0.5020824 | | 6.5 | 20 | |
| 1,2-Dichlorobenzene | Q | 10.0 | 10.6 | 0.3515131 | 0.3921635 | | 5.9 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 10.1 | 0.5246059 | 0.4613697 | | -12.1 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 10.9 | 0.5683593 | 0.553574 | | -2.6 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 11.5 | 5.952263 | 6.645256 | | 11.6 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 11.6 | 2.43776 | 2.837107 | | 16.4 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 10.5 | 1.091156 | 1.147173 | | 5.1 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 11.6 | 2.374472 | 2.751832 | | 15.9 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 10.2 | 0.3365477 | 0.4949447 | | 47.1 | 20 | * |
| 2-Chloroethylvinyl Ether | L | 20.0 | 35.5 | 8907.764 | 16644.05 | | 77.3 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 10.8 | 4.631978 | 5.002964 | | 8.0 | 20 | |
| 2-Hexanone | A | 10.0 | 11.0 | 0.2190266 | 0.2405687 | | 9.8 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 12.0 | 4.95554 | 5.568265 | | 12.4 | 20 | |

CENTAURI LABS ™

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | L | 10.0 | 11.9 | 0.4276112 | 0.5086613 | | 19.0 | 20 | |
| Acetone | Q | 10.0 | 13.4 | 0.0456676 | 5.146875E-02 | | 34.2 | 20 | * |
| Acetonitrile | L | 100 | 85.2 | 18346.21 | 17831.37 | | -14.8 | 20 | |
| Acrylonitrile | A | 10.0 | 8.03 | 43710.6 | 49100.2 | | 12.3 | 20 | |
| Benzene | A | 10.0 | 10.7 | 2.819357 | 2.712077 | | -3.8 | 20 | |
| Bromobenzene | A | 10.0 | 10.6 | 1.278368 | 1.348085 | | 5.5 | 20 | |
| Bromochloromethane | A | 10.0 | 10.0 | 0.1022042 | 0.1021656 | | -0.04 | 20 | |
| Bromodichloromethane | A | 10.0 | 10.3 | 0.6221092 | 0.5729184 | | -7.9 | 20 | |
| Bromoform | A | 10.0 | 10.9 | 0.3684413 | 0.4030498 | | 9.4 | 20 | |
| Bromomethane | L | 10.0 | 15.1 | 0.080217 | 9.105054E-02 | | 51.4 | 20 | * |
| Carbon disulfide | A | 10.0 | 9.19 | 1.261127 | 1.140899 | | -9.5 | 20 | |
| Carbon tetrachloride | A | 10.0 | 10.2 | 0.7442417 | 0.7358584 | | -1.1 | 20 | |
| Chlorobenzene | A | 10.0 | 10.7 | 3.699172 | 3.974428 | | 7.4 | 20 | |
| Chlorodibromomethane | L | 10.0 | 11.3 | 0.6831609 | 0.7677271 | | 13.0 | 20 | |
| Chloroethane | L | 10.0 | 9.44 | 0.3386901 | 0.2444077 | | -5.6 | 20 | |
| Chloroform | A | 10.0 | 9.64 | 0.6088983 | 0.5865968 | | -3.7 | 20 | |
| Chloromethane | A | 10.0 | 8.87 | 0.5083799 | 0.4506533 | | -11.4 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 11.3 | 0.3758816 | 0.4193716 | | 11.6 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 10.8 | 0.4054395 | 0.5963415 | | 47.1 | 20 | * |
| Cyclohexane | A | 10.0 | 9.68 | 1292555 | 1345088 | | 4.1 | 20 | |
| Dibromomethane | A | 10.0 | 9.70 | 0.1725585 | 0.1476224 | | -14.5 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 6.64 | 0.3558482 | 0.2362156 | | -33.6 | 20 | * |
| Ethyl methacrylate | A | 10.0 | 9.52 | 211158.5 | 206851.5 | | -2.0 | 20 | |
| Ethylbenzene | A | 10.0 | 10.9 | 7.575219 | 8.285065 | | 9.4 | 20 | |
| Freon 113 | A | 10.0 | 9.18 | 1293474 | 649434 | | -49.8 | 20 | * |

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# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 10.4 | 0.2714185 | 0.2886467 | | 6.3 | 20 | |
| Iodomethane | A | 10.0 | 5.30 | 3599342 | 150821.2 | | -95.8 | 20 | * |
| Isobutyl alcohol | A | 100 | 106 | 5258.805 | 7181.59 | | 36.6 | 20 | * |
| Isopropylbenzene | A | 10.0 | 11.7 | 7.217441 | 8.464713 | | 17.3 | 20 | |
| m,p-Xylenes | A | 20.0 | 22.4 | 2.975394 | 3.3282 | | 11.9 | 20 | |
| Methacrylonitrile | A | 10.0 | 10.8 | 53524.73 | 124961.4 | | 133 | 20 | * |
| Methyl Acetate | A | 10.0 | 6.11 | 31372.81 | 102018.6 | | 225 | 20 | * |
| Methyl tert-Butyl Ether | L | 10.0 | 9.15 | 0.4306216 | 0.3936453 | | -8.5 | 20 | |
| Methylcyclohexane | L | 10.0 | 11.2 | 1143584 | 1310446 | | 12.4 | 20 | |
| Methylene Chloride | Q | 10.0 | 9.45 | 0.3506711 | 0.2686458 | | -5.5 | 20 | |
| Methylmethacrylate | A | 10.0 | 9.56 | 733813.5 | 754175 | | 2.8 | 20 | |
| Naphthalene | L | 10.0 | 9.10 | 0.1034311 | 9.757436E-02 | | -9.0 | 20 | |
| n-Butylbenzene | L | 10.0 | 10.5 | 4.34243 | 6.034982 | | 5.0 | 20 | |
| n-Propylbenzene | A | 10.0 | 10.5 | 8.565694 | 8.96611 | | 4.7 | 20 | |
| o-Xylene | L | 10.0 | 11.2 | 2.489593 | 2.789448 | | 12.0 | 20 | |
| p-Isopropyltoluene | L | 10.0 | 12.0 | 6.076664 | 7.279825 | | 19.8 | 20 | |
| Propionitrile | A | 10.0 | 12.1 | 15194.65 | 17650.4 | | 16.2 | 20 | |
| sec-Butylbenzene | L | 10.0 | 11.5 | 8.048094 | 9.233374 | | 14.7 | 20 | |
| Styrene | A | 10.0 | 10.7 | 3.786209 | 4.047715 | | 6.9 | 20 | |
| tert-Butylbenzene | L | 10.0 | 12.5 | 5.062972 | 6.315792 | | 24.7 | 20 | * |
| Tetrachloroethene | A | 10.0 | 11.7 | 2.138238 | 2.509678 | | 17.4 | 20 | |
| Toluene | A | 10.0 | 10.0 | 1.743137 | 1.572096 | | -9.8 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 8.77 | 0.6296353 | 0.3531023 | | -43.9 | 20 | * |
| trans-1,3-Dichloropropene | A | 10.0 | 10.4 | 0.4054395 | 0.3858979 | | -4.8 | 20 | |
| Trichloroethene | A | 10.0 | 10.1 | 0.7738535 | 0.6945938 | | -10.2 | 20 | |

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# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Trichlorofluoromethane | A | 10.0 | 9.47 | 0.8976513 | 0.849166 | | -5.4 | 20 |
| Vinyl acetate | A | 20.0 | 17.9 | 241788.3 | 226070.9 | | -6.5 | 20 |
| Vinyl chloride | A | 10.0 | 10.1 | 0.4399842 | 0.4424203 | | 0.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890220.D | Injection Date: | 11/04/10 |
| Instrument ID: | GCMS-B | Injection Time: | 14:32 |
| Sequence: | S047020 | Lab Sample ID: | S047020-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 22.6 | PASS |
| 75 | 30 - 60% of 95 | 52.1 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 7.09 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 72.9 | PASS |
| 175 | 5 - 9% of 174 | 8.51 | PASS |
| 176 | 95 - 101% of 174 | 97.3 | PASS |
| 177 | 5 - 9% of 176 | 7.64 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047020-CCV1 | B02890221.D | 11/04/2010 | 14:58:00 |
| Blank | B047032-BLK1 | B02890222.D | 11/04/2010 | 15:55:00 |
| LCS | B047032-BS1 | B02890223.D | 11/04/2010 | 16:22:00 |
| LCS Dup | B047032-BSD1 | B02890224.D | 11/04/2010 | 16:49:00 |
| GKHMS-TB-02 | 1011002-17 | B02890225.D | 11/04/2010 | 17:16:00 |
| GKHMS-GW-014-1010 | 1011002-01 | B02890226.D | 11/04/2010 | 17:43:00 |
| GKHMS-GW-015-1010 | 1011002-02 | B02890227.D | 11/04/2010 | 18:10:00 |
| GKHMS-GW-016-1010 | 1011002-03 | B02890228.D | 11/04/2010 | 18:36:00 |
| GKHMS-GW-024-1010 | 1011002-04 | B02890229.D | 11/04/2010 | 19:03:00 |
| GKHMS-GW-025-1010 | 1011002-05 | B02890230.D | 11/04/2010 | 19:30:00 |
| GKHMS-GW-034D-1010 | 1011002-06 | B02890231.D | 11/04/2010 | 19:57:00 |
| GKHMS-GW-026-1010 | 1011002-07 | B02890232.D | 11/04/2010 | 20:24:00 |
| GKHMS-GW-027-1010 | 1011002-08 | B02890233.D | 11/04/2010 | 20:50:00 |
| GKHMS-GW-028-1010 | 1011002-09 | B02890234.D | 11/04/2010 | 21:17:00 |
| GKHMS-GW-029-1010 | 1011002-10 | B02890235.D | 11/04/2010 | 21:44:00 |
| GKHMS-GW-030-1010 | 1011002-11 | B02890236.D | 11/04/2010 | 22:11:00 |
| GKHMS-GW-033D-1010 | 1011002-12 | B02890237.D | 11/04/2010 | 22:38:00 |
| GKHMS-GW-020-1010 | 1011002-13 | B02890238.D | 11/04/2010 | 23:05:00 |
| GKHMS-GW-021-1010 | 1011002-14 | B02890239.D | 11/04/2010 | 23:32:00 |
| GKHMS-GW-031-1010 | 1011002-15 | B02890240.D | 11/04/2010 | 23:59:00 |
| GKHMS-GW-032D-1010 | 1011002-16 | B02890241.D | 11/05/2010 | 0:26:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890221.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047020 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047020-CCV1 | Injection Time: | 14:58 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 8.99 | 1.116484 | 1.004017 | | -10.1 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 9.31 | 0.6624498 | 0.6169833 | | -6.9 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 11.1 | 0.5107566 | 0.566824 | | 11.0 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 10.4 | 0.2283942 | 0.1616394 | | -29.2 | 20 | * |
| 1,1-Dichloroethane | A | 10.0 | 9.18 | 0.7717732 | 0.7088357 | | -8.2 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 9.52 | 0.3711489 | 0.3532781 | | -4.8 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 10.8 | 1.087045 | 0.7536869 | | -30.7 | 20 | * |
| 1,2,3-Trichlorobenzene | L | 10.0 | 10.8 | 9.684893E-02 | 0.1721002 | | 8.5 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 11.1 | 0.4473402 | 0.5022705 | | 12.3 | 20 | |
| 1,2,4-Trichlorobenzene | L | 10.0 | 10.6 | 0.1341797 | 0.2314875 | | 5.8 | 20 | |
| 1,2,4-Trimethylbenzene | L | 10.0 | 10.4 | 5.114888 | 6.097436 | | 3.6 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 8.23 | 1.014216E-02 | 1.026388E-02 | | 1.2 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 10.2 | 0.4713555 | 0.4789613 | | 1.6 | 20 | |
| 1,2-Dichlorobenzene | Q | 10.0 | 9.94 | 0.3515131 | 0.4836457 | | -0.6 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 9.88 | 0.5246059 | 0.3424282 | | -34.7 | 20 | * |
| 1,2-Dichloropropane | A | 10.0 | 11.5 | 0.5683593 | 0.3818867 | | -32.8 | 20 | * |
| 1,3,5-Trimethylbenzene | A | 10.0 | 11.2 | 5.952263 | 6.692446 | | 12.4 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 12.2 | 2.43776 | 2.974265 | | 22.0 | 20 | * |
| 1,3-Dichloropropane | A | 10.0 | 9.78 | 1.091156 | 1.066686 | | -2.2 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 12.5 | 2.374472 | 2.971196 | | 25.1 | 20 | * |
| 2,2-Dichloropropane | A | 10.0 | 10.8 | 0.3365477 | 0.3641415 | | 8.2 | 20 | |
| 2-Butanone | A | 20.0 | 22.0 | 7.242459E-02 | 5.761454E-02 | | -20.4 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 10.7 | 4.631978 | 4.962007 | | 7.1 | 20 | |
| 2-Hexanone | A | 20.0 | 21.7 | 0.2190266 | 0.2372856 | | 8.3 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 11.5 | 4.95554 | 5.69472 | | 14.9 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890221.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047020 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047020-CCV1 | Injection Time: | 14:58 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | L | 20.0 | 20.6 | 0.4276112 | 0.3773359 | | 3.2 | 20 | |
| Acetone | Q | 20.0 | 18.8 | 0.0456676 | 0.0344002 | | -5.8 | 20 | |
| Acetonitrile | L | 100 | 117 | 18346.21 | 15134.1 | | 17.4 | 20 | |
| Acrylonitrile | A | 50.0 | 49.9 | 43710.6 | 37105.3 | | -15.1 | 20 | |
| Benzene | A | 10.0 | 9.85 | 2.819357 | 1.914905 | | -32.1 | 20 | * |
| Bromobenzene | A | 10.0 | 10.7 | 1.278368 | 1.368668 | | 7.1 | 20 | |
| Bromochloromethane | A | 10.0 | 10.4 | 0.1022042 | 0.1067248 | | 4.4 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.20 | 0.6221092 | 0.3933221 | | -36.8 | 20 | * |
| Bromoform | A | 10.0 | 7.65 | 0.3684413 | 0.2820009 | | -23.5 | 20 | * |
| Bromomethane | L | 10.0 | 2.80 | 0.080217 | 2.262688E-02 | | -72.0 | 20 | * |
| Carbon disulfide | A | 20.0 | 19.8 | 1.261127 | 1.246995 | | -1.1 | 20 | |
| Carbon tetrachloride | A | 10.0 | 8.03 | 0.7442417 | 0.5974912 | | -19.7 | 20 | |
| Chlorobenzene | A | 10.0 | 9.70 | 3.699172 | 3.586919 | | -3.0 | 20 | |
| Chlorodibromomethane | L | 10.0 | 8.42 | 0.6831609 | 0.5882538 | | -15.8 | 20 | |
| Chloroethane | L | 10.0 | 29.8 | 0.3386901 | 0.8526163 | | 198 | 20 | * |
| Chloroform | A | 10.0 | 9.43 | 0.6088983 | 0.5744117 | | -5.7 | 20 | |
| Chloromethane | A | 10.0 | 8.25 | 0.5083799 | 0.4193145 | | -17.5 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 9.94 | 0.3758816 | 0.3737082 | | -0.6 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 9.32 | 0.4054395 | 0.2658811 | | -34.4 | 20 | * |
| Cyclohexane | A | 10.0 | 11.4 | 1292555 | 1153580 | | -10.8 | 20 | |
| Dibromomethane | A | 10.0 | 10.5 | 0.1725585 | 0.1223364 | | -29.1 | 20 | * |
| Dichlorodifluoromethane | A | 10.0 | 10.0 | 0.3558482 | 0.3568525 | | 0.3 | 20 | |
| Ethyl methacrylate | A | 10.0 | 11.1 | 211158.5 | 190549.8 | | -9.8 | 20 | |
| Ethylbenzene | A | 10.0 | 9.99 | 7.575219 | 7.566418 | | -0.1 | 20 | |
| Freon 113 | A | 5.00 | 10.2 | 1293474 | 1150153 | | -11.1 | 20 | |

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890221.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047020 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047020-CCV1 | Injection Time: | 14:58 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 9.48 | 0.2714185 | 0.3441571 | | 26.8 | 20 | * |
| Iodomethane | A | 10.0 | 10.2 | 3599342 | 2934992 | | -18.5 | 20 | |
| Isopropylbenzene | A | 10.0 | 10.5 | 7.217441 | 7.546558 | | 4.6 | 20 | |
| m,p-Xylenes | A | 20.0 | 21.2 | 2.975394 | 3.147569 | | 5.8 | 20 | |
| Methacrylonitrile | A | 10.0 | 10.7 | 53524.73 | 49244.9 | | -8.0 | 20 | |
| Methyl Acetate | A | 10.0 | 10.8 | 31372.81 | 26923.3 | | -14.2 | 20 | |
| Methyl tert-Butyl Ether | L | 10.0 | 10.8 | 0.4306216 | 0.4114642 | | 7.7 | 20 | |
| Methylcyclohexane | L | 10.0 | 9.41 | 1143584 | 1009947 | | -5.9 | 20 | |
| Methylene Chloride | Q | 10.0 | 9.38 | 0.3506711 | 0.290032 | | -6.2 | 20 | |
| Methylmethacrylate | A | 10.0 | 10.5 | 733813.5 | 650563.8 | | -11.3 | 20 | |
| Naphthalene | L | 10.0 | 9.86 | 0.1034311 | 0.1402109 | | -1.4 | 20 | |
| n-Butylbenzene | L | 10.0 | 9.72 | 4.34243 | 6.349366 | | -2.8 | 20 | |
| n-Propylbenzene | A | 10.0 | 11.0 | 8.565694 | 9.378865 | | 9.5 | 20 | |
| o-Xylene | L | 10.0 | 10.0 | 2.489593 | 2.638234 | | 0.1 | 20 | |
| p-Isopropyltoluene | L | 10.0 | 10.7 | 6.076664 | 7.405843 | | 6.6 | 20 | |
| Propionitrile | A | 10.0 | 11.6 | 15194.65 | 14466.8 | | -4.8 | 20 | |
| sec-Butylbenzene | L | 10.0 | 10.2 | 8.048094 | 9.392111 | | 2.2 | 20 | |
| Styrene | A | 10.0 | 10.6 | 3.786209 | 4.032866 | | 6.5 | 20 | |
| tert-Butylbenzene | L | 10.0 | 10.1 | 5.062972 | 5.737539 | | 1.2 | 20 | |
| Tetrachloroethene | A | 10.0 | 9.28 | 2.138238 | 1.98389 | | -7.2 | 20 | |
| Toluene | A | 10.0 | 9.80 | 1.743137 | 1.174434 | | -32.6 | 20 | * |
| trans-1,2-Dichloroethene | A | 10.0 | 9.37 | 0.6296353 | 0.5902515 | | -6.3 | 20 | |
| trans-1,3-Dichloropropene | A | 10.0 | 9.32 | 0.4054395 | 0.2658811 | | -34.4 | 20 | * |
| Trichloroethene | A | 10.0 | 9.19 | 0.7738535 | 0.4853418 | | -37.3 | 20 | * |
| Trichlorofluoromethane | A | 10.0 | 10.2 | 0.8976513 | 0.9197808 | | 2.5 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890221.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047020 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047020-CCV1 | Injection Time: | 14:58 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Vinyl acetate | A | 20.0 | 22.4 | 241788.3 | 234598.5 | | -3.0 | 20 |
| Vinyl chloride | A | 10.0 | 10.2 | 0.4399842 | 0.4492577 | | 2.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CENTAURI LABS™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047020 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047020-CCV1 )** | | | *Lab File ID: B02890221.D* | | | *Analyzed: 11/04/10 14:58* | | | |
| 1,4-Difluorobenzene | 13895330 | 4.121 | 1.541656E+07 | 4.122 | 90 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 9720471 | 11.276 | 7201022 | 11.276 | 135 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 3013611 | 7.577 | 3291138 | 7.578 | 92 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11768260 | 3.483 | 1.310695E+07 | 3.485 | 90 | 50 - 200 | -0.0020 | +/-0.50 | |
| **Blank (B047032-BLK1 )** | | | *Lab File ID: B02890222.D* | | | *Analyzed: 11/04/10 15:55* | | | |
| 1,4-Difluorobenzene | 17614740 | 4.12 | 13895330 | 4.121 | 127 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7105656 | 11.278 | 9720471 | 11.276 | 73 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3511047 | 7.576 | 3013611 | 7.577 | 117 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 14853280 | 3.484 | 11768260 | 3.483 | 126 | 50 - 200 | 0.0010 | +/-0.50 | |
| **LCS (B047032-BS1 )** | | | *Lab File ID: B02890223.D* | | | *Analyzed: 11/04/10 16:22* | | | |
| 1,4-Difluorobenzene | 14095610 | 4.121 | 13895330 | 4.121 | 101 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 9413634 | 11.276 | 9720471 | 11.276 | 97 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 3084524 | 7.577 | 3013611 | 7.577 | 102 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 12304820 | 3.485 | 11768260 | 3.483 | 105 | 50 - 200 | 0.0020 | +/-0.50 | |
| **LCS Dup (B047032-BSD1 )** | | | *Lab File ID: B02890224.D* | | | *Analyzed: 11/04/10 16:49* | | | |
| 1,4-Difluorobenzene | 15493100 | 4.121 | 13895330 | 4.121 | 111 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 8937352 | 11.276 | 9720471 | 11.276 | 92 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 3273982 | 7.579 | 3013611 | 7.577 | 109 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 13732060 | 3.485 | 11768260 | 3.483 | 117 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-TB-02 (1011002-17 )** | | | *Lab File ID: B02890225.D* | | | *Analyzed: 11/04/10 17:16* | | | |
| 1,4-Difluorobenzene | 13274760 | 4.126 | 13895330 | 4.121 | 96 | 50 - 200 | 0.0050 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5098672 | 11.283 | 9720471 | 11.276 | 52 | 50 - 200 | 0.0070 | +/-0.50 | |
| Chlorobenzene-d5 | 2597618 | 7.58 | 3013611 | 7.577 | 86 | 50 - 200 | 0.0030 | +/-0.50 | |
| Pentafluorobenzene | 11269990 | 3.489 | 11768260 | 3.483 | 96 | 50 - 200 | 0.0060 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047020 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-014-1010 (1011002-01 )** | | | *Lab File ID: B02890226.D* | | | *Analyzed: 11/04/10 17:43* | | | |
| 1,4-Difluorobenzene | 18927040 | 4.123 | 13895330 | 4.121 | 136 | 50 - 200 | 0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6771245 | 11.28 | 9720471 | 11.276 | 70 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 3549767 | 7.579 | 3013611 | 7.577 | 118 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 15918630 | 3.486 | 11768260 | 3.483 | 135 | 50 - 200 | 0.0030 | +/-0.50 | |
| **GKHMS-GW-015-1010 (1011002-02 )** | | | *Lab File ID: B02890227.D* | | | *Analyzed: 11/04/10 18:10* | | | |
| 1,4-Difluorobenzene | 17589110 | 4.123 | 13895330 | 4.121 | 127 | 50 - 200 | 0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6301130 | 11.28 | 9720471 | 11.276 | 65 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 3272755 | 7.579 | 3013611 | 7.577 | 109 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 14722810 | 3.486 | 11768260 | 3.483 | 125 | 50 - 200 | 0.0030 | +/-0.50 | |
| **GKHMS-GW-016-1010 (1011002-03 )** | | | *Lab File ID: B02890228.D* | | | *Analyzed: 11/04/10 18:36* | | | |
| 1,4-Difluorobenzene | 17512550 | 4.123 | 13895330 | 4.121 | 126 | 50 - 200 | 0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6066276 | 11.279 | 9720471 | 11.276 | 62 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 3350026 | 7.579 | 3013611 | 7.577 | 111 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 14598910 | 3.486 | 11768260 | 3.483 | 124 | 50 - 200 | 0.0030 | +/-0.50 | |
| **GKHMS-GW-024-1010 (1011002-04 )** | | | *Lab File ID: B02890229.D* | | | *Analyzed: 11/04/10 19:03* | | | |
| 1,4-Difluorobenzene | 16261600 | 4.118 | 13895330 | 4.121 | 117 | 50 - 200 | -0.0030 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6262318 | 11.277 | 9720471 | 11.276 | 64 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3505580 | 7.577 | 3013611 | 7.577 | 116 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 13611430 | 3.48 | 11768260 | 3.483 | 116 | 50 - 200 | -0.0030 | +/-0.50 | |
| **GKHMS-GW-025-1010 (1011002-05 )** | | | *Lab File ID: B02890230.D* | | | *Analyzed: 11/04/10 19:30* | | | |
| 1,4-Difluorobenzene | 17095510 | 4.122 | 13895330 | 4.121 | 123 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6302898 | 11.278 | 9720471 | 11.276 | 65 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3455878 | 7.579 | 3013611 | 7.577 | 115 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 14311990 | 3.485 | 11768260 | 3.483 | 122 | 50 - 200 | 0.0020 | +/-0.50 | |

CENTAURI LABS ™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047020 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-034D-1010 (1011002-06 )** | | | *Lab File ID: B02890231.D* | | | *Analyzed: 11/04/10 19:57* | | | |
| 1,4-Difluorobenzene | 17082800 | 4.124 | 13895330 | 4.121 | 123 | 50 - 200 | 0.0030 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6704549 | 11.279 | 9720471 | 11.276 | 69 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 3569244 | 7.579 | 3013611 | 7.577 | 118 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 13932490 | 3.487 | 11768260 | 3.483 | 118 | 50 - 200 | 0.0040 | +/-0.50 | |
| **GKHMS-GW-026-1010 (1011002-07 )** | | | *Lab File ID: B02890232.D* | | | *Analyzed: 11/04/10 20:24* | | | |
| 1,4-Difluorobenzene | 14525570 | 4.123 | 13895330 | 4.121 | 105 | 50 - 200 | 0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5838291 | 11.278 | 9720471 | 11.276 | 60 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3133256 | 7.579 | 3013611 | 7.577 | 104 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 11962430 | 3.486 | 11768260 | 3.483 | 102 | 50 - 200 | 0.0030 | +/-0.50 | |
| **GKHMS-GW-027-1010 (1011002-08 )** | | | *Lab File ID: B02890233.D* | | | *Analyzed: 11/04/10 20:50* | | | |
| 1,4-Difluorobenzene | 14666260 | 4.122 | 13895330 | 4.121 | 106 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5483729 | 11.278 | 9720471 | 11.276 | 56 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3081710 | 7.578 | 3013611 | 7.577 | 102 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12275560 | 3.485 | 11768260 | 3.483 | 104 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-GW-028-1010 (1011002-09 )** | | | *Lab File ID: B02890234.D* | | | *Analyzed: 11/04/10 21:17* | | | |
| 1,4-Difluorobenzene | 14406540 | 4.122 | 13895330 | 4.121 | 104 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6163463 | 11.278 | 9720471 | 11.276 | 63 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2884071 | 7.578 | 3013611 | 7.577 | 96 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11775010 | 3.485 | 11768260 | 3.483 | 100 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-GW-029-1010 (1011002-10 )** | | | *Lab File ID: B02890235.D* | | | *Analyzed: 11/04/10 21:44* | | | |
| 1,4-Difluorobenzene | 14016850 | 4.121 | 13895330 | 4.121 | 101 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5925804 | 11.278 | 9720471 | 11.276 | 61 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2842052 | 7.578 | 3013611 | 7.577 | 94 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11449990 | 3.483 | 11768260 | 3.483 | 97 | 50 - 200 | 0.0000 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047020 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-030-1010 (1011002-11 )** | | | *Lab File ID: B02890236.D* | | | *Analyzed: 11/04/10 22:11* | | | |
| 1,4-Difluorobenzene | 13807290 | 4.122 | 13895330 | 4.121 | 99 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5892657 | 11.278 | 9720471 | 11.276 | 61 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2797291 | 7.577 | 3013611 | 7.577 | 93 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11050870 | 3.485 | 11768260 | 3.483 | 94 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-GW-033D-1010 (1011002-12 )** | | | *Lab File ID: B02890237.D* | | | *Analyzed: 11/04/10 22:38* | | | |
| 1,4-Difluorobenzene | 14276760 | 4.121 | 13895330 | 4.121 | 103 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5851240 | 11.278 | 9720471 | 11.276 | 60 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2864638 | 7.577 | 3013611 | 7.577 | 95 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11245370 | 3.484 | 11768260 | 3.483 | 96 | 50 - 200 | 0.0010 | +/-0.50 | |
| **GKHMS-GW-020-1010 (1011002-13 )** | | | *Lab File ID: B02890238.D* | | | *Analyzed: 11/04/10 23:05* | | | |
| 1,4-Difluorobenzene | 12448710 | 4.122 | 13895330 | 4.121 | 90 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5365818 | 11.279 | 9720471 | 11.276 | 55 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 2557478 | 7.578 | 3013611 | 7.577 | 85 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 10001700 | 3.485 | 11768260 | 3.483 | 85 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-GW-021-1010 (1011002-14 )** | | | *Lab File ID: B02890239.D* | | | *Analyzed: 11/04/10 23:32* | | | |
| 1,4-Difluorobenzene | 13021330 | 4.119 | 13895330 | 4.121 | 94 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6451435 | 11.274 | 9720471 | 11.276 | 66 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2761704 | 7.576 | 3013611 | 7.577 | 92 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 10583740 | 3.482 | 11768260 | 3.483 | 90 | 50 - 200 | -0.0010 | +/-0.50 | |
| **GKHMS-GW-031-1010 (1011002-15 )** | | | *Lab File ID: B02890240.D* | | | *Analyzed: 11/04/10 23:59* | | | |
| 1,4-Difluorobenzene | 15398520 | 4.121 | 13895330 | 4.121 | 111 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6345797 | 11.276 | 9720471 | 11.276 | 65 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 3054503 | 7.577 | 3013611 | 7.577 | 101 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 12738980 | 3.483 | 11768260 | 3.483 | 108 | 50 - 200 | 0.0000 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047020 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-032D-1010 (1011002-16 )** | | | *Lab File ID: B02890241.D* | | | *Analyzed: 11/05/10 00:26* | | | |
| 1,4-Difluorobenzene | 16624530 | 4.121 | 13895330 | 4.121 | 120 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7743797 | 11.277 | 9720471 | 11.276 | 80 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3555266 | 7.577 | 3013611 | 7.577 | 118 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 13258250 | 3.483 | 11768260 | 3.483 | 113 | 50 - 200 | 0.0000 | +/-0.50 | |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-D |

| | 2FBPL (50 - 110) | NB-d5 (40 - 110) | TRPL-D14 (50 - 135) |
|---|---|---|---|
| 1011002-01 | 79 | 88 | 95 |
| 1011002-02 | 83 | 84 | 101 |
| 1011002-03 | 85 | 83 | 91 |
| 1011002-04 | 83 | 88 | 92 |
| 1011002-05 | 81 | 82 | 93 |
| 1011002-06 | 84 | 83 | 93 |
| 1011002-07 | 82 | 86 | 80 |
| 1011002-08 | 87 | 75 | 95 |
| 1011002-09 | 83 | 85 | 89 |
| 1011002-10 | 87 | 91 | 93 |
| 1011002-11 | 88 | 89 | 109 |
| 1011002-12 | 82 | 78 | 93 |
| 1011002-13 | 85 | 86 | 85 |
| 1011002-14 | 78 | 131* | 98 |
| 1011002-15 | 89 | 89 | 94 |
| 1011002-16 | 87 | 95 | 85 |
| B048005-BLK1 | 87 | 95 | 94 |
| B048005-BS1 | 92 | 98 | 103 |
| B048005-BSD1 | 88 | 94 | 96 |

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048005-BLK1 | Batch: | B048005 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-GW-029-1010 | 1011002-10 | D46310.D | 17:17 |
| GKHMS-GW-015-1010 | 1011002-02 | D46302.D | 14:02 |
| GKHMS-GW-016-1010 | 1011002-03 | D46303.D | 14:26 |
| GKHMS-GW-024-1010 | 1011002-04 | D46304.D | 14:50 |
| GKHMS-GW-025-1010 | 1011002-05 | D46305.D | 15:15 |
| GKHMS-GW-034D-1010 | 1011002-06 | D46306.D | 15:39 |
| GKHMS-GW-026-1010 | 1011002-07 | D46307.D | 16:04 |
| GKHMS-GW-014-1010 | 1011002-01 | D46301.D | 13:38 |
| GKHMS-GW-028-1010 | 1011002-09 | D46309.D | 16:53 |
| LCS Dup | B048005-BSD1 | D46300.D | 13:13 |
| GKHMS-GW-030-1010 | 1011002-11 | D46311.D | 17:41 |
| GKHMS-GW-033D-1010 | 1011002-12 | D46312.D | 18:06 |
| GKHMS-GW-020-1010 | 1011002-13 | D46313.D | 18:30 |
| GKHMS-GW-021-1010 | 1011002-14 | D46314.D | 18:54 |
| GKHMS-GW-031-1010 | 1011002-15 | D46329.D | 11:55 |
| GKHMS-GW-032D-1010 | 1011002-16 | D46330.D | 12:19 |
| LCS | B048005-BS1 | D46299.D | 12:49 |
| GKHMS-GW-027-1010 | 1011002-08 | D46308.D | 16:28 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B048005-BLK1 | File ID: | D46298.D |
| Sampled: | | Prepared: | 11/12/10 12:35 | Analyzed: | 11/17/10 12:24 |
| Solids: | | Preparation: | 3520C Cont. | Dilution: | |
| Batch: | B048005 | Sequence: | S048010 | Calibration: | 0111602 |
| Column: | 1 | | | | |

Instrument: GCMS-D

| CAS NO. | COMPOUND | CONC. (ng/L) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 50.0 | U |
| 83-32-9 | Acenaphthene | 50.0 | U |
| 208-96-8 | Acenaphthylene | 50.0 | U |
| 120-12-7 | Anthracene | 50.0 | U |
| 56-55-3 | Benzo[a]anthracene | 50.0 | U |
| 50-32-8 | Benzo[a]pyrene | 50.0 | U |
| 205-99-2 | Benzo[b]fluoranthene | 50.0 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 50.0 | U |
| 207-08-9 | Benzo[k]fluoranthene | 50.0 | U |
| 218-01-9 | Chrysene | 50.0 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 50.0 | U |
| 206-44-0 | Fluoranthene | 50.0 | U |
| 86-73-7 | Fluorene | 50.0 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 50.0 | U |
| 91-20-3 | Naphthalene | 50.0 | U |
| 85-01-8 | Phenanthrene | 50.0 | U |
| 129-00-0 | Pyrene | 50.0 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B048005 | Laboratory ID: | B048005-BS1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5150 | 103 | 45 - 105 |
| Acenaphthene | 5000 | 4950 | 99 | 45 - 110 |
| Acenaphthylene | 5000 | 4490 | 90 | 50 - 105 |
| Anthracene | 5000 | 4900 | 98 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 5030 | 101 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5490 | 110 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5980 | 120 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 6160 | 123 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 5360 | 107 | 45 - 125 |
| Chrysene | 5000 | 4920 | 98 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 5960 | 119 | 40 - 125 |
| Fluoranthene | 5000 | 4660 | 93 | 55 - 115 |
| Fluorene | 5000 | 4870 | 97 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 5740 | 115 | 45 - 125 |
| Naphthalene | 5000 | 4710 | 94 | 40 - 100 |
| Phenanthrene | 5000 | 4880 | 98 | 50 - 115 |
| Pyrene | 5000 | 5350 | 107 | 50 - 130 |

| ANALYTE | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC. # | | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5280 | 106 | * | 2 | 20 | 45 - 105 |
| Acenaphthene | 5000 | 5030 | 101 | | 2 | 20 | 45 - 110 |
| Acenaphthylene | 5000 | 4510 | 90 | | 0.6 | 20 | 50 - 105 |
| Anthracene | 5000 | 5010 | 100 | | 2 | 20 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 5110 | 102 | | 2 | 20 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5590 | 112 | * | 2 | 20 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5770 | 115 | | 4 | 20 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 6420 | 128 | * | 4 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 5570 | 111 | | 4 | 20 | 45 - 125 |
| Chrysene | 5000 | 5000 | 100 | | 2 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 6150 | 123 | | 3 | 20 | 40 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B048005 | Laboratory ID: | B048005-BSD1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Fluoranthene | 5000 | 4990 | 100 | 7 | 20 | 55 - 115 |
| Fluorene | 5000 | 4890 | 98 | 0.3 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 5900 | 118 | 3 | 20 | 45 - 125 |
| Naphthalene | 5000 | 4850 | 97 | 3 | 20 | 40 - 100 |
| Phenanthrene | 5000 | 5020 | 100 | 3 | 20 | 50 - 115 |
| Pyrene | 5000 | 5140 | 103 | 4 | 20 | 50 - 130 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |

# INITIAL CALIBRATION DATA

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6998678 | 0.6928788 | 0.7861832 | 0.7182898 | 0.7454438 | 0.61871 |
| Acenaphthene | 1.35609 | 1.360759 | 1.542331 | 1.393121 | 1.417282 | 1.167548 |
| Acenaphthylene | 2.086527 | 2.173511 | 2.491196 | 2.304639 | 2.469502 | 2.015595 |
| Anthracene | 1.149397 | 1.195438 | 1.414392 | 1.285541 | 1.359337 | 1.083758 |
| Benzo[a]anthracene | 1.729219 | 1.635469 | 1.813508 | 1.628326 | 1.718838 | 1.44421 |
| Benzo[a]pyrene | 2.070213 | 2.152228 | 2.357776 | 2.177479 | 2.432008 | 2.360145 |
| Benzo[b]fluoranthene | 2.246619 | 2.450026 | 2.745016 | 2.563208 | 2.684552 | 2.708263 |
| Benzo[g,h,i]perylene | 1.621029 | 1.623379 | 1.846475 | 1.621483 | 1.867722 | 1.766085 |
| Benzo[k]fluoranthene | 2.554631 | 2.745418 | 2.750892 | 2.509434 | 2.719822 | 2.637611 |
| Carbazole | | | | | | |
| Chrysene | 1.633828 | 1.648224 | 1.866568 | 1.657847 | 1.728138 | 1.451514 |
| Dibenz[a,h]anthracene | 1.483124 | 1.483425 | 1.698972 | 1.573097 | 1.820535 | 1.690607 |
| Fluoranthene | 1.147919 | 1.226292 | 1.417924 | 1.322613 | 1.35443 | 1.086918 |
| Fluorene | 1.312635 | 1.311524 | 1.539282 | 1.413423 | 1.529181 | 1.220159 |
| Indeno[1,2,3-cd]pyrene | 2.025178 | 2.055117 | 2.35135 | 2.143138 | 2.49272 | 2.320363 |
| Naphthalene | 1.206408 | 1.218463 | 1.346238 | 1.232176 | 1.223558 | 1.165698 |
| Phenanthrene | 1.297902 | 1.313994 | 1.460657 | 1.328181 | 1.32559 | 1.074443 |
| Pyrene | 2.116627 | 2.296767 | 2.490596 | 2.333519 | 2.284912 | 2.077411 |
| 2-Fluorobiphenyl | 1.610498 | 1.620703 | 1.860345 | 1.676616 | 1.680071 | 1.416445 |
| Nitrobenzene-d5 | 0.3799167 | 0.3872439 | 0.4331469 | 0.3960707 | 0.4245936 | 0.3431777 |
| Terphenyl-d14 | 0.981781 | 1.066537 | 1.231772 | 1.108824 | 1.08851 | 0.9848726 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6906016 | 0.6715998 | 0.6387307 | | | |
| Acenaphthene | 1.308477 | 1.243833 | 1.133641 | | | |
| Acenaphthylene | 2.290065 | 2.191529 | 1.97907 | | | |
| Anthracene | 1.242426 | 1.185892 | 1.132079 | | | |
| Benzo[a]anthracene | 1.562415 | 1.496959 | 1.418862 | | | |
| Benzo[a]pyrene | 2.31118 | 2.256053 | 2.168264 | | | |
| Benzo[b]fluoranthene | 2.449553 | 2.584195 | 2.489339 | | | |
| Benzo[g,h,i]perylene | 1.715931 | 1.685418 | 1.62047 | | | |
| Benzo[k]fluoranthene | 2.595031 | 2.355483 | 2.209489 | | | |
| Carbazole | | | | | | |
| Chrysene | 1.530943 | 1.447942 | 1.359459 | | | |
| Dibenz[a,h]anthracene | 1.653509 | 1.640184 | 1.593958 | | | |
| Fluoranthene | 1.235483 | 1.171686 | 1.152857 | | | |
| Fluorene | 1.408747 | 1.358794 | 1.264352 | | | |
| Indeno[1,2,3-cd]pyrene | 2.265913 | 2.244316 | 2.162238 | | | |
| Naphthalene | 1.271896 | 1.232873 | 1.173873 | | | |
| Phenanthrene | 1.227056 | 1.161614 | 1.111768 | | | |
| Pyrene | 2.143779 | 1.993386 | 1.77759 | | | |
| 2-Fluorobiphenyl | 1.592496 | 1.52104 | 1.347374 | | | |
| Nitrobenzene-d5 | 0.3923432 | 0.4061396 | 0.4113819 | | | |
| Terphenyl-d14 | 1.036812 | 0.9830102 | 0.8780064 | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46158.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S046039 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S046039-SCV1 | Injection Time: | 15:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 2500 | 2450 | 0.6958117 | 0.6817819 | | -2.0 | 20 |
| Acenaphthene | A | 2500 | 2370 | 1.324787 | 1.25343 | | -5.4 | 20 |
| Acenaphthylene | A | 2500 | 2390 | 2.222404 | 2.121 | | -4.6 | 20 |
| Anthracene | A | 2500 | 2380 | 1.227584 | 1.168661 | | -4.8 | 20 |
| Benzo[a]anthracene | A | 2500 | 2330 | 1.605312 | 1.496478 | | -6.8 | 20 |
| Benzo[a]pyrene | A | 2500 | 2370 | 2.253927 | 2.136756 | | -5.2 | 20 |
| Benzo[b]fluoranthene | A | 2500 | 2270 | 2.546752 | 2.312748 | | -9.2 | 20 |
| Benzo[g,h,i]perylene | A | 2500 | 2450 | 1.707555 | 1.675813 | | -1.9 | 20 |
| Benzo[k]fluoranthene | A | 2500 | 2380 | 2.564201 | 2.441688 | | -4.8 | 20 |
| Chrysene | A | 2500 | 2280 | 1.591607 | 1.453402 | | -8.7 | 20 |
| Dibenz[a,h]anthracene | A | 2500 | 2440 | 1.626379 | 1.584666 | | -2.6 | 20 |
| Fluoranthene | A | 2500 | 2350 | 1.235125 | 1.161404 | | -6.0 | 20 |
| Fluorene | A | 2500 | 2370 | 1.373122 | 1.301104 | | -5.2 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 2500 | 2260 | 2.228926 | 2.014394 | | -9.6 | 20 |
| Naphthalene | A | 2500 | 2480 | 1.230131 | 1.221897 | | -0.7 | 20 |
| Phenanthrene | A | 2500 | 2280 | 1.255689 | 1.144927 | | -8.8 | 20 |
| Pyrene | A | 2500 | 2400 | 2.168287 | 2.080985 | | -4.0 | 20 |
| 2-Fluorobiphenyl | A | 2500 | 2440 | 1.591732 | 1.552743 | | -2.4 | 20 |
| Nitrobenzene-d5 | A | 2500 | 2470 | 0.3971127 | 0.3917262 | | -1.4 | 20 |
| Terphenyl-d14 | A | 2500 | 2360 | 1.040014 | 0.9812326 | | -5.7 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46295.D | Injection Date: | 11/17/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:19 |
| Sequence: | S048010 | Lab Sample ID: | S048010-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 34.3 | PASS |
| 70 | Less than 2% of 69 | 0.584 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 49.8 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.6 | PASS |
| 275 | 10 - 30% of 198 | 20.3 | PASS |
| 365 | 1 - 200% of 198 | 2.65 | PASS |
| 443 | 17 - 23% of 442 | 18.4 | PASS |
| 441 | Less than 100% of 443 | 80.8 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S048010-CCV1 | D46297.D | 11/17/2010 | 11:58:00 |
| Blank | B048005-BLK1 | D46298.D | 11/17/2010 | 12:24:00 |
| LCS | B048005-BS1 | D46299.D | 11/17/2010 | 12:49:00 |
| LCS Dup | B048005-BSD1 | D46300.D | 11/17/2010 | 13:13:00 |
| GKHMS-GW-014-1010 | 1011002-01 | D46301.D | 11/17/2010 | 13:38:00 |
| GKHMS-GW-015-1010 | 1011002-02 | D46302.D | 11/17/2010 | 14:02:00 |
| GKHMS-GW-016-1010 | 1011002-03 | D46303.D | 11/17/2010 | 14:26:00 |
| GKHMS-GW-024-1010 | 1011002-04 | D46304.D | 11/17/2010 | 14:50:00 |
| GKHMS-GW-025-1010 | 1011002-05 | D46305.D | 11/17/2010 | 15:15:00 |
| GKHMS-GW-034D-1010 | 1011002-06 | D46306.D | 11/17/2010 | 15:39:00 |
| GKHMS-GW-026-1010 | 1011002-07 | D46307.D | 11/17/2010 | 16:04:00 |
| GKHMS-GW-027-1010 | 1011002-08 | D46308.D | 11/17/2010 | 16:28:00 |
| GKHMS-GW-028-1010 | 1011002-09 | D46309.D | 11/17/2010 | 16:53:00 |
| GKHMS-GW-029-1010 | 1011002-10 | D46310.D | 11/17/2010 | 17:17:00 |
| GKHMS-GW-030-1010 | 1011002-11 | D46311.D | 11/17/2010 | 17:41:00 |
| GKHMS-GW-033D-1010 | 1011002-12 | D46312.D | 11/17/2010 | 18:06:00 |
| GKHMS-GW-020-1010 | 1011002-13 | D46313.D | 11/17/2010 | 18:30:00 |
| GKHMS-GW-021-1010 | 1011002-14 | D46314.D | 11/17/2010 | 18:54:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46297.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S048010 | Injection Date: | 11/17/10 |
| Lab Sample ID: | S048010-CCV1 | Injection Time: | 11:58 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1050 | 0.6958117 | 0.7297309 | | 4.9 | 20 |
| Acenaphthene | A | 1000 | 1080 | 1.324787 | 1.429003 | | 7.9 | 20 |
| Acenaphthylene | A | 1000 | 1090 | 2.222404 | 2.412677 | | 8.6 | 20 |
| Anthracene | A | 1000 | 1110 | 1.227584 | 1.358712 | | 10.7 | 20 |
| Benzo[a]anthracene | A | 1000 | 1120 | 1.605312 | 1.793124 | | 11.7 | 20 |
| Benzo[a]pyrene | A | 1000 | 1160 | 2.253927 | 2.615485 | | 16.0 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1100 | 2.546752 | 2.812493 | | 10.4 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 1110 | 1.707555 | 1.891402 | | 10.8 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1110 | 2.564201 | 2.850938 | | 11.2 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.756911 | | 10.4 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 1120 | 1.626379 | 1.819499 | | 11.9 | 20 |
| Fluoranthene | A | 1000 | 1030 | 1.235125 | 1.27201 | | 3.0 | 20 |
| Fluorene | A | 1000 | 1070 | 1.373122 | 1.462893 | | 6.5 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 1140 | 2.228926 | 2.533102 | | 13.6 | 20 |
| Naphthalene | A | 1000 | 959 | 1.230131 | 1.179388 | | -4.1 | 20 |
| Phenanthrene | A | 1000 | 1070 | 1.255689 | 1.339877 | | 6.7 | 20 |
| Pyrene | A | 1000 | 1150 | 2.168287 | 2.498259 | | 15.2 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1100 | 1.591732 | 1.750595 | | 10.0 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1110 | 0.3971127 | 0.4423708 | | 11.4 | 20 |
| Terphenyl-d14 | A | 1000 | 1060 | 1.040014 | 1.10428 | | 6.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46326.D | Injection Date: | 11/18/10 |
| Instrument ID: | GCMS-D | Injection Time: | 10:50 |
| Sequence: | S048011 | Lab Sample ID: | S048011-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 40.5 | PASS |
| 70 | Less than 2% of 69 | 0.483 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 52.8 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.35 | PASS |
| 275 | 10 - 30% of 198 | 21.4 | PASS |
| 365 | 1 - 200% of 198 | 3.1 | PASS |
| 443 | 17 - 23% of 442 | 19.2 | PASS |
| 441 | Less than 100% of 443 | 76.9 | PASS |
| 442 | 40 - 200% of 198 | 48.4 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| | S048011-CCV1 | D46328.D | 11/18/2010 | 11:30:00 |
| GKHMS-GW-031-1010 | 1011002-15 | D46329.D | 11/18/2010 | 11:55:00 |
| GKHMS-GW-032D-1010 | 1011002-16 | D46330.D | 11/18/2010 | 12:19:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46328.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S048011 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S048011-CCV1 | Injection Time: | 11:30 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1040 | 0.6958117 | 0.7261758 | | 4.4 | 20 |
| Acenaphthene | A | 1000 | 1020 | 1.324787 | 1.350579 | | 1.9 | 20 |
| Acenaphthylene | A | 1000 | 1000 | 2.222404 | 2.223839 | | 0.06 | 20 |
| Anthracene | A | 1000 | 1060 | 1.227584 | 1.306923 | | 6.5 | 20 |
| Benzo[a]anthracene | A | 1000 | 1100 | 1.605312 | 1.758824 | | 9.6 | 20 |
| Benzo[a]pyrene | A | 1000 | 1120 | 2.253927 | 2.534103 | | 12.4 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1140 | 2.546752 | 2.897609 | | 13.8 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 918 | 1.707555 | 1.566834 | | -8.2 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1130 | 2.564201 | 2.887644 | | 12.6 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.745121 | | 9.6 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 918 | 1.626379 | 1.493027 | | -8.2 | 20 |
| Fluoranthene | A | 1000 | 995 | 1.235125 | 1.229038 | | -0.5 | 20 |
| Fluorene | A | 1000 | 965 | 1.373122 | 1.325718 | | -3.5 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 947 | 2.228926 | 2.109996 | | -5.3 | 20 |
| Naphthalene | A | 1000 | 870 | 1.230131 | 1.070101 | | -13.0 | 20 |
| Phenanthrene | A | 1000 | 1040 | 1.255689 | 1.309617 | | 4.3 | 20 |
| Pyrene | A | 1000 | 1170 | 2.168287 | 2.544271 | | 17.3 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1130 | 1.591732 | 1.801738 | | 13.2 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1020 | 0.3971127 | 0.4037676 | | 1.7 | 20 |
| Terphenyl-d14 | A | 1000 | 1110 | 1.040014 | 1.158106 | | 11.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048010 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048010-CCV1 )** | | | *Lab File ID: D46297.D* | | | *Analyzed: 11/17/10 11:58* | | | |
| 1,4-Dichlorobenzene-d4 | 221979 | 3.73 | 524277 | 3.79 | 42 | 50 - 200 | -0.0600 | +/-30.00 | |
| Acenaphthene-d10 | 329536 | 6.84 | 890160 | 6.91 | 37 | 50 - 200 | -0.0700 | +/-30.00 | |
| Chrysene-d12 | 246988 | 11.26 | 837431 | 11.37 | 29 | 50 - 200 | -0.1100 | +/-30.00 | |
| Naphthalene-d8 | 788307 | 5.01 | 1909751 | 5.08 | 41 | 50 - 200 | -0.0700 | +/-30.00 | |
| Perylene-d12 | 134736 | 13.93 | 457505 | 14.11 | 29 | 50 - 200 | -0.1800 | +/-30.00 | |
| Phenanthrene-d10 | 476987 | 8.37 | 1402237 | 8.45 | 34 | 50 - 200 | -0.0800 | +/-30.00 | |
| **Blank (B048005-BLK1 )** | | | *Lab File ID: D46298.D* | | | *Analyzed: 11/17/10 12:24* | | | |
| 1,4-Dichlorobenzene-d4 | 208805 | 3.73 | 221979 | 3.73 | 94 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 319022 | 6.84 | 329536 | 6.84 | 97 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 175365 | 11.27 | 246988 | 11.26 | 71 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 739829 | 5.01 | 788307 | 5.01 | 94 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 95316 | 13.94 | 134736 | 13.93 | 71 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 403598 | 8.37 | 476987 | 8.37 | 85 | 50 - 200 | 0.0000 | +/-30.00 | |
| **LCS (B048005-BS1 )** | | | *Lab File ID: D46299.D* | | | *Analyzed: 11/17/10 12:49* | | | |
| 1,4-Dichlorobenzene-d4 | 184548 | 3.73 | 221979 | 3.73 | 83 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 266646 | 6.84 | 329536 | 6.84 | 81 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 197042 | 11.27 | 246988 | 11.26 | 80 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 614532 | 5.01 | 788307 | 5.01 | 78 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 108289 | 13.93 | 134736 | 13.93 | 80 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 390194 | 8.37 | 476987 | 8.37 | 82 | 50 - 200 | 0.0000 | +/-30.00 | |
| **LCS Dup (B048005-BSD1 )** | | | *Lab File ID: D46300.D* | | | *Analyzed: 11/17/10 13:13* | | | |
| 1,4-Dichlorobenzene-d4 | 198607 | 3.72 | 221979 | 3.73 | 89 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 282006 | 6.84 | 329536 | 6.84 | 86 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 235270 | 11.27 | 246988 | 11.26 | 95 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 650978 | 5.01 | 788307 | 5.01 | 83 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 133128 | 13.93 | 134736 | 13.93 | 99 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 418060 | 8.37 | 476987 | 8.37 | 88 | 50 - 200 | 0.0000 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048010 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-014-1010 (1011002-01 )** | | | *Lab File ID: D46301.D* | | | *Analyzed: 11/17/10 13:38* | | | |
| 1,4-Dichlorobenzene-d4 | 185014 | 3.71 | 221979 | 3.73 | 83 | 50 - 200 | -0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 356937 | 6.83 | 329536 | 6.84 | 108 | 50 - 200 | -0.0100 | +/-30.00 | |
| Chrysene-d12 | 279226 | 11.27 | 246988 | 11.26 | 113 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 772027 | 5 | 788307 | 5.01 | 98 | 50 - 200 | -0.0100 | +/-30.00 | |
| Perylene-d12 | 131676 | 13.93 | 134736 | 13.93 | 98 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 531646 | 8.37 | 476987 | 8.37 | 111 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-015-1010 (1011002-02 )** | | | *Lab File ID: D46302.D* | | | *Analyzed: 11/17/10 14:02* | | | |
| 1,4-Dichlorobenzene-d4 | 180084 | 3.73 | 221979 | 3.73 | 81 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 274866 | 6.84 | 329536 | 6.84 | 83 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 205089 | 11.26 | 246988 | 11.26 | 83 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 616993 | 5.01 | 788307 | 5.01 | 78 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 110789 | 13.93 | 134736 | 13.93 | 82 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 391664 | 8.37 | 476987 | 8.37 | 82 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-016-1010 (1011002-03 )** | | | *Lab File ID: D46303.D* | | | *Analyzed: 11/17/10 14:26* | | | |
| 1,4-Dichlorobenzene-d4 | 158504 | 3.73 | 221979 | 3.73 | 71 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 221533 | 6.84 | 329536 | 6.84 | 67 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 168562 | 11.26 | 246988 | 11.26 | 68 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 530501 | 5.01 | 788307 | 5.01 | 67 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 95878 | 13.93 | 134736 | 13.93 | 71 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 309682 | 8.37 | 476987 | 8.37 | 65 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-024-1010 (1011002-04 )** | | | *Lab File ID: D46304.D* | | | *Analyzed: 11/17/10 14:50* | | | |
| 1,4-Dichlorobenzene-d4 | 168047 | 3.72 | 221979 | 3.73 | 76 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 267658 | 6.83 | 329536 | 6.84 | 81 | 50 - 200 | -0.0100 | +/-30.00 | |
| Chrysene-d12 | 234486 | 11.27 | 246988 | 11.26 | 95 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 583488 | 5.01 | 788307 | 5.01 | 74 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 139200 | 13.93 | 134736 | 13.93 | 103 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 396321 | 8.37 | 476987 | 8.37 | 83 | 50 - 200 | 0.0000 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048010 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-025-1010 (1011002-05 )** | | | *Lab File ID: D46305.D* | | | *Analyzed: 11/17/10 15:15* | | | |
| 1,4-Dichlorobenzene-d4 | 148517 | 3.73 | 221979 | 3.73 | 67 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 226554 | 6.84 | 329536 | 6.84 | 69 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 189324 | 11.27 | 246988 | 11.26 | 77 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 508895 | 5.01 | 788307 | 5.01 | 65 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 113120 | 13.93 | 134736 | 13.93 | 84 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 336863 | 8.37 | 476987 | 8.37 | 71 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-034D-1010 (1011002-06 )** | | | *Lab File ID: D46306.D* | | | *Analyzed: 11/17/10 15:39* | | | |
| 1,4-Dichlorobenzene-d4 | 189738 | 3.73 | 221979 | 3.73 | 85 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 275638 | 6.84 | 329536 | 6.84 | 84 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 207762 | 11.26 | 246988 | 11.26 | 84 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 650526 | 5.01 | 788307 | 5.01 | 83 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 119717 | 13.93 | 134736 | 13.93 | 89 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 381273 | 8.37 | 476987 | 8.37 | 80 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-026-1010 (1011002-07 )** | | | *Lab File ID: D46307.D* | | | *Analyzed: 11/17/10 16:04* | | | |
| 1,4-Dichlorobenzene-d4 | 136910 | 3.73 | 221979 | 3.73 | 62 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 208680 | 6.84 | 329536 | 6.84 | 63 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 217882 | 11.26 | 246988 | 11.26 | 88 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 473525 | 5.01 | 788307 | 5.01 | 60 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 122350 | 13.92 | 134736 | 13.93 | 91 | 50 - 200 | -0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 302471 | 8.37 | 476987 | 8.37 | 63 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-027-1010 (1011002-08 )** | | | *Lab File ID: D46308.D* | | | *Analyzed: 11/17/10 16:28* | | | |
| 1,4-Dichlorobenzene-d4 | 146331 | 3.73 | 221979 | 3.73 | 66 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 201421 | 6.84 | 329536 | 6.84 | 61 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 141367 | 11.26 | 246988 | 11.26 | 57 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 474720 | 5.01 | 788307 | 5.01 | 60 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 83154 | 13.92 | 134736 | 13.93 | 62 | 50 - 200 | -0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 267132 | 8.37 | 476987 | 8.37 | 56 | 50 - 200 | 0.0000 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048010 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-028-1010 (1011002-09 )** | | | *Lab File ID: D46309.D* | | | *Analyzed: 11/17/10 16:53* | | | |
| 1,4-Dichlorobenzene-d4 | 148116 | 3.73 | 221979 | 3.73 | 67 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 233128 | 6.83 | 329536 | 6.84 | 71 | 50 - 200 | -0.0100 | +/-30.00 | |
| Chrysene-d12 | 206820 | 11.26 | 246988 | 11.26 | 84 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 511516 | 5.01 | 788307 | 5.01 | 65 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 112809 | 13.92 | 134736 | 13.93 | 84 | 50 - 200 | -0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 338894 | 8.37 | 476987 | 8.37 | 71 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-029-1010 (1011002-10 )** | | | *Lab File ID: D46310.D* | | | *Analyzed: 11/17/10 17:17* | | | |
| 1,4-Dichlorobenzene-d4 | 157006 | 3.72 | 221979 | 3.73 | 71 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 233647 | 6.84 | 329536 | 6.84 | 71 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 207639 | 11.26 | 246988 | 11.26 | 84 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 522262 | 5.01 | 788307 | 5.01 | 66 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 126014 | 13.92 | 134736 | 13.93 | 94 | 50 - 200 | -0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 336479 | 8.37 | 476987 | 8.37 | 71 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-030-1010 (1011002-11 )** | | | *Lab File ID: D46311.D* | | | *Analyzed: 11/17/10 17:41* | | | |
| 1,4-Dichlorobenzene-d4 | 145891 | 3.72 | 221979 | 3.73 | 66 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 232561 | 6.84 | 329536 | 6.84 | 71 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 163847 | 11.26 | 246988 | 11.26 | 66 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 499274 | 5.01 | 788307 | 5.01 | 63 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 88834 | 13.92 | 134736 | 13.93 | 66 | 50 - 200 | -0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 328839 | 8.37 | 476987 | 8.37 | 69 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-033D-1010 (1011002-12 )** | | | *Lab File ID: D46312.D* | | | *Analyzed: 11/17/10 18:06* | | | |
| 1,4-Dichlorobenzene-d4 | 140985 | 3.73 | 221979 | 3.73 | 64 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 218097 | 6.84 | 329536 | 6.84 | 66 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 158739 | 11.26 | 246988 | 11.26 | 64 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 478111 | 5.01 | 788307 | 5.01 | 61 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 87772 | 13.92 | 134736 | 13.93 | 65 | 50 - 200 | -0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 300961 | 8.37 | 476987 | 8.37 | 63 | 50 - 200 | 0.0000 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048010 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-020-1010 (1011002-13 )** | | | *Lab File ID: D46313.D* | | | *Analyzed: 11/17/10 18:30* | | | |
| 1,4-Dichlorobenzene-d4 | 140191 | 3.72 | 221979 | 3.73 | 63 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 195956 | 6.83 | 329536 | 6.84 | 59 | 50 - 200 | -0.0100 | +/-30.00 | |
| Chrysene-d12 | 127997 | 11.26 | 246988 | 11.26 | 52 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 473362 | 5.01 | 788307 | 5.01 | 60 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 77920 | 13.92 | 134736 | 13.93 | 58 | 50 - 200 | -0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 244592 | 8.37 | 476987 | 8.37 | 51 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-021-1010 (1011002-14 )** | | | *Lab File ID: D46314.D* | | | *Analyzed: 11/17/10 18:54* | | | |
| 1,4-Dichlorobenzene-d4 | 152786 | 3.73 | 221979 | 3.73 | 69 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 248654 | 6.84 | 329536 | 6.84 | 75 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 199885 | 11.27 | 246988 | 11.26 | 81 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 468738 | 5.01 | 788307 | 5.01 | 59 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 93754 | 13.93 | 134736 | 13.93 | 70 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 318367 | 8.38 | 476987 | 8.37 | 67 | 50 - 200 | 0.0100 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048011 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048011-CCV1 )** | | | *Lab File ID: D46328.D* | | | *Analyzed: 11/18/10 11:30* | | | |
| 1,4-Dichlorobenzene-d4 | 145296 | 3.7 | 524277 | 3.79 | 28 | 50 - 200 | -0.0900 | +/-30.00 | |
| Acenaphthene-d10 | 240208 | 6.82 | 890160 | 6.91 | 27 | 50 - 200 | -0.0900 | +/-30.00 | |
| Chrysene-d12 | 163764 | 11.25 | 837431 | 11.37 | 20 | 50 - 200 | -0.1200 | +/-30.00 | |
| Naphthalene-d8 | 559936 | 4.99 | 1909751 | 5.08 | 29 | 50 - 200 | -0.0900 | +/-30.00 | |
| Perylene-d12 | 83894 | 13.9 | 457505 | 14.11 | 18 | 50 - 200 | -0.2100 | +/-30.00 | |
| Phenanthrene-d10 | 335469 | 8.35 | 1402237 | 8.45 | 24 | 50 - 200 | -0.1000 | +/-30.00 | |
| **GKHMS-GW-031-1010 (1011002-15 )** | | | *Lab File ID: D46329.D* | | | *Analyzed: 11/18/10 11:55* | | | |
| 1,4-Dichlorobenzene-d4 | 124618 | 3.72 | 145296 | 3.7 | 86 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 189469 | 6.82 | 240208 | 6.82 | 79 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 142120 | 11.25 | 163764 | 11.25 | 87 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 428189 | 5 | 559936 | 4.99 | 76 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 76834 | 13.9 | 83894 | 13.9 | 92 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 264017 | 8.35 | 335469 | 8.35 | 79 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-GW-032D-1010 (1011002-16 )** | | | *Lab File ID: D46330.D* | | | *Analyzed: 11/18/10 12:19* | | | |
| 1,4-Dichlorobenzene-d4 | 126741 | 3.72 | 145296 | 3.7 | 87 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 184926 | 6.82 | 240208 | 6.82 | 77 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 178775 | 11.25 | 163764 | 11.25 | 109 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 425246 | 5 | 559936 | 4.99 | 76 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 99529 | 13.91 | 83894 | 13.9 | 119 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 261576 | 8.36 | 335469 | 8.35 | 78 | 50 - 200 | 0.0100 | +/-30.00 | |

# SURROGATE SUMMARY SHEET

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-V |

| | DCB [2C] (30 - 135) | DCB (30 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| 1011002-14 | 50 | 39 | 121 | 91 |
| 1011002-15 | 35 | 38 | 77 | 98 |
| 1011002-16 | 50 | 46 | 76 | 158* |
| B045083-BLK1 | 87 | 83 | 93 | 91 |
| B045083-BS1 | 101 | 104 | 104 | 105 |
| B045083-BSD1 | 98 | 101 | 110 | 104 |

# METHOD BLANK SUMMARY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B045083-BLK1 | Batch: | B045083 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B045083-BSD1 | V0316284.D | 12:49 |
| LCS | B045083-BS1 | V0316283.D | 11:48 |
| GKHMS-GW-032D-1010 | 1011002-16 | V0316277.D | 21:08 |
| GKHMS-GW-031-1010 | 1011002-15 | V0316276.D | 20:36 |
| GKHMS-GW-021-1010 | 1011002-14 | V0316275.D | 20:04 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Instrument: | GCECD-V | | | | |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.050 | U |
| 72-55-9 | 4,4'-DDE | 0.050 | U |
| 50-29-3 | 4,4'-DDT | 0.050 | U |
| 309-00-2 | Aldrin | 0.050 | U |
| 319-84-6 | alpha-BHC | 0.050 | U |
| 5103-71-9 | alpha-Chlordane | 0.050 | U |
| 319-85-7 | beta-BHC | 0.050 | U |
| 57-74-9 | Chlordane | 1.00 | U |
| 319-86-8 | delta-BHC | 0.050 | U |
| 60-57-1 | Dieldrin | 0.050 | U |
| 959-98-8 | Endosulfan I | 0.050 | U |
| 33213-65-9 | Endosulfan II | 0.050 | U |
| 1031-07-8 | Endosulfan sulfate | 0.050 | U |
| 72-20-8 | Endrin | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde | 0.050 | U |
| 53494-70-5 | Endrin ketone | 0.050 | U |
| 58-89-9 | gamma-BHC | 0.050 | U |
| 5103-74-2 | gamma-Chlordane | 0.050 | U |
| 76-44-8 | Heptachlor | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide | 0.050 | U |
| 72-43-5 | Methoxychlor | 0.050 | U |
| 8001-35-2 | Toxaphene | 1.00 | U |
| 143-50-0 | Kepone | 0.050 | U |
| 143-50-0 | Kepone [2C] | 0.050 | U |
| 2385-85-5 | Mirex | 0.050 | U |
| 2385-85-5 | Mirex [2C] | 0.050 | U |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Column: | 1 | | | | |

Instrument: GCECD-V

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 0.050 | U |
| 118-74-1 | Hexachlorobenzene [2C] | 0.050 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D | | |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 | | |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | | | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 | Instrument: | GCECD-V |
| Column: | 2 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD [2C] | 0.050 | U |
| 72-55-9 | 4,4'-DDE [2C] | 0.050 | U |
| 50-29-3 | 4,4'-DDT [2C] | 0.050 | U |
| 309-00-2 | Aldrin [2C] | 0.050 | U |
| 319-84-6 | alpha-BHC [2C] | 0.050 | U |
| 5103-71-9 | alpha-Chlordane [2C] | 0.050 | U |
| 319-85-7 | beta-BHC [2C] | 0.050 | U |
| 57-74-9 | Chlordane [2C] | 1.00 | U |
| 319-86-8 | delta-BHC [2C] | 0.050 | U |
| 60-57-1 | Dieldrin [2C] | 0.050 | U |
| 959-98-8 | Endosulfan I [2C] | 0.050 | U |
| 33213-65-9 | Endosulfan II [2C] | 0.050 | U |
| 1031-07-8 | Endosulfan Sulfate [2C] | 0.050 | U |
| 72-20-8 | Endrin [2C] | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde [2C] | 0.050 | U |
| 53494-70-5 | Endrin Ketone [2C] | 0.050 | U |
| 58-89-9 | gamma-BHC [2C] | 0.050 | U |
| 5103-74-2 | gamma-Chlordane [2C] | 0.050 | U |
| 76-44-8 | Heptachlor [2C] | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide [2C] | 0.050 | U |
| 72-43-5 | Methoxychlor [2C] | 0.050 | U |
| 8001-35-2 | Toxaphene [2C] | 1.00 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.424 | 85 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.421 | 84 | 50 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.421 | 84 | 0.7 | 30 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.449 | 90 | 7 | 30 | 50 - 150 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.500 | 100 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.482 | 96 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.434 | 87 | 45 - 140 |
| Aldrin | 0.500 | 0.480 | 96 | 25 - 140 |
| alpha-BHC | 0.500 | 0.502 | 100 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.463 | 93 | 65 - 125 |
| beta-BHC | 0.500 | 0.491 | 98 | 65 - 125 |
| delta-BHC | 0.500 | 0.488 | 98 | 45 - 135 |
| Dieldrin | 0.500 | 0.474 | 95 | 60 - 130 |
| Endosulfan I | 0.500 | 0.446 | 89 | 50 - 110 |
| Endosulfan II | 0.500 | 0.463 | 93 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.456 | 91 | 55 - 135 |
| Endrin | 0.500 | 0.487 | 97 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.448 | 90 | 55 - 135 |
| Endrin ketone | 0.500 | 0.462 | 92 | 75 - 125 |
| gamma-BHC | 0.500 | 0.506 | 101 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.469 | 94 | 60 - 125 |
| Heptachlor | 0.500 | 0.431 | 86 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.466 | 93 | 60 - 130 |
| Methoxychlor | 0.500 | 0.449 | 90 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.506 | 101 | 1 | 20 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.503 | 101 | 4 | 20 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.444 | 89 | 2 | 20 | 45 - 140 |
| Aldrin | 0.500 | 0.530 | 106 | 10 | 20 | 25 - 140 |
| alpha-BHC | 0.500 | 0.548 | 110 | 9 | 20 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.480 | 96 | 4 | 20 | 65 - 125 |
| beta-BHC | 0.500 | 0.499 | 100 | 2 | 20 | 65 - 125 |
| delta-BHC | 0.500 | 0.515 | 103 | 5 | 20 | 45 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BSD1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Dieldrin | 0.500 | 0.489 | 98 | 3 | 20 | 60 - 130 |
| Endosulfan I | 0.500 | 0.474 | 95 | 6 | 20 | 50 - 110 |
| Endosulfan II | 0.500 | 0.468 | 94 | 1 | 20 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.462 | 92 | 1 | 20 | 55 - 135 |
| Endrin | 0.500 | 0.504 | 101 | 3 | 20 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.456 | 91 | 2 | 20 | 55 - 135 |
| Endrin ketone | 0.500 | 0.460 | 92 | 0.5 | 20 | 75 - 125 |
| gamma-BHC | 0.500 | 0.534 | 107 | 6 | 20 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.488 | 98 | 4 | 20 | 60 - 125 |
| Heptachlor | 0.500 | 0.449 | 90 | 4 | 20 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.486 | 97 | 4 | 20 | 60 - 130 |
| Methoxychlor | 0.500 | 0.443 | 89 | 1 | 20 | 55 - 150 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.488 | 98 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.467 | 93 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.450 | 90 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.492 | 98 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.509 | 102 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.471 | 94 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.468 | 94 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.487 | 97 | 45 - 135 |
| Dieldrin [2C] | 0.500 | 0.476 | 95 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.472 | 94 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.474 | 95 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.449 | 90 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.497 | 99 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.485 | 97 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.463 | 93 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.506 | 101 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.472 | 94 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.480 | 96 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.472 | 94 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.434 | 87 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.497 | 99 | 2 | 20 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.485 | 97 | 4 | 20 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.463 | 93 | 3 | 20 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.516 | 103 | 5 | 20 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.543 | 109 | 6 | 20 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.490 | 98 | 4 | 20 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.493 | 99 | 5 | 20 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.516 | 103 | 6 | 20 | 45 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BSD1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Dieldrin [2C] | 0.500 | 0.493 | 99 | 3 | 20 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.491 | 98 | 4 | 20 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.482 | 96 | 2 | 20 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.457 | 91 | 2 | 20 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.514 | 103 | 3 | 20 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.498 | 100 | 3 | 20 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.467 | 93 | 0.8 | 20 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.537 | 107 | 6 | 20 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.493 | 99 | 4 | 20 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.507 | 101 | 6 | 20 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.494 | 99 | 5 | 20 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.439 | 88 | 1 | 20 | 55 - 150 |

# INITIAL CALIBRATION DATA

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | | | 4228003 | 3967186 | 4201500 | 3047132 |
| 4,4'-DDD [2C] | | | 7792208 | 7234494 | 7619482 | 6131764 |
| 4,4'-DDE | | | 5306430 | 4930815 | 4905410 | 4373280 |
| 4,4'-DDE [2C] | | | 1.05443E+07 | 9945321 | 1.001526E+07 | 8982652 |
| 4,4'-DDT | | | 4631770 | 4366302 | 4478454 | 4147808 |
| 4,4'-DDT [2C] | | | 8748053 | 8157576 | 8180418 | 7352604 |
| Aldrin | | | 6761234 | 6460819 | 6690681 | 6307220 |
| Aldrin [2C] | | | 1.240337E+07 | 1.180853E+07 | 1.200809E+07 | 1.139338E+07 |
| alpha-BHC | | | 8488671 | 7949527 | 7538186 | 7296800 |
| alpha-BHC [2C] | | | 1.382115E+07 | 1.306267E+07 | 1.252462E+07 | 1.23821E+07 |
| alpha-Chlordane | | | 6201309 | 5986639 | 6256260 | 6030841 |
| alpha-Chlordane [2C] | | | 1.12669E+07 | 1.08037E+07 | 1.114199E+07 | 1.05152E+07 |
| beta-BHC | | | 7843279 | 7387674 | 7101254 | 7049252 |
| beta-BHC [2C] | | | 4931394 | 4828646 | 5176968 | 5031416 |
| Chlordane | | 517678.6 | | | | |
| Chlordane [2C] | | 789094 | | | | |
| delta-BHC | | | 7277924 | 6853354 | 7136828 | 6118556 |
| delta-BHC [2C] | | | 1.176847E+07 | 1.112517E+07 | 1.157096E+07 | 1.020546E+07 |
| Dieldrin | | | 6341216 | 6042704 | 6217778 | 5841492 |
| Dieldrin [2C] | | | 1.170951E+07 | 1.119844E+07 | 1.14154E+07 | 1.031153E+07 |
| Endosulfan I | | | 6125407 | 6050284 | 6438542 | 6003184 |
| Endosulfan I [2C] | | | 1.02781E+07 | 9912386 | 1.028405E+07 | 9704388 |
| Endosulfan II | | | 5308187 | 5140706 | 5390746 | 4924880 |
| Endosulfan II [2C] | | | 9538840 | 9171726 | 9648252 | 9191232 |
| Endosulfan sulfate | | | 4958684 | 4760022 | 5120770 | 4713624 |
| Endosulfan Sulfate [2C] | | | 8230730 | 7832858 | 8416440 | 7694276 |
| Endrin | | | 5364980 | 5128918 | 5398841 | 4949464 |
| Endrin [2C] | | | 9751123 | 9321387 | 9634690 | 8577168 |
| Endrin Aldehyde | | | 3195252 | 3201460 | 3474004 | 3271235 |
| Endrin Aldehyde [2C] | | | 5327351 | 5133040 | 5899840 | 5162072 |
| Endrin ketone | | | 5942327 | 5673715 | 5995198 | 5581840 |

# INITIAL CALIBRATION DATA

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Endrin Ketone [2C] | | | 9014131 | 8514627 | 9035220 | 8302084 |
| gamma-BHC [2C] | | | 1.252149E+07 | 1.192095E+07 | 1.213754E+07 | 1.145081E+07 |
| gamma-Chlordane | | | 6252519 | 5972695 | 6205992 | 5951332 |
| gamma-Chlordane [2C] | | | 1.151052E+07 | 1.100949E+07 | 1.127758E+07 | 1.058262E+07 |
| Heptachlor | | | 6807055 | 6619332 | 6970796 | 6834228 |
| Heptachlor [2C] | | | 1.340323E+07 | 1.289744E+07 | 1.319733E+07 | 1.272744E+07 |
| Heptachlor Epoxide | | | 6403914 | 6186826 | 6435112 | 6265156 |
| Heptachlor Epoxide [2C] | | | 1.151958E+07 | 1.110571E+07 | 1.145404E+07 | 1.091235E+07 |
| Methoxychlor | | | 2362743 | 2303264 | 2444272 | 2306283 |
| Methoxychlor [2C] | | | 4258555 | 3976531 | 4070250 | 4020820 |
| Toxaphene | 143490.1 | | | | | |
| Toxaphene [2C] | 320181.4 | | | | | |
| TCMX | ~~9564832~~ | ~~5491488~~ | 5073178 | 4913595 | 4674152 | 4976984 |
| TCMX [2C] | ~~1.430665E+07~~ | ~~8436756~~ | 7528036 | 7276810 | 6532528 | 7642860 |
| DCB | ~~5687836~~ | ~~3319555~~ | 3684320 | 3457805 | 3733342 | 3588711 |
| DCB [2C] | ~~8540948~~ | ~~5219928~~ | 5719084 | 5322371 | 5733588 | 5652922 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 4191842 | | | | | |
| 4,4'-DDD [2C] | 6758776 | | | | | |
| 4,4'-DDE | 5137484 | | | | | |
| 4,4'-DDE [2C] | 9513908 | | | | | |
| 4,4'-DDT | 4772662 | | | | | |
| 4,4'-DDT [2C] | 7714816 | | | | | |
| Aldrin | 6697544 | | | | | |
| Aldrin [2C] | 1.034277E+07 | | | | | |
| alpha-BHC | 7309564 | | | | | |
| alpha-BHC [2C] | 1.126125E+07 | | | | | |
| alpha-Chlordane | 6760975 | | | | | |
| alpha-Chlordane [2C] | 1.071551E+07 | | | | | |
| beta-BHC | 7107892 | | | | | |
| beta-BHC [2C] | 5914674 | | | | | |
| Chlordane | | | | | | |
| Chlordane [2C] | | | | | | |
| delta-BHC | 5695150 | | | | | |
| delta-BHC [2C] | 9316952 | | | | | |
| Dieldrin | 6008766 | | | | | |
| Dieldrin [2C] | 1.018429E+07 | | | | | |
| Endosulfan I | 6605348 | | | | | |
| Endosulfan I [2C] | 9917316 | | | | | |
| Endosulfan II | 5987412 | | | | | |
| Endosulfan II [2C] | 9464448 | | | | | |
| Endosulfan sulfate | 5757440 | | | | | |
| Endosulfan Sulfate [2C] | 9836088 | | | | | |
| Endrin | 5721012 | | | | | |
| Endrin [2C] | 8934724 | | | | | |
| Endrin Aldehyde | 4660820 | | | | | |
| Endrin Aldehyde [2C] | 5632228 | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Endrin ketone | 6451818 | | | | | |
| Endrin Ketone [2C] | 9609206 | | | | | |
| gamma-BHC [2C] | 1.020279E+07 | | | | | |
| gamma-Chlordane | 6337892 | | | | | |
| gamma-Chlordane [2C] | 1.080924E+07 | | | | | |
| Heptachlor | 7673279 | | | | | |
| Heptachlor [2C] | 1.259966E+07 | | | | | |
| Heptachlor Epoxide | 6898168 | | | | | |
| Heptachlor Epoxide [2C] | 1.144202E+07 | | | | | |
| Methoxychlor | 2339110 | | | | | |
| Methoxychlor [2C] | 4506600 | | | | | |
| Toxaphene | | | | | | |
| Toxaphene [2C] | | | | | | |
| TCMX | 5878088 | | | | | |
| TCMX [2C] | 8240324 | | | | | |
| DCB | 4565668 | | | | | |
| DCB [2C] | 7295552 | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 3927132 | 12.80733 | 0.9931665 | | | |
| 4,4'-DDD [2C] | 7107345 | 9.49265 | 0.9953261 | | | |
| 4,4'-DDE | 4930684 | 7.136616 | 0.9957538 | | | |
| 4,4'-DDE [2C] | 9800288 | 5.974536 | 0.9975432 | | | |
| 4,4'-DDT | 4479399 | 5.376023 | 0.9976117 | | | |
| 4,4'-DDT [2C] | 8030693 | 6.567605 | 0.9967026 | | | |
| Aldrin | 6583499 | 2.916463 | 0.9986387 | | | |
| Aldrin [2C] | 1.159123E+07 | 6.790814 | 0.9987355 | | | |
| alpha-BHC | 7716550 | 6.557162 | 0.9958162 | | | |
| alpha-BHC [2C] | 1.261036E+07 | 7.470782 | 0.9972337 | | | |
| alpha-Chlordane | 6247204 | 4.939292 | 0.998986 | | | |
| alpha-Chlordane [2C] | 1.088866E+07 | 2.845215 | 0.9988789 | | | |
| beta-BHC | 7297870 | 4.555459 | 0.9967492 | | | |
| beta-BHC [2C] | 5176619 | 8.3482 | 0.9987438 | | | |
| Chlordane | | | 0 | | | |
| Chlordane [2C] | | | 0 | | | |
| delta-BHC | 6616362 | 10.30961 | 0.9974496 | | | |
| delta-BHC [2C] | 1.07974E+07 | 9.479932 | 0.9979358 | | | |
| Dieldrin | 6090391 | 3.179883 | 0.9985682 | | | |
| Dieldrin [2C] | 1.096383E+07 | 6.199808 | 0.9986072 | | | |
| Endosulfan I | 6244553 | 4.221736 | 0.9987476 | | | |
| Endosulfan I [2C] | 1.001925E+07 | 2.535149 | 0.9990434 | | | |
| Endosulfan II | 5350386 | 7.442338 | 0.9985825 | | | |
| Endosulfan II [2C] | 9402900 | 2.260476 | 0.9987657 | | | |
| Endosulfan sulfate | 5062108 | 8.324653 | 0.9978397 | | | |
| Endosulfan Sulfate [2C] | 8402078 | 10.15314 | 0.9973928 | | | |
| Endrin | 5312643 | 5.508657 | 0.9981912 | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Endrin [2C] | 9243818 | 5.289009 | 0.9983315 | | | |
| Endrin Aldehyde | 3560554 | 17.56286 | 0.9979873 | | | |
| Endrin Aldehyde [2C] | 5430906 | 6.052219 | 0.9937648 | | | |
| Endrin ketone | 5928980 | 5.741913 | 0.9981873 | | | |
| Endrin Ketone [2C] | 8895054 | 5.732912 | 0.9975023 | | | |
| gamma-BHC [2C] | 1.164672E+07 | 7.685229 | 0.9987495 | | | |
| gamma-Chlordane | 6144086 | 2.815292 | 0.9986504 | | | |
| gamma-Chlordane [2C] | 1.103789E+07 | 3.33242 | 0.9987641 | | | |
| Heptachlor | 6980938 | 5.827347 | 0.9991177 | | | |
| Heptachlor [2C] | 1.296502E+07 | 2.559587 | 0.9991483 | | | |
| Heptachlor Epoxide | 6437835 | 4.29548 | 0.9991091 | | | |
| Heptachlor Epoxide [2C] | 1.128674E+07 | 2.341002 | 0.9990929 | | | |
| Methoxychlor | 2351134 | 2.448607 | 0.998842 | | | |
| Methoxychlor [2C] | 4166551 | 5.240687 | 0.9970825 | | | |
| Toxaphene | | | 0 | | | |
| Toxaphene [2C] | | | 0 | | | |
| TCMX | 5103199 | 8.965449 | 0.9975621 | | | |
| TCMX [2C] | 7444112 | 8.3338 | 0.9937107 | | | |
| DCB | 3805969 | 11.49518 | 0.9968368 | | | |
| DCB [2C] | 5944703 | 13.0102 | 0.9962796 | | | |

V0316231BRKDWN

| % BREAKDOWN | SIGNAL 1 RTx-CLP | SIGNAL 2 RTx-CLP2 |
|---|---|---|
| **ENDRIN** | **6.58** | **4.63** |
| **DDT** | **1.53** | **1.29** |

| | RAW RESPONSE | |
|---|---|---|
| ENDRIN KETONE | 8092017.00 | 11915024.00 |
| ENDRIN ALDEHYDE | 5794209.00 | 5002648.00 |
| **ENDRIN** | 197300000.00 | 348700000.00 |
| | | |
| DDE | 0.00 | 0.00 |
| DDD | 2229613.00 | 3545463.00 |
| **DDT** | 143600000.00 | 270800000.00 |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316240.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-SCV1 | Injection Time: | 16:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.4 | 3927132 | 4038988 | | 2.8 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 51.8 | 7107345 | 7357034 | | 3.5 | 20 |
| 4,4'-DDE | L | 50.0 | 48.8 | 4930684 | 4816830 | | -2.3 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.3 | 9800288 | 9666454 | | -1.4 | 20 |
| 4,4'-DDT | L | 50.0 | 48.1 | 4479399 | 4306818 | | -3.9 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.0 | 8030693 | 7864020 | | -2.1 | 20 |
| Aldrin | L | 50.0 | 48.9 | 6583499 | 6441240 | | -2.2 | 20 |
| Aldrin [2C] | L | 50.0 | 50.7 | 1.159123E+07 | 1.17541E+07 | | 1.4 | 20 |
| alpha-BHC | L | 50.0 | 50.4 | 7716550 | 7785798 | | 0.9 | 20 |
| alpha-BHC [2C] | L | 50.0 | 51.4 | 1.261036E+07 | 1.296084E+07 | | 2.8 | 20 |
| alpha-Chlordane | L | 50.0 | 48.0 | 6247204 | 5994614 | | -4.0 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.4 | 1.088866E+07 | 1.076895E+07 | | -1.1 | 20 |
| beta-BHC | L | 50.0 | 49.9 | 7297870 | 7287814 | | -0.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.4 | 5176619 | 4909320 | | -5.2 | 20 |
| delta-BHC | L | 50.0 | 51.8 | 6616362 | 6860098 | | 3.7 | 20 |
| delta-BHC [2C] | L | 50.0 | 52.3 | 1.07974E+07 | 1.12966E+07 | | 4.6 | 20 |
| Dieldrin | L | 50.0 | 48.9 | 6090391 | 5959458 | | -2.1 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.1 | 1.096383E+07 | 1.097932E+07 | | 0.1 | 20 |
| Endosulfan I | L | 50.0 | 48.0 | 6244553 | 5998544 | | -3.9 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.4 | 1.001925E+07 | 9892124 | | -1.3 | 20 |
| Endosulfan II | L | 50.0 | 47.4 | 5350386 | 5070140 | | -5.2 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.0 | 9402900 | 9219596 | | -1.9 | 20 |
| Endosulfan sulfate | L | 50.0 | 48.1 | 5062108 | 4866284 | | -3.9 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 47.9 | 8402078 | 8049164 | | -4.2 | 20 |
| Endrin | L | 50.0 | 48.8 | 5312643 | 5186818 | | -2.4 | 20 |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316240.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-SCV1 | Injection Time: | 16:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 50.5 | 9243818 | 9343426 | | 1.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 52.1 | 3560554 | 3709280 | | 4.2 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 51.1 | 5430906 | 5551866 | | 2.2 | 20 |
| Endrin ketone | L | 50.0 | 47.8 | 5928980 | 5662886 | | -4.5 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 48.5 | 8895054 | 8620990 | | -3.1 | 20 |
| gamma-BHC [2C] | L | 50.0 | 50.9 | 1.164672E+07 | 1.185677E+07 | | 1.8 | 20 |
| gamma-Chlordane | L | 50.0 | 49.0 | 6144086 | 6014530 | | -2.1 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.3 | 1.103789E+07 | 1.088972E+07 | | -1.3 | 20 |
| Heptachlor | L | 50.0 | 48.6 | 6980938 | 6778736 | | -2.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.5 | 1.296502E+07 | 1.284027E+07 | | -1.0 | 20 |
| Heptachlor Epoxide | L | 50.0 | 48.2 | 6437835 | 6203680 | | -3.6 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.1 | 1.128674E+07 | 1.108669E+07 | | -1.8 | 20 |
| Methoxychlor | L | 50.0 | 50.2 | 2351134 | 2358820 | | 0.3 | 20 |
| Methoxychlor [2C] | L | 50.0 | 47.5 | 4166551 | 3956046 | | -5.1 | 20 |
| TCMX | L | 25.0 | 25.4 | 5103199 | 5193616 | | 1.8 | 20 |
| TCMX [2C] | L | 25.0 | 24.8 | 7444112 | 7389744 | | -0.7 | 20 |
| DCB | L | 25.0 | 23.2 | 3805969 | 3533777 | | -7.2 | 20 |
| DCB [2C] | L | 25.0 | 23.0 | 5944703 | 5465896 | | -8.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316246.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-CCV1 | Injection Time: | 20:07 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Heptachlor Epoxide | L | 50.0 | 45.8 | 6437835 | 5892178 | | -8.5 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 47.2 | 1.128674E+07 | 1.066511E+07 | | -5.5 | 20 |
| TCMX | L | 25.0 | 24.3 | 5103199 | 4956876 | | -2.9 | 20 |
| TCMX [2C] | L | 25.0 | 24.4 | 7444112 | 7259684 | | -2.5 | 20 |
| DCB | L | 25.0 | 21.8 | 3805969 | 3315558 | | -12.9 | 20 |
| DCB [2C] | L | 25.0 | 22.1 | 5944703 | 5252344 | | -11.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.6 | 3927132 | 4056868 | | 3.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 51.2 | 7107345 | 7277152 | | 2.4 | 20 |
| 4,4'-DDE | L | 50.0 | 51.0 | 4930684 | 5028686 | | 2.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.8 | 9800288 | 9760268 | | -0.4 | 20 |
| 4,4'-DDT | L | 50.0 | 49.8 | 4479399 | 4464286 | | -0.3 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.8 | 8030693 | 8006086 | | -0.3 | 20 |
| Aldrin | L | 50.0 | 50.3 | 6583499 | 6623548 | | 0.6 | 20 |
| Aldrin [2C] | L | 50.0 | 50.9 | 1.159123E+07 | 1.179124E+07 | | 1.7 | 20 |
| alpha-BHC | L | 50.0 | 52.1 | 7716550 | 8040072 | | 4.2 | 20 |
| alpha-BHC [2C] | L | 50.0 | 52.3 | 1.261036E+07 | 1.318789E+07 | | 4.6 | 20 |
| alpha-Chlordane | L | 50.0 | 49.6 | 6247204 | 6196054 | | -0.8 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.3 | 1.088866E+07 | 1.073454E+07 | | -1.4 | 20 |
| beta-BHC | L | 50.0 | 52.1 | 7297870 | 7598910 | | 4.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.9 | 5176619 | 4956086 | | -4.3 | 20 |
| delta-BHC | L | 50.0 | 54.1 | 6616362 | 7156772 | | 8.2 | 20 |
| delta-BHC [2C] | L | 50.0 | 53.1 | 1.07974E+07 | 1.145907E+07 | | 6.1 | 20 |
| Dieldrin | L | 50.0 | 50.4 | 6090391 | 6138264 | | 0.8 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.4 | 1.096383E+07 | 1.10548E+07 | | 0.8 | 20 |
| Endosulfan I | L | 50.0 | 47.8 | 6244553 | 5963266 | | -4.5 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.3 | 1.001925E+07 | 9870438 | | -1.5 | 20 |
| Endosulfan II | L | 50.0 | 48.7 | 5350386 | 5211888 | | -2.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.8 | 9402900 | 9355800 | | -0.5 | 20 |
| Endosulfan sulfate | L | 50.0 | 49.7 | 5062108 | 5034586 | | -0.5 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.4 | 8402078 | 8129800 | | -3.2 | 20 |
| Endrin | L | 50.0 | 51.0 | 5312643 | 5415740 | | 1.9 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 51.7 | 9243818 | 9554568 | | 3.4 | 20 |
| Endrin Aldehyde | L | 50.0 | 46.6 | 3560554 | 3318566 | | -6.8 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 50.6 | 5430906 | 5501934 | | 1.3 | 20 |
| Endrin ketone | L | 50.0 | 49.0 | 5928980 | 5813120 | | -2.0 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 48.6 | 8895054 | 8652152 | | -2.7 | 20 |
| gamma-BHC [2C] | L | 50.0 | 51.6 | 1.164672E+07 | 1.202405E+07 | | 3.2 | 20 |
| gamma-Chlordane | L | 50.0 | 50.2 | 6144086 | 6163074 | | 0.3 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.2 | 1.103789E+07 | 1.087087E+07 | | -1.5 | 20 |
| Heptachlor | L | 50.0 | 49.0 | 6980938 | 6845460 | | -1.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.4 | 1.296502E+07 | 1.279548E+07 | | -1.3 | 20 |
| Heptachlor Epoxide | L | 50.0 | 49.4 | 6437835 | 6365172 | | -1.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.0 | 1.128674E+07 | 1.10573E+07 | | -2.0 | 20 |
| Methoxychlor | L | 50.0 | 51.8 | 2351134 | 2438070 | | 3.7 | 20 |
| Methoxychlor [2C] | L | 50.0 | 47.6 | 4166551 | 3963534 | | -4.9 | 20 |
| TCMX | L | 25.0 | 26.0 | 5103199 | 5303972 | | 3.9 | 20 |
| TCMX [2C] | L | 25.0 | 25.0 | 7444112 | 7455648 | | 0.2 | 20 |
| DCB | L | 25.0 | 24.7 | 3805969 | 3764899 | | -1.1 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5610868 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316272.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV2 | Injection Time: | 18:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.2 | 3927132 | 4017144 | | 2.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 52.6 | 7107345 | 7483022 | | 5.3 | 20 |
| 4,4'-DDE | L | 50.0 | 49.5 | 4930684 | 4879706 | | -1.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 50.4 | 9800288 | 9877784 | | 0.8 | 20 |
| 4,4'-DDT | L | 50.0 | 46.4 | 4479399 | 4160028 | | -7.1 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 50.0 | 8030693 | 8033248 | | 0.04 | 20 |
| Aldrin | L | 50.0 | 47.6 | 6583499 | 6265822 | | -4.8 | 20 |
| Aldrin [2C] | L | 50.0 | 51.4 | 1.159123E+07 | 1.192005E+07 | | 2.8 | 20 |
| alpha-BHC | L | 50.0 | 49.6 | 7716550 | 7650676 | | -0.9 | 20 |
| alpha-BHC [2C] | L | 50.0 | 53.0 | 1.261036E+07 | 1.33796E+07 | | 6.1 | 20 |
| alpha-Chlordane | L | 50.0 | 46.1 | 6247204 | 5763774 | | -7.7 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.9 | 1.088866E+07 | 1.087077E+07 | | -0.2 | 20 |
| beta-BHC | L | 50.0 | 48.7 | 7297870 | 3227424 | | -2.7 | 20 |
| beta-BHC [2C] | L | 50.0 | 48.3 | 5176619 | 4996522 | | -3.5 | 20 |
| delta-BHC | L | 50.0 | 51.8 | 6616362 | 6849552 | | 3.5 | 20 |
| delta-BHC [2C] | L | 50.0 | 54.3 | 1.07974E+07 | 1.171687E+07 | | 8.5 | 20 |
| Dieldrin | L | 50.0 | 47.7 | 6090391 | 5811592 | | -4.6 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.7 | 1.096383E+07 | 1.110888E+07 | | 1.3 | 20 |
| Endosulfan I | L | 50.0 | 44.9 | 6244553 | 5603772 | | -10.3 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.9 | 1.001925E+07 | 9990868 | | -0.3 | 20 |
| Endosulfan II | L | 50.0 | 45.9 | 5350386 | 4910082 | | -8.2 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.3 | 9402900 | 9277900 | | -1.3 | 20 |
| Endosulfan sulfate | L | 50.0 | 47.3 | 5062108 | 4788552 | | -5.4 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.6 | 8402078 | 8169674 | | -2.8 | 20 |
| Endrin | L | 50.0 | 49.1 | 5312643 | 5218246 | | -1.8 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316272.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV2 | Injection Time: | 18:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 52.5 | 9243818 | 9713220 | | 5.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 47.5 | 3560554 | 3380038 | | -5.1 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 49.7 | 5430906 | 5401690 | | -0.5 | 20 |
| Endrin ketone | L | 50.0 | 47.2 | 5928980 | 5599254 | | -5.6 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8763520 | | -1.5 | 20 |
| gamma-BHC [2C] | L | 50.0 | 52.3 | 1.164672E+07 | 1.219179E+07 | | 4.7 | 20 |
| gamma-Chlordane | L | 50.0 | 46.8 | 6144086 | 5745286 | | -6.5 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.8 | 1.103789E+07 | 1.098883E+07 | | -0.4 | 20 |
| Heptachlor | L | 50.0 | 41.9 | 6980938 | 5845736 | | -16.3 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.3 | 1.296502E+07 | 1.278192E+07 | | -1.4 | 20 |
| Heptachlor Epoxide | L | 50.0 | 46.4 | 6437835 | 5980800 | | -7.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.5 | 1.128674E+07 | 1.117517E+07 | | -1.0 | 20 |
| Methoxychlor | L | 50.0 | 47.2 | 2351134 | 2221906 | | -5.5 | 20 |
| Methoxychlor [2C] | L | 50.0 | 48.0 | 4166551 | 4001668 | | -4.0 | 20 |
| TCMX | L | 25.0 | 24.6 | 5103199 | 5011176 | | -1.8 | 20 |
| TCMX [2C] | L | 25.0 | 25.3 | 7444112 | 7544380 | | 1.4 | 20 |
| DCB | L | 25.0 | 23.2 | 3805969 | 3532432 | | -7.2 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5609424 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 48.0 | 3927132 | 3770986 | | -4.0 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 48.3 | 7107345 | 6866646 | | -3.4 | 20 |
| 4,4'-DDE | L | 50.0 | 46.6 | 4930684 | 4591422 | | -6.9 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 51.2 | 9800288 | 1.002769E+07 | | 2.3 | 20 |
| 4,4'-DDT | L | 50.0 | 42.2 | 4479399 | 3782032 | | -15.6 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.9 | 8030693 | 8018976 | | -0.1 | 20 |
| Aldrin | L | 50.0 | 43.2 | 6583499 | 5685812 | | -13.6 | 20 |
| Aldrin [2C] | L | 50.0 | 51.7 | 1.159123E+07 | 1.197679E+07 | | 3.3 | 20 |
| alpha-BHC | L | 50.0 | 45.6 | 7716550 | 7040958 | | -8.8 | 20 |
| alpha-BHC [2C] | L | 50.0 | 53.0 | 1.261036E+07 | 1.336872E+07 | | 6.0 | 20 |
| alpha-Chlordane | L | 50.0 | 41.8 | 6247204 | 5227724 | | -16.3 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 50.1 | 1.088866E+07 | 1.091461E+07 | | 0.2 | 20 |
| beta-BHC | L | 50.0 | 44.9 | 7297870 | 2980204 | | -10.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 48.6 | 5176619 | 5037110 | | -2.7 | 20 |
| delta-BHC | L | 50.0 | 47.8 | 6616362 | 6326490 | | -4.4 | 20 |
| delta-BHC [2C] | L | 50.0 | 55.0 | 1.07974E+07 | 1.188226E+07 | | 10.0 | 20 |
| Dieldrin | L | 50.0 | 43.4 | 6090391 | 5288288 | | -13.2 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.8 | 1.096383E+07 | 1.112931E+07 | | 1.5 | 20 |
| Endosulfan I | L | 50.0 | 40.2 | 6244553 | 5014186 | | -19.7 | 20 |
| Endosulfan I [2C] | L | 50.0 | 50.2 | 1.001925E+07 | 1.004955E+07 | | 0.3 | 20 |
| Endosulfan II | L | 50.0 | 42.2 | 5350386 | 4515086 | | -15.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 48.5 | 9402900 | 9122232 | | -3.0 | 20 |
| Endosulfan sulfate | L | 50.0 | 43.0 | 5062108 | 4358376 | | -13.9 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.5 | 8402078 | 8149176 | | -3.0 | 20 |
| Endrin | L | 50.0 | 45.2 | 5312643 | 4798624 | | -9.7 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Endrin [2C] | L | 50.0 | 48.9 | 9243818 | 9041360 | | -2.2 | 20 | |
| Endrin Aldehyde | L | 50.0 | 44.1 | 3560554 | 3138266 | | -11.9 | 20 | |
| Endrin Aldehyde [2C] | L | 50.0 | 48.4 | 5430906 | 5259008 | | -3.2 | 20 | |
| Endrin ketone | L | 50.0 | 43.4 | 5928980 | 5151682 | | -13.1 | 20 | |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8766434 | | -1.4 | 20 | |
| gamma-BHC [2C] | L | 50.0 | 52.4 | 1.164672E+07 | 1.220732E+07 | | 4.8 | 20 | |
| gamma-Chlordane | L | 50.0 | 42.3 | 6144086 | 5202852 | | -15.3 | 20 | |
| gamma-Chlordane [2C] | L | 50.0 | 50.1 | 1.103789E+07 | 1.105896E+07 | | 0.2 | 20 | |
| Heptachlor | L | 50.0 | 36.8 | 6980938 | 5139642 | | -26.4 | 20 | * |
| Heptachlor [2C] | L | 50.0 | 48.5 | 1.296502E+07 | 1.256813E+07 | | -3.1 | 20 | |
| Heptachlor Epoxide | L | 50.0 | 42.0 | 6437835 | 5412026 | | -15.9 | 20 | |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.8 | 1.128674E+07 | 1.123936E+07 | | -0.4 | 20 | |
| Methoxychlor | L | 50.0 | 44.1 | 2351134 | 2071848 | | -11.9 | 20 | |
| Methoxychlor [2C] | L | 50.0 | 47.4 | 4166551 | 3949076 | | -5.2 | 20 | |
| TCMX | L | 25.0 | 21.2 | 5103199 | 4336128 | | -15.0 | 20 | |
| TCMX [2C] | L | 25.0 | 25.5 | 7444112 | 7604768 | | 2.2 | 20 | |
| DCB | L | 25.0 | 21.8 | 3805969 | 3320276 | | -12.8 | 20 | |
| DCB [2C] | L | 25.0 | 24.6 | 5944703 | 5852540 | | -1.6 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316282.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049006 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S049006-CCV1 | Injection Time: | 10:35 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 46.8 | 3927132 | 3674090 | | -6.4 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 47.6 | 7107345 | 6771816 | | -4.7 | 20 |
| 4,4'-DDE | L | 50.0 | 47.0 | 4930684 | 4635430 | | -6.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 45.8 | 9800288 | 8982022 | | -8.3 | 20 |
| 4,4'-DDT | L | 50.0 | 41.7 | 4479399 | 3734408 | | -16.6 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 45.4 | 8030693 | 7295528 | | -9.2 | 20 |
| Aldrin | L | 50.0 | 47.1 | 6583499 | 6205982 | | -5.7 | 20 |
| Aldrin [2C] | L | 50.0 | 49.2 | 1.159123E+07 | 1.139398E+07 | | -1.7 | 20 |
| alpha-BHC | L | 50.0 | 51.3 | 7716550 | 7921396 | | 2.7 | 20 |
| alpha-BHC [2C] | L | 50.0 | 52.2 | 1.261036E+07 | 1.316394E+07 | | 4.4 | 20 |
| alpha-Chlordane | L | 50.0 | 44.6 | 6247204 | 5572488 | | -10.8 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 46.4 | 1.088866E+07 | 1.010659E+07 | | -7.2 | 20 |
| beta-BHC | L | 50.0 | 48.5 | 7297870 | 3216712 | | -3.0 | 20 |
| beta-BHC [2C] | L | 50.0 | 46.7 | 5176619 | 4836362 | | -6.6 | 20 |
| delta-BHC | L | 50.0 | 51.7 | 6616362 | 6835658 | | 3.3 | 20 |
| delta-BHC [2C] | L | 50.0 | 52.1 | 1.07974E+07 | 1.124157E+07 | | 4.1 | 20 |
| Dieldrin | L | 50.0 | 45.4 | 6090391 | 5529232 | | -9.2 | 20 |
| Dieldrin [2C] | L | 50.0 | 46.6 | 1.096383E+07 | 1.022374E+07 | | -6.8 | 20 |
| Endosulfan I | L | 50.0 | 43.9 | 6244553 | 5483608 | | -12.2 | 20 |
| Endosulfan I [2C] | L | 50.0 | 46.5 | 1.001925E+07 | 9322808 | | -7.0 | 20 |
| Endosulfan II | L | 50.0 | 43.3 | 5350386 | 4636128 | | -13.3 | 20 |
| Endosulfan II [2C] | L | 50.0 | 45.3 | 9402900 | 8510784 | | -9.5 | 20 |
| Endosulfan sulfate | L | 50.0 | 44.0 | 5062108 | 4455012 | | -12.0 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 44.2 | 8402078 | 7425192 | | -11.6 | 20 |
| Endrin | L | 50.0 | 46.8 | 5312643 | 4968480 | | -6.5 | 20 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316282.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049006 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S049006-CCV1 | Injection Time: | 10:35 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 48.7 | 9243818 | 8998574 | | -2.7 | 20 |
| Endrin Aldehyde | L | 50.0 | 41.0 | 3560554 | 2916404 | | -18.1 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 44.4 | 5430906 | 4825994 | | -11.1 | 20 |
| Endrin ketone | L | 50.0 | 43.4 | 5928980 | 5148184 | | -13.2 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 44.0 | 8895054 | 7822436 | | -12.1 | 20 |
| gamma-BHC [2C] | L | 50.0 | 51.3 | 1.164672E+07 | 1.195039E+07 | | 2.6 | 20 |
| gamma-Chlordane | L | 50.0 | 45.4 | 6144086 | 5584336 | | -9.1 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 46.5 | 1.103789E+07 | 1.025716E+07 | | -7.1 | 20 |
| Heptachlor | L | 50.0 | 41.1 | 6980938 | 5732790 | | -17.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 48.2 | 1.296502E+07 | 1.250826E+07 | | -3.5 | 20 |
| Heptachlor Epoxide | L | 50.0 | 45.1 | 6437835 | 5812648 | | -9.7 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 46.7 | 1.128674E+07 | 1.054735E+07 | | -6.6 | 20 |
| Methoxychlor | L | 50.0 | 42.3 | 2351134 | 1988091 | | -15.4 | 20 |
| Methoxychlor [2C] | L | 50.0 | 43.2 | 4166551 | 3597072 | | -13.7 | 20 |
| TCMX | L | 25.0 | 24.8 | 5103199 | 5069524 | | -0.6 | 20 |
| TCMX [2C] | L | 25.0 | 25.4 | 7444112 | 7554220 | | 1.5 | 20 |
| DCB | L | 25.0 | 22.2 | 3805969 | 3385750 | | -11.0 | 20 |
| DCB [2C] | L | 25.0 | 21.6 | 5944703 | 5143388 | | -13.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316285.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049006 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S049006-CCV2 | Injection Time: | 13:21 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 59.2 | 3927132 | 4646986 | | 18.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 58.4 | 7107345 | 8304584 | | 16.8 | 20 |
| 4,4'-DDE | L | 50.0 | 56.4 | 4930684 | 5558574 | | 12.7 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 54.8 | 9800288 | 1.073336E+07 | | 9.5 | 20 |
| 4,4'-DDT | L | 50.0 | 53.4 | 4479399 | 4788878 | | 6.9 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 55.6 | 8030693 | 8922940 | | 11.1 | 20 |
| Aldrin | L | 50.0 | 53.6 | 6583499 | 7059100 | | 7.2 | 20 |
| Aldrin [2C] | L | 50.0 | 54.7 | 1.159123E+07 | 1.267862E+07 | | 9.4 | 20 |
| alpha-BHC | L | 50.0 | 55.0 | 7716550 | 8490166 | | 10.0 | 20 |
| alpha-BHC [2C] | L | 50.0 | 55.0 | 1.261036E+07 | 1.386523E+07 | | 10.0 | 20 |
| alpha-Chlordane | L | 50.0 | 52.8 | 6247204 | 6592668 | | 5.5 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 54.1 | 1.088866E+07 | 1.177295E+07 | | 8.1 | 20 |
| beta-BHC | L | 50.0 | 54.3 | 7297870 | 3602798 | | 8.7 | 20 |
| beta-BHC [2C] | L | 50.0 | 50.8 | 5176619 | 5261970 | | 1.6 | 20 |
| delta-BHC | L | 50.0 | 57.1 | 6616362 | 7550352 | | 14.1 | 20 |
| delta-BHC [2C] | L | 50.0 | 56.6 | 1.07974E+07 | 1.22317E+07 | | 13.3 | 20 |
| Dieldrin | L | 50.0 | 54.3 | 6090391 | 6612686 | | 8.6 | 20 |
| Dieldrin [2C] | L | 50.0 | 55.1 | 1.096383E+07 | 1.208803E+07 | | 10.3 | 20 |
| Endosulfan I | L | 50.0 | 52.2 | 6244553 | 6519730 | | 4.4 | 20 |
| Endosulfan I [2C] | L | 50.0 | 53.9 | 1.001925E+07 | 1.080882E+07 | | 7.9 | 20 |
| Endosulfan II | L | 50.0 | 53.2 | 5350386 | 5689402 | | 6.3 | 20 |
| Endosulfan II [2C] | L | 50.0 | 53.7 | 9402900 | 1.009653E+07 | | 7.4 | 20 |
| Endosulfan sulfate | L | 50.0 | 54.3 | 5062108 | 5501240 | | 8.7 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 53.7 | 8402078 | 9027732 | | 7.4 | 20 |
| Endrin | L | 50.0 | 56.0 | 5312643 | 5950876 | | 12.0 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316285.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049006 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S049006-CCV2 | Injection Time: | 13:21 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 57.4 | 9243818 | 1.061356E+07 | | 14.8 | 20 |
| Endrin Aldehyde | L | 50.0 | 50.3 | 3560554 | 3584034 | | 0.7 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 54.3 | 5430906 | 5900932 | | 8.7 | 20 |
| Endrin ketone | L | 50.0 | 54.4 | 5928980 | 6447150 | | 8.7 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 54.9 | 8895054 | 9771842 | | 9.9 | 20 |
| gamma-BHC [2C] | L | 50.0 | 54.5 | 1.164672E+07 | 1.270055E+07 | | 9.0 | 20 |
| gamma-Chlordane | L | 50.0 | 53.6 | 6144086 | 6584676 | | 7.2 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 53.9 | 1.103789E+07 | 1.189411E+07 | | 7.8 | 20 |
| Heptachlor | L | 50.0 | 48.9 | 6980938 | 6827110 | | -2.2 | 20 |
| Heptachlor [2C] | L | 50.0 | 52.8 | 1.296502E+07 | 1.36966E+07 | | 5.6 | 20 |
| Heptachlor Epoxide | L | 50.0 | 52.5 | 6437835 | 6761520 | | 5.0 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 53.1 | 1.128674E+07 | 1.198641E+07 | | 6.2 | 20 |
| Methoxychlor | L | 50.0 | 55.4 | 2351134 | 2607292 | | 10.9 | 20 |
| Methoxychlor [2C] | L | 50.0 | 54.2 | 4166551 | 4512998 | | 8.3 | 20 |
| TCMX | L | 25.0 | 27.2 | 5103199 | 5545720 | | 8.7 | 20 |
| TCMX [2C] | L | 25.0 | 26.7 | 7444112 | 7941316 | | 6.7 | 20 |
| DCB | L | 25.0 | 28.0 | 3805969 | 4257100 | | 11.8 | 20 |
| DCB [2C] | L | 25.0 | 27.1 | 5944703 | 6454152 | | 8.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# SURROGATE SUMMARY SHEET

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-U |

| | DCB [2C] (40 - 135) | DCB (40 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| 1011002-14 | 44 | 52 | 89 | 80 |
| 1011002-15 | 41 | 41 | 74 | 70 |
| 1011002-16 | 51 | 63 | 75 | 108 |
| B046145-BLK1 | 94 | 94 | 87 | 84 |
| B046145-BS1 | 87 | 91 | 86 | 85 |
| B046145-BSD1 | 82 | 89 | 69 | 62 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046145 | Laboratory ID: | B046145-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 | 5.00 | 5.54 | 111 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 | 5.00 | 4.37 | 87 | 23 | 30 | 25 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046145 | Laboratory ID: | B046145-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 5.00 | 100 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 5.05 | 101 | 1 | 30 | 25 - 125 |

# METHOD BLANK SUMMARY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046145-BLK1 | Batch: | B046145 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B046145-BSD1 | U0324414.D | 15:00 |
| LCS | B046145-BS1 | U0324413.D | 14:28 |
| GKHMS-GW-032D-1010 | 1011002-16 | U0324421.D | 18:45 |
| GKHMS-GW-031-1010 | 1011002-15 | U0324420.D | 18:13 |
| GKHMS-GW-021-1010 | 1011002-14 | U0324419.D | 17:41 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | B046145-BLK1 | File ID: | U0324412.D | | |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 13:56 | | |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | | | |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 | Instrument: | GCECD-U |
| Column: | 1 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011002 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | B046145-BLK1 | File ID: | U0324412.D | | |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 13:56 | | |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | | | |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 | Instrument: | GCECD-U |
| Column: | 2 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 [2C] | 1.00 | U |
| 11104-28-2 | PCB-1221 [2C] | 1.00 | U |
| 11141-16-5 | PCB-1232 [2C] | 1.00 | U |
| 53469-21-9 | PCB-1242 [2C] | 1.00 | U |
| 12672-29-6 | PCB-1248 [2C] | 1.00 | U |
| 11097-69-1 | PCB-1254 [2C] | 1.00 | U |
| 11096-82-5 | PCB-1260 [2C] | 1.00 | U |

# INITIAL CALIBRATION DATA

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111103 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 2:46:38PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| PCB-1016 | ~~11667.68~~ | | | | | |
| PCB-1016 [2C] | ~~3742.742~~ | | | | | |
| PCB-1221 | | | | ~~6640.43~~ | | |
| PCB-1221 [2C] | | | | ~~2714.852~~ | | |
| PCB-1232 | | | 4592.482 | | | |
| PCB-1232 [2C] | | | 1635.813 | | | |
| PCB-1242 | | | | | 6831.269 | 7461.344 |
| PCB-1242 [2C] | | | | | 2648.593 | 2887.199 |
| PCB-1248 | | 8602.448 | | | | |
| PCB-1248 [2C] | | 4045.542 | | | | |
| PCB-1254 | | | | ~~27502.26~~ | | |
| PCB-1254 [2C] | | | | ~~8677.596~~ | | |
| PCB-1260 | ~~33823.68~~ | | | | | |
| PCB-1260 [2C] | ~~11890.15~~ | | | | | |
| TCMX | ~~499278.4~~ | ~~542283.6~~ | ~~506125.2~~ | ~~517626.8~~ | 519850.2 | 558057.6 |
| TCMX [2C] | ~~187237.9~~ | ~~207237~~ | ~~199538.5~~ | ~~198100.8~~ | 195248.7 | 207448.5 |
| DCB | ~~430261.6~~ | ~~549001.6~~ | ~~489026~~ | ~~443306.8~~ | 467307.4 | 547545.6 |
| DCB [2C] | ~~138227.4~~ | ~~173421~~ | ~~154697.5~~ | ~~140383.5~~ | 155446.6 | 177043.7 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111103 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 2:46:38PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| PCB-1016 | | | | 10787.98 | ~~11209.76~~ | 12042.67 |
| PCB-1016 [2C] | | | | 3367.892 | ~~3407.247~~ | 3730.234 |
| PCB-1221 | | | | | | |
| PCB-1221 [2C] | | | | | | |
| PCB-1232 | | | | | | |
| PCB-1232 [2C] | | | | | | |
| PCB-1242 | 8406.014 | 8627.416 | 9045.624 | | | |
| PCB-1242 [2C] | 3111.642 | 3587.172 | 3729.164 | | | |
| PCB-1248 | | | | | | |
| PCB-1248 [2C] | | | | | | |
| PCB-1254 | | | | | | |
| PCB-1254 [2C] | | | | | | |
| PCB-1260 | | | | 29735.45 | 31057.95 | 33205.16 |
| PCB-1260 [2C] | | | | 10091.2 | 10614.39 | 11469.62 |
| TCMX | 540226 | 580675.2 | 506027 | ~~467983.2~~ | ~~461517.1~~ | ~~487077.2~~ |
| TCMX [2C] | 212037.2 | 231601.4 | 230612.8 | ~~173304.6~~ | ~~173684.3~~ | ~~183894.5~~ |
| DCB | 534340.4 | 604995.1 | 635114.8 | ~~388759.6~~ | ~~394981.6~~ | ~~421854~~ |
| DCB [2C] | 170922.1 | 224144.6 | 231284.8 | ~~135652.8~~ | ~~134131.4~~ | ~~170032.4~~ |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111103 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 2:46:38PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| PCB-1016 | 12075.8 | 8.566025 | | | 20 | |
| PCB-1016 [2C] | 3937.657 | 13.28868 | | | 20 | |
| PCB-1221 | | | | | 20 | |
| PCB-1221 [2C] | | | | | 20 | |
| PCB-1232 | | | | | 20 | |
| PCB-1232 [2C] | | | | | 20 | |
| PCB-1242 | 8074.333 | 11.21551 | | | 20 | |
| PCB-1242 [2C] | 3192.754 | 14.34754 | | | 20 | |
| PCB-1248 | | | | | 20 | |
| PCB-1248 [2C] | | | | | 20 | |
| PCB-1254 | | | | | 20 | |
| PCB-1254 [2C] | | | | | 20 | |
| PCB-1260 | 31974.47 | 4.749315 | | | 20 | |
| PCB-1260 [2C] | 11271.14 | 8.013692 | | | 20 | |
| TCMX | 540967.2 | 5.496186 | | | 20 | |
| TCMX [2C] | 215389.7 | 7.246717 | | | 20 | |
| DCB | 557860.6 | 11.70303 | | | 20 | |
| DCB [2C] | 191768.3 | 17.64599 | | | 20 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324332.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S046052 | Injection Date: | 10/14/10 |
| Lab Sample ID: | S046052-SCV1 | Injection Time: | 15:50 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 524 | 8074.333 | 8359.768 | | 3.5 | 20 |
| PCB-1242 [2C] | A | 500 | 516 | 3192.754 | 3285.708 | | 2.9 | 20 |
| TCMX | A | 25.0 | 27.4 | 540967.2 | 592474.8 | | 9.5 | 20 |
| TCMX [2C] | A | 25.0 | 27.0 | 215389.7 | 232329.9 | | 7.9 | 20 |
| DCB | A | 25.0 | 25.1 | 557860.6 | 560996.8 | | 0.6 | 20 |
| DCB [2C] | A | 25.0 | 24.1 | 191768.3 | 184970.6 | | -3.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324372.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S046052 | Injection Date: | 10/29/10 |
| Lab Sample ID: | S046052-SCV2 | Injection Time: | 14:54 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| PCB-1016 | A | 500 | 503 | 12075.8 | 11945.03 | | -1.1 | 20 | |
| PCB-1016 [2C] | A | 500 | 479 | 3937.657 | 3652.758 | | -7.2 | 20 | |
| PCB-1260 | A | 500 | 493 | 31974.47 | 31779 | | -0.6 | 20 | |
| PCB-1260 [2C] | A | 500 | 490 | 11271.14 | 11061.22 | | -1.9 | 20 | |
| TCMX | A | 25.0 | 25.8 | 540967.2 | 453705.6 | | -16.1 | 20 | |
| TCMX [2C] | A | 25.0 | 25.8 | 215389.7 | 181729.1 | | -15.6 | 20 | |
| DCB | A | 25.0 | 23.1 | 557860.6 | 392718.6 | | -29.6 | 20 | * |
| DCB [2C] | A | 25.0 | 20.8 | 191768.3 | 127925.6 | | -33.3 | 20 | * |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324406.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV1 | Injection Time: | 10:14 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 498 | 8074.333 | 7962.836 | | -1.4 | 20 |
| PCB-1242 [2C] | A | 500 | 452 | 3192.754 | 2875.162 | | -9.9 | 20 |
| TCMX | A | 25.0 | 23.4 | 540967.2 | 507237.2 | | -6.2 | 20 |
| TCMX [2C] | A | 25.0 | 23.6 | 215389.7 | 203194.2 | | -5.7 | 20 |
| DCB | A | 25.0 | 22.8 | 557860.6 | 508900 | | -8.8 | 20 |
| DCB [2C] | A | 25.0 | 21.1 | 191768.3 | 162150.4 | | -15.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324417.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV2 | Injection Time: | 16:37 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 483 | 8074.333 | 7590.648 | | -6.0 | 20 |
| PCB-1242 [2C] | A | 500 | 475 | 3192.754 | 3015.672 | | -5.5 | 20 |
| TCMX | A | 25.0 | 24.4 | 540967.2 | 526981.2 | | -2.6 | 20 |
| TCMX [2C] | A | 25.0 | 24.5 | 215389.7 | 211427.7 | | -1.8 | 20 |
| DCB | A | 25.0 | 25.0 | 557860.6 | 556967.6 | | -0.2 | 20 |
| DCB [2C] | A | 25.0 | 22.4 | 191768.3 | 172092.7 | | -10.3 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011002 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324424.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV3 | Injection Time: | 20:22 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 480 | 8074.333 | 7586.302 | | -6.0 | 20 |
| PCB-1242 [2C] | A | 500 | 489 | 3192.754 | 3127.35 | | -2.0 | 20 |
| TCMX | A | 25.0 | 24.7 | 540967.2 | 533532 | | -1.4 | 20 |
| TCMX [2C] | A | 25.0 | 24.5 | 215389.7 | 211402.7 | | -1.9 | 20 |
| DCB | A | 25.0 | 25.5 | 557860.6 | 568225.2 | | 1.9 | 20 |
| DCB [2C] | A | 25.0 | 22.9 | 191768.3 | 175832.2 | | -8.3 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011002

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

Pesticides

Raw data and evaluation reports for Chlordane and Toxaphene daily continuing check standards are provided.

PCBs

The complete original PCB data package is provided.
Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Virginia Zusman, Laboratory Director
Chemtech

2/4/2011

ADDENDUM VOLATILES PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-014-1010

Sample Date/Time: 10/30/10 09:30

File ID: B02890226.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-01

Percent solids: N/A

Preparation Method: EPA 5030B

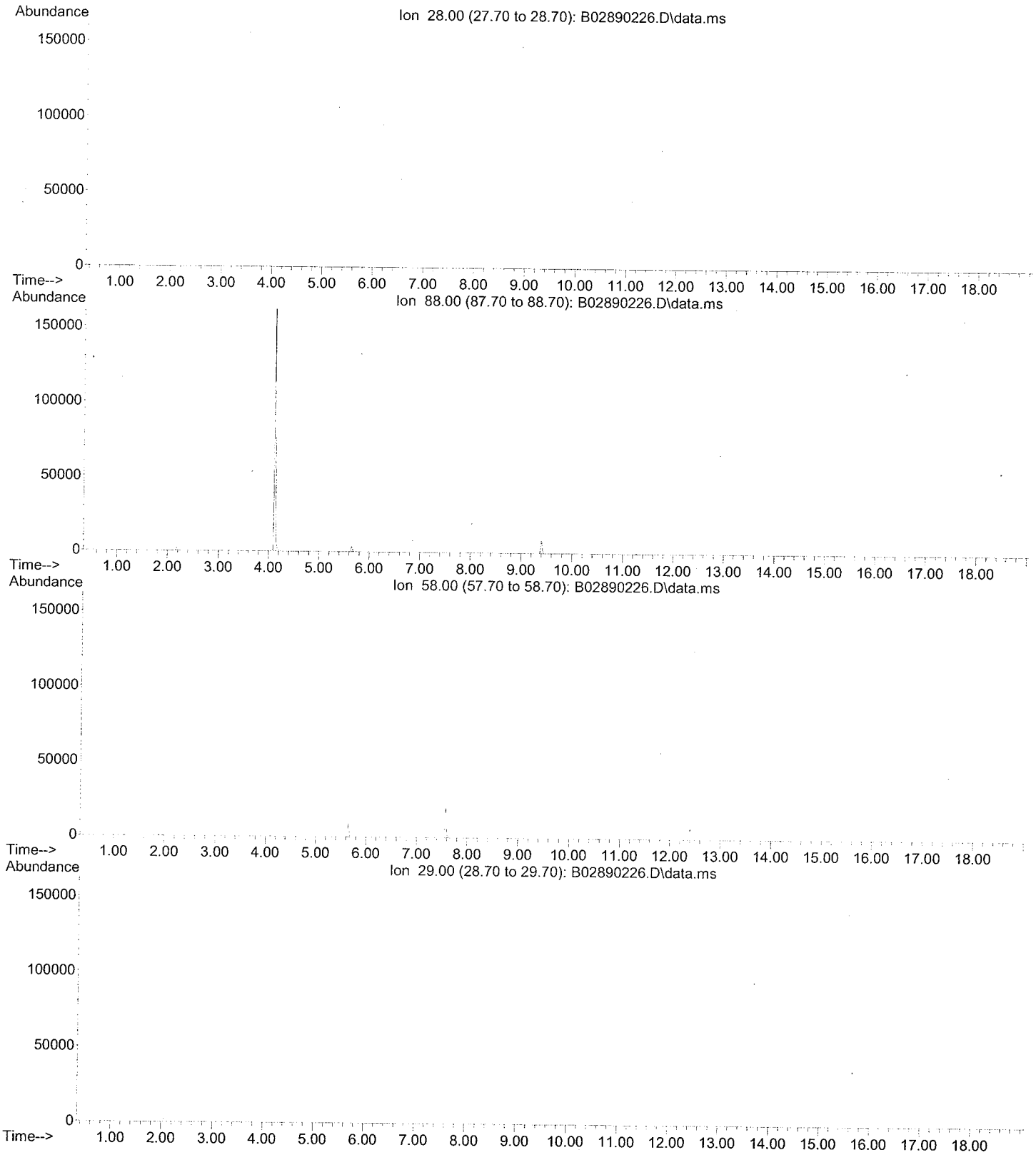
Prepared Date/Time: 11/04/10 17:43

Analyzed Date/Time: 11/04/10 17:43

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890226.D
Operator : MP
Acquired : 4 Nov 2010 5:43 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-01
Misc Info : TETRA TECH, WATER
Vial Number: 7



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-015-1010

Sample Date/Time: 10/30/10 10:00

File ID: B02890227.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-02

Percent solids: N/A

Preparation Method: EPA 5030B

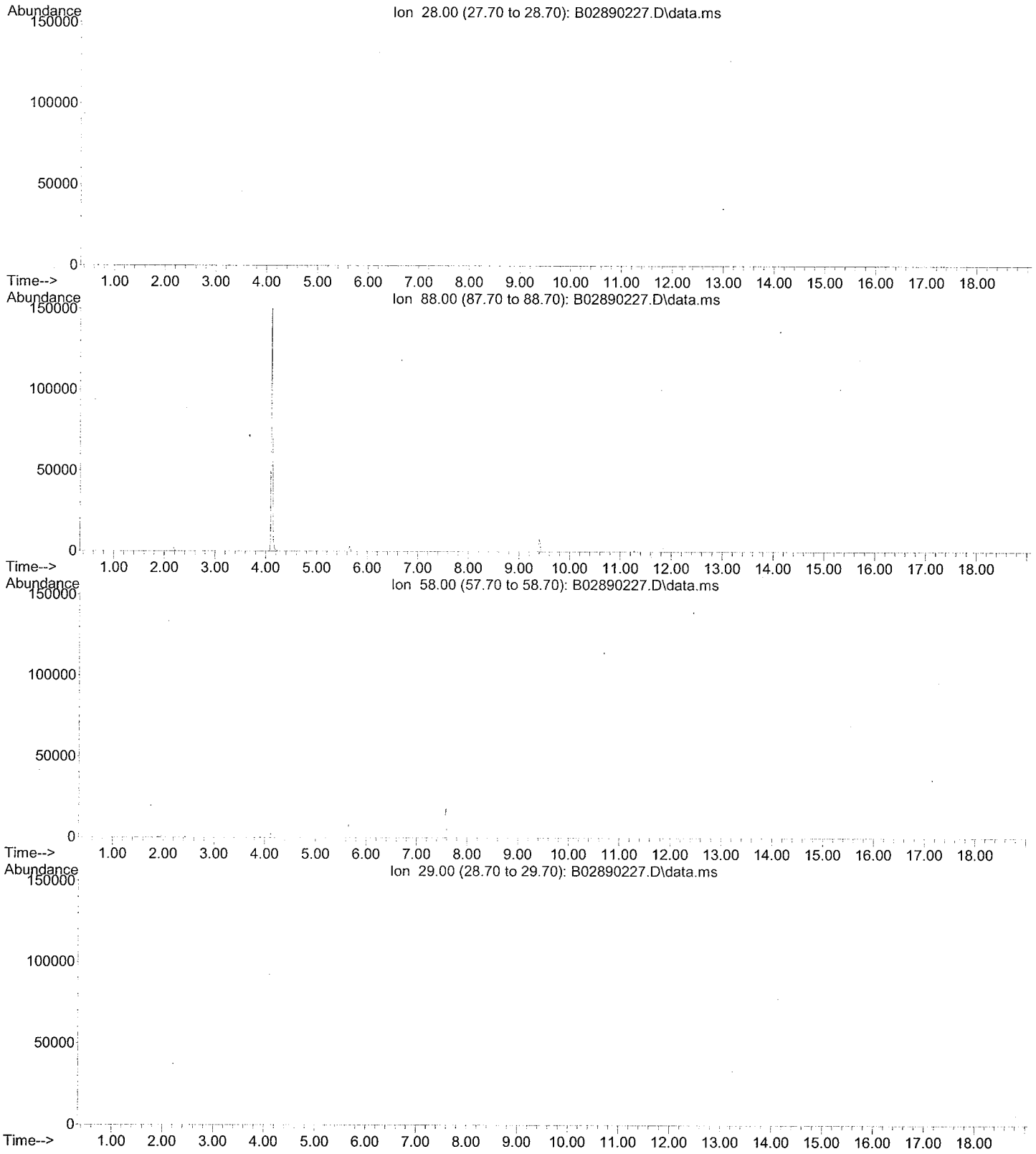
Prepared Date/Time: 11/04/10 18:10

Analyzed Date/Time: 11/04/10 18:10

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890227.D
Operator : MP
Acquired : 4 Nov 2010 6:10 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-02
Misc Info : TETRA TECH, WATER
Vial Number: 8



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-016-1010

Sample Date/Time: 10/30/10 10:30

File ID: B02890228.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-03

Percent solids: N/A

Preparation Method: EPA 5030B

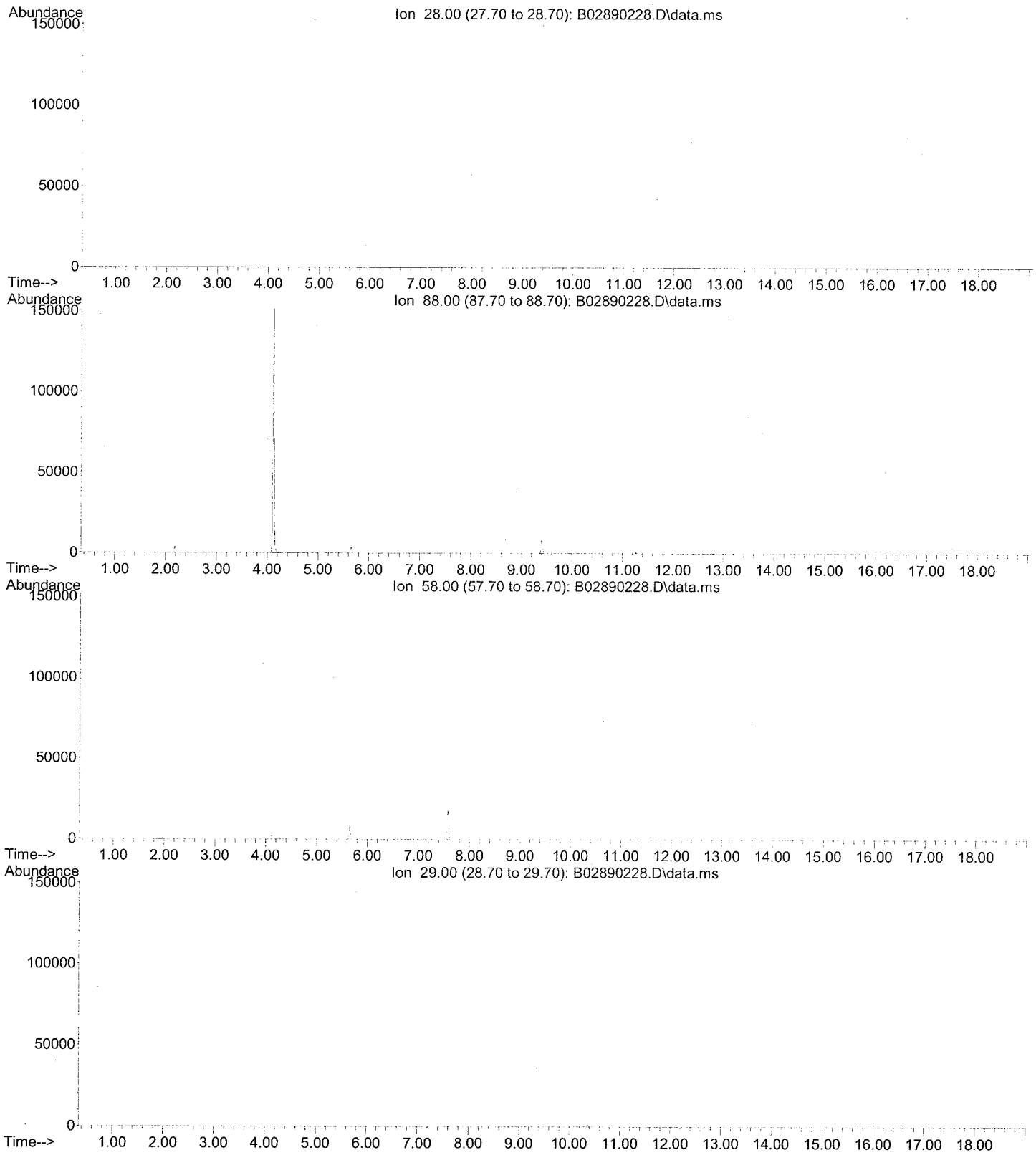
Prepared Date/Time: 11/04/10 18:36

Analyzed Date/Time: 11/04/10 18:36

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890228.D
Operator : MP
Acquired : 4 Nov 2010 6:36 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-03
Misc Info : TETRA TECH, WATER
Vial Number: 9



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-024-1010

Sample Date/Time: 10/30/10 13:00

File ID: B02890229.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-04

Percent solids: N/A

Preparation Method: EPA 5030B

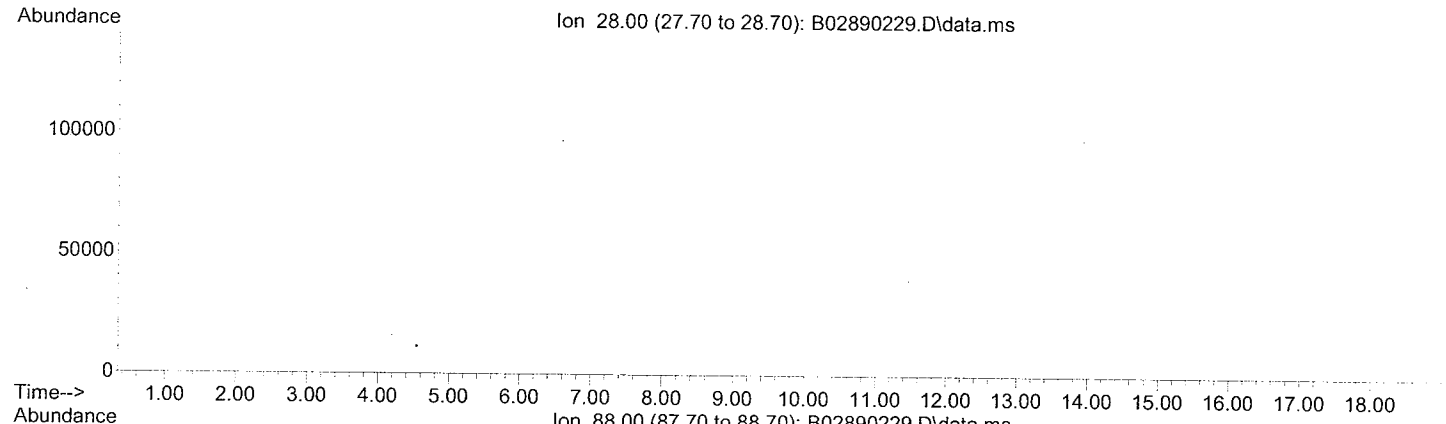
Prepared Date/Time: 11/04/10 19:03

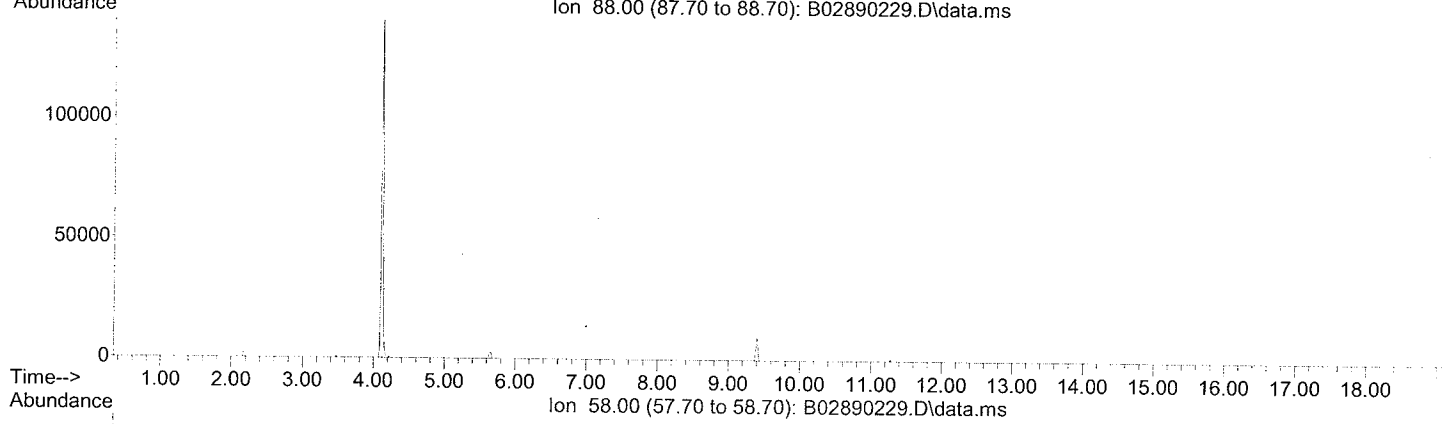
Analyzed Date/Time: 11/04/10 19:03

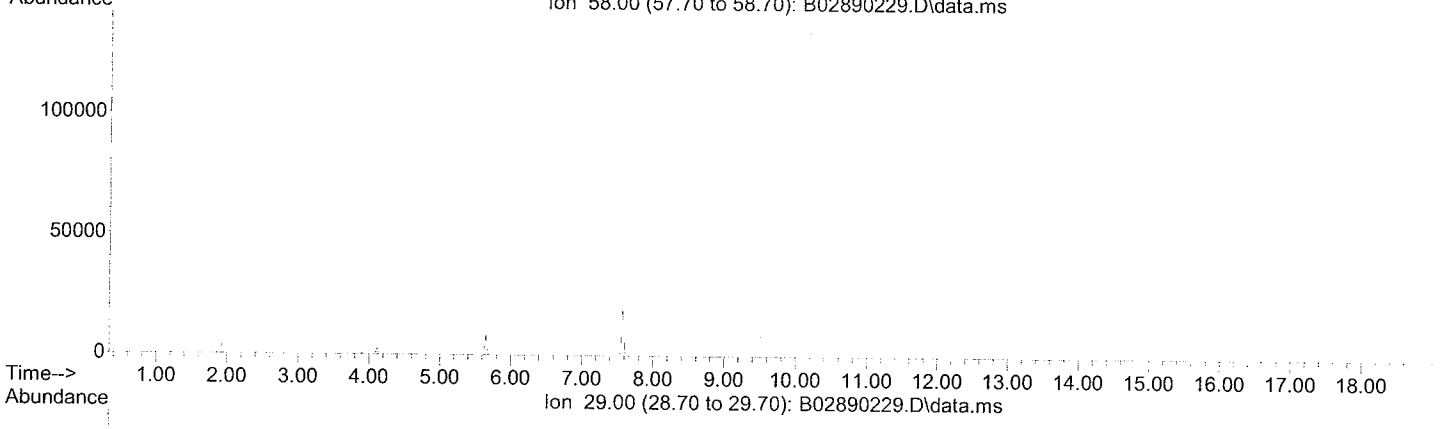
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

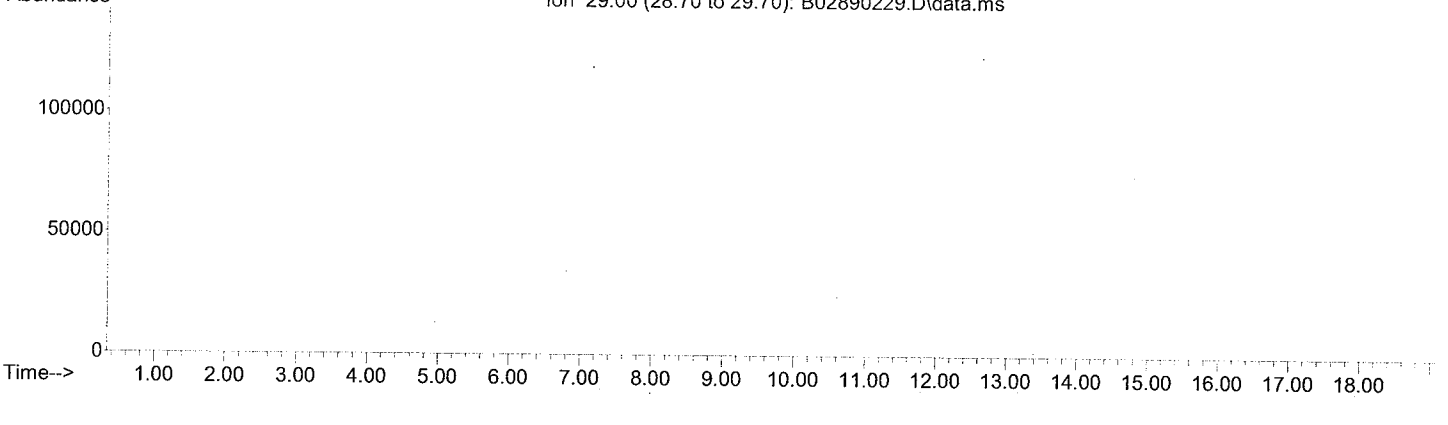
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890229.D
Operator : MP
Acquired : 4 Nov 2010 7:03 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-04
Misc Info : TETRA TECH, WATER
Vial Number: 10



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-025-1010

Sample Date/Time: 10/30/10 11:40

File ID: B02890230.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-05

Percent solids: N/A

Preparation Method: EPA 5030B

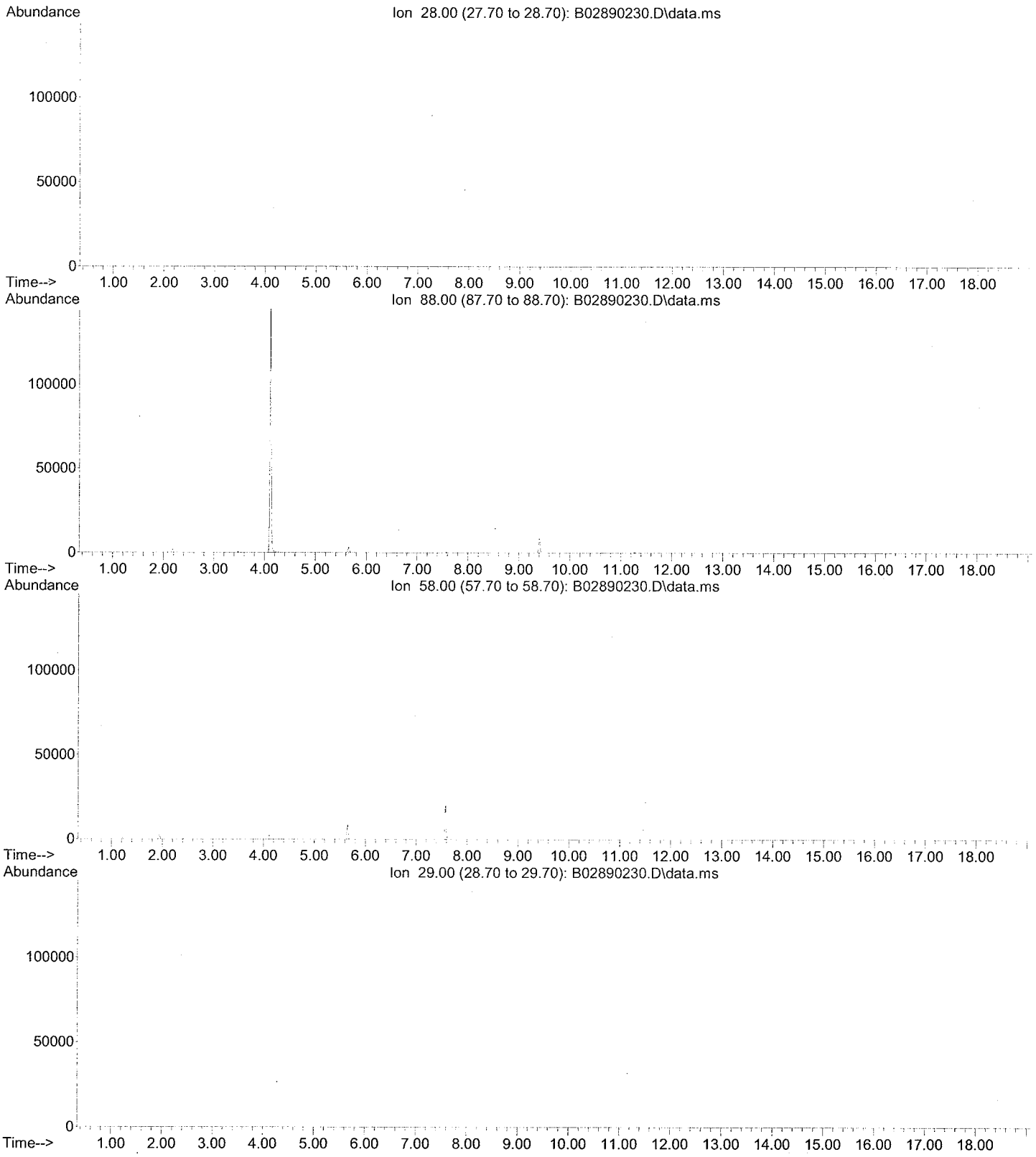
Prepared Date/Time: 11/04/10 19:30

Analyzed Date/Time: 11/04/10 19:30

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890230.D
Operator : MP
Acquired : 4 Nov 2010 7:30 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-05
Misc Info : TETRA TECH, WATER
Vial Number: 11



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-034D-1010

Sample Date/Time: 10/30/10 08:40

File ID: B02890231.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-06

Percent solids: N/A

Preparation Method: EPA 5030B

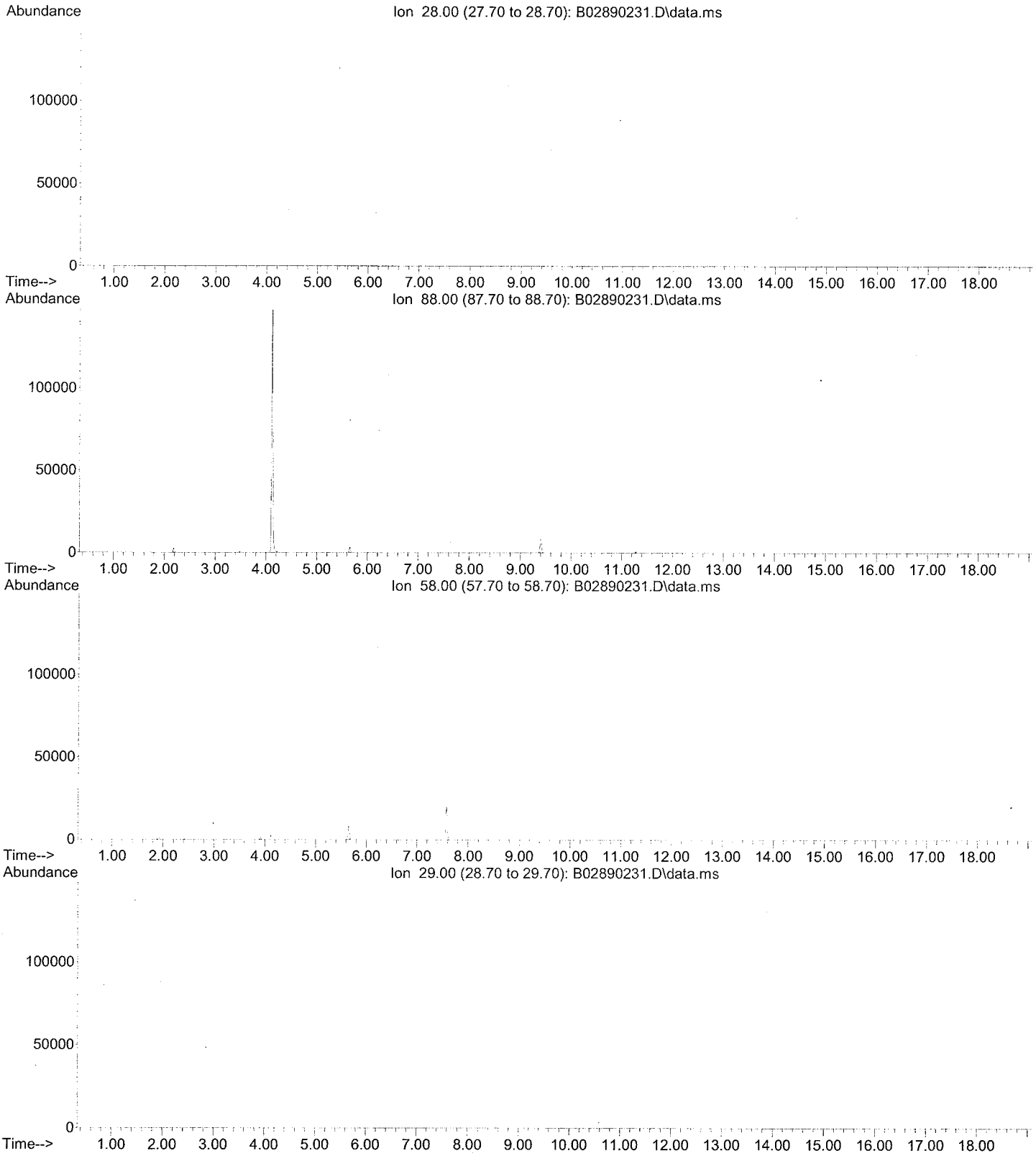
Prepared Date/Time: 11/04/10 19:57

Analyzed Date/Time: 11/04/10 19:57

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890231.D
Operator : MP
Acquired : 4 Nov 2010 7:57 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-06
Misc Info : TETRA TECH, WATER
Vial Number: 12



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-026-1010

Sample Date/Time: 10/31/10 10:40

File ID: B02890232.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-07

Percent solids: N/A

Preparation Method: EPA 5030B

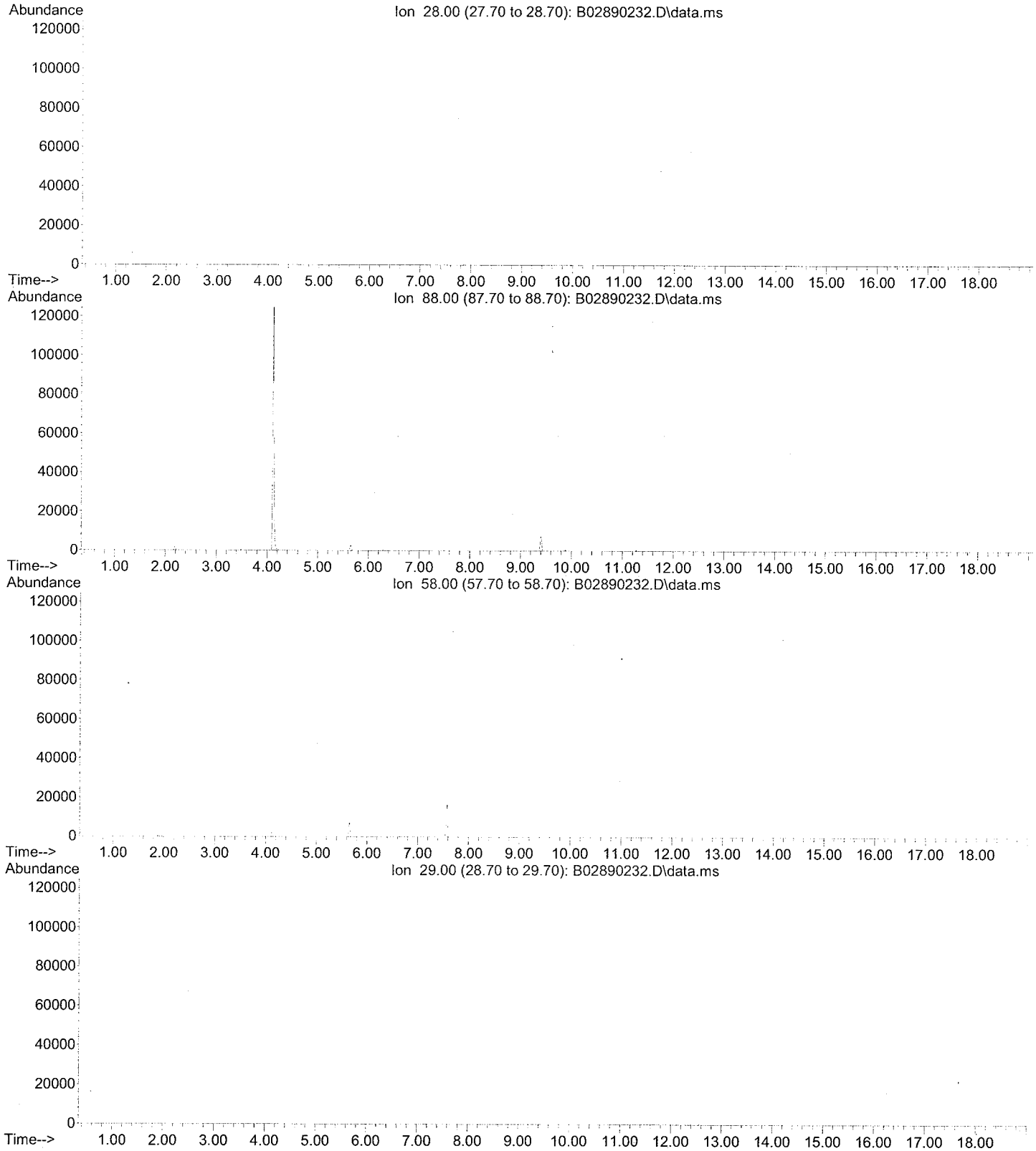
Prepared Date/Time: 11/04/10 20:24

Analyzed Date/Time: 11/04/10 20:24

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890232.D
Operator : MP
Acquired : 4 Nov 2010 8:24 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-07
Misc Info : TETRA TECH, WATER
Vial Number: 13



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-027-1010

Sample Date/Time: 10/31/10 12:20

File ID: B02890233.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-08

Percent solids: N/A

Preparation Method: EPA 5030B

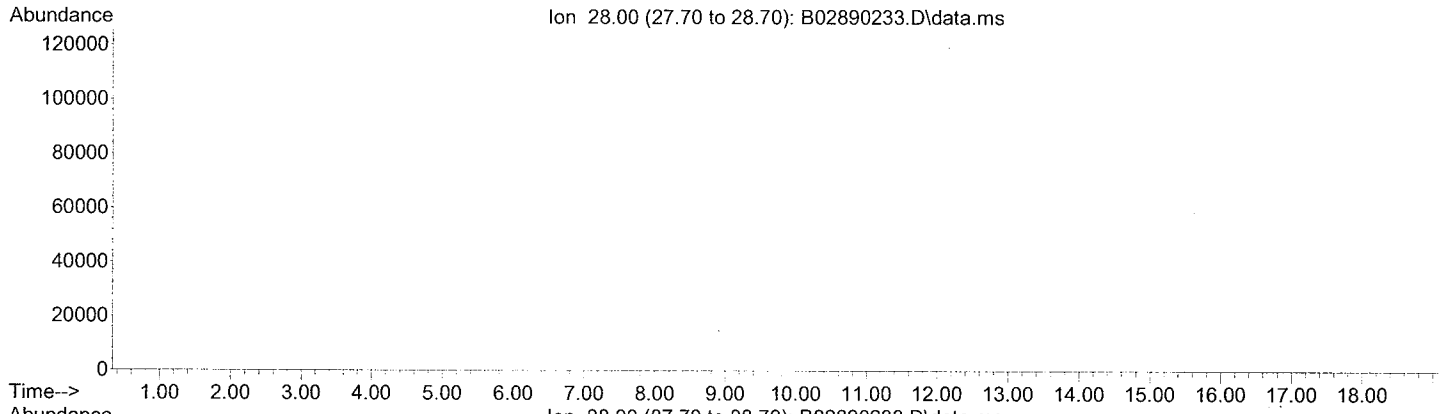
Prepared Date/Time: 11/04/10 20:50

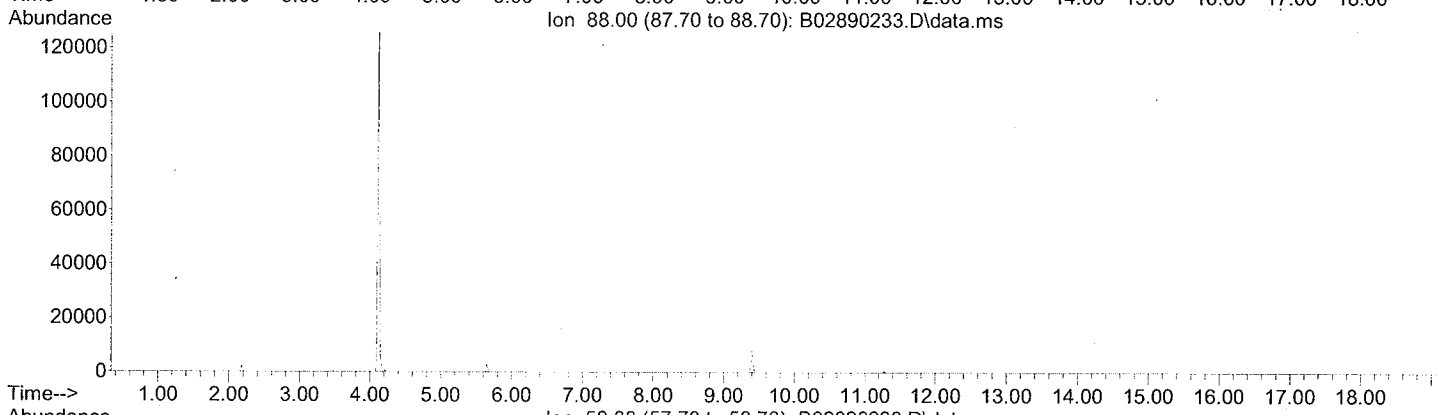
Analyzed Date/Time: 11/04/10 20:50

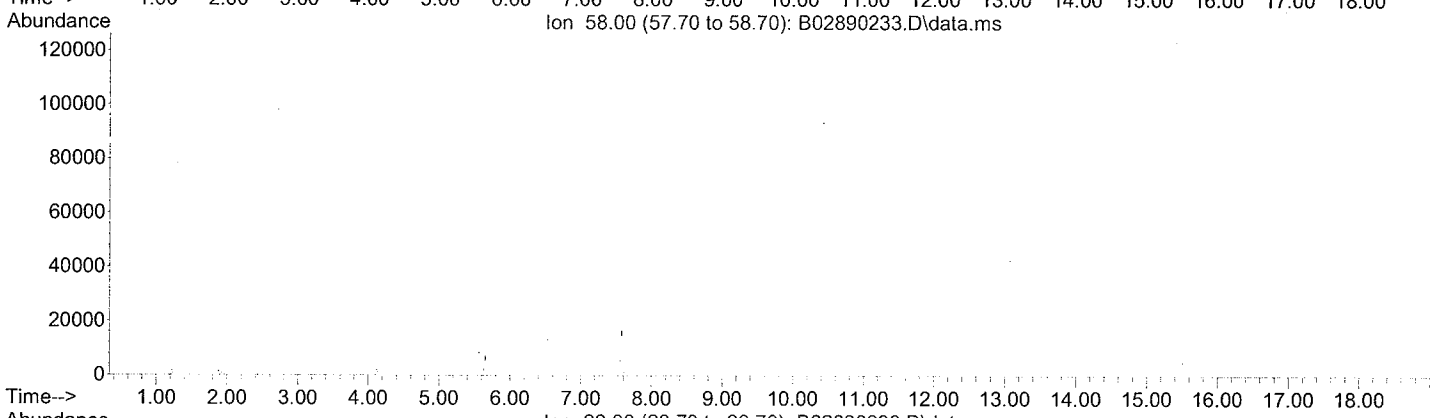
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

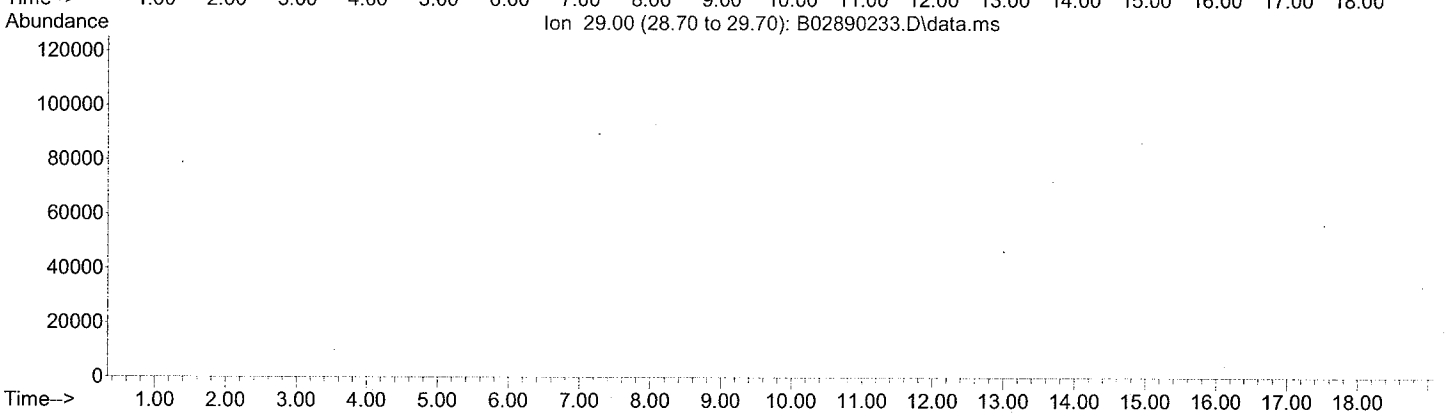
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890233.D
Operator : MP
Acquired : 4 Nov 2010 8:50 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-08
Misc Info : TETRA TECH, WATER
Vial Number: 14



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-028-1010

Sample Date/Time: 10/31/10 15:00

File ID: B02890234.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-09

Percent solids: N/A

Preparation Method: EPA 5030B

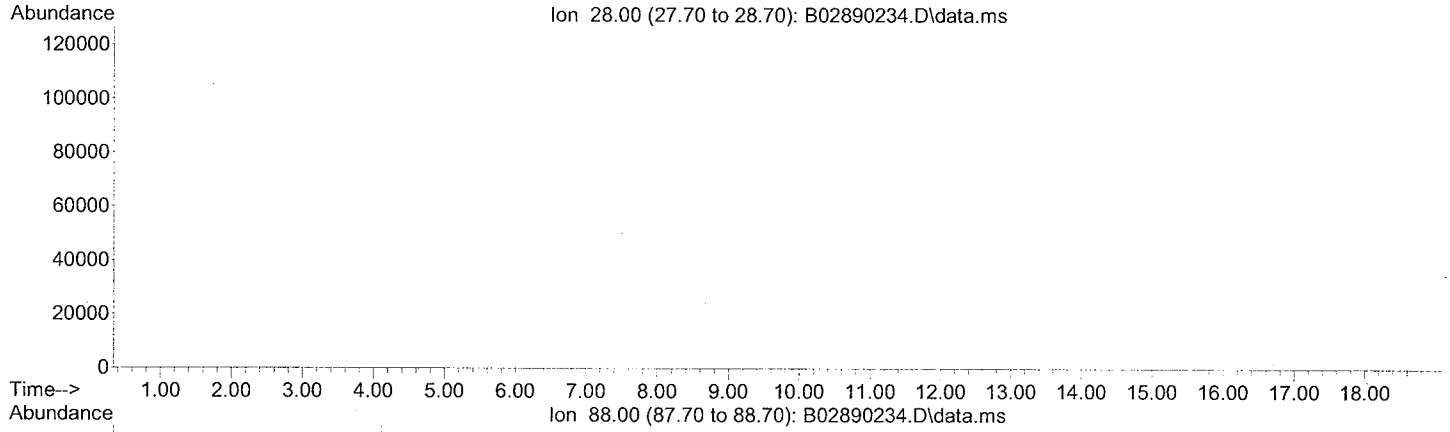
Prepared Date/Time: 11/04/10 21:17

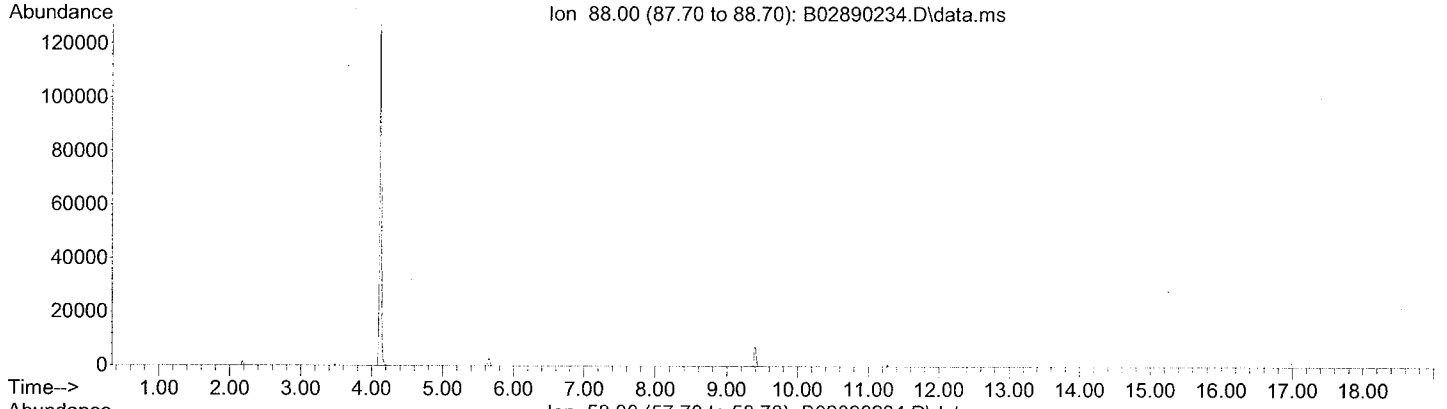
Analyzed Date/Time: 11/04/10 21:17

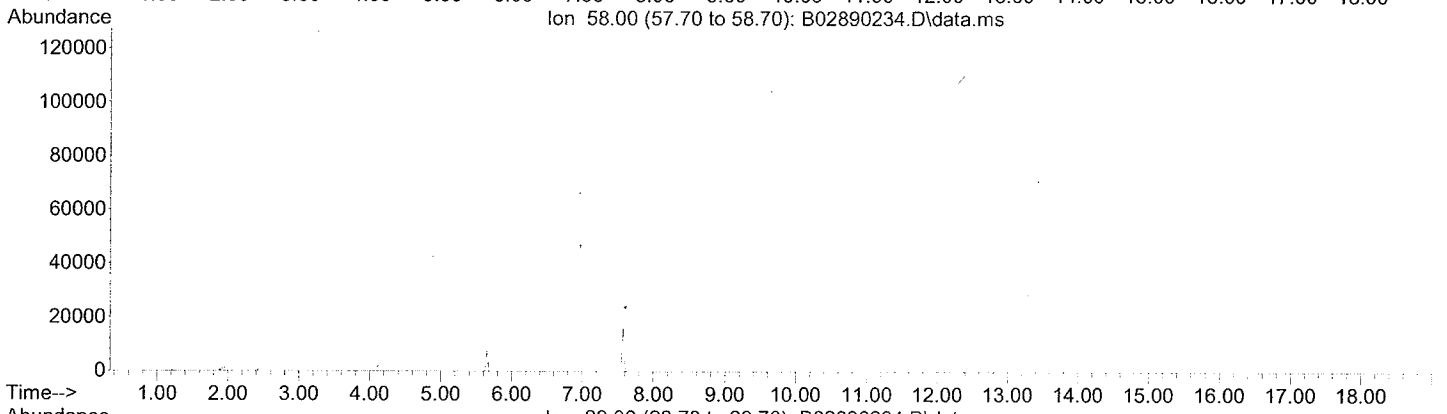
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

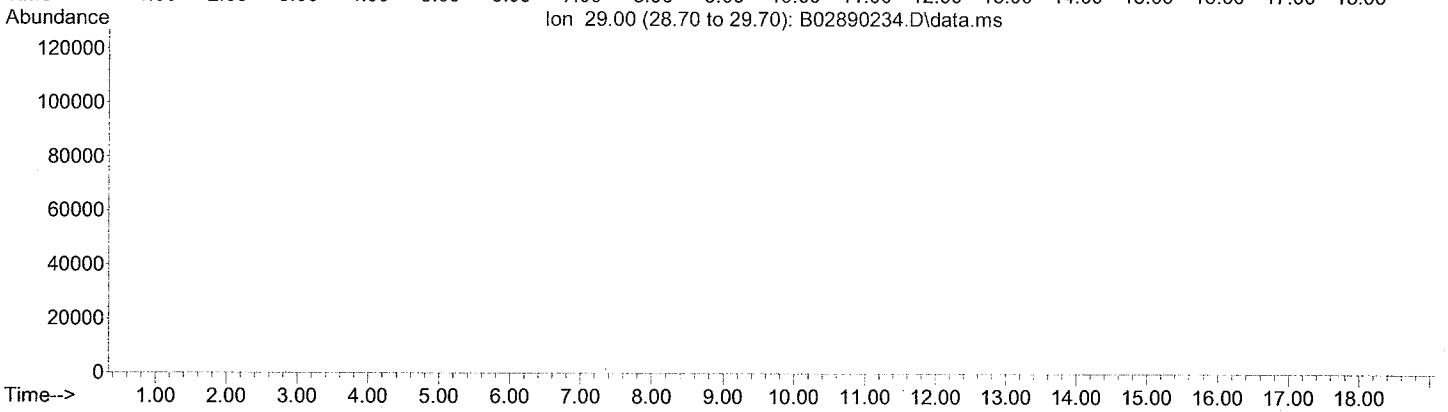
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890234.D
Operator : MP
Acquired : 4 Nov 2010 9:17 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-09
Misc Info : TETRA TECH, WATER
Vial Number: 15



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-029-1010

Sample Date/Time: 10/31/10 13:00

File ID: B02890235.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-10

Percent solids: N/A

Preparation Method: EPA 5030B

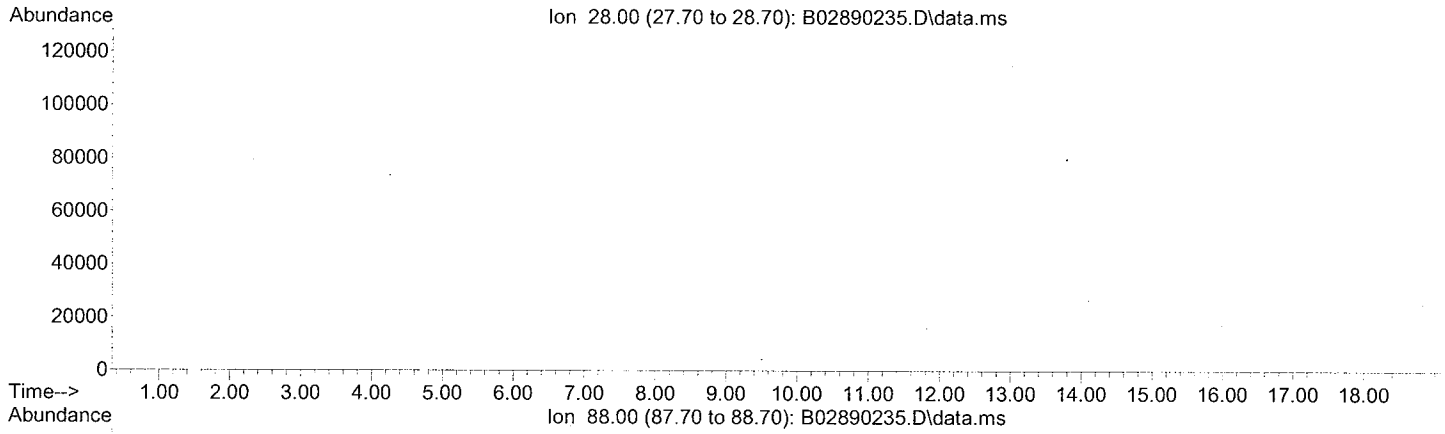
Prepared Date/Time: 11/04/10 21:44

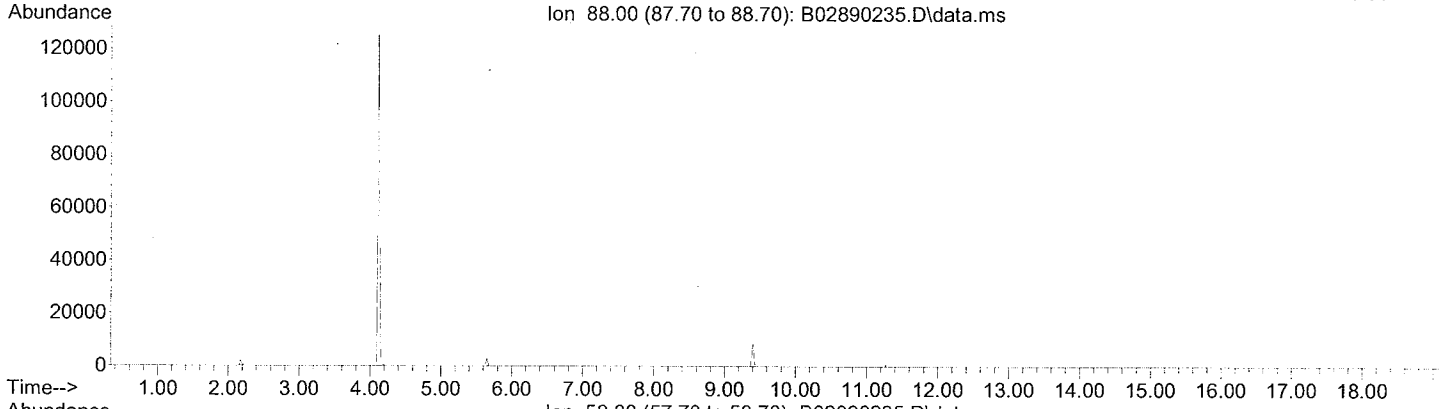
Analyzed Date/Time: 11/04/10 21:44

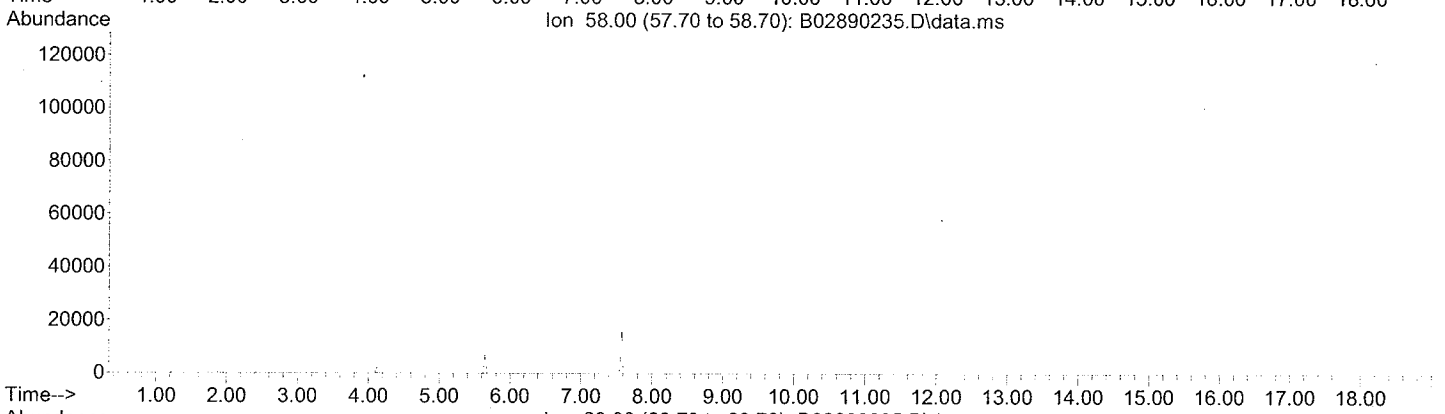
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

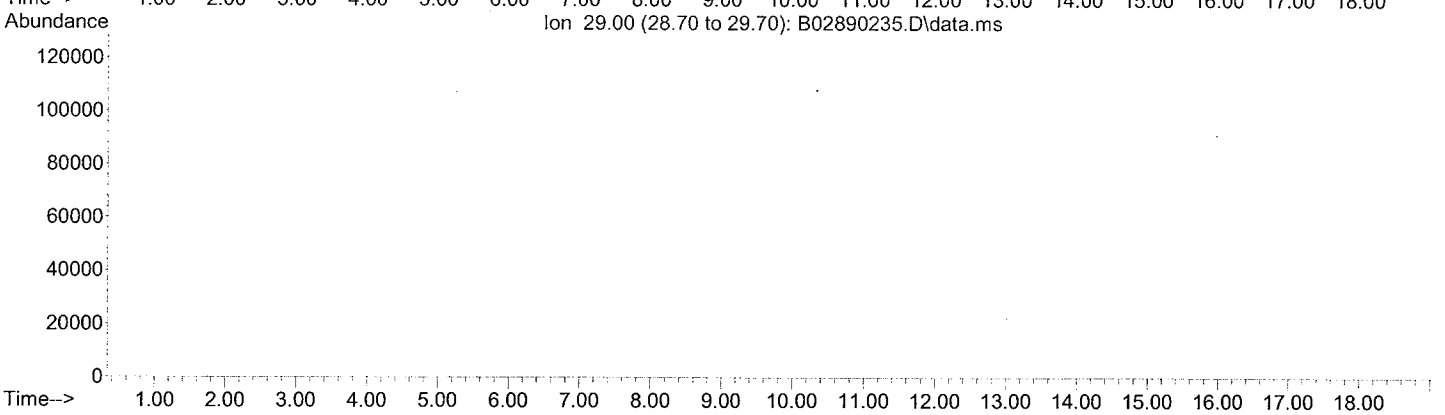
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890235.D
Operator : MP
Acquired : 4 Nov 2010 9:44 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-10
Misc Info : TETRA TECH, WATER
Vial Number: 16



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-030-1010

Sample Date/Time: 10/31/10 11:40

File ID: B02890236.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-11

Percent solids: N/A

Preparation Method: EPA 5030B

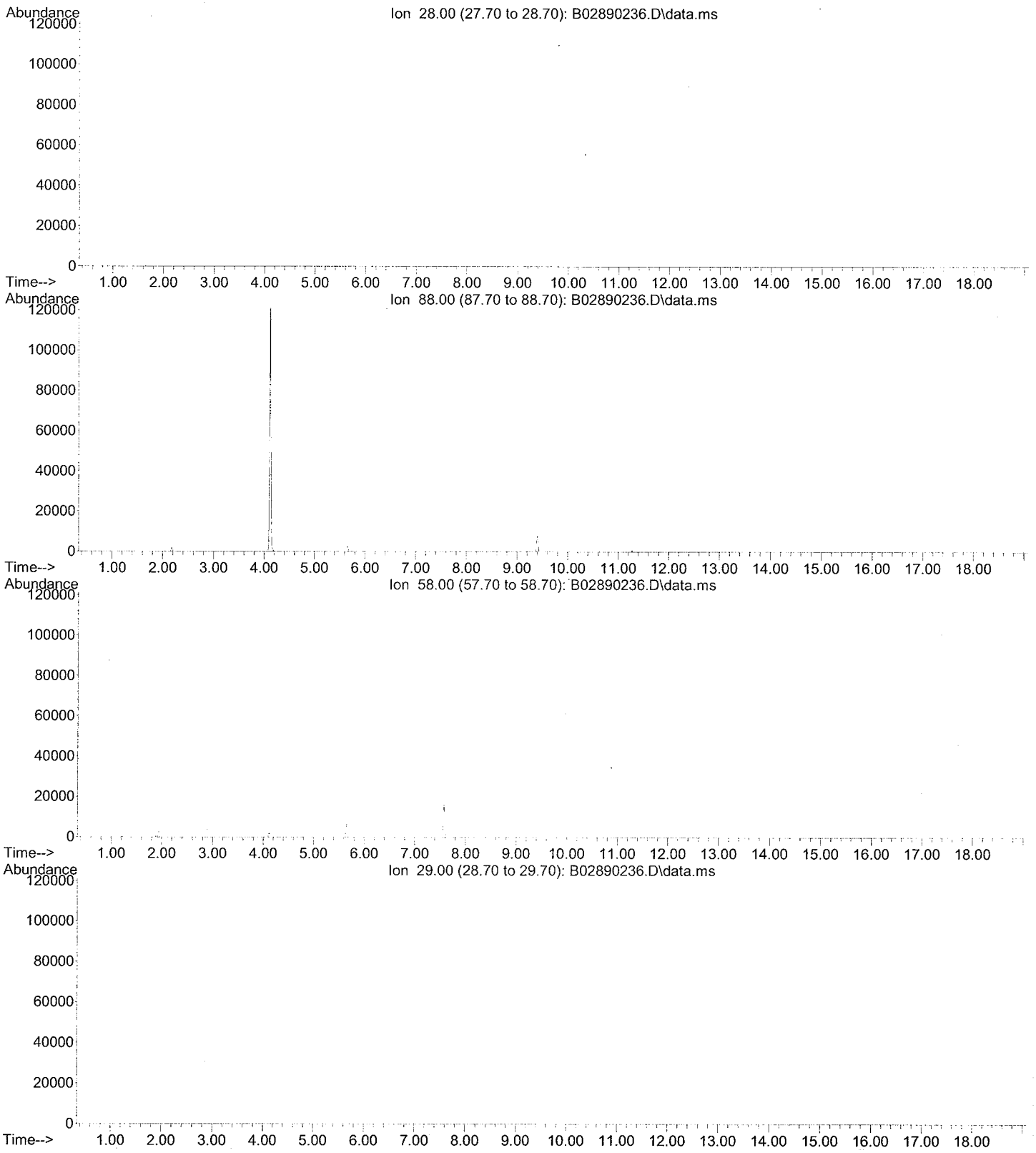
Prepared Date/Time: 11/04/10 22:11

Analyzed Date/Time: 11/04/10 22:11

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890236.D
Operator : MP
Acquired : 4 Nov 2010 10:11 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-11
Misc Info : TETRA TECH, WATER
Vial Number: 17



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-033D-1010

Sample Date/Time: 10/31/10 10:00

File ID: B02890237.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-12

Percent solids: N/A

Preparation Method: EPA 5030B

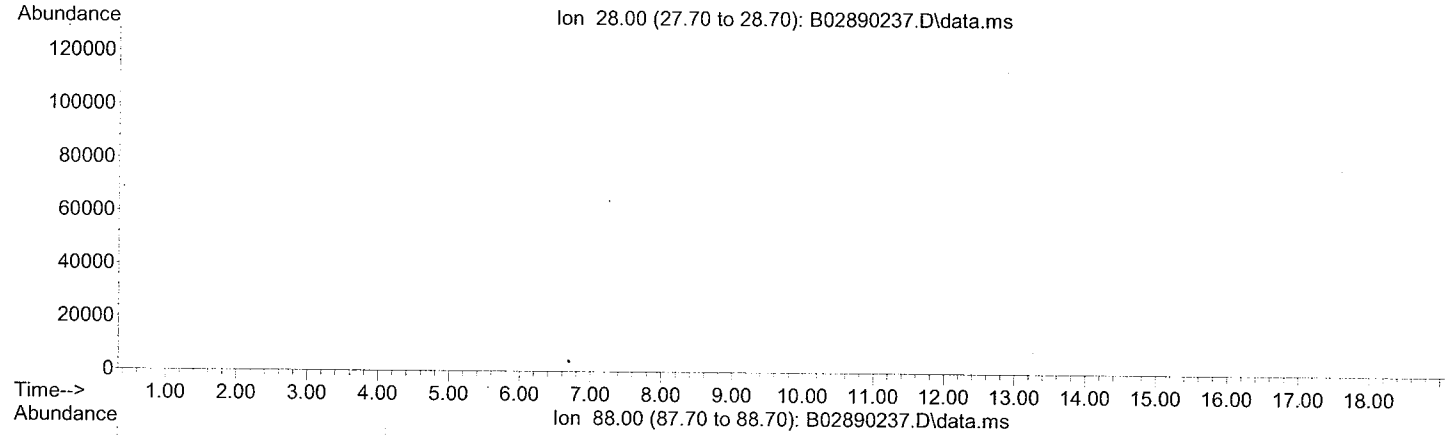
Prepared Date/Time: 11/04/10 22:38

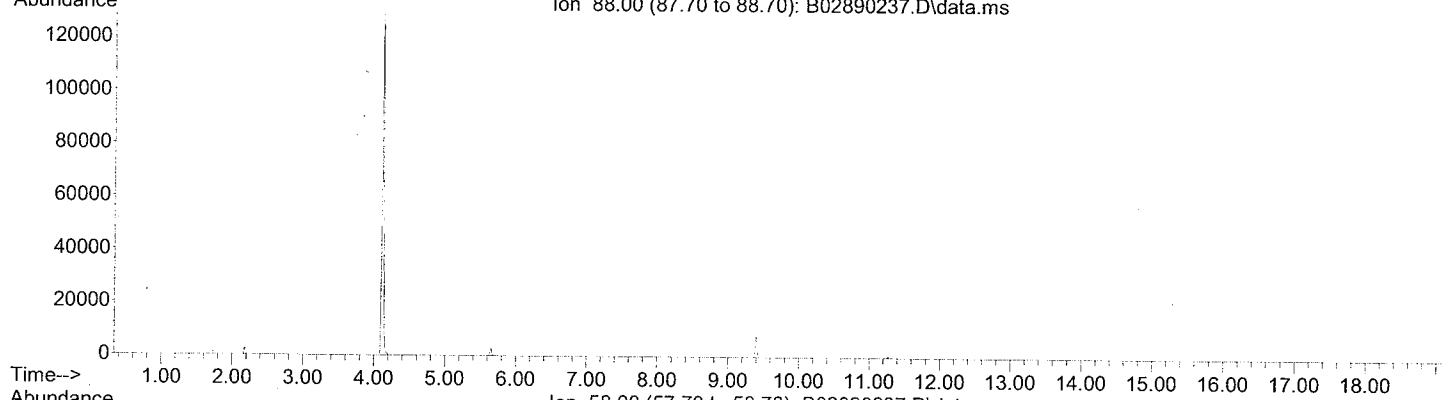
Analyzed Date/Time: 11/04/10 22:38

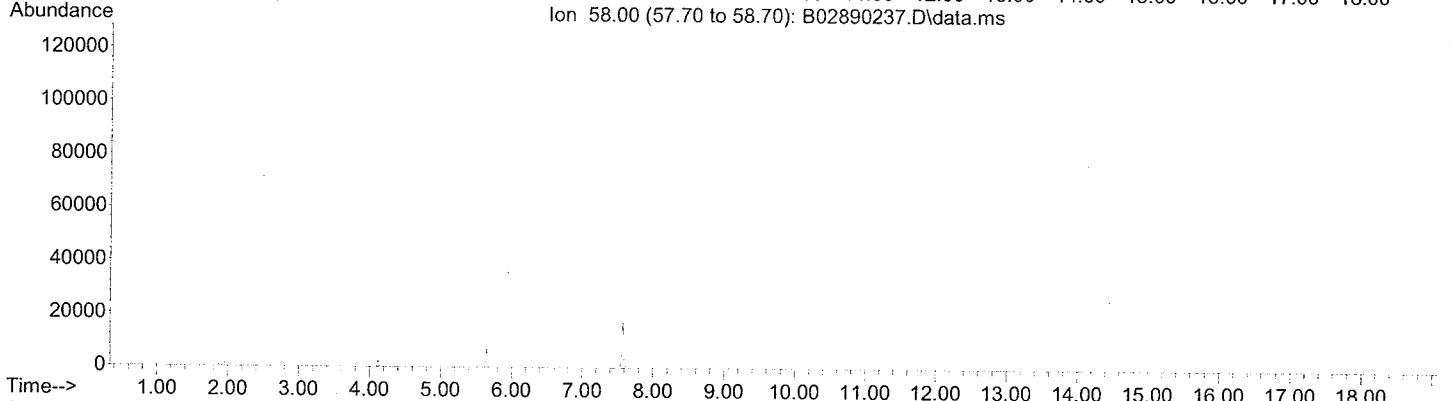
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

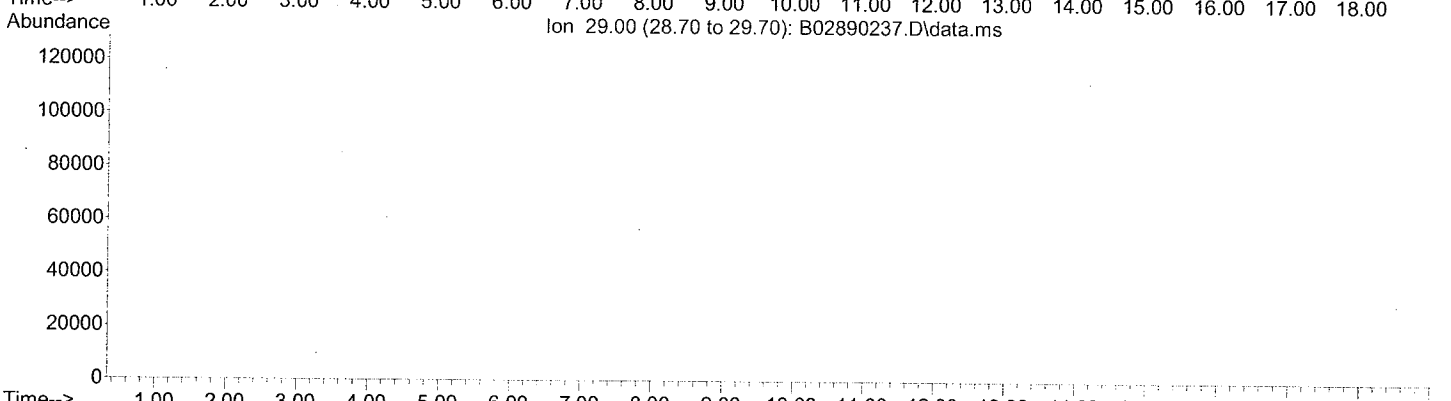
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890237.D
Operator : MP
Acquired : 4 Nov 2010 10:38 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-12
Misc Info : TETRA TECH, WATER
Vial Number: 18



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-020-1010

Sample Date/Time: 11/01/10 10:00

File ID: B02890238.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-13

Percent solids: N/A

Preparation Method: EPA 5030B

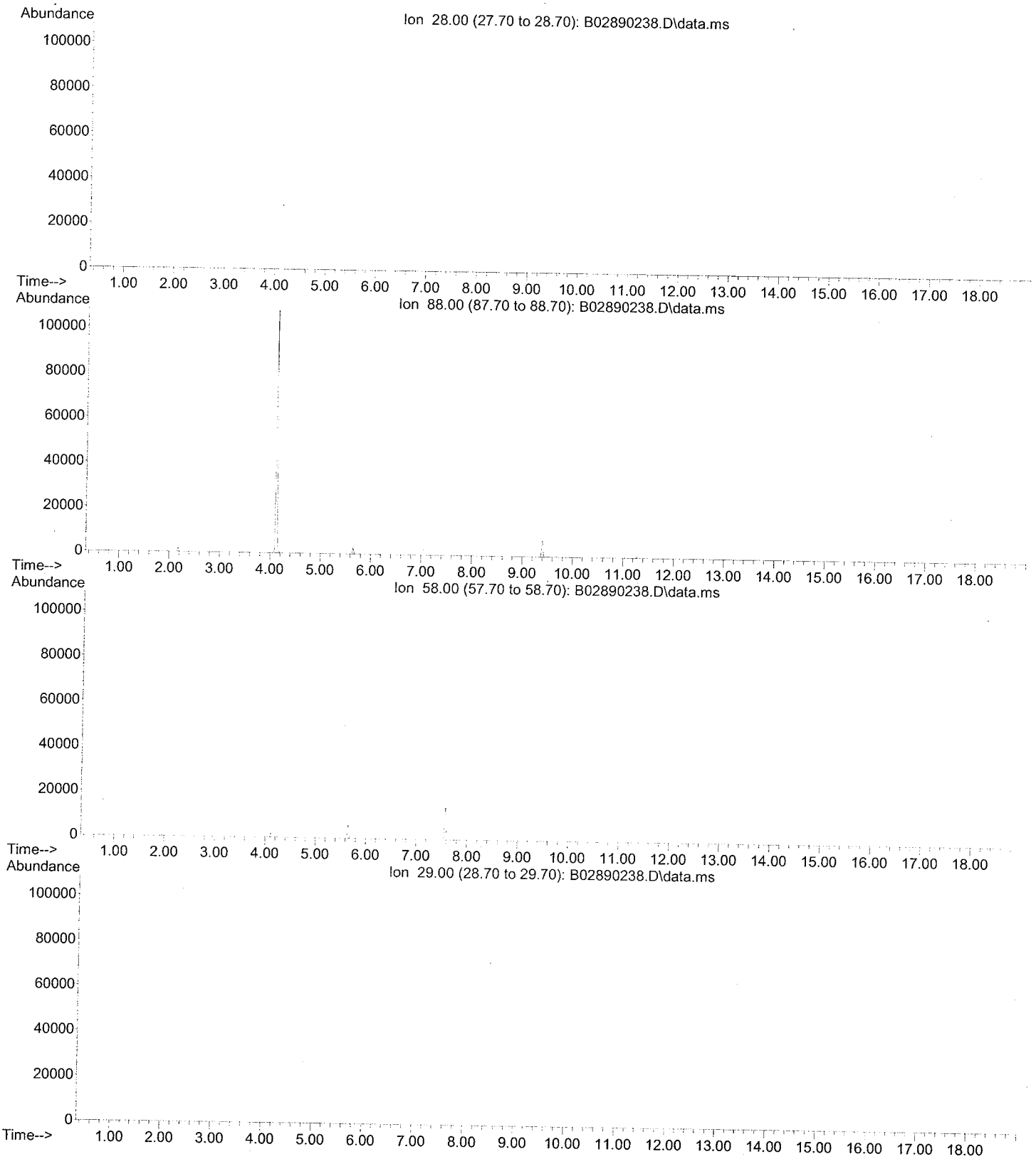
Prepared Date/Time: 11/04/10 23:05

Analyzed Date/Time: 11/04/10 23:05

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890238.D
Operator : MP
Acquired : 4 Nov 2010 11:05 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-13
Misc Info : TETRA TECH, WATER
Vial Number: 19



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-021-1010

Sample Date/Time: 11/01/10 11:00

File ID: B02890239.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-14

Percent solids: N/A

Preparation Method: EPA 5030B

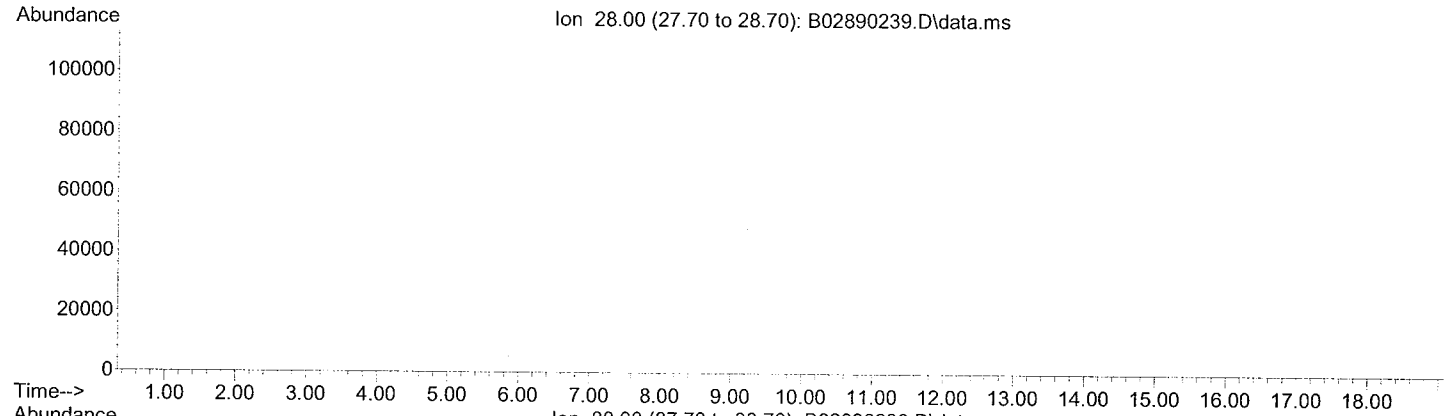
Prepared Date/Time: 11/04/10 23:32

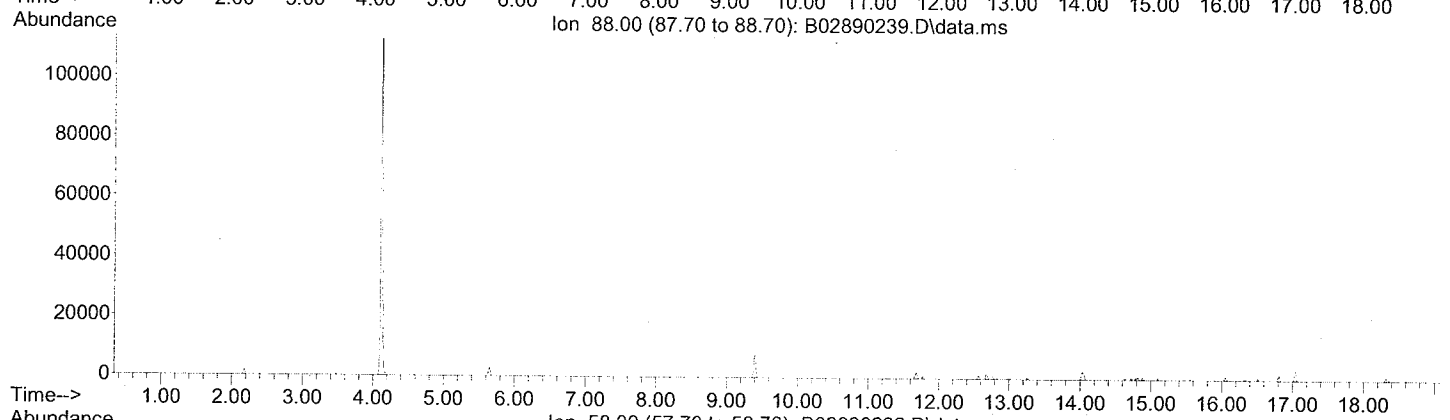
Analyzed Date/Time: 11/04/10 23:32

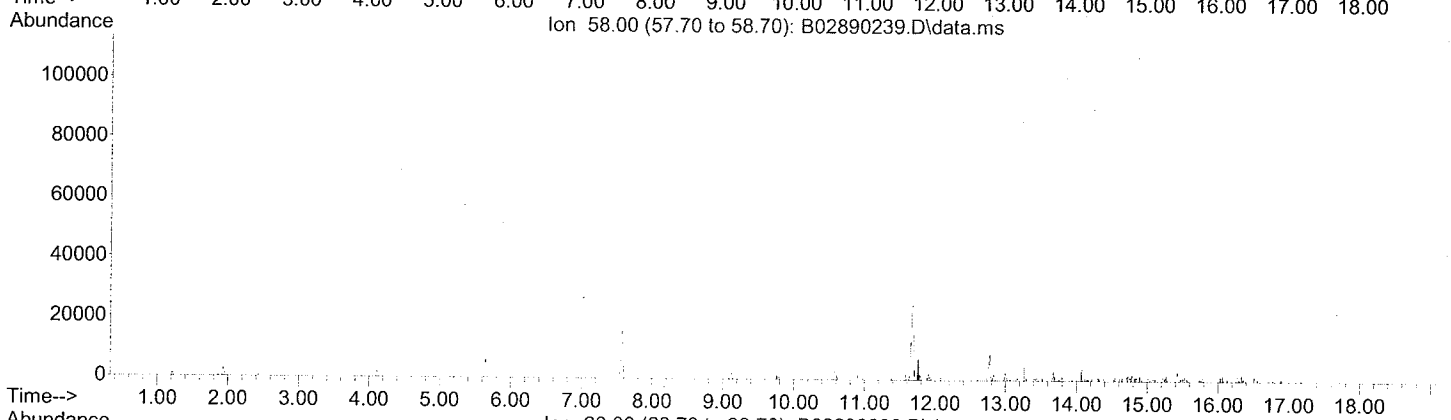
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

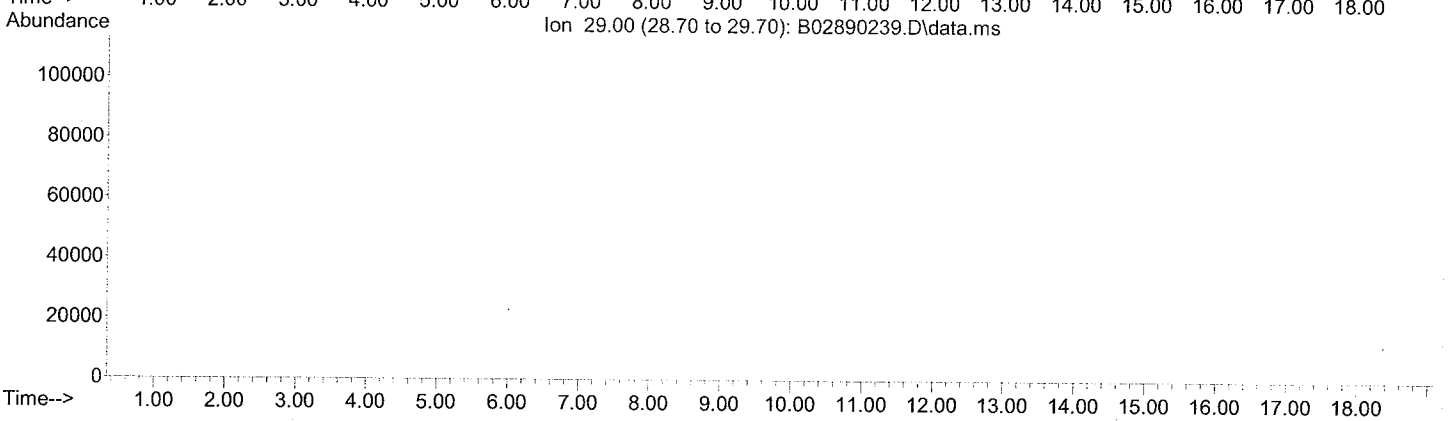
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890239.D
Operator : MP
Acquired : 4 Nov 2010 11:32 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-14
Misc Info : TETRA TECH, WATER
Vial Number: 20



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-031-1010

Sample Date/Time: 11/01/10 09:20

File ID: B02890240.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-15

Percent solids: N/A

Preparation Method: EPA 5030B

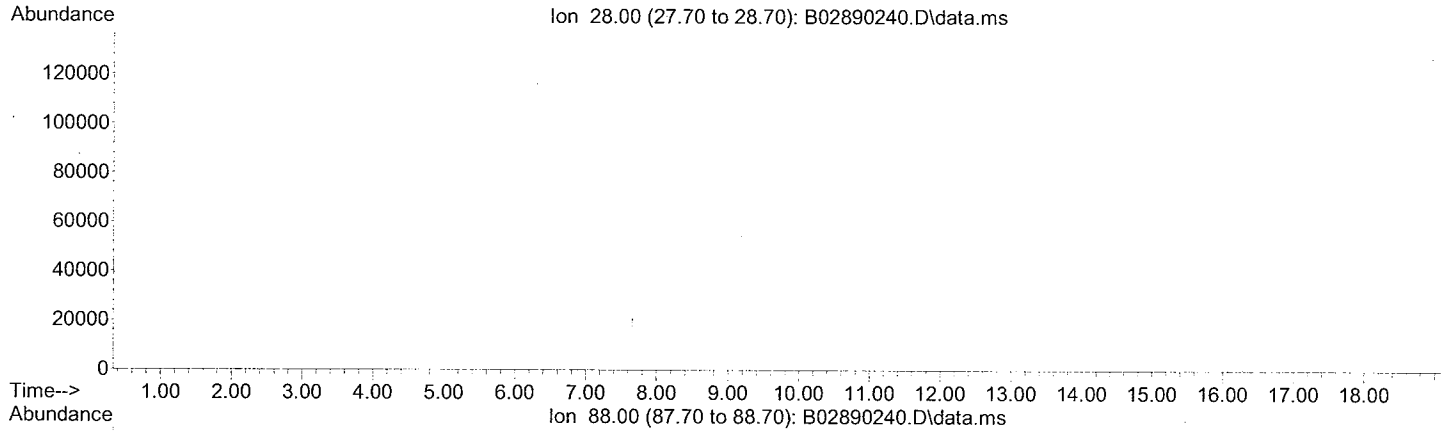
Prepared Date/Time: 11/04/10 23:59

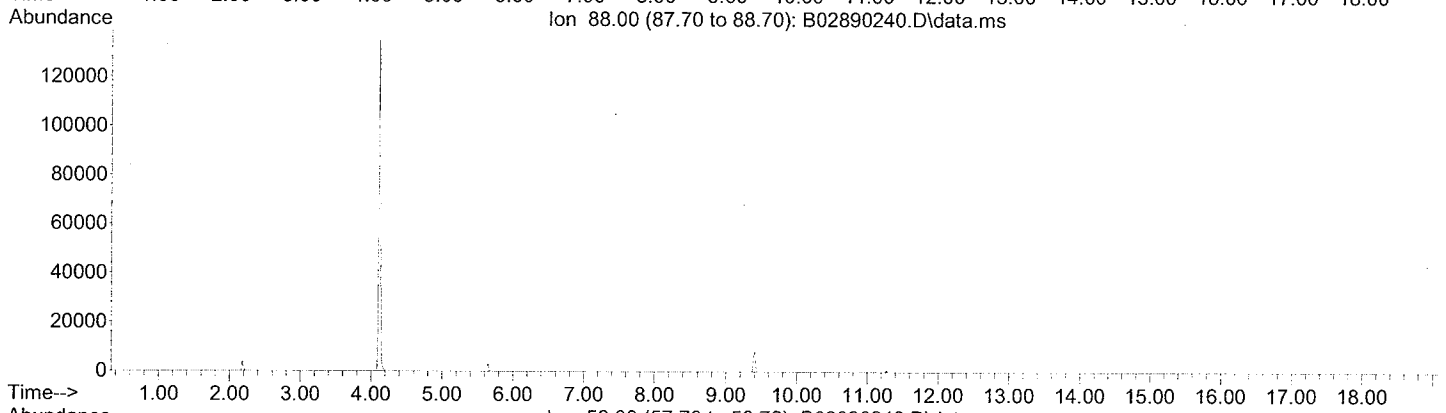
Analyzed Date/Time: 11/04/10 23:59

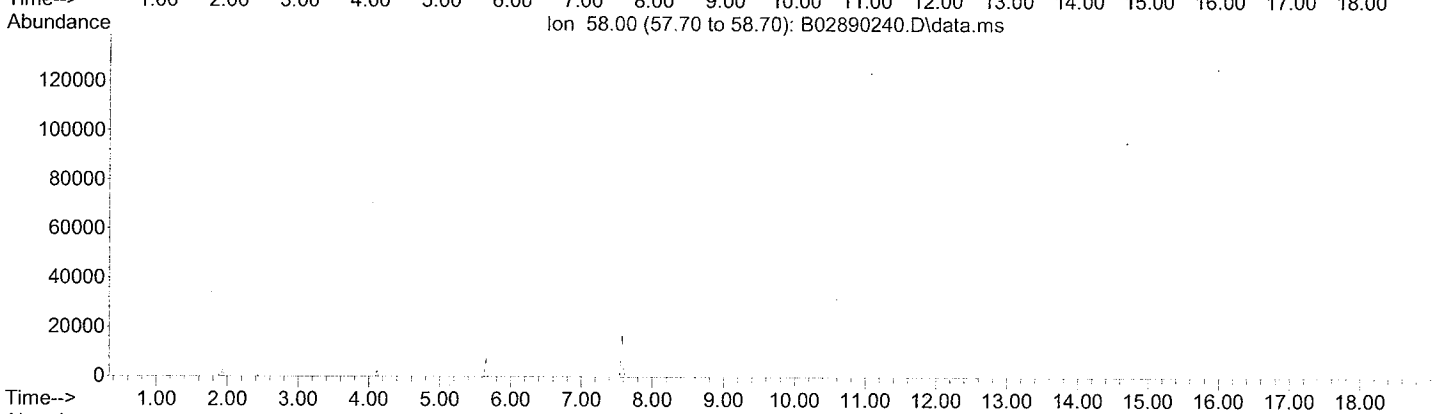
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

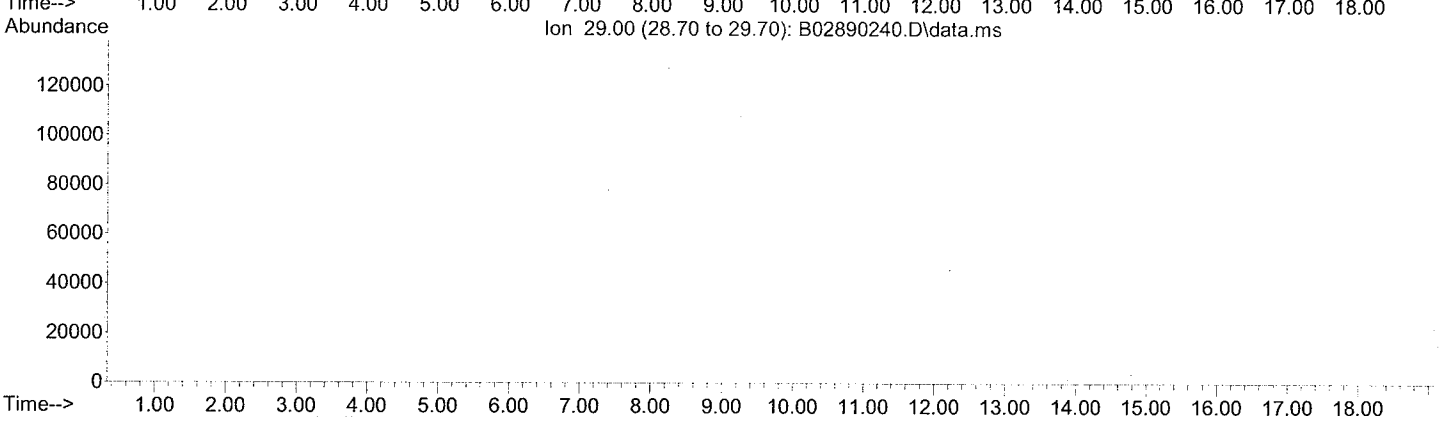
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890240.D
Operator : MP
Acquired : 4 Nov 2010 11:59 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-15
Misc Info : TETRA TECH, WATER
Vial Number: 21



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-032D-1010

Sample Date/Time: 11/01/10 08:40

File ID: B02890241.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-16

Percent solids: N/A

Preparation Method: EPA 5030B

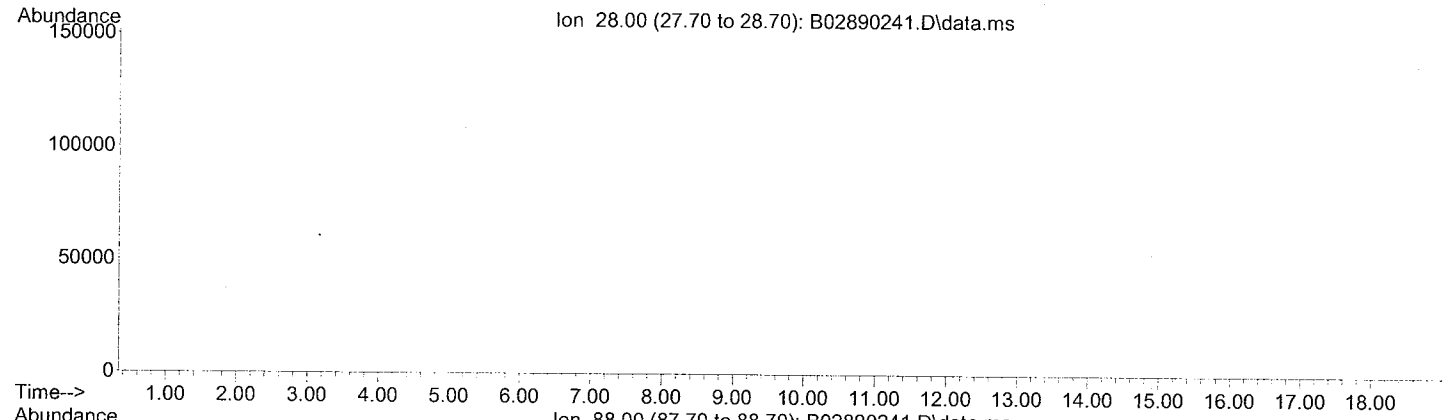
Prepared Date/Time: 11/05/10 00:26

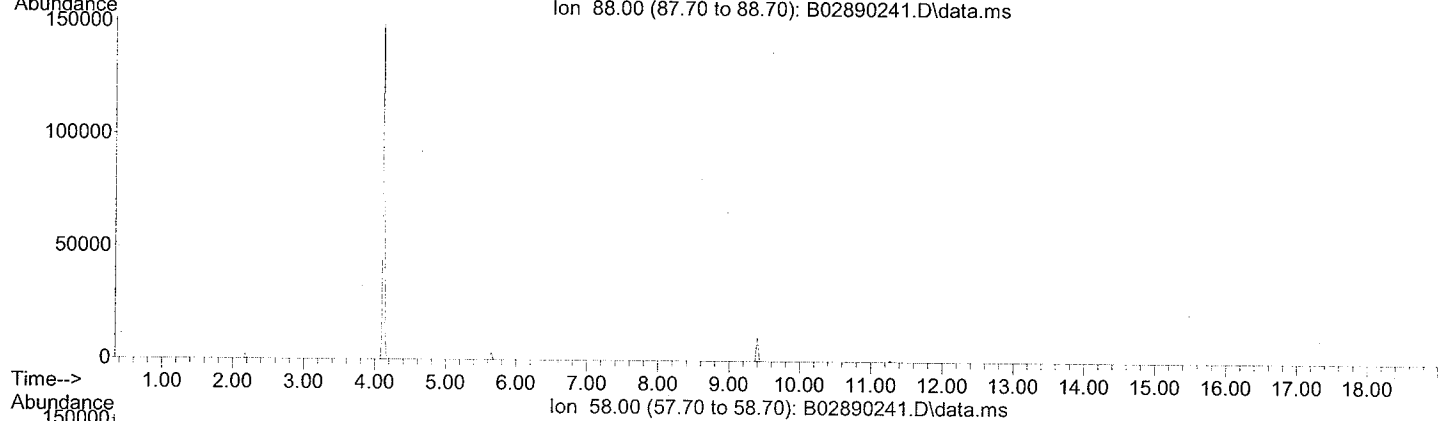
Analyzed Date/Time: 11/05/10 00:26

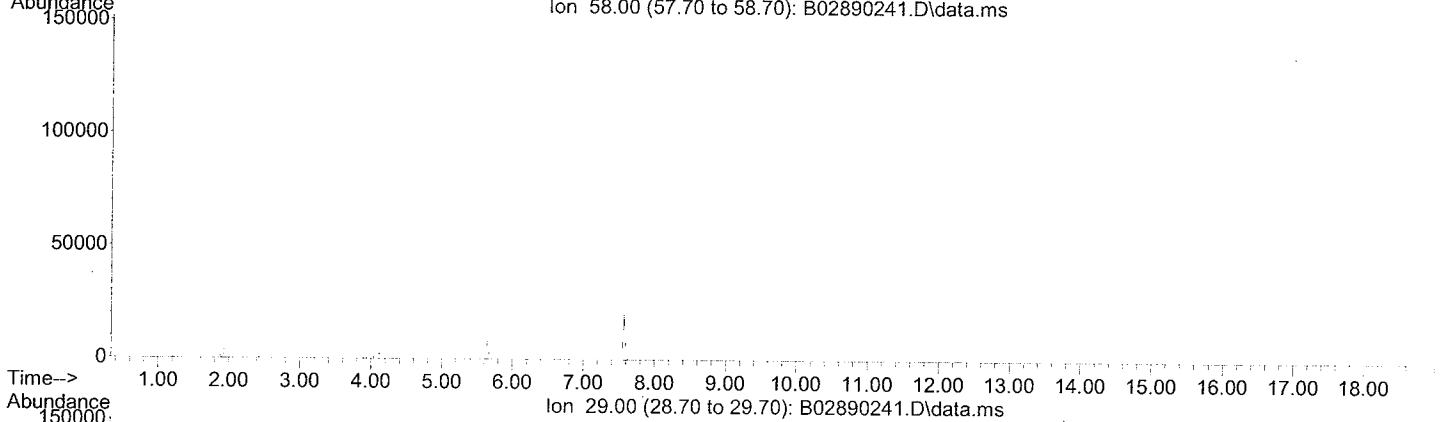
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

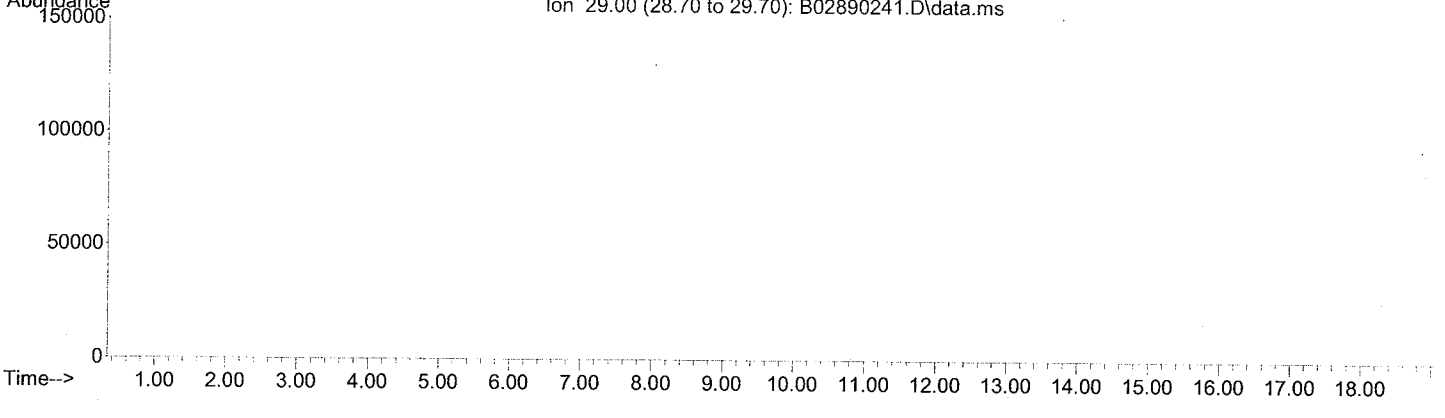
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890241.D
Operator : MP
Acquired : 5 Nov 2010 12:26 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-16
Misc Info : TETRA TECH, WATER
Vial Number: 22



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-TB-02

Sample Date/Time: 10/30/10 08:00

File ID: B02890225.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011002-17

Percent solids: N/A

Preparation Method: EPA 5030B

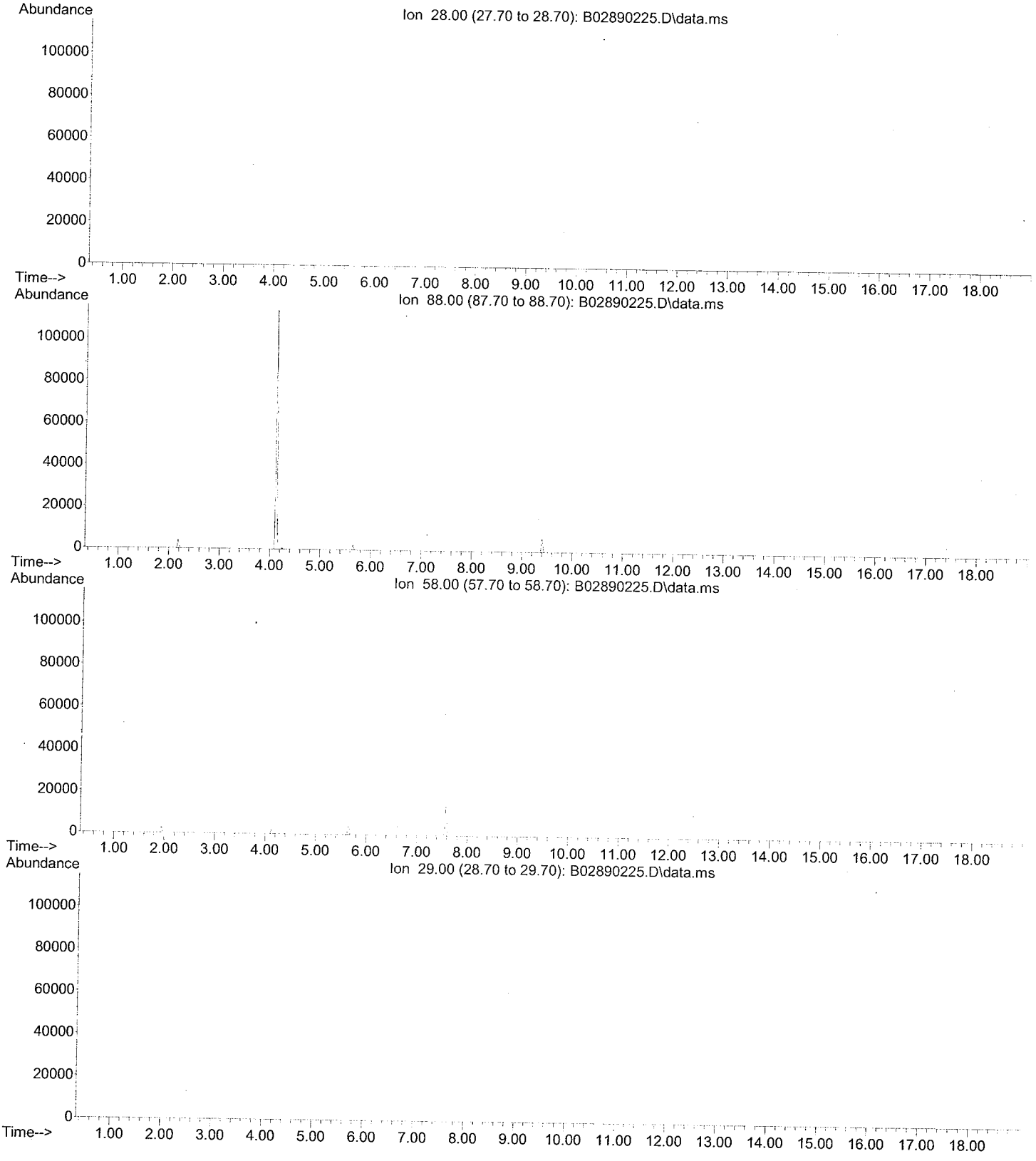
Prepared Date/Time: 11/04/10 17:16

Analyzed Date/Time: 11/04/10 17:16

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110410\B02890225.D
Operator : MP
Acquired : 4 Nov 2010 5:16 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011002-17
Misc Info : TETRA TECH, WATER
Vial Number: 6

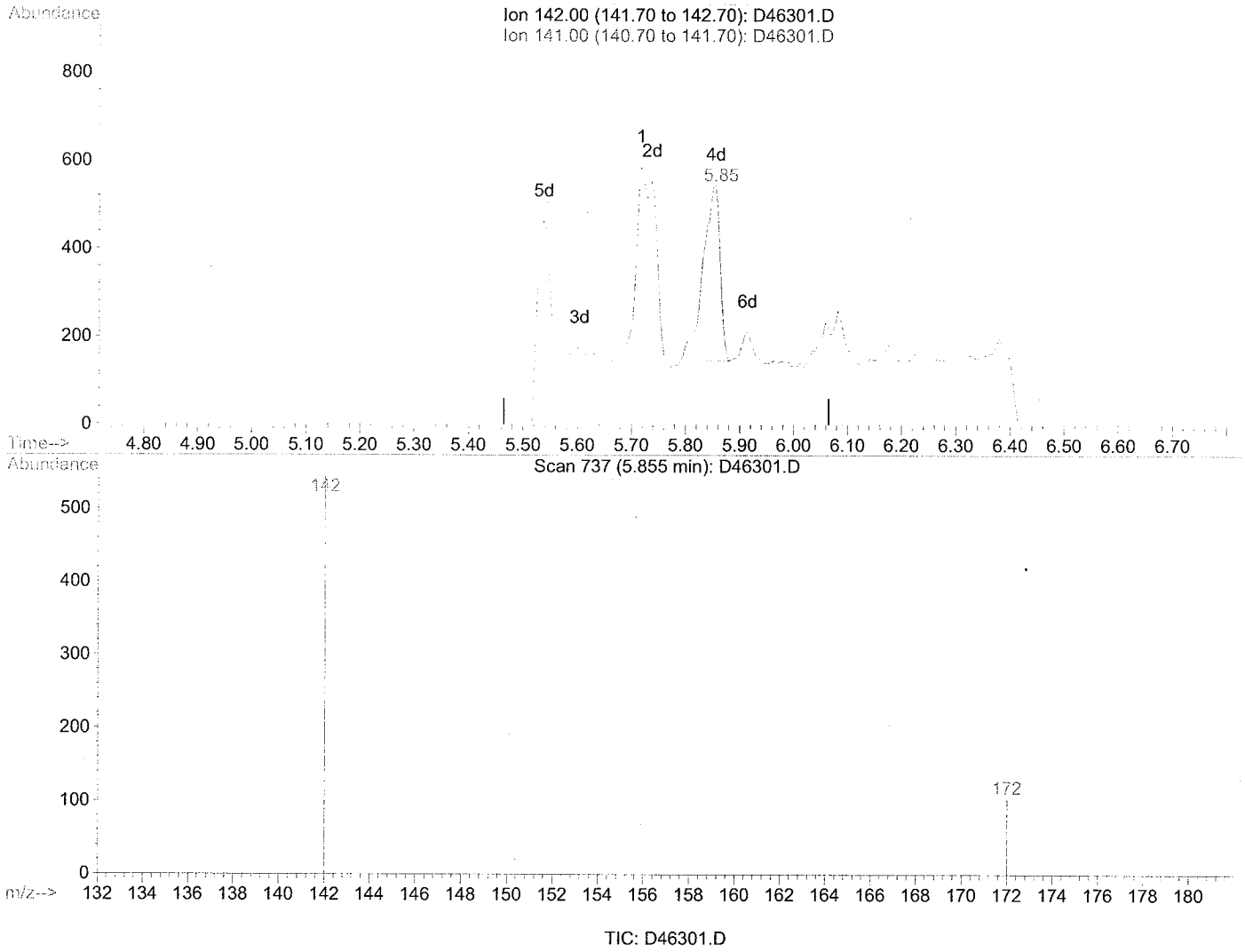


ADDENDUM PAH PACKAGE

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46301.D Vial: 6
Acq On : 17 Nov 2010 13:38 Operator: JI
Sample : 1011002-01 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:58 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46301.D

(5) 2-Methylnaphthalene (T)

5.85min 6.35ug/L m

response 853

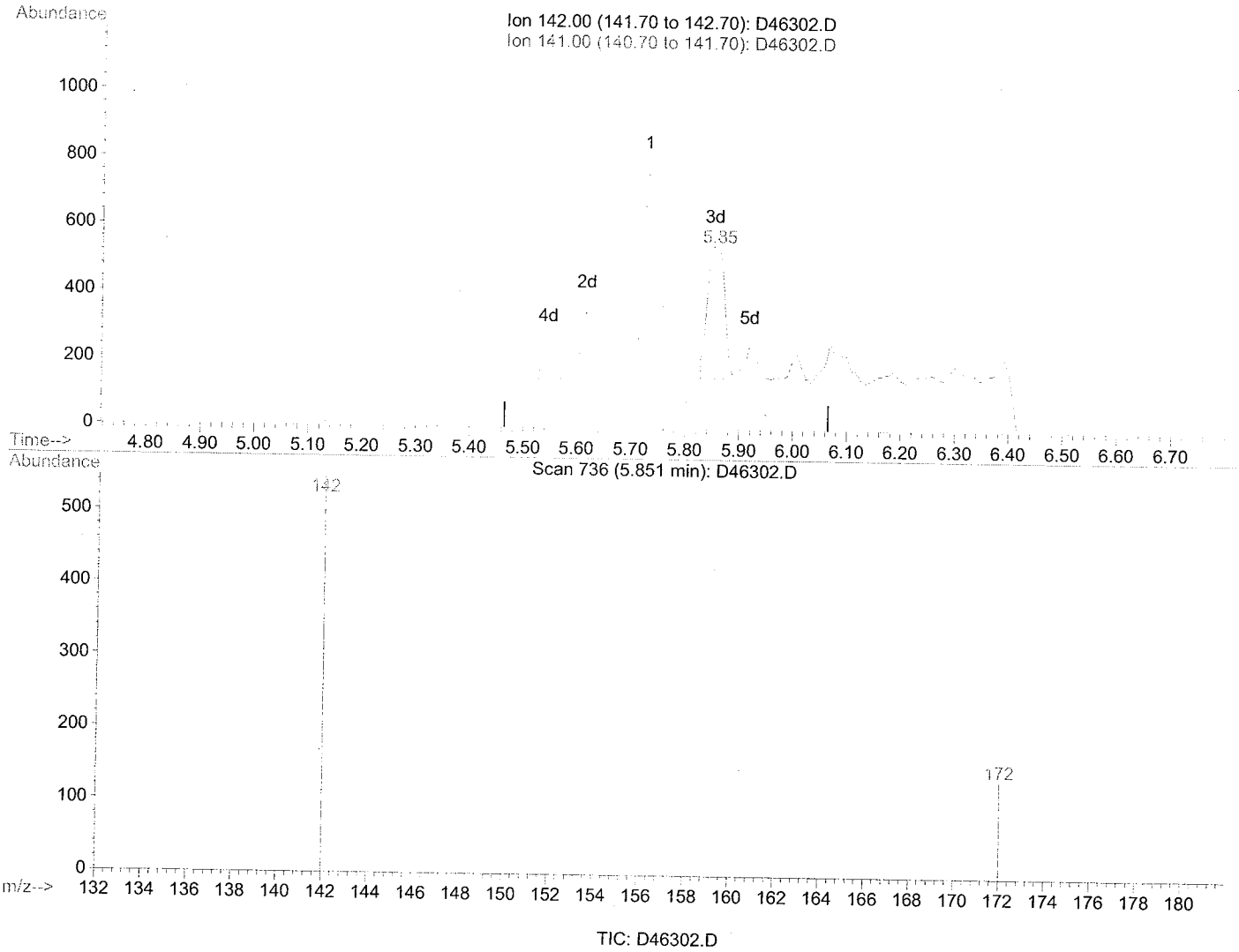
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46302.D
Acq On : 17 Nov 2010 14:02
Sample : 1011002-02
Misc : TETRATECH, WATER HP#P JI
Quant Time: Feb 3 10:58 2011

Vial: 7
Operator: JI
Inst : GCMS-D
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46302.D

(5) 2-Methylnaphthalene (T)

5.85min 8.02ug/L m

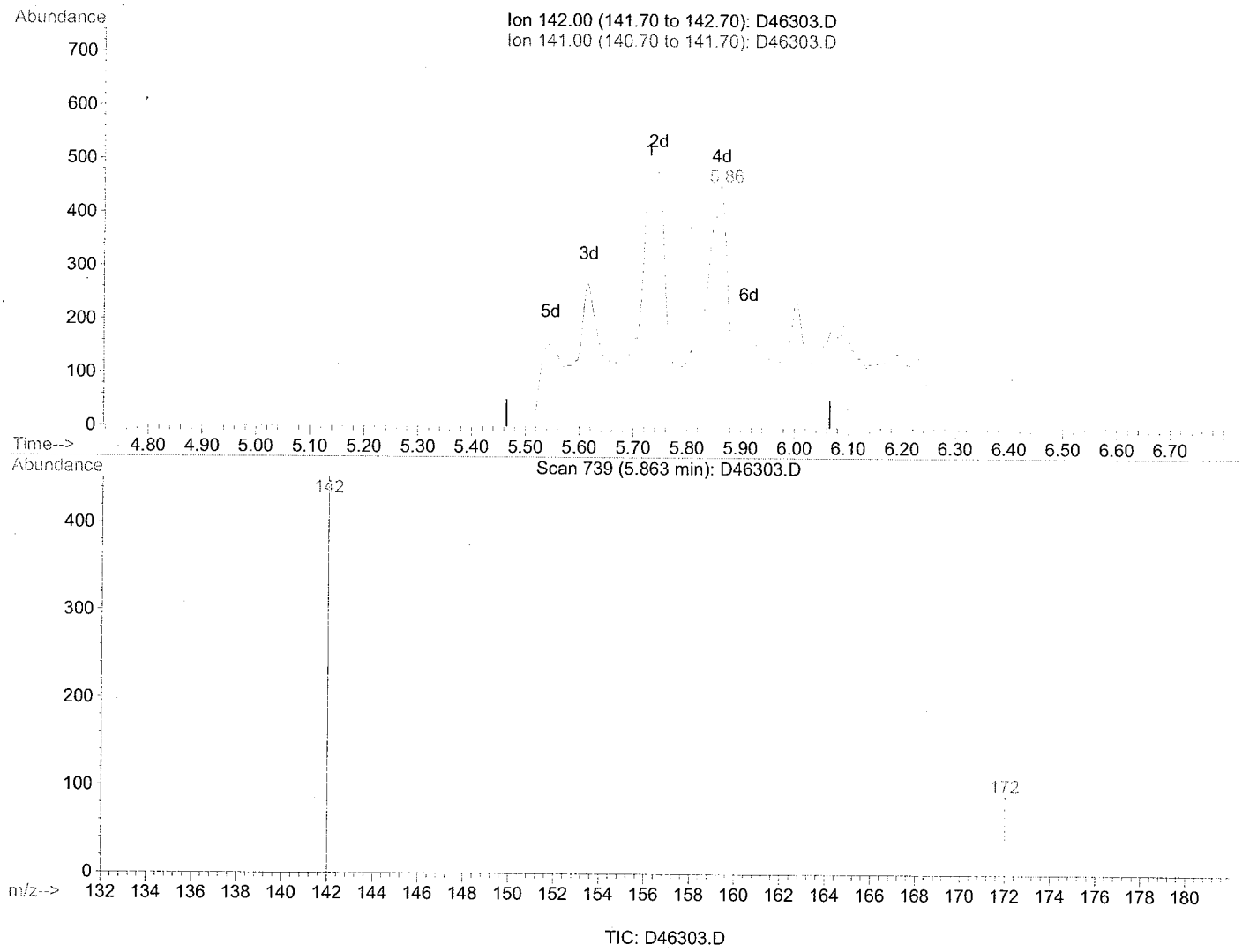
response 861

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46303.D Vial: 8
Acq On : 17 Nov 2010 14:26 Operator: JI
Sample : 1011002-03 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:58 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46303.D

(5) 2-Methylnaphthalene (T)

5.86min 7.59ug/L m

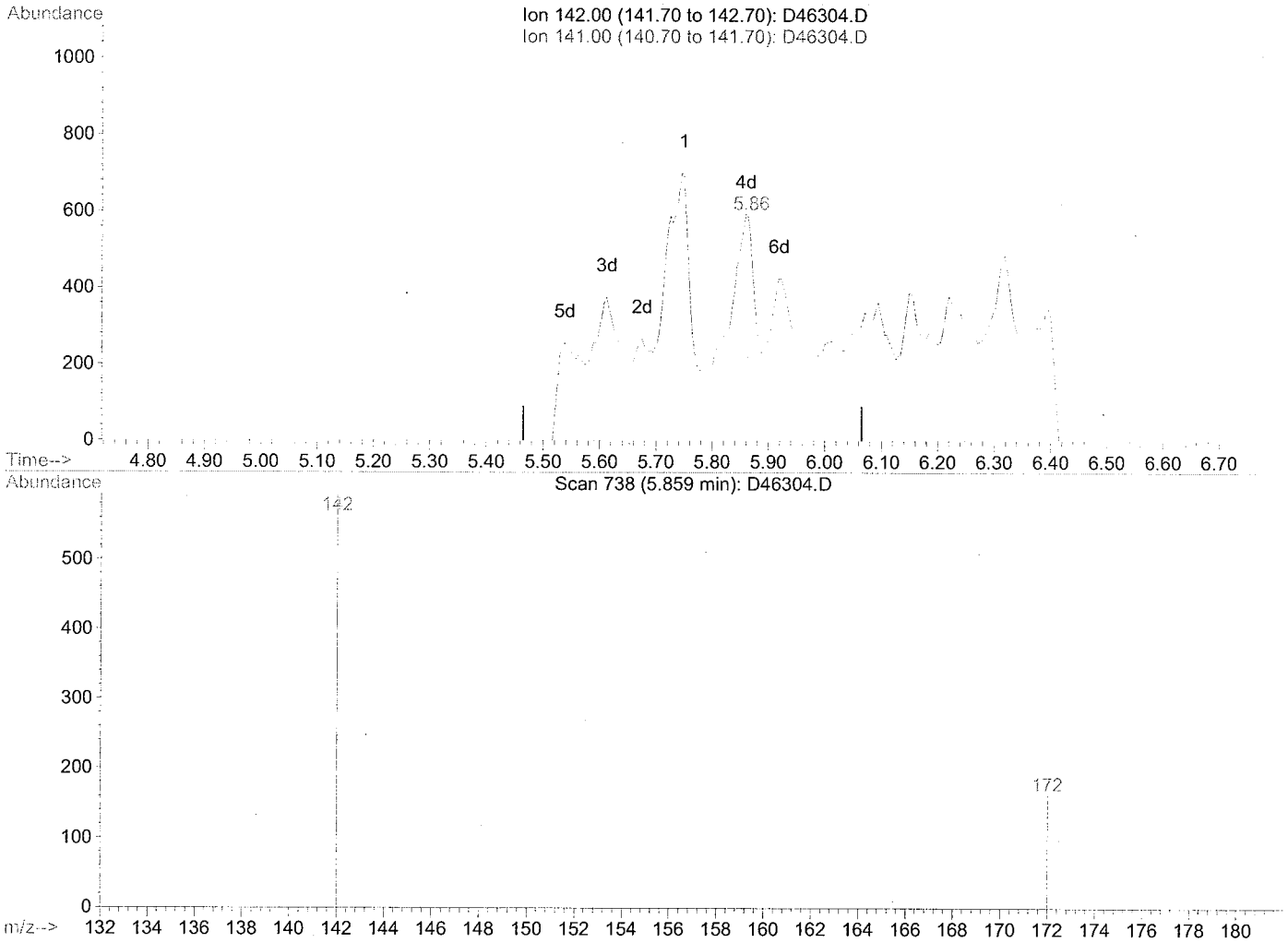
response 700

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46304.D Vial: 9
Acq On : 17 Nov 2010 14:50 Operator: JI
Sample : 1011002-04 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:59 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46304.D

(5) 2-Methylnaphthalene (T)

5.86min 7.48ug/L m

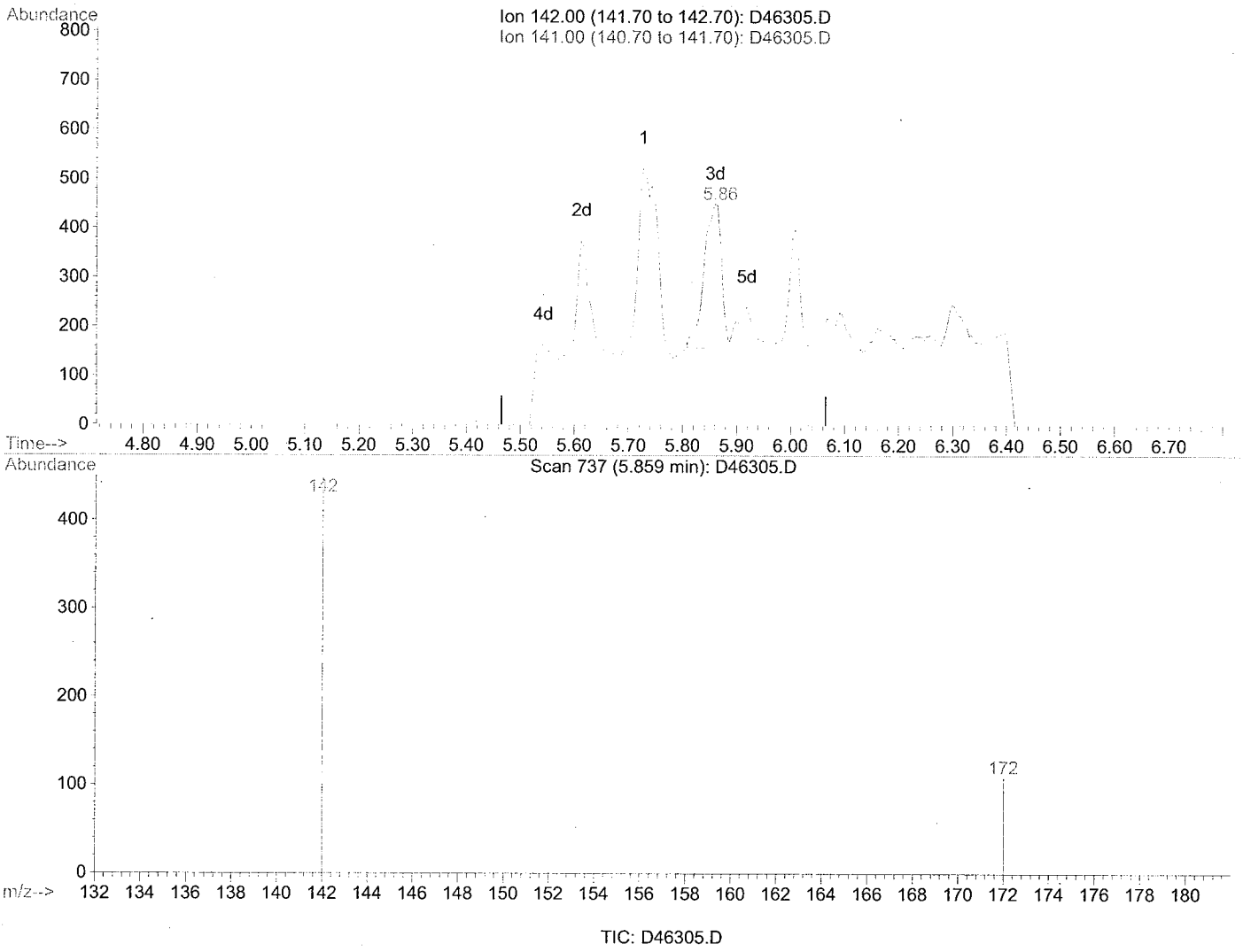
response 759

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46305.D Vial: 10
Acq On : 17 Nov 2010 15:15 Operator: JI
Sample : 1011002-05 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:59 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46305.D

(5) 2-Methylnaphthalene (T)

5.86min 7.38ug/L m

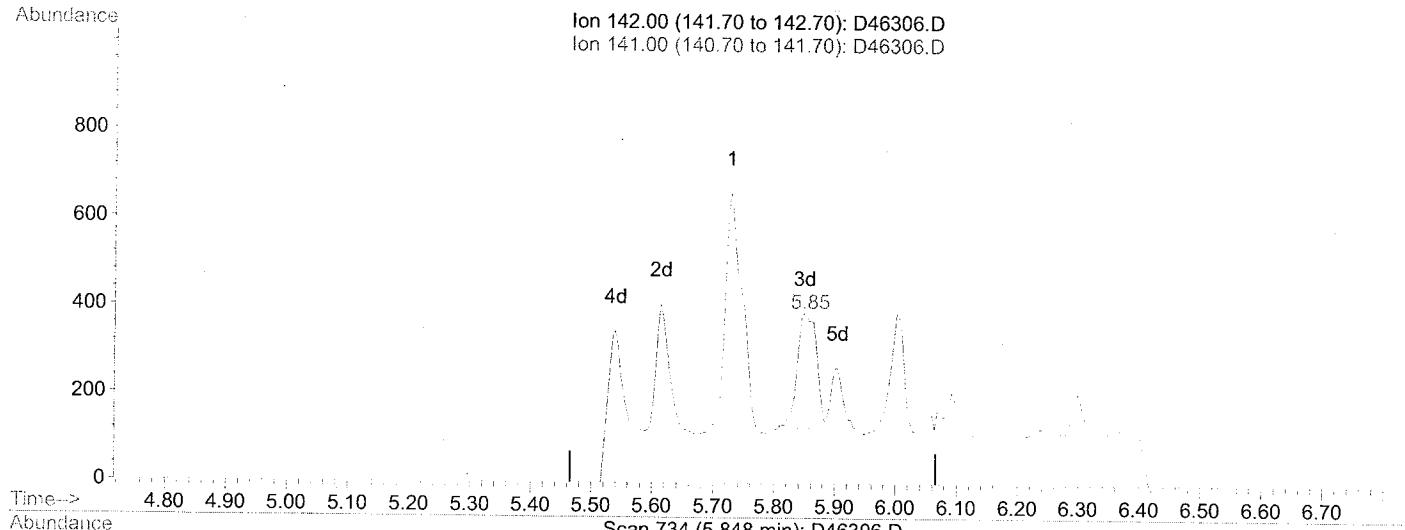
response 653

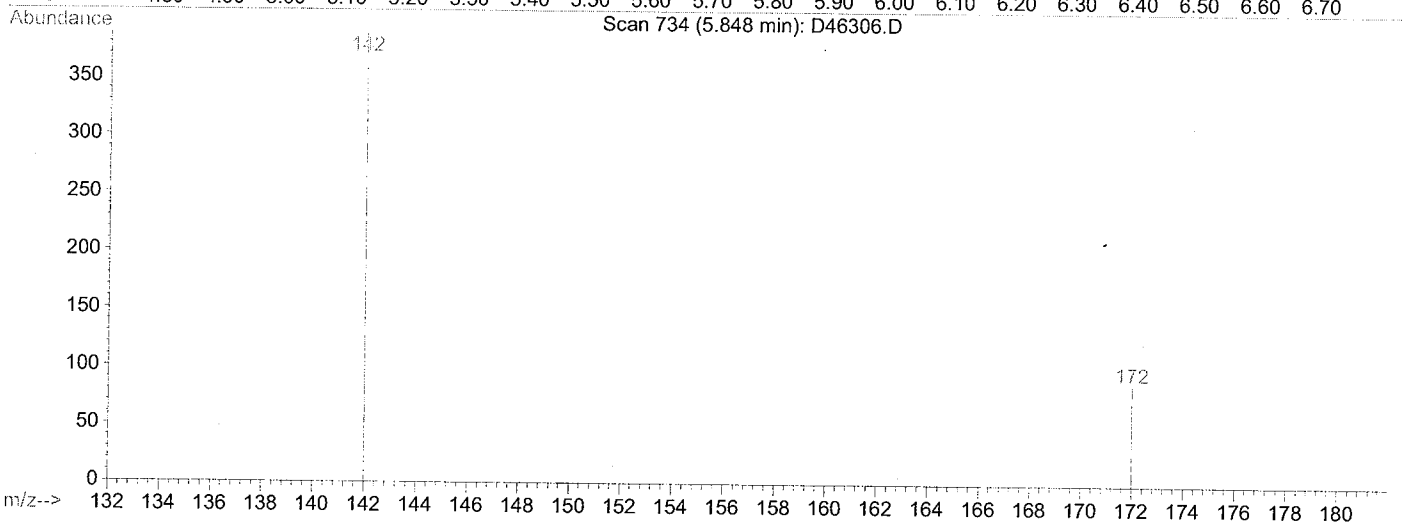
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46306.D Vial: 11
Acq On : 17 Nov 2010 15:39 Operator: JI
Sample : 1011002-06 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:59 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46306.D

(5) 2-Methylnaphthalene (T)

5.85min 5.14ug/L m

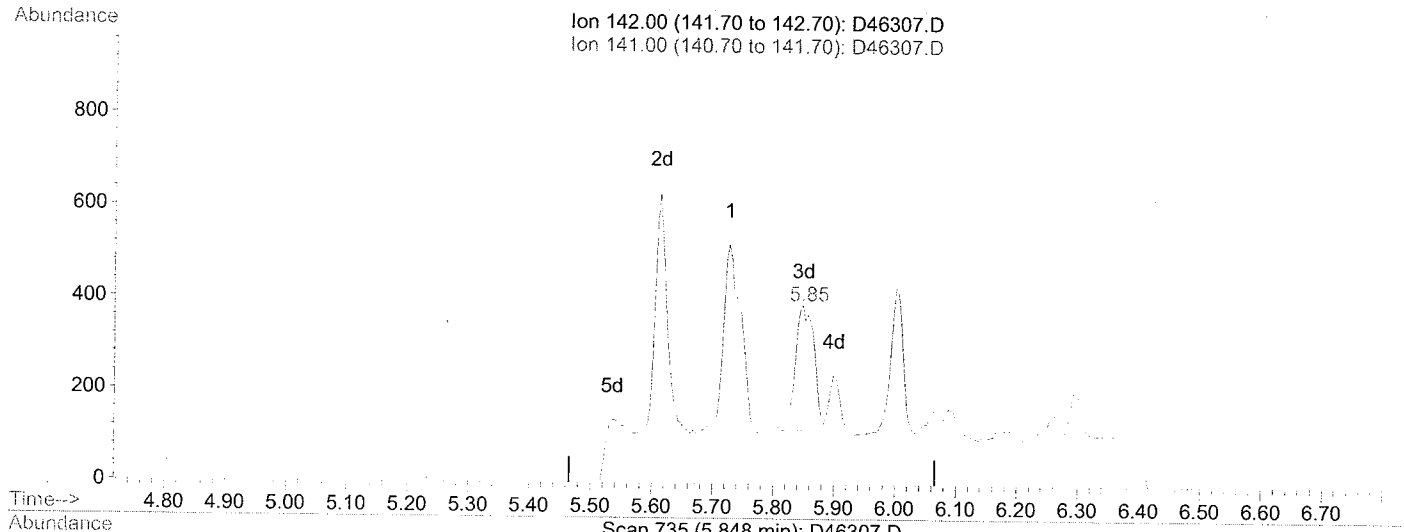
response 582

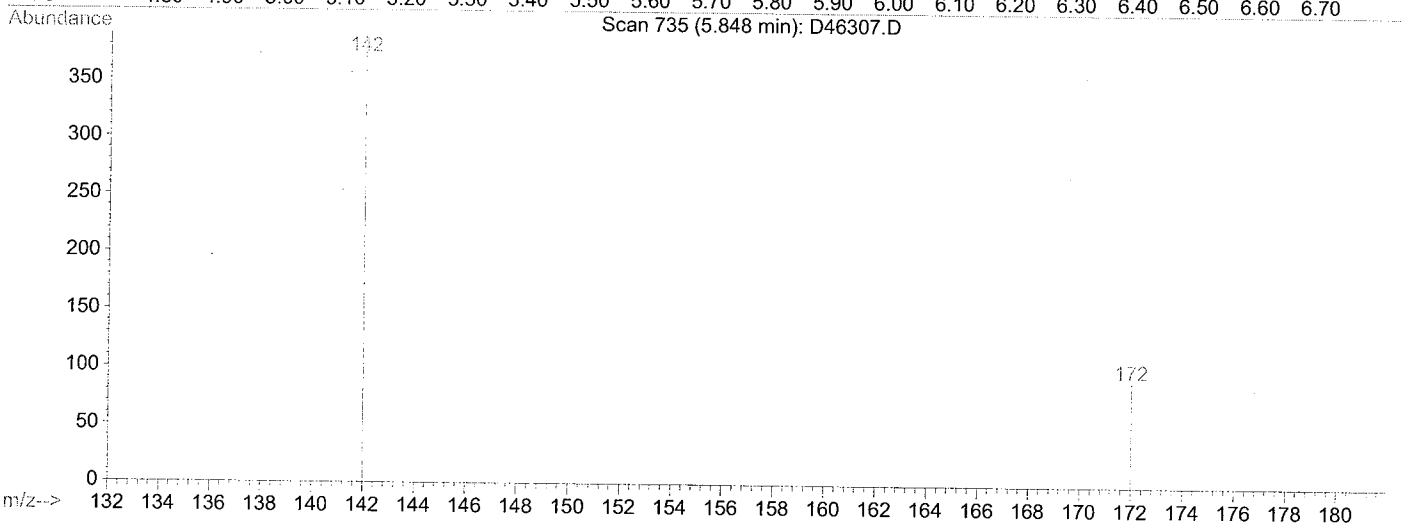
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46307.D Vial: 12
Acq On : 17 Nov 2010 16:04 Operator: JI
Sample : 1011002-07 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:59 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46307.D

(5) 2-Methylnaphthalene (T)

5.85min 7.13ug/L m

response 587

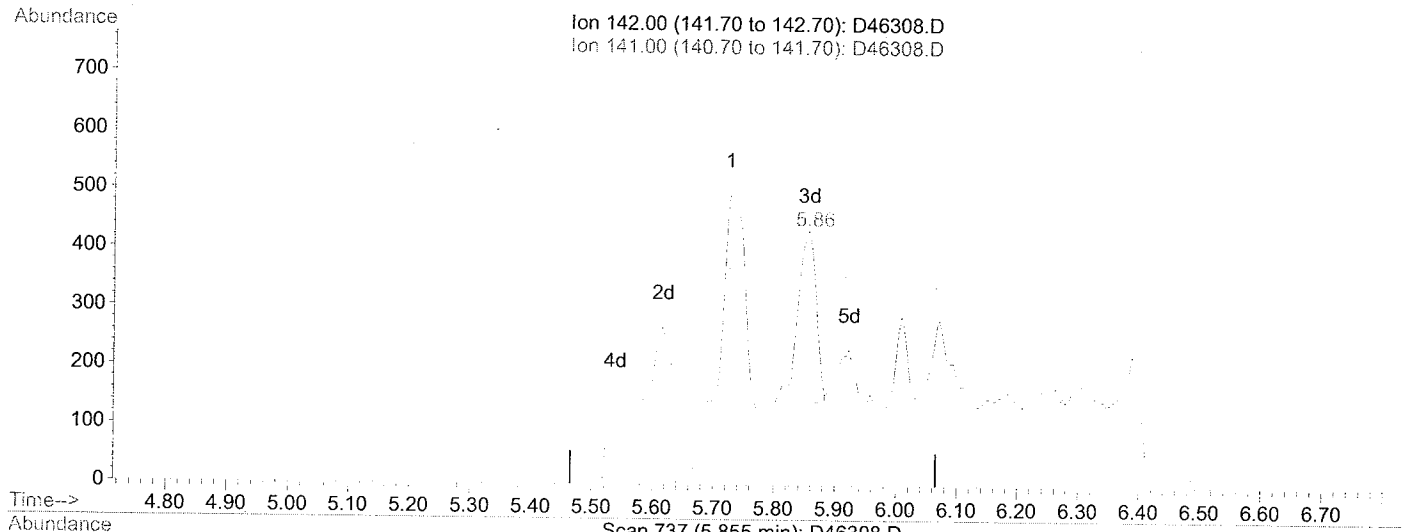
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

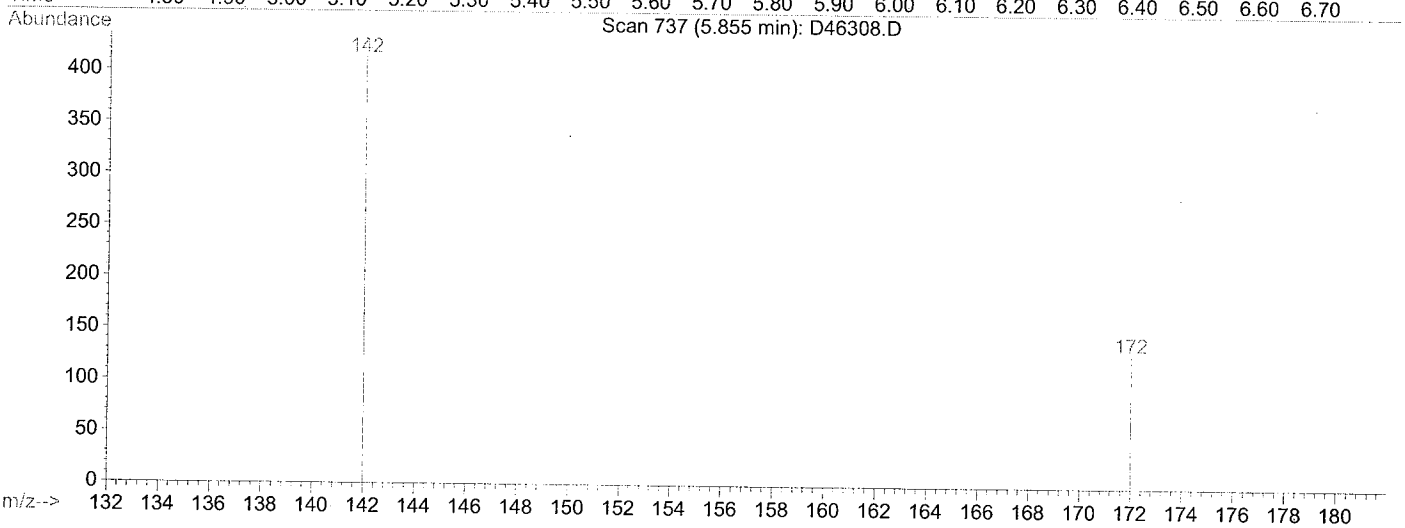
Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46308.D
Acq On : 17 Nov 2010 16:28
Sample : 1011002-08
Misc : TETRATECH, WATER HP#P JI
Quant Time: Feb 3 10:59 2011

Vial: 13
Operator: JI
Inst : GCMS-D
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46308.D

(5) 2-Methylnaphthalene (T)

5.86min 7.28ug/L m

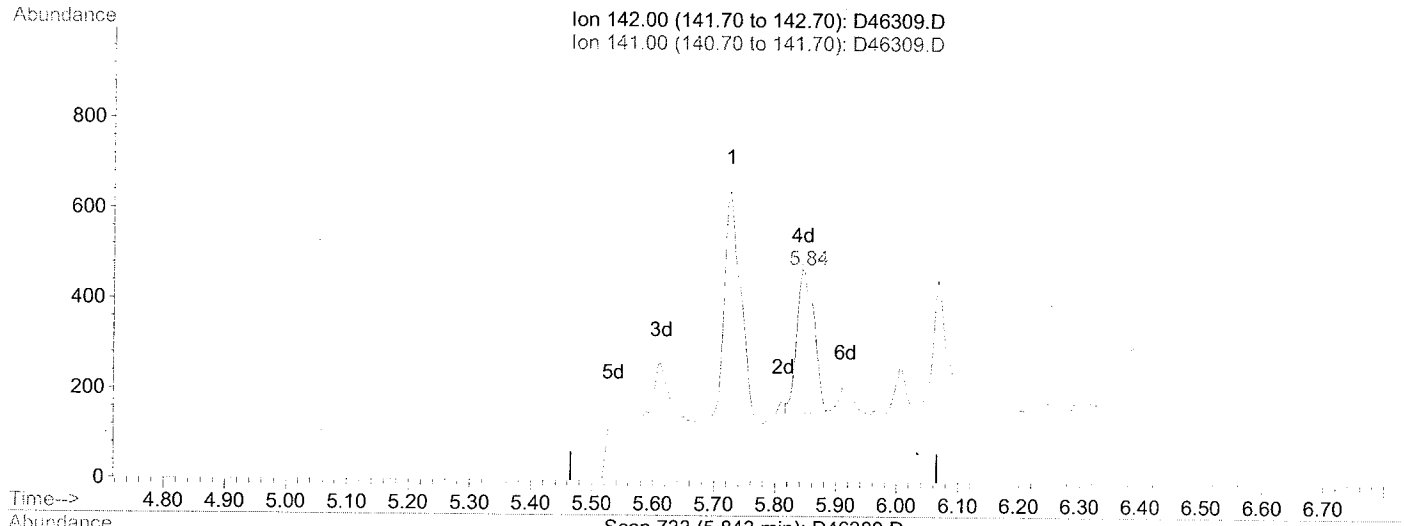
response 601

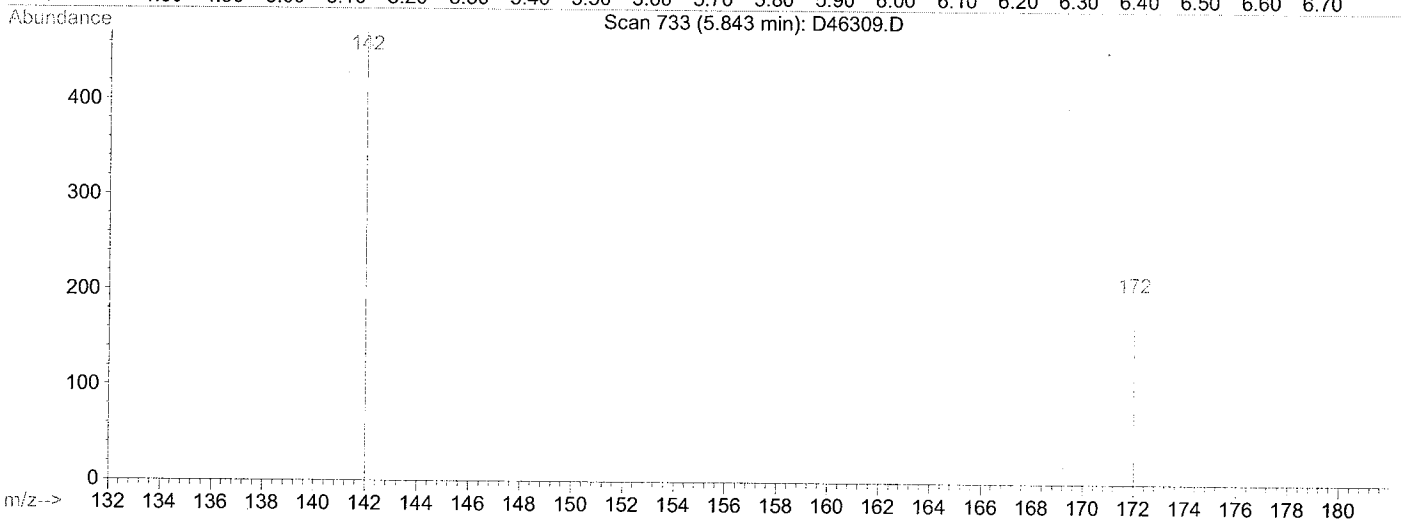
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46309.D Vial: 14
Acq On : 17 Nov 2010 16:53 Operator: JI
Sample : 1011002-09 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:00 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46309.D

(5) 2-Methylnaphthalene (T)

5.84min 7.09ug/L m

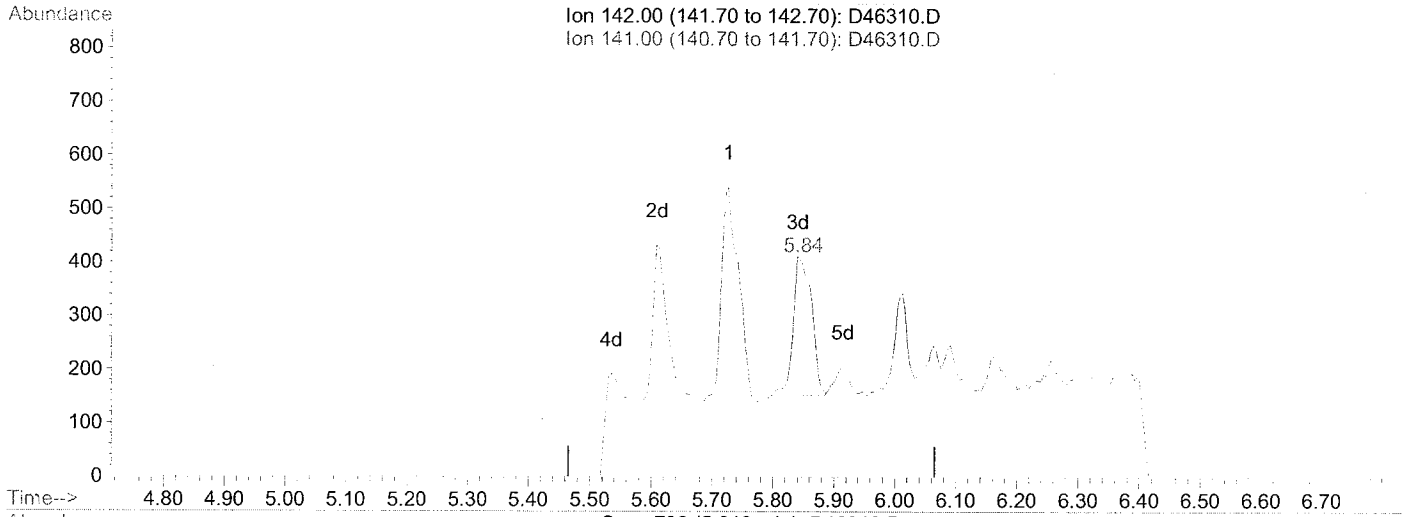
response 631

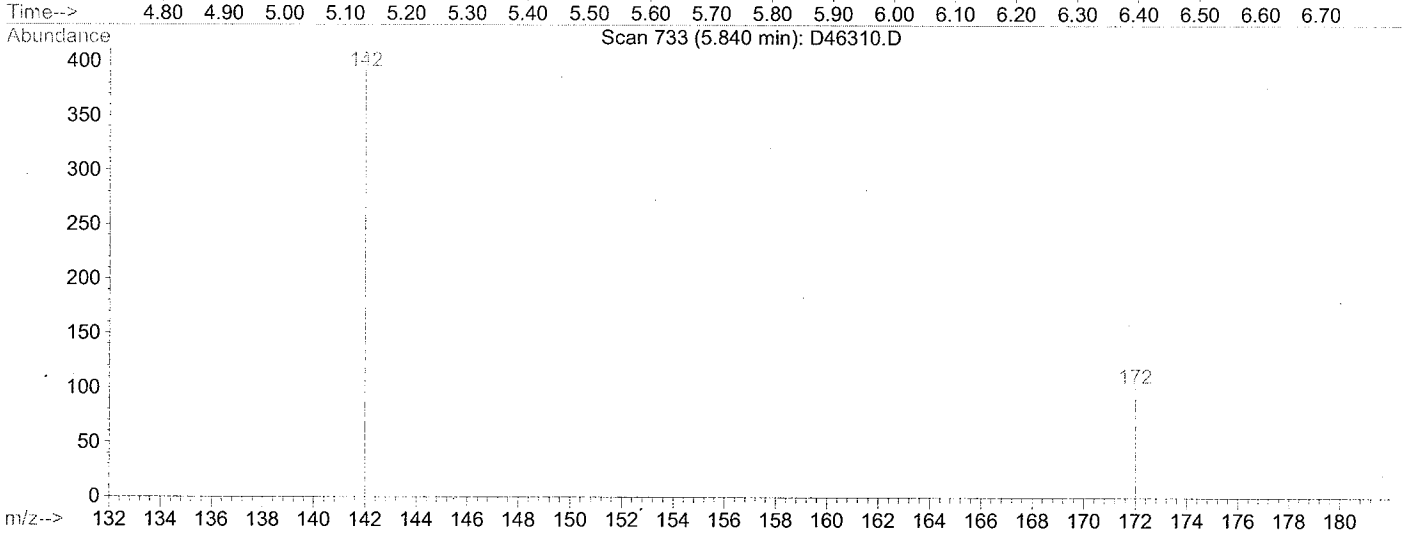
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46310.D Vial: 15
Acq On : 17 Nov 2010 17:17 Operator: JI
Sample : 1011002-10 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:00 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46310.D

(5) 2-Methylnaphthalene (T)

5.84min 5.87ug/L m

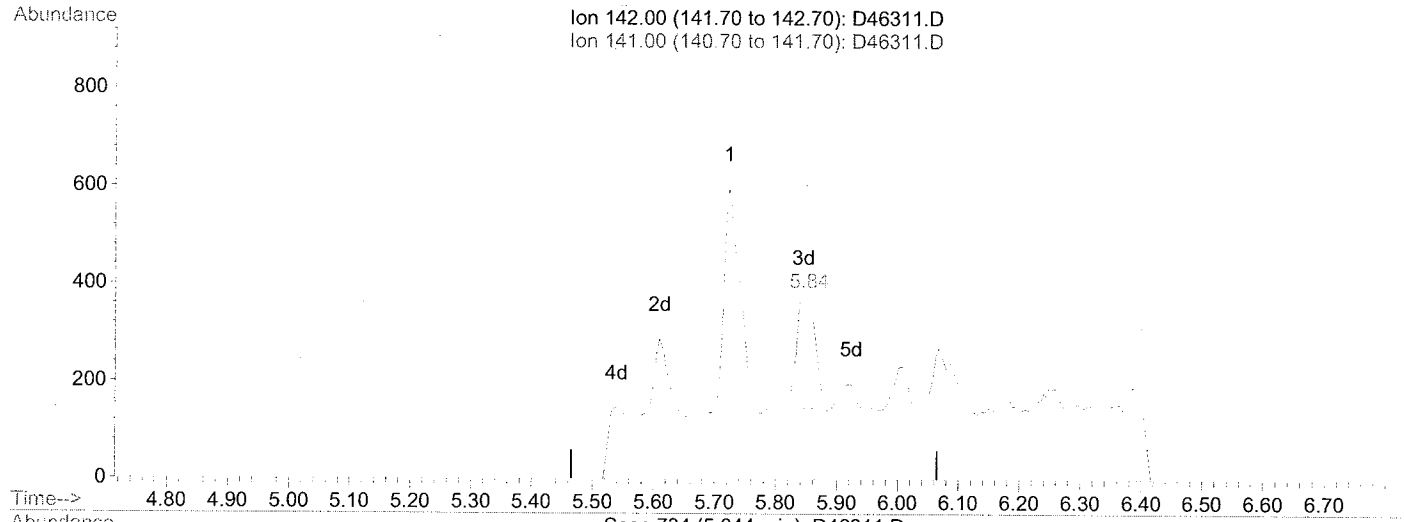
response 533

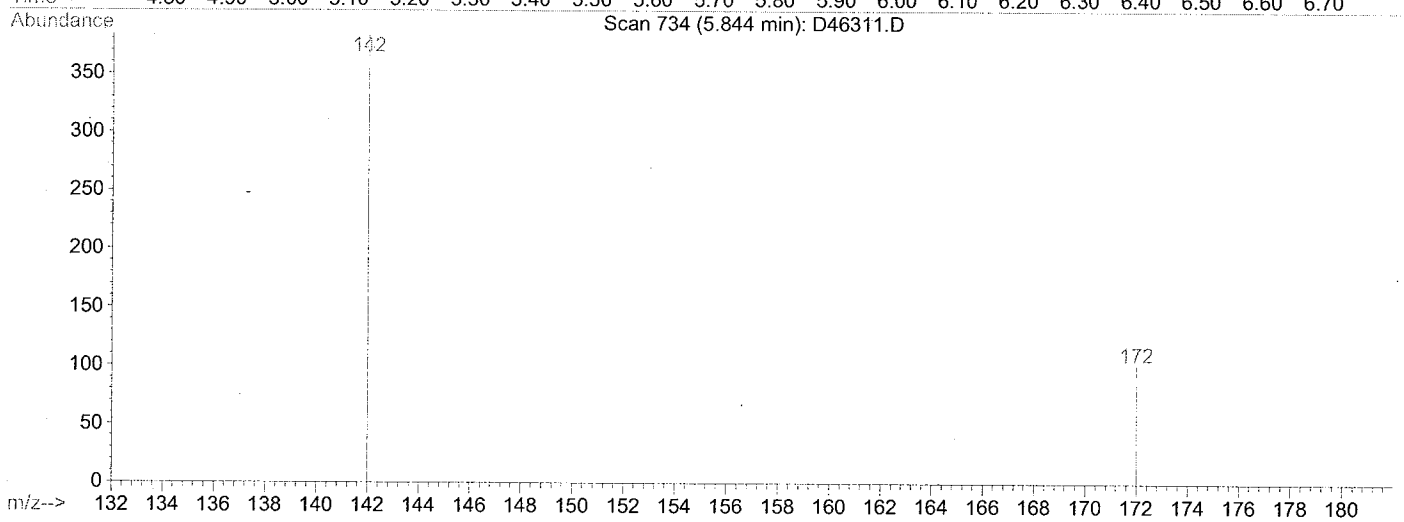
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46311.D Vial: 16
Acq On : 17 Nov 2010 17:41 Operator: JI
Sample : 1011002-11 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:00 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46311.D

(5) 2-Methylnaphthalene (T)

5.84min 5.68ug/L m

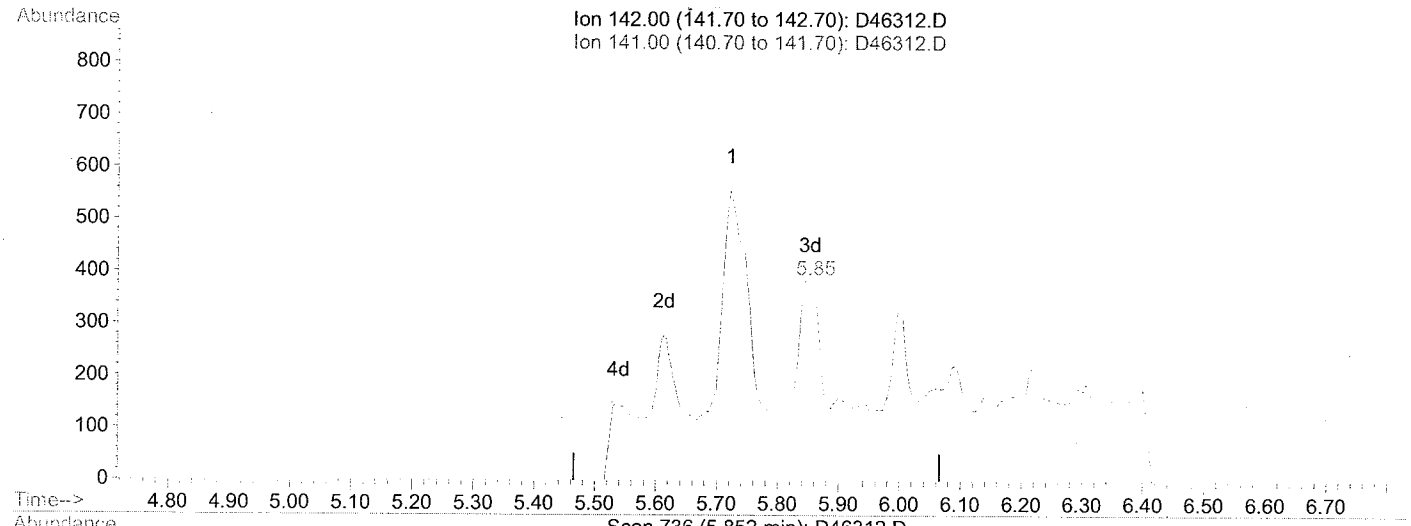
response 493

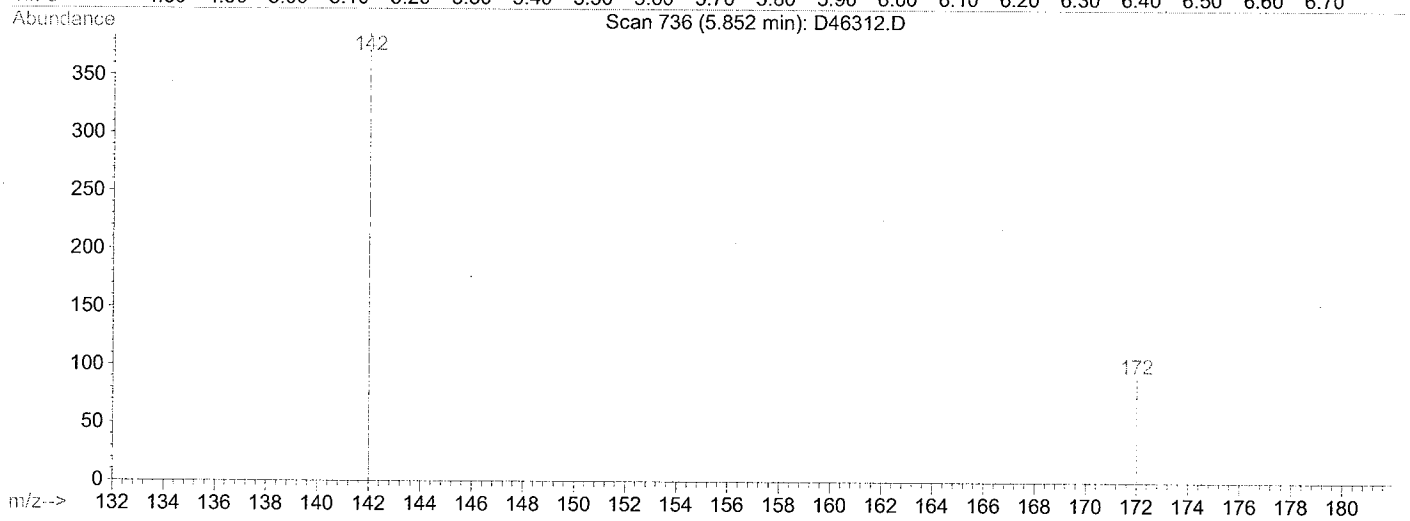
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46312.D Vial: 17
Acq On : 17 Nov 2010 18:06 Operator: JI
Sample : 1011002-12 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:00 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46312.D

(5) 2-Methylnaphthalene (T)

5.85min 6.07ug/L m

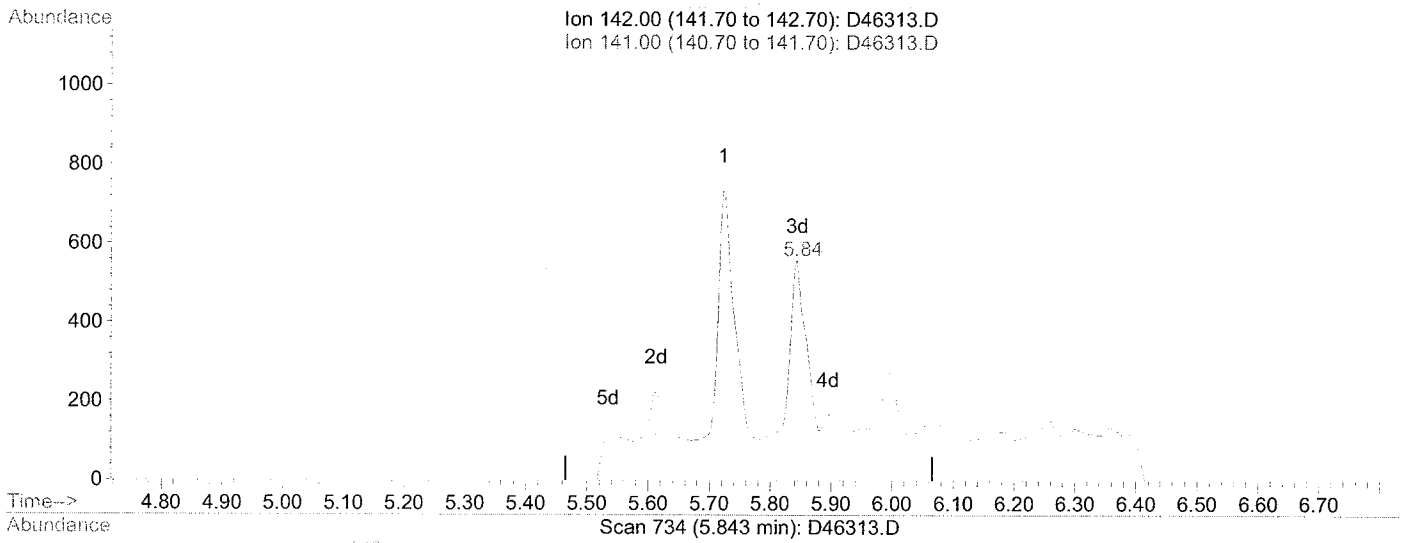
response 505

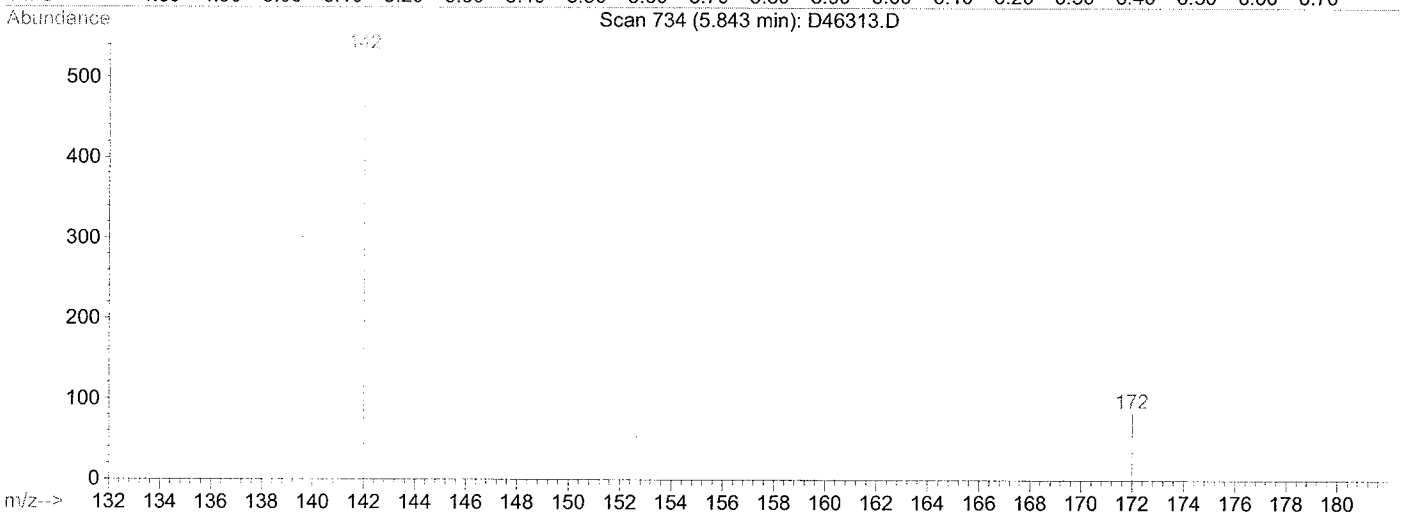
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46313.D Vial: 18
Acq On : 17 Nov 2010 18:30 Operator: JI
Sample : 1011002-13 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:00 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46313.D

(5) 2-Methylnaphthalene (T)

5.84min 9.08ug/L m

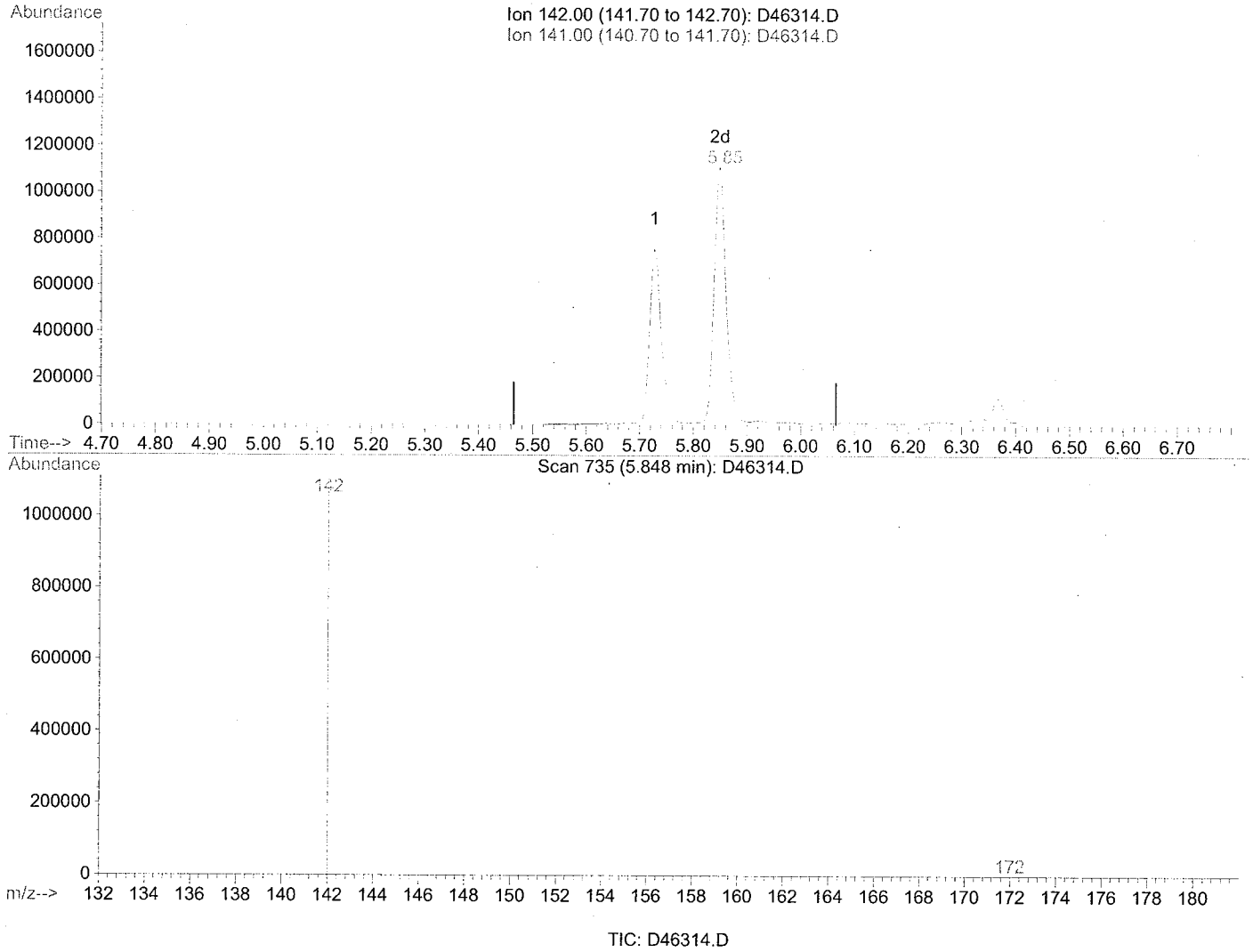
response 748

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46314.D Vial: 19
Acq On : 17 Nov 2010 18:54 Operator: JI
Sample : 1011002-14 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:01 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46314.D

(5) 2-Methylnaphthalene (T)

5.85min 20888.21ug/L m

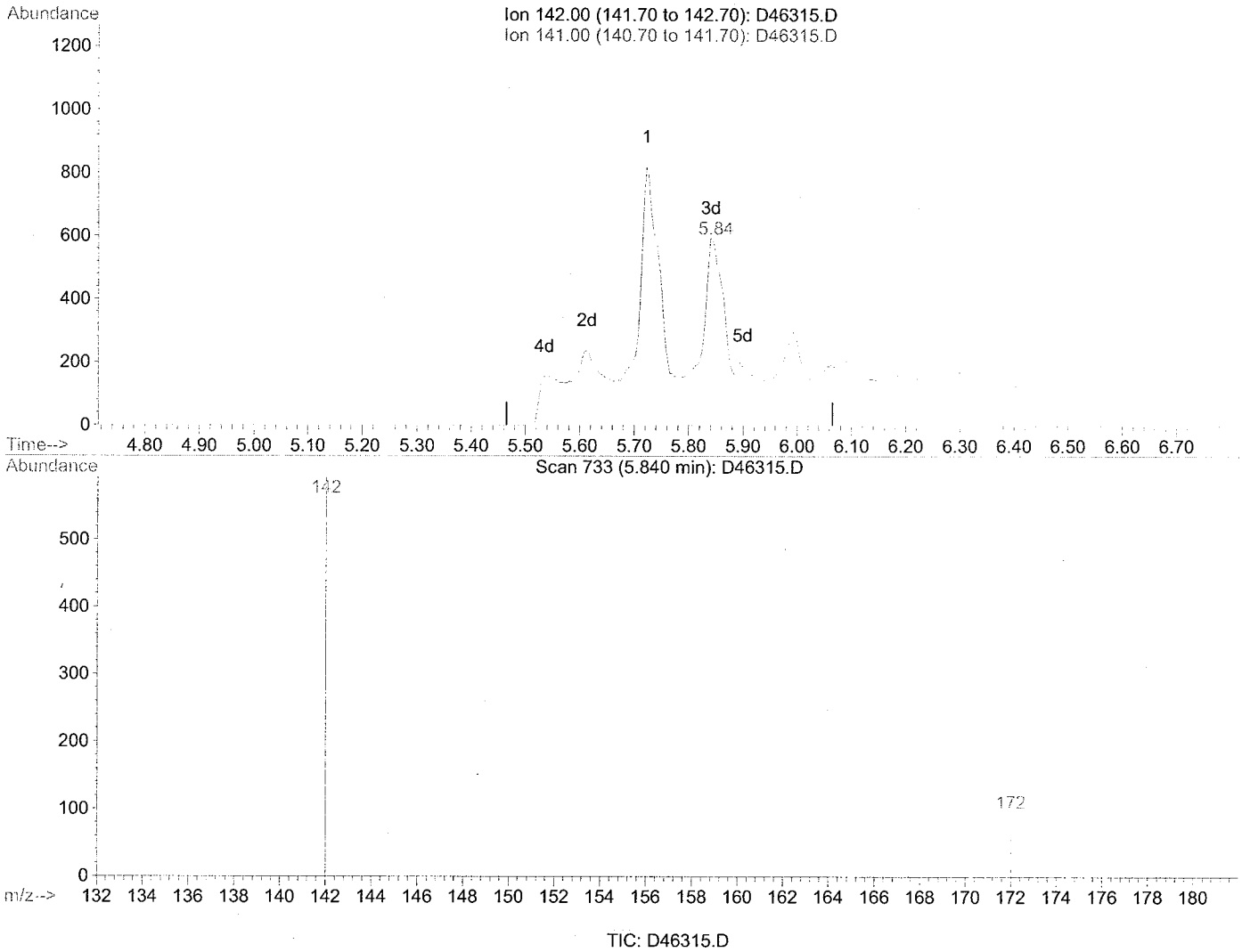
response 1703190

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46315.D Vial: 20
Acq On : 17 Nov 2010 19:19 Operator: JI
Sample : 1011002-15 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:01 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46315.D

(5) 2-Methylnaphthalene (T)

5.84min 13.36ug/L m

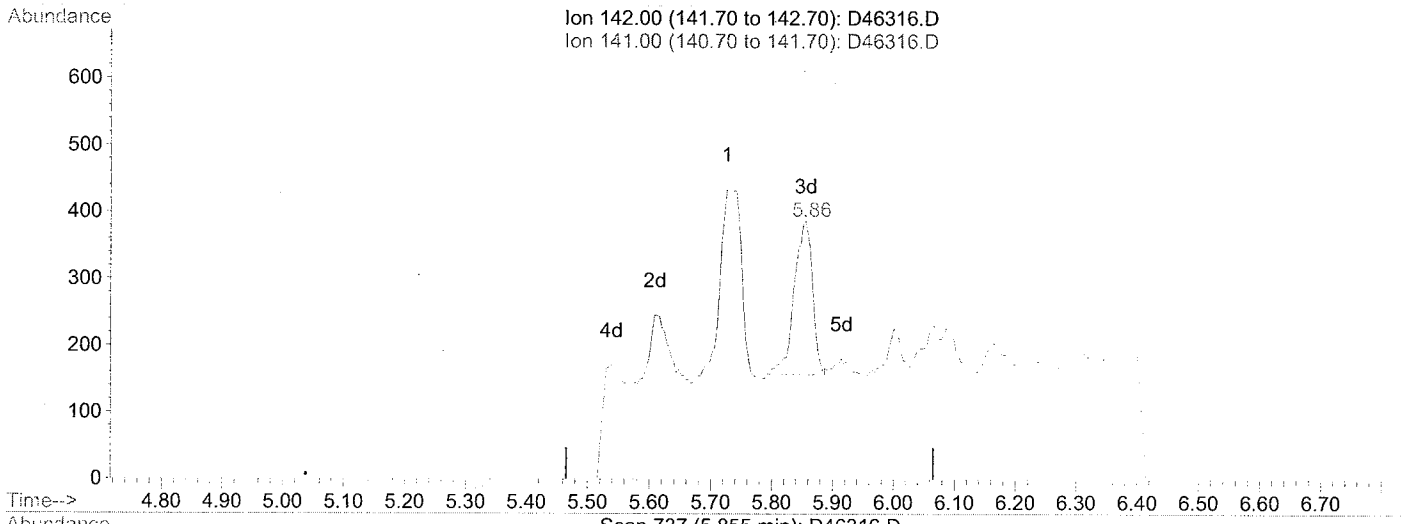
response 900

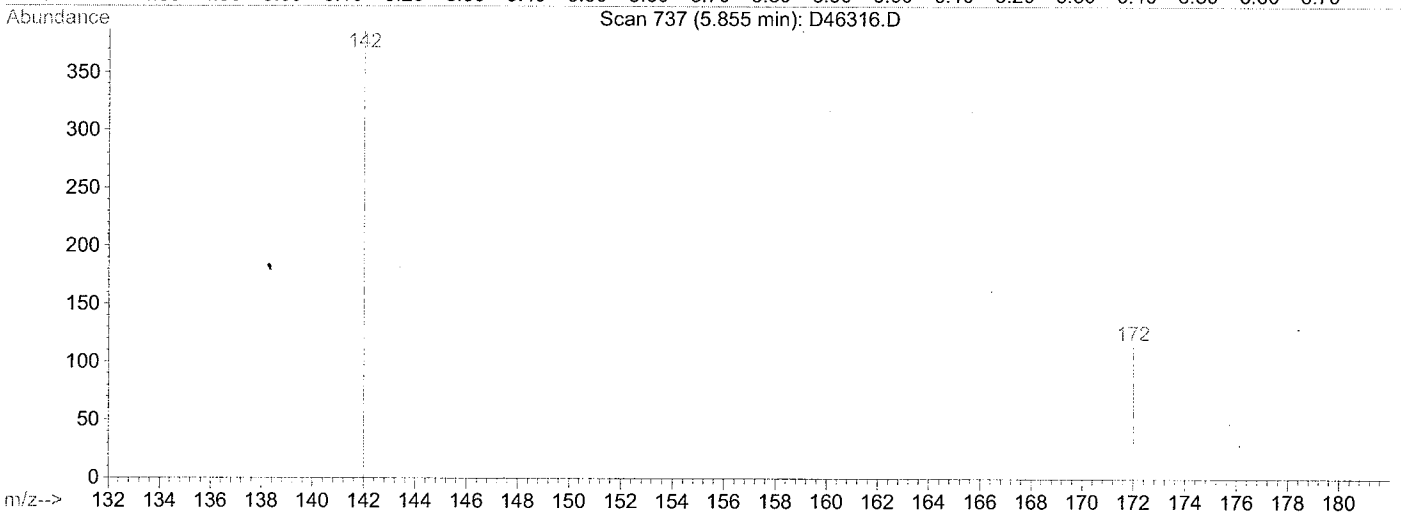
| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111710\D46316.D Vial: 21
Acq On : 17 Nov 2010 19:43 Operator: JI
Sample : 1011002-16 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:01 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46316.D

(5) 2-Methylnaphthalene (T)

5.86min 6.88ug/L m

response 470

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

ADDENDUM PESTICIDE INFORMATION

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 5.103 | 5.480 | E6 | -7.4 | 117 |
| 2 | A | Hexachlorobenzene | 6.898 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 7.717 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 7.298 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 6.981 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 6.583 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 3.316 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 6.616 | 0.000 | E6 | 100.0# | -0# |
| 9 | A | 2,4-DDE | 0.000 | 891648.133 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 6.438 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 6.245 | 0.000 | E6 | 100.0# | -0# |
| 12 | A | gamma-Chlordane | 6.144 | 0.000 | E6 | 100.0# | -0# |
| 13 | A | alpha-Chlordane | 6.247 | 0.000 | E6 | 100.0# | -0# |
| 14 | B | Trans-Nonachlor | 0.000 | 10596299.210 | | 0.0 | 0# |
| 15 | B | 4,4-DDE | 4.931 | 0.000 | E6 | 100.0# | -0# |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# |
| 17 | MA | Dieldrin | 6.090 | 0.000 | E6 | 100.0# | -0# |
| 18 | MA | 2,4-DDT | 0.000 | 667655.967 | | 0.0 | 0# |
| 19 | MA | Endrin | 5.313 | 0.000 | E6 | 100.0# | -0# |
| 20 | B | Endosulfan II | 5.350 | 0.000 | E6 | 100.0# | -0# |
| 21 | A | 4,4-DDD | 3.927 | 0.000 | E6 | 100.0# | -0# |
| 22 | MA | 4,4-DDT | 4.479 | 0.000 | E6 | 100.0# | -0# |
| 23 | B | Endrin Aldehyde | 3.561 | 0.000 | E6 | 100.0# | -0# |
| 24 | B | Mirex | 0.000 | 0.000 | | 0.0 | 0# |
| 25 | B | Endosulfan Sulfate | 5.062 | 0.000 | E6 | 100.0# | -0# |
| 26 | A | Methoxychlor | 2.351 | 0.000 | E6 | 100.0# | -0# |
| 27 | B | Endrin Ketone | 5.929 | 0.000 | E6 | 100.0# | -0# |
| 28 | S | Decachlorobiphenyl | 3.806 | 3.806 | E6 | 0.0 | 102 |
| 29 | L8 | Toxaphene | 61.471 | 87.739 | E3 | -42.7# | 165# |
| 30 | L8 | Toxaphene {2} | 181.672 | 351.816 | E3 | -93.7# | 195# |
| 31 | L8 | Toxaphene {3} | 147.757 | 259.378 | E3 | -75.5# | 177# |
| 32 | L8 | Toxaphene {4} | 88.473 | 190.215 | E3 | -115.0# | 216# |
| 33 | L8 | Toxaphene {5} | 138.766 | 230.284 | E3 | -66.0# | 166# |
| 34 | L9 | Chlordane | 369.780 | 375.816 | E3 | -1.6 | 96 |
| 35 | L9 | Chlordane {2} | 263.821 | 308.850 | E3 | -17.1 | 94 |
| 36 | L9 | Chlordane {3} | 799.046 | 796.095 | E3 | 0.4 | 93 |
| 37 | L9 | Chlordane {4} | 1.265 | 1.060 | E6 | 16.2 | 93 |
| 38 | L9 | Chlordane {5} | 201.968 | 224.288 | E3 | -11.1 | 94 |

Signal #2
Continuing Calibration File: V0316261.D

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 7.444 | 8.714 | E6 | -17.1 | 133 |
| 2 | A | Hexachlorobenzene | 8.994 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 12.610 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 11.647 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 12.965 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 11.591 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 5.177 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 10.797 | 0.000 | E6 | 100.0# | -0# |
| 9 | B | 2,4-DDE | 0.000 | 0.000 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 11.287 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 10.019 | 0.000 | E6 | 100.0# | -0# |

(#) = Out of

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_1CAL\111010VC.M (Chemstation Integ.
Title : 8081A-Pest_Tox Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% | |
|---|---|---|---|---|---|---|---|---|
| 12 | A | gamma-Chlordane | 11.038 | 0.000 | E6 | 100.0# | -0# | |
| 13 | A | alpha-Chlordane | 10.889 | 0.000 | E6 | 100.0# | -0# | |
| 14 | B | Trans-Nonachlor | 0.000 | 693284.806 | | 0.0 | | 0# |
| 15 | B | 4,4-DDE | 9.800 | 0.000 | E6 | 100.0# | -0# | |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# | |
| 17 | MA | Dieldrin | 10.964 | 0.000 | E6 | 100.0# | -0# | |
| 18 | MA | 2,4-DDT | 0.000 | 0.000 | | 0.0 | 0# | |
| 19 | MA | Endrin | 9.244 | 0.000 | E6 | 100.0# | -0# | |
| 20 | B | Endosulfan II | 9.403 | 0.000 | E6 | 100.0# | -0# | |
| 21 | A | 4,4-DDD | 7.107 | 0.000 | E6 | 100.0# | -0# | |
| 22 | MA | 4,4-DDT | 8.031 | 0.000 | E6 | 100.0# | -0# | |
| 23 | B | Endrin Aldehyde | 5.431 | 0.000 | E6 | 100.0# | -0# | |
| 24 | B | Mirex | 0.000 | 218320.266 | | 0.0 | | 0# |
| 25 | B | Endosulfan Sulfate | 8.402 | 0.000 | E6 | 100.0# | -0# | |
| 26 | A | Methoxychlor | 4.167 | 0.000 | E6 | 100.0# | -0# | |
| 27 | B | Endrin Ketone | 8.895 | 0.000 | E6 | 100.0# | -0# | |
| 28 | S | Decachlorobiphenyl | 5.945 | 5.745 | E6 | 3.4 | 100 | |
| 29 | L8 | Toxaphene | 157.914 | 277.443 | E3 | -75.7# | 177# | |
| 30 | L8 | Toxaphene {2} | 225.226 | 400.309 | E3 | -77.7# | 177# | |
| 31 | L8 | Toxaphene {3} | 402.433 | 755.677 | E3 | -87.8# | 192# | |
| 32 | L8 | Toxaphene {4} | 230.642 | 406.774 | E3 | -76.4# | 177# | |
| 33 | L8 | Toxaphene {5} | 214.962 | 342.157 | E3 | -59.2# | 153# | |
| 34 | L9 | Chlordane | 637.234 | 668.034 | E3 | -4.8 | 99 | |
| 35 | L9 | Chlordane {2} | 377.539 | 469.046 | E3 | -24.2# | 97 | |
| 36 | L9 | Chlordane {3} | 1.258 | 1.357 | E6 | -7.8 | 97 | |
| 37 | L9 | Chlordane {4} | 979.278 | 1156.718 | E3 | -18.1 | 97 | |
| 38 | L9 | Chlordane {5} | 316.875 | 369.008 | E3 | -16.5 | 98 | |

Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD1A.CH Vial: 4
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD2B.CH
Acq On : 15 Nov 2010 12:36 pm Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:30 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

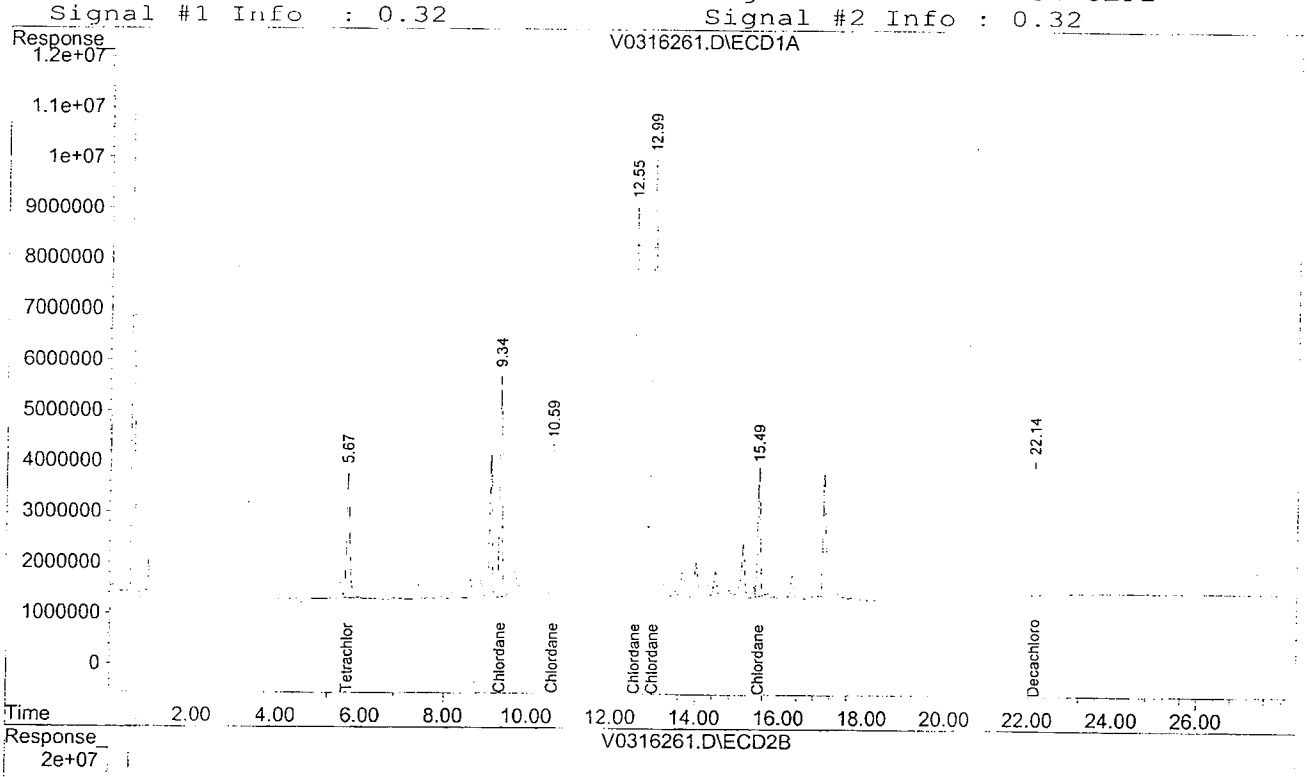
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.67f | 6.46 | 137.0E6 | 217.8E6 | 26.848 | 29.264 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 134.24%# | 146.32%# |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 95143598 | 143.6E6 | 24.999 | 24.160 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 120.80% |
| Target Compounds | | | | | | |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| 34) L9 Chlordane | 9.34 | 10.38 | 187.9E6 | 334.0E6 | 508.162 | 524.167 |
| 35) L9 Chlordane {2} | 10.59 | 11.96 | 154.4E6 | 234.5E6 | 585.340 | 621.188 |
| 36) L9 Chlordane {3} | 12.56 | 14.07 | 398.0E6 | 678.3E6 | 498.154 | 539.171 |
| 37) L9 Chlordane {4} | 12.99 | 14.56 | 529.8E6 | 578.4E6 | 418.808 | 590.598 # |
| 38) L9 Chlordane {5} | 15.49 | 17.59 | 112.1E6 | 184.5E6 | 555.256 | 582.261 |
| Sum Chlordane | | | 1382.3E6 | 2009.7E6 | 2565.719 | 2857.386 |
| Average Chlordane | | | | | 513.144 | 571.477 |

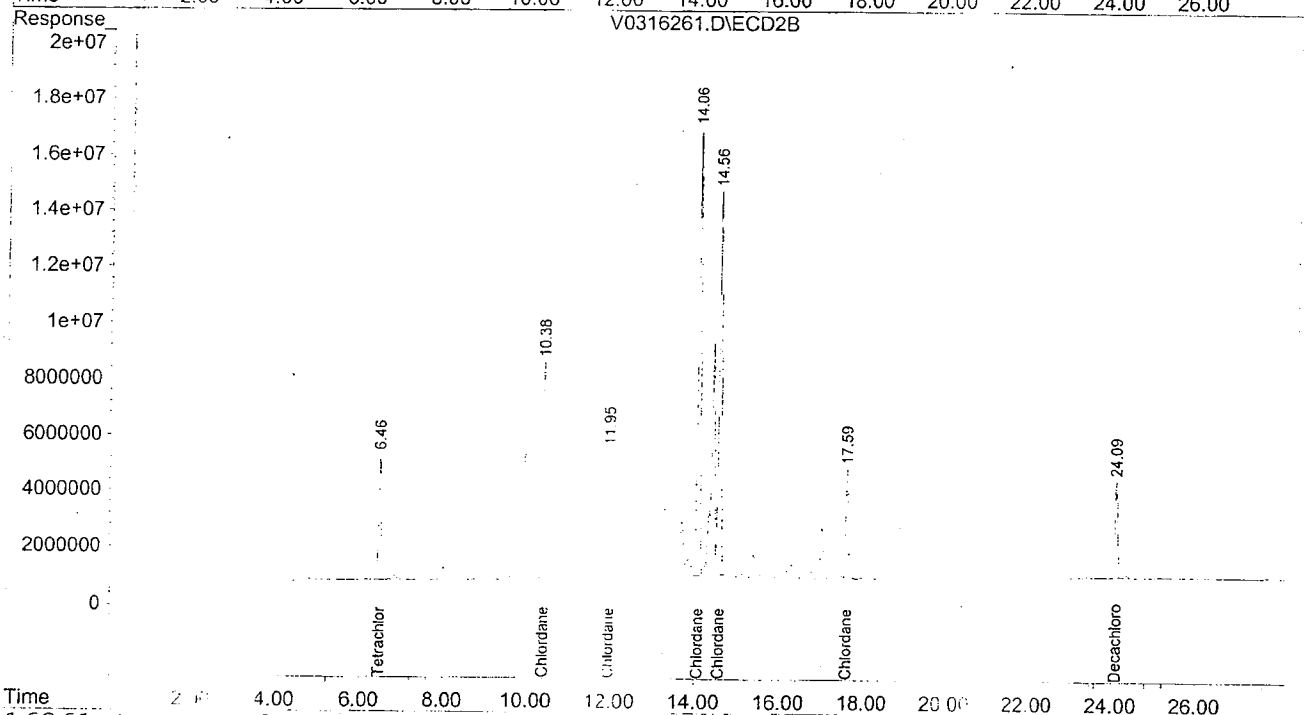
# Quantitation Report

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD1A.CH Vial: 4
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD2B.CH
Acq On : 15 Nov 2010 12:36 pm Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:30 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ:
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32



Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD1A.CH Vial: 3
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD2B.CH
Acq On : 15 Nov 2010 12:04 pm Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:28 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

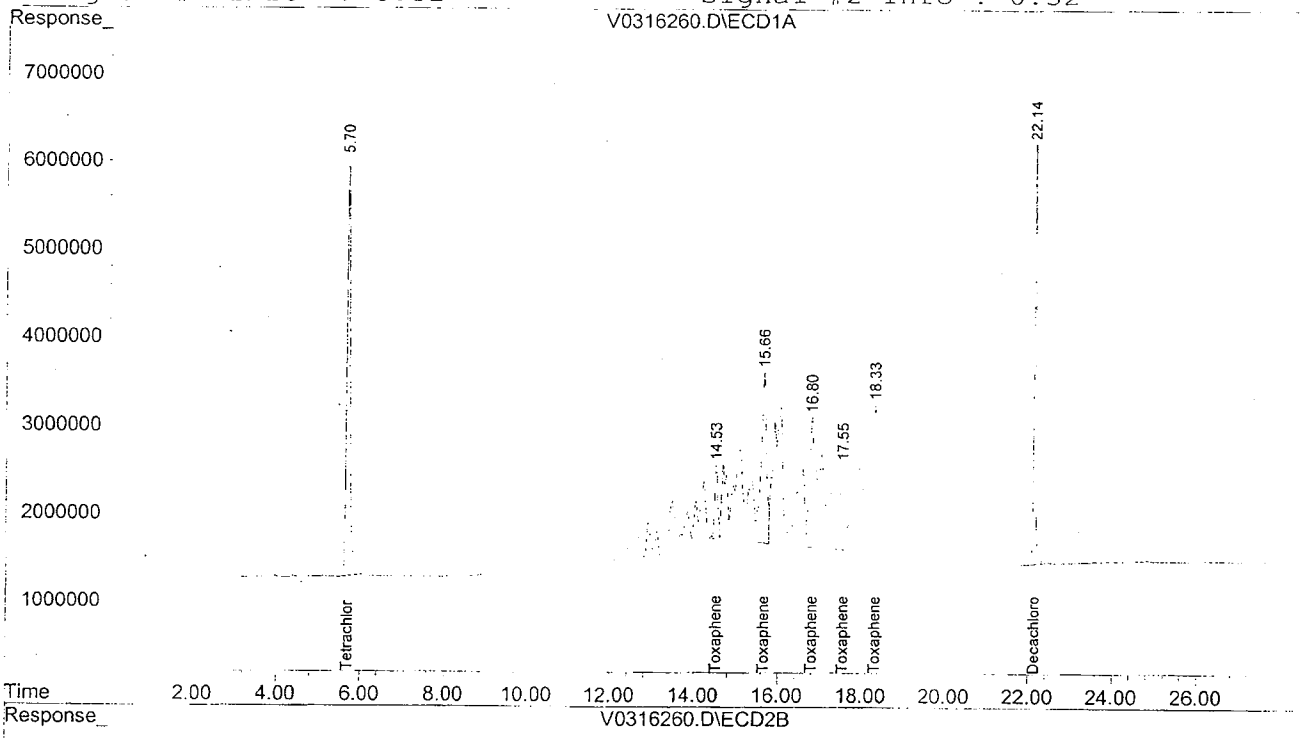
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.70f | 6.46 | 254.7E6 | 366.8E6 | 49.909 | 49.280 |
| Spiked Amount | 20.000 | Range 50 - 130 | | Recovery = | 249.55%# | 246.40%# |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 167.2E6 | 245.7E6 | 43.941 | 41.335 |
| Spiked Amount | 20.000 | Range 30 - 150 | | Recovery = | 219.71%# | 206.68%# |
| Target Compounds | | | | | | |
| 29) L8 Toxaphene | 14.53 | 15.59 | 43869686 | 138.7E6 | 713.662 | 878.462 |
| 30) L8 Toxaphene {2} | 15.66 | 17.38 | 175.9E6 | 200.2E6 | 968.273 | 888.684 |
| 31) L8 Toxaphene {3} | 16.80 | 17.74 | 129.7E6 | 377.8E6 | 877.722 | 938.885 |
| 32) L8 Toxaphene {4} | 17.55 | 18.78 | 95107616 | 203.4E6 | 1074.985 | 881.829 |
| 33) L8 Toxaphene {5} | 18.33 | 20.28 | 115.1E6 | 171.1E6 | 829.759 | 795.855 |
| Sum Toxaphene | | | 559.7E6 | 1091.2E6 | 4464.401 | 4383.715 |
| Average Toxaphene | | | | | 892.880 | 876.743 |
| Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average Chlordane | | | | | 0.000 | 0.000 |

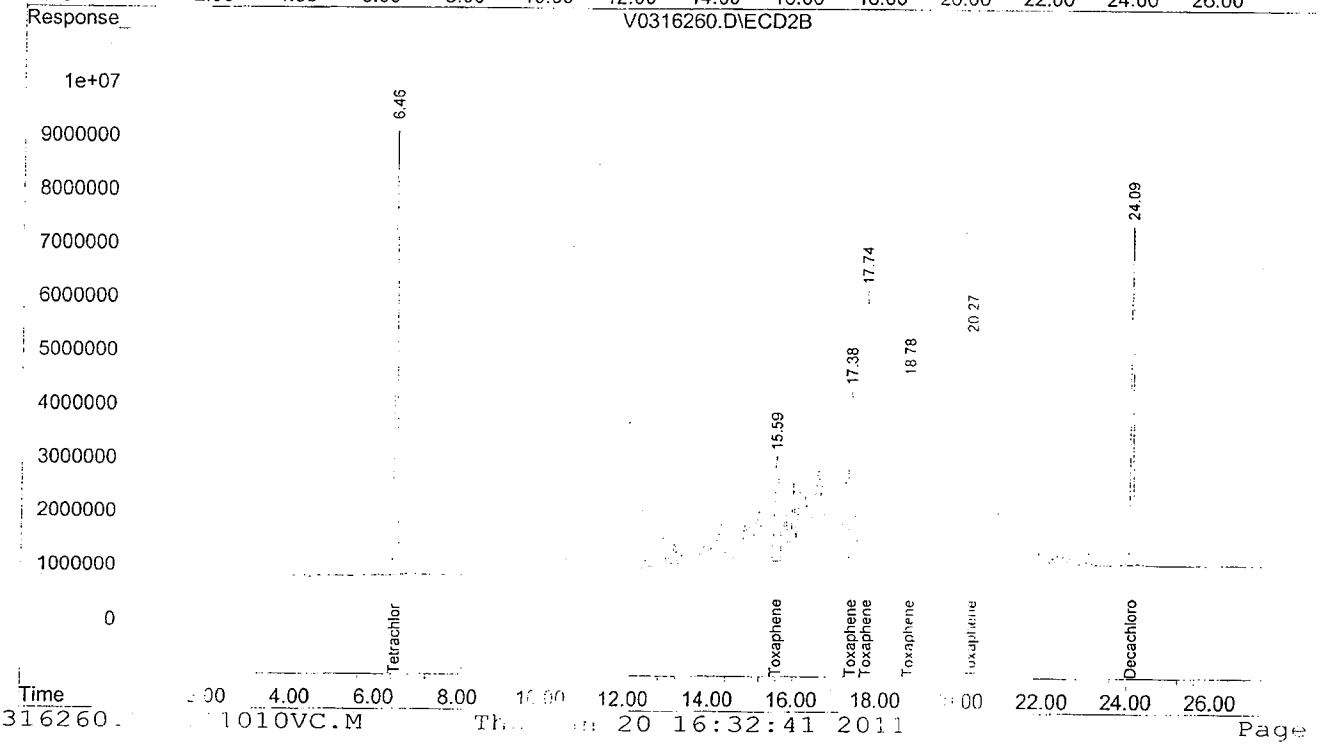
Quantitation Report

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD1A.CH Vial: 3
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD2B.CH
Acq On : 15 Nov 2010 12:04 pm Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:28 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ:
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32



ADDENDUM PCB PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-021-1010

Sample Date/Time: 11/1/10 11:00

File ID: U0324419.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1011002-14

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 17:41

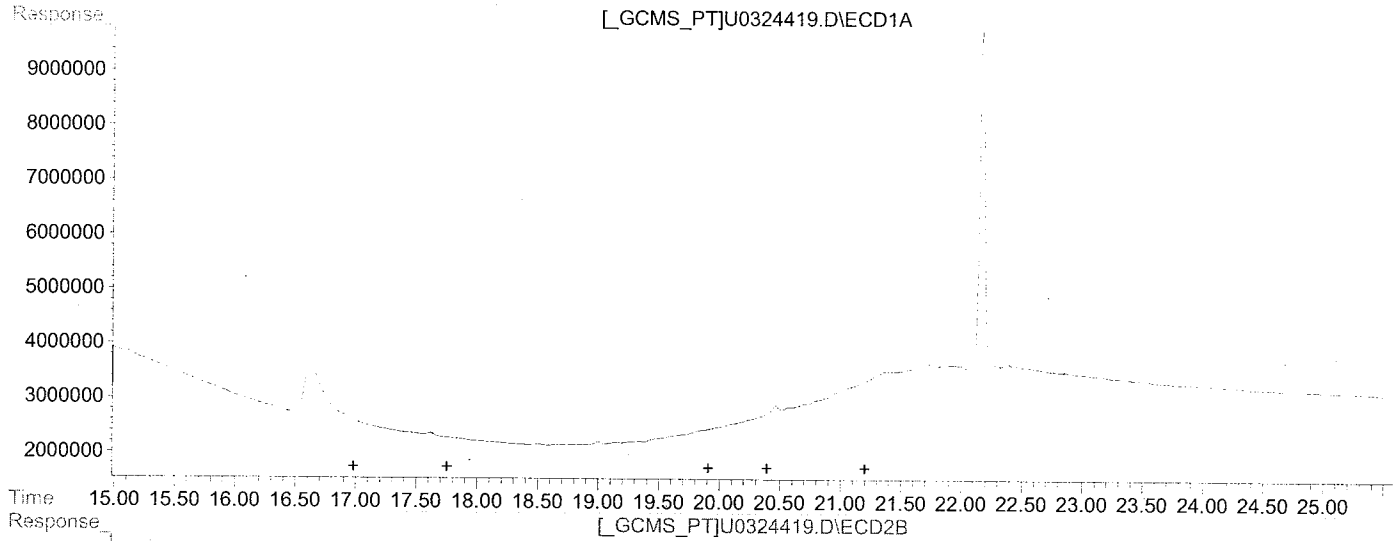
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

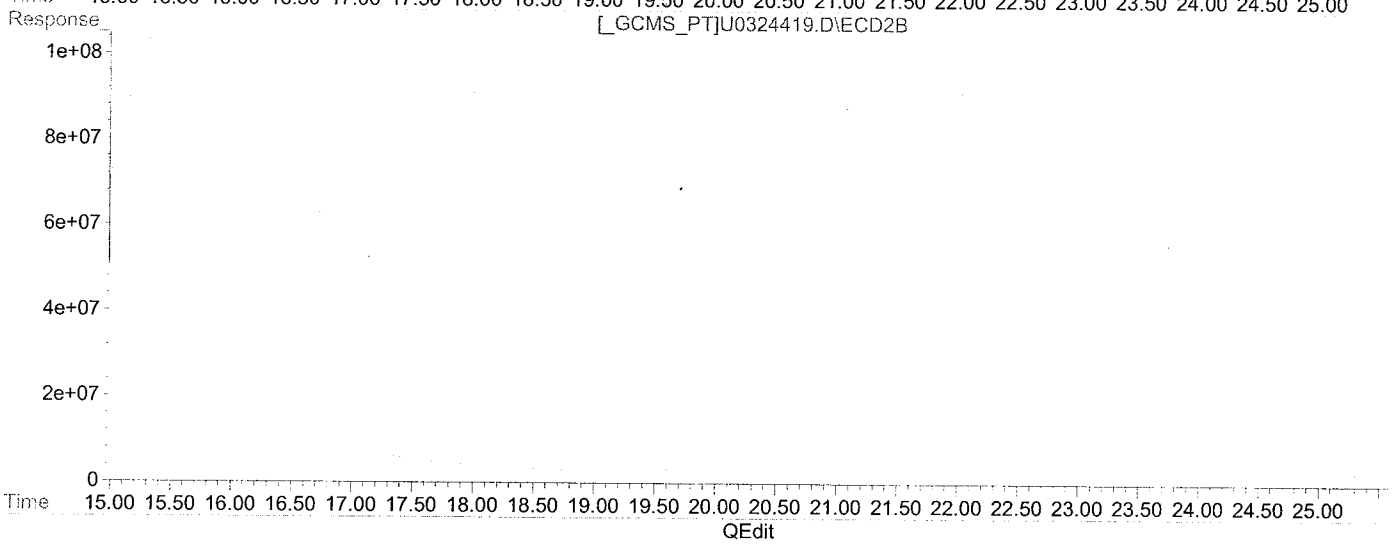
The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324419.D\ECD1A.CH Vial: 14
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324419.D\ECD2B.CH
Acq On : 11-4-2010 17:41:19 Operator: RP
Sample : 1011002-14 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:51 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




QEdit

(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

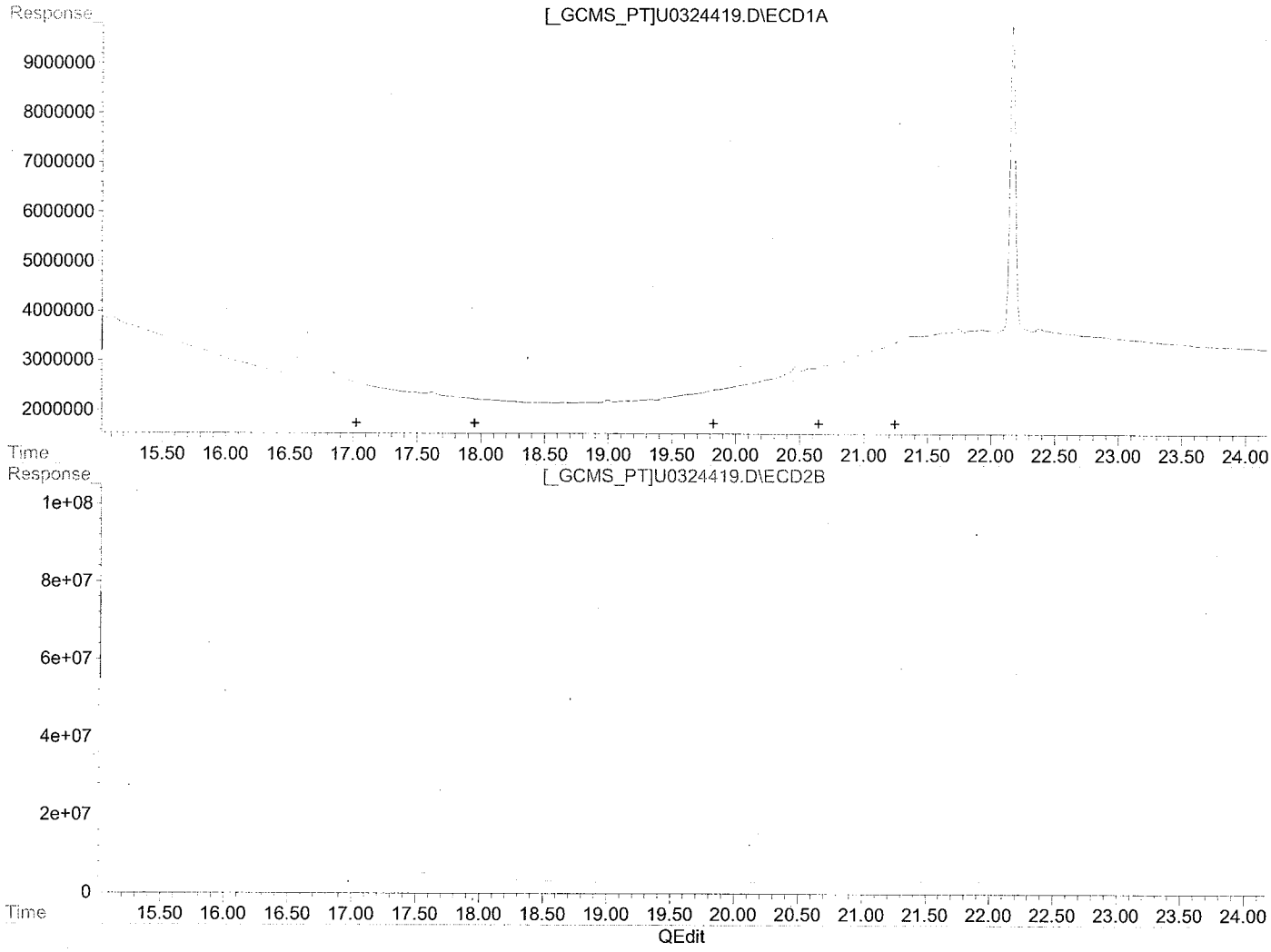
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324419.D\ECD1A.CH Vial: 14
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324419.D\ECD2B.CH
Acq On : 11-4-2010 17:41:19 Operator: RP
Sample : 1011002-14 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:51 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-031-1010

Sample Date/Time: 11/1/10 09:20

File ID: U0324420.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1011002-15

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 18:14

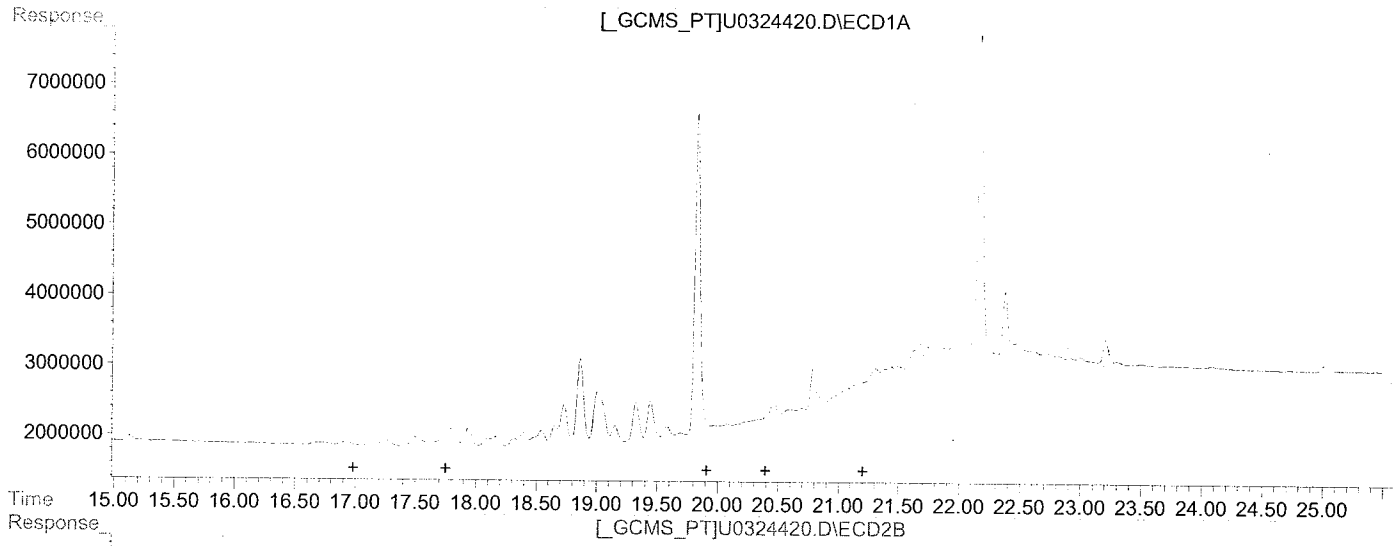
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

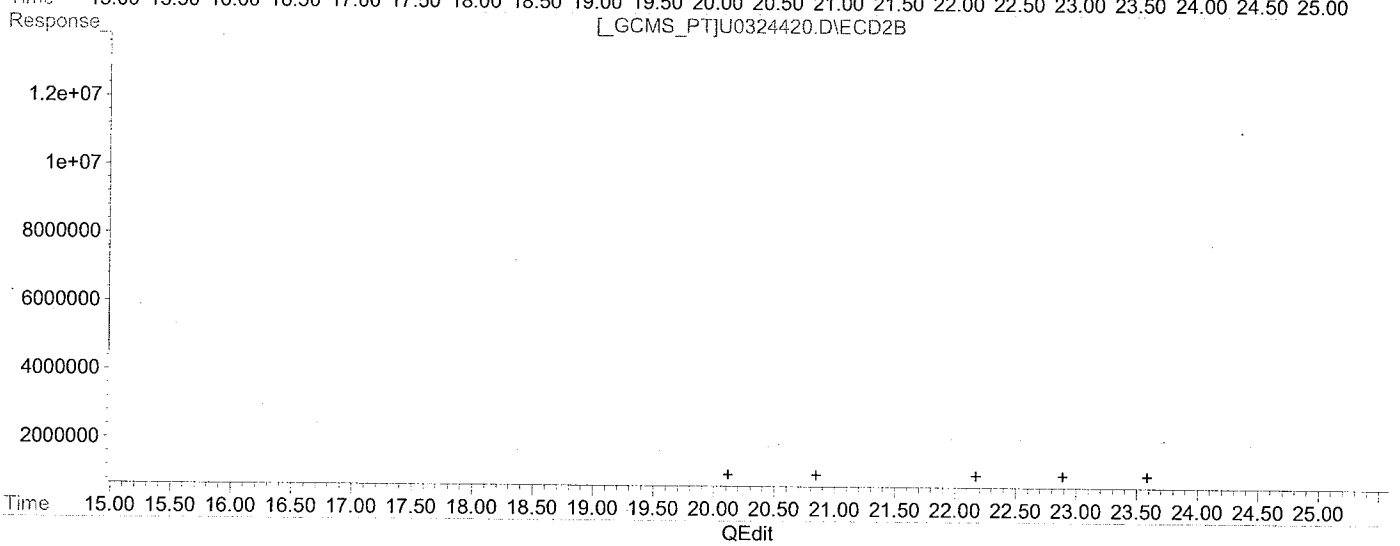
The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324420.D\ECD1A.CH Vial: 15
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324420.D\ECD2B.CH
Acq On : 11-4-2010 18:13:32 Operator: RP
Sample : 1011002-15 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:52 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




QEdit

(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

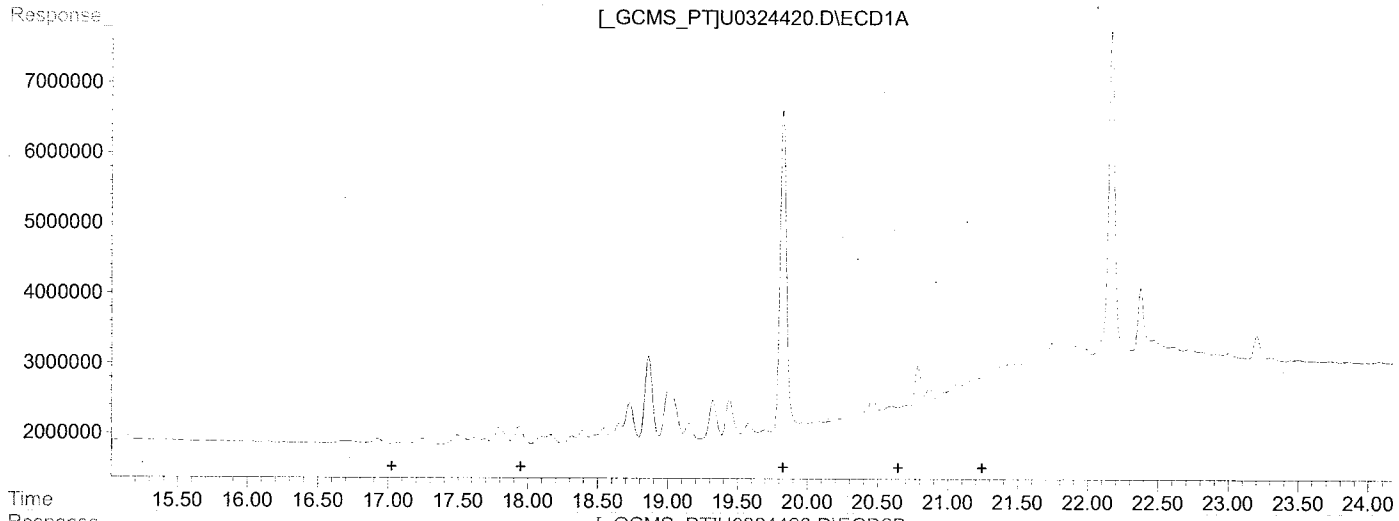
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

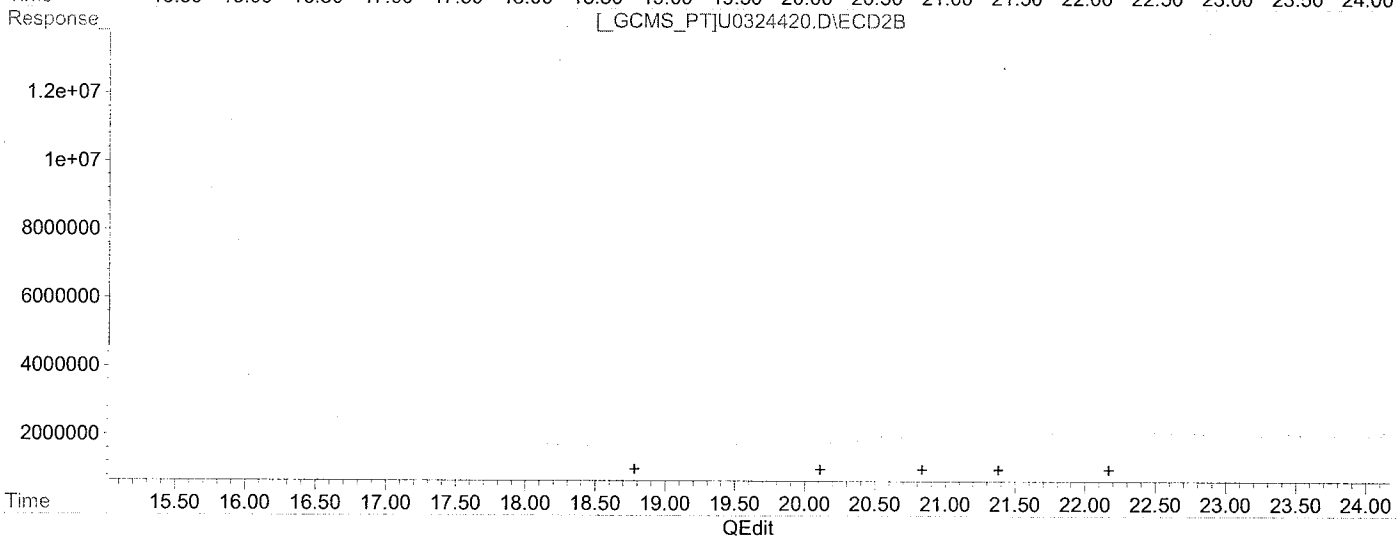
(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324420.D\ECD1A.CH Vial: 15
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324420.D\ECD2B.CH
Acq On : 11-4-2010 18:13:32 Operator: RP
Sample : 1011002-15 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:52 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




QEdit

(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-032D-1010

Sample Date/Time: 11/1/10 00:00

File ID: U0324421.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1011002-16

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 18:46

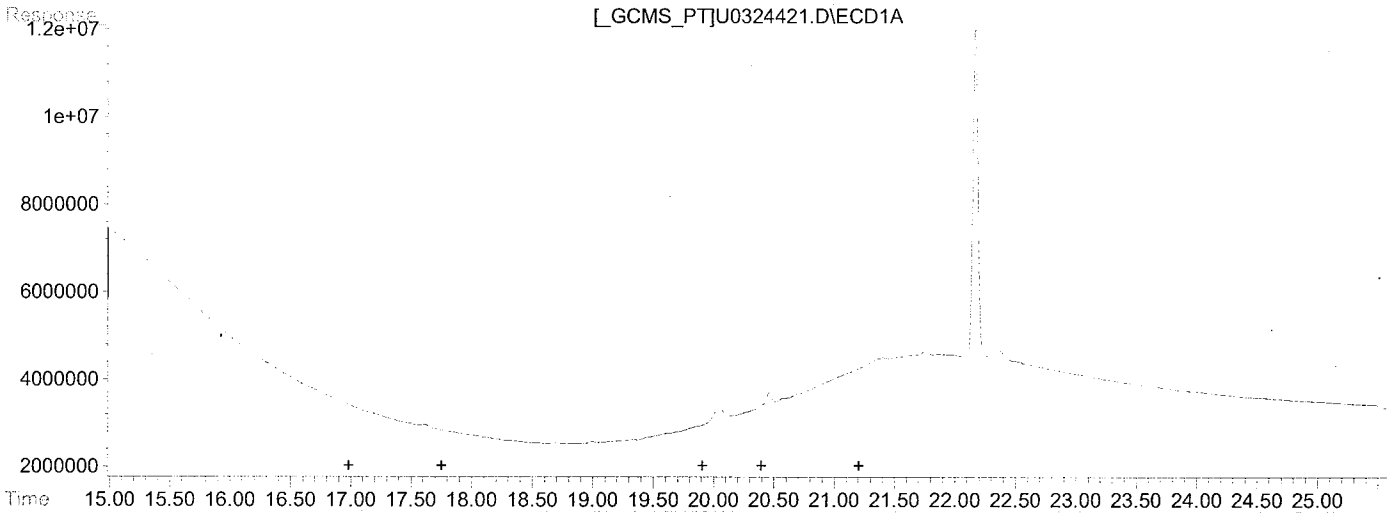
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

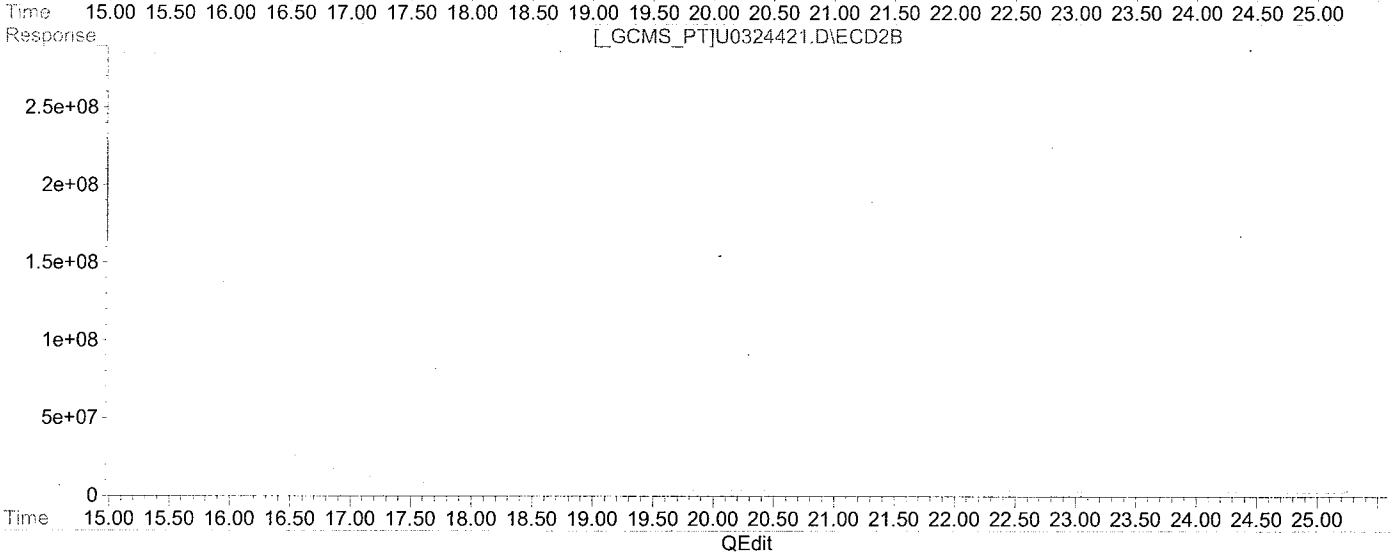
The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324421.D\ECD1A.CH Vial: 16
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324421.D\ECD2B.CH
Acq On : 11-4-2010 18:45:37 Operator: RP
Sample : 1011002-16 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:52 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




QEdit

(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

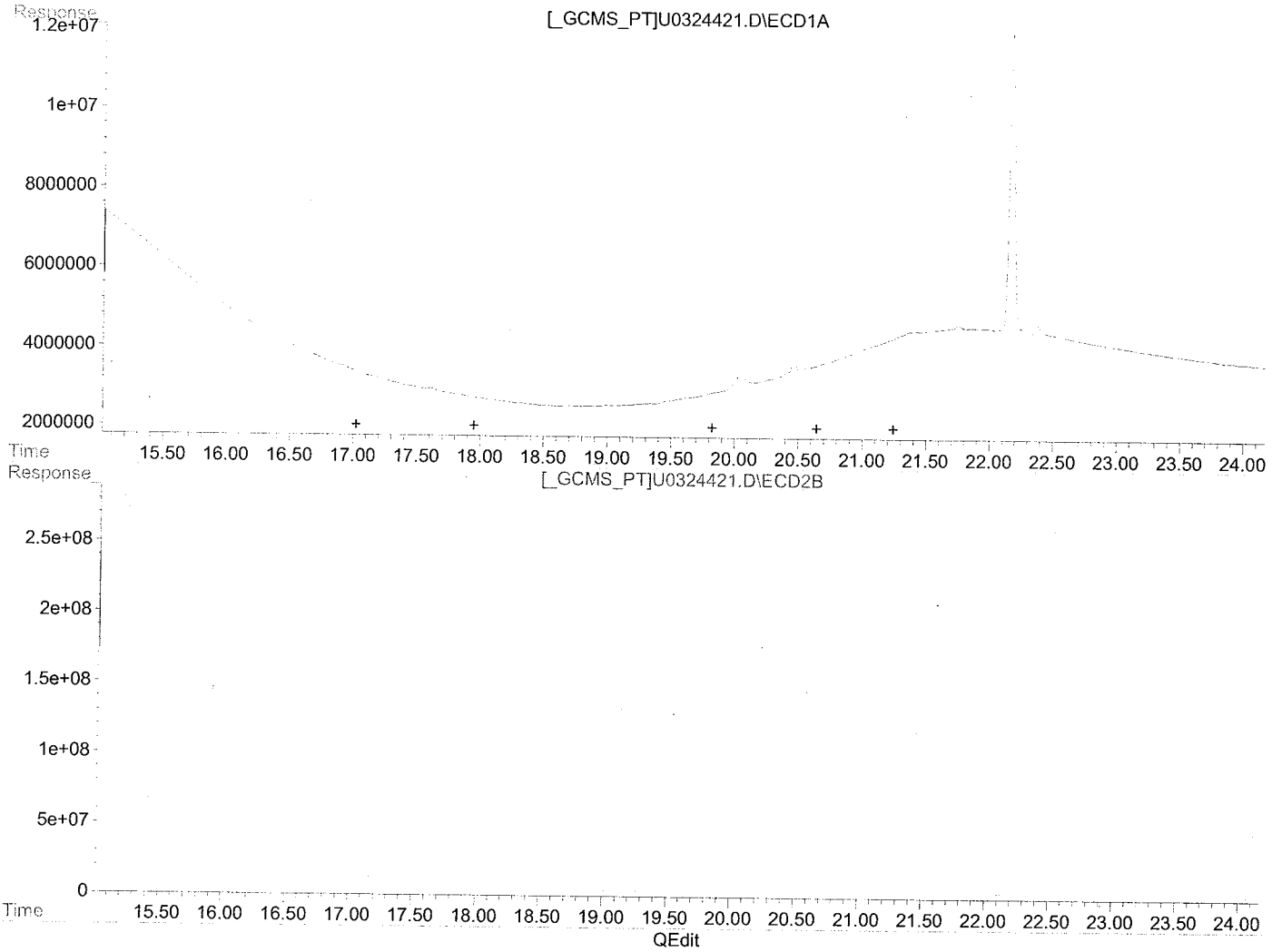
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324421.D\ECD1A.CH Vial: 16
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324421.D\ECD2B.CH
Acq On : 11-4-2010 18:45:37 Operator: RP
Sample : 1011002-16 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:52 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** S. STOTLER-HARDY **DATE:** FEBRUARY 16, 2011

**FROM:** A. COGNETTI **COPIES:** DV FILE

**SUBJECT:** ORGANIC DATA VALIDATION: VOC/PAH/PEST/PCB
NAS KEY WEST, CTO JM16
SAMPLE DELIVERY GROUP (SDG) - 1011003

**SAMPLES:** 9/Aqueous/VOC

| | | |
|---|---|---|
| GKHMS-GW-017-1010 | GKHMS-GW-018-1010 | GKHMS-GW-019-1010 |
| GKHMS-GW-022-1010 | GKHMS-GW-023-1010 | GKHMS-GW-FD001-1010 |
| GKHMS-GW-FD002-1010 | GKHMS-GW-FD003-1010 | GKHMS-TB-03 |

7/Aqueous/PAH

| | | |
|---|---|---|
| GKHMS-GW-017-1010 | GKHMS-GW-018-1010 | GKHMS-GW-019-1010 |
| GKHMS-GW-022-1010 | GKHMS-GW-023-1010 | GKHMS-GW-FD002-1010 |
| GKHMS-GW-FD003-1010 | | |

2/PEST/PAH

| | |
|---|---|
| GKHMS-GW-022-1010 | GKHMS-GW-FD003-1010 |

## OVERVIEW

The sample set for NAS Key West, CTO JM16, SDG 1011003 consisted of eight (8) aqueous environmental samples and one (1) aqueous trip blank analyzed for volatile organic compounds (VOCs). Seven (7) environmental samples were also analyzed for polynuclear aromatic hydrocarbons (PAHs). Two (2) environmental samples, GKHMS-GW-022-1010 and GKHMS-GW-FD003-1010, were also analyzed for pesticides (PEST) and polychlorinated biphenyls (PCBs). There are three (3) field duplicate pairs included in this SDG: GKHMS-GW-017-1010/GKHMS-GW-FD001-1010, GKHMS-GW-019-1010/GKHMS-GW-FD002-1010 and GKHMS-GW-022-1010/GKHMS-GW-FD003-1010.

The samples were collected by TetraTech NUS on November 1 and 2, 2010 and analyzed by Centauri Laboratories. All analyses were conducted in accordance with USEPA SW-846 Methods 8260B, 8270C SIM, 8082 and 8081 analytical and reporting protocols.

The sample data in this SDG were validated with regard to the following list of parameters.

- Data Completeness
* • Holding Times
* • GC/MS Tuning
- Initial and Continuing Calibration
* • Laboratory Blank Analyses
* • Surrogate Recoveries
- Blank Spike/Blank Spike Duplicate Results
- Matrix Spike/Matrix Spike Duplicate Results
* • Internal Standard Recoveries
* • Compound Identification
* • Field Duplicate Precision

* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

## VOC

The initial and continuing calibration relative response factors (RRFs) for 1,2-dibromo-3-chloropropane and acetone were less than the 0.05 quality control limit on November 2, 2010 and November 5, 2010 @ 8:49 on instrument GCMS-B. The nondetected 1,2-dibromo-3-chloropropane and acetone results were qualified as rejected (UR).

The initial calibration RRFs were not reported for the following analytes by the laboratory affecting all samples; acetonitrile, acrylonitrile, cyclohexane, ethyl methacrylate, 1,1,2-trichlorotrifluoroethane, methyl iodide, methacrylonitrile, methyl acetate, methyl cyclohexane, methylmethacrylate, propionitrile, and vinyl acetate. As the response factors could not be verified to be greater than the quality control limit of 0.05, all positive and non-detected sample results were qualified estimated, (J) and (UJ), for the aforementioned analytes.

The initial calibration relative standard deviation (RSD) was greater than the 15% quality control limit for several target compounds on November 2, 2010 on instrument GCMS-B. The target compounds were 1,1,2-trichloroethane, 1,1-dichloropropene, 1,2,3-trichlorobenzene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, 1,2-dichloroethane, 1,2-dichloropropane, 2-butanone, 4-methyl-2-pentanone, benzene, bromodichloromethane, bromomethane, cis 1,3-dichloropropene, cyclohexane, dibromomethane, hexachlorobutadiene, methacrylonitrile, methyl acetate, methyl tert-butyl ether, methylcyclohexane, methylene chloride, methyl methacrylate, naphthalene, n-butylbenzene, propionitrile, sec-butylbenzene, toluene, trans 1,3-dichlrorpropene, trichloroethene and vinyl acetate. The initial calibration r factor for linear calibration was less than the 0.995 quality control limit for 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, methyl cyclohexane and naphthalene. The positive methyl cyclohexane, naphthalene, cyclohexane and n-butylbenzene results were qualified as estimated (J). The nondetected results of the aforementioned target compounds were qualified as estimated (UJ).

The continuing calibration RRF for bromomethane was less than the 0.05 quality control limit on November 5, 2010 @ 8:49 on instrument GCMS-B. The nondetected bromomethane results were qualified as rejected (UR).

The continuing calibration percent differences (%Ds) for several target compounds were greater than the 20% quality control limit on November 5, 2010 @ 8:49. The target compounds were 1,2-dichloroethane, bromodichloromethane, bromomethane, chloroethane, cis 1,3-dichloropropene, trans 1,3-dichloropropene, trichloroethene and vinyl acetate. The nondetected results of the aforementioned target compounds were qualified as estimated (UJ).

The matrix spike/ matrix spike duplicate (MS/MSD) percent recoveries (%Rs) of several analytes were outside quality control limits in sample GKHMS-GW-018-1010. The %Rs of 1,2,3-trichlorobenzene and naphthalene were greater than the upper quality control limit in the MS/MSD. The positive naphthalene result in sample GKHMS-GW-018-1010 was qualified as estimated (J).

The laboratory control sample (LCS) percent recoveries (%Rs) of several target compounds were outside quality control limits in batch B047033. The percent recoveries of 2,2-dichloropropane, acrylonitrile and methyl acetate were less than the lower quality control limit. The nondetected 2,2-dichloropropane, acrylonitrile and methyl acetate results were qualified as estimated (UJ).

**PAH**

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. Because the laboratory which provided the analysis closed, Chem Tech, the company that purchased Centauri Laboratories, provided the data. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The retention time and response factor for 1-methylnaphthalene are very similar to 2-methylnaphthalene. The positive and nondetected 1-methylnaphthalene results were qualified as estimated (J) and (UJ). The nondetected 1-methylnaphthalene results were reported to the reporting limit. The other PAHs in the original package were reported to the method detection limit.

**ADDITIONAL COMMENTS**

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. Chem Tech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not reported by the laboratory. Also, the continuing calibration data for pesticides chlordane and toxaphene were missing and all quality control data was not received for the PCB fraction. The following tables outline the discrepancies between the compounds reported/not reported by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC |
| 1-methylnaphthalene | PAH |
| Aroclor-1262 | PCB |
| Aroclor-1268 | PCB |

The laboratory was contacted in regards to these four target compounds. 1,4-dioxane in the VOC fraction examined in the chromatograms as a Tentatively Identified Compound (TIC) via Method 8260B. There were no positive detections of 1,4-dioxane. 1,4-dioxane was not calibrated. Therefore, the nondetected 1,4-dioxane results were not added to the database.

The laboratory was able to provide the missing results of Aroclor-1262 and Aroclor-1268. The laboratory did not calibrate for these PCBs. The nondetected Aroclor-1262 and Aroclor-1268 results were not added to the database.

| Compounds Reported by the Lab not listed in the SAP in the Pesticide Fraction |
|---|
| Chlordane |
| Kepone |
| mirex |

Naphthalene was reported in both the VOC and PAH fractions in this SDG.

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |
| 1,2,3-trichloropropane |
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Methacrylonitrile |
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

The MS %R of bromomethane was less than the lower quality control limit in sample GKHMS-GW-018-1010. The relative percent difference (RPD) was greater than the quality control limit for bromomethane. No action was taken on the nondetected bromomethane result because the %R in the MSD was within quality control limits.

The MSD %R of acrylonitrile was less than the lower quality control limit in sample GKHMS-GW-018-1010. No action was taken on the nondetected acrylonitrile result because the %R in the MS was within quality control limits.

The RPDs for acetonitrile and chloroethane were greater than the quality control limit in the MS/MSD of sample GKHMS-GW-018-1010. No action was taken on the nondetected acetonitrile and chloroethane results because the %Rs in the MS and MSD were within quality control limits.

The LCS %Rs of 2-hexanone and acetone were greater than the upper quality control limit in batch B047033. No action was taken on the nondetected 2-hexanone and acetone results.

Sample GKHMS-GW-017-1010 was analyzed at a 10X dilution in order to obtain concentrations of 2-methylnaphthalene, acenaphthene and naphthalene within instrument calibration range.

The continuing calibration %Ds for benzo(k)fluoranthene and pyrene were greater than the 20% quality control limit on November 16, 2010 @ 10:40 affecting the diluted sample GKHMS-GW-017-1010. No action was taken on the benzo(k)fluoranthene and pyrene results because these results were not used for reporting and validation purposes from the diluted sample.

The MS/MSD %Rs of benzo(a)pyrene and benzo(b)fluoranthene were greater than the upper quality control limit in sample GKHMS-GW-018-1010. No action was taken on the nondetected benzo(a)pyrene and benzo(b)fluoranthene results in sample GKHMS-GW-018-1010.

The LCS associated with batch B048003 had %Rs of several PAHs greater than the upper quality control limit. The PAHs were benzo(a)pyrene, benzo(fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. No action was taken on the nondetected results of the aforementioned PAHs in the affected samples.

The %Ds for several pesticides were greater than the 15% quality control limit on column 1 on November 15, 2010 @ 22:44 affecting both samples. The pesticides were 4,4'-DDT, alpha-chlordane, endosulfan I, endosulfan II, gamma chlordane, heptachlor and heptachlor epoxide. No action was taken on the nondetected pesticide results of the aforementioned pesticides.

The %R of surrogate DBC was less than the lower quality control limit but greater than 10% on column 2 in sample GKHMS-GW-FD003-1010. No action was taken.

Nondetected results were reported to the method detection limit (MDL).

## EXECUTIVE SUMMARY

**Laboratory Performance Issues:** VOC initial and continuing calibration relative response factors, %RSDs or %Ds noncompliances resulted in the rejection or qualification of data. The VOC LCS %Rs of several compounds were outside of quality control limits resulting in the qualification of data. 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks.

**Other factors affecting data quality:** The %Rs of naphthalene in the MS/MSD exceeded quality control limits resulting in the qualification of data. The closing of Centauri Laboratories affected the ability of the data validator to obtain missing data.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October 1999) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-02 | | | 1011003-03 | | | 1011003-04 | | | 1011003-05 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 2,2-DICHLOROPROPANE | | 0.21 | UJ | E | 0.21 | UJ | E | 0.21 | UJ | E | 0.21 | UJ | E |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ACRYLONITRILE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-023-1010 | | | GKHMS-GW-FD001-1010 | | | GKHMS-GW-FD002-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-06 | | | 1011003-07 | | | 1011003-08 | | | 1011003-09 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | GKHMS-GW-017-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.25 | U | | 0.25 | U | | 0.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 0.28 | U | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C | 0.48 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | | 0.43 | U | | 0.43 | U | | 0.43 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 0.21 | U | | 0.21 | U | | 0.21 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 0.3 | U | | 0.3 | U | | 0.3 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| 1,3-DICHLOROPROPANE | | 0.23 | U | | 0.23 | U | | 0.23 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 2,2-DICHLOROPROPANE | | 0.21 | UJ | E | 0.21 | UJ | E | 0.21 | UJ | E | 0.21 | UJ | E |
| 2-BUTANONE | | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| 2-HEXANONE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 0.4 | U | | 0.4 | U | | 0.4 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 0.55 | U | | 0.55 | U | | 0.55 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| ACETONE | | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ACRYLONITRILE | | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE | 1 | UJ | CE |
| BENZENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 0.31 | U | | 0.31 | U | | 0.31 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C | 0.24 | UJ | C |
| BROMODICHLOROMETHANE | | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-03 |
|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-01 |
| FRACTION: OV | SAMP_DATE | 11/1/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | 0.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 1,1,1,2-TETRACHLOROETHANE | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | 0.18 | U | |
| 1,1-DICHLOROETHENE | 0.28 | U | |
| 1,1-DICHLOROPROPENE | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | 0.49 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | 0.48 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | 0.21 | U | |
| 1,2-DICHLOROBENZENE | 0.3 | U | |
| 1,2-DICHLOROETHANE | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | 0.45 | U | |
| 1,3-DICHLOROBENZENE | 0.44 | U | |
| 1,3-DICHLOROPROPANE | 0.23 | U | |
| 1,4-DICHLOROBENZENE | 1 | U | |
| 2,2-DICHLOROPROPANE | 0.21 | UJ | E |
| 2-BUTANONE | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | 0.38 | U | |
| 2-HEXANONE | 0.31 | U | |
| 4-CHLOROTOLUENE | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | 0.55 | U | |
| 4-METHYL-2-PENTANONE | 0.23 | UJ | C |
| ACETONE | 0.8 | UR | C |
| ACETONITRILE | 1 | UJ | C |
| ACRYLONITRILE | 1 | UJ | CE |
| BENZENE | 0.21 | UJ | C |
| BROMOBENZENE | 0.31 | U | |
| BROMOCHLOROMETHANE | 0.24 | UJ | C |
| BROMODICHLOROMETHANE | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-02 | | | 1011003-03 | | | 1011003-04 | | | 1011003-05 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMOMETHANE | | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 1.65 | | | 0.28 | U | | 0.28 | U | | 0.28 | U | |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 1.05 | J | C | 0.43 | UJ | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | | 0.17 | UJ | C | 0.17 | UJ | C | 0.17 | UJ | C | 0.17 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-PROPYLBENZENE | | 1.09 | | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | UJ | C | 0.5 | UJ | C | 0.5 | UJ | C | 0.5 | UJ | C |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 1.09 | | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-023-1010 | | | GKHMS-GW-FD001-1010 | | | GKHMS-GW-FD002-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-06 | | | 1011003-07 | | | 1011003-08 | | | 1011003-09 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | GKHMS-GW-017-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| BROMOMETHANE | | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROBENZENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 0.26 | U | | 0.26 | U | | 0.26 | U | | 0.26 | U | |
| CHLOROETHANE | | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.18 | U | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| CHLOROMETHANE | | 0.79 | U | | 0.79 | U | | 0.79 | U | | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.2 | U | | 0.2 | U | | 0.2 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 1 | UJ | C | 1.16 | J | C | 1 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 0.42 | U | | 0.42 | U | | 0.42 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 0.28 | U | | 1.92 | | | 0.28 | U | | 0.28 | U | |
| ISOPROPYLBENZENE | | 0.37 | U | | 0.37 | U | | 0.37 | U | | 0.37 | U | |
| M+P-XYLENES | | 0.67 | U | | 0.67 | U | | 0.67 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | | 0.43 | UJ | C | 1.31 | J | C | 0.43 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL METHACRYLATE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | | 0.17 | UJ | C | 0.17 | UJ | C | 0.17 | UJ | C | 0.17 | UJ | C |
| N-BUTYLBENZENE | | 0.54 | UJ | C | 1.09 | J | C | 0.54 | UJ | C | 0.54 | UJ | C |
| N-PROPYLBENZENE | | 0.44 | U | | 1.22 | | | 0.44 | U | | 0.44 | U | |
| O-XYLENE | | 0.29 | U | | 0.29 | U | | 0.29 | U | | 0.29 | U | |
| PROPIONITRILE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 0.5 | UJ | C | 0.5 | UJ | C | 0.5 | UJ | C | 0.5 | UJ | C |
| STYRENE | | 0.36 | U | | 0.36 | U | | 0.36 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 0.42 | U | | 1.12 | | | 0.42 | U | | 0.42 | U | |
| TETRACHLOROETHENE | | 0.38 | U | | 0.38 | U | | 0.38 | U | | 0.38 | U | |
| TOLUENE | | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-03 |
|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-01 |
| FRACTION: OV | SAMP_DATE | 11/1/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | 0.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| BROMOFORM | 0.24 | U | |
| BROMOMETHANE | 0.39 | UR | C |
| CARBON DISULFIDE | 0.29 | U | |
| CARBON TETRACHLORIDE | 0.26 | U | |
| CHLOROBENZENE | 0.24 | U | |
| CHLORODIBROMOMETHANE | 0.26 | U | |
| CHLOROETHANE | 0.23 | UJ | C |
| CHLOROFORM | 0.18 | U | |
| CHLOROMETHANE | 0.79 | U | |
| CIS-1,2-DICHLOROETHENE | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | 0.21 | UJ | C |
| CYCLOHEXANE | 1 | UJ | C |
| DIBROMOMETHANE | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | 0.42 | U | |
| ETHYL METHACRYLATE | 1 | UJ | C |
| ETHYLBENZENE | 0.28 | U | |
| ISOPROPYLBENZENE | 0.37 | U | |
| M+P-XYLENES | 0.67 | U | |
| METHACRYLONITRILE | 1 | UJ | C |
| METHYL ACETATE | 0.27 | UJ | CE |
| METHYL CYCLOHEXANE | 0.43 | UJ | C |
| METHYL IODIDE | 1 | UJ | C |
| METHYL METHACRYLATE | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | 0.25 | UJ | C |
| METHYLENE CHLORIDE | 0.17 | UJ | C |
| N-BUTYLBENZENE | 0.54 | UJ | C |
| N-PROPYLBENZENE | 0.44 | U | |
| O-XYLENE | 0.29 | U | |
| PROPIONITRILE | 1 | UJ | C |
| SEC-BUTYLBENZENE | 0.5 | UJ | C |
| STYRENE | 0.36 | U | |
| TERT-BUTYLBENZENE | 0.42 | U | |
| TETRACHLOROETHENE | 0.38 | U | |
| TOLUENE | 0.27 | UJ | C |
| TRANS-1,2-DICHLOROETHENE | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-02 | | | 1011003-03 | | | 1011003-04 | | | 1011003-05 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-023-1010 | | | GKHMS-GW-FD001-1010 | | | GKHMS-GW-FD002-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-06 | | | 1011003-07 | | | 1011003-08 | | | 1011003-09 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | GKHMS-GW-017-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | | 0.24 | U | | 0.24 | U | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-TB-03 | | |
|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-01 | | |
| FRACTION: OV | SAMP_DATE | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | |
| | UNITS | UG/L | | |
| | PCT_SOLIDS | 0.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| TRANS-1,3-DICHLOROPROPENE | | 0.22 | UJ | C |
| TRICHLOROETHENE | | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.35 | U | |
| VINYL ACETATE | | 0.29 | UJ | C |
| VINYL CHLORIDE | | 0.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-017-1010-DL | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-02 | | | 1011003-02RE1 | | | 1011003-03 | | | 1011003-04 | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 16 | J | Q | | | | 0.05 | UJ | Q | 0.28 | J | Q |
| 2-METHYLNAPHTHALENE | | | | | 23.1 | | | 0.0167 | U | | 0.184 | | |
| ACENAPHTHENE | | | | | 2.26 | | | 0.6 | | | 0.143 | | |
| ACENAPHTHYLENE | | 0.0167 | U | | | | | 0.0551 | | | 0.0863 | | |
| ANTHRACENE | | 0.377 | | | | | | 0.0832 | | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | | 0.117 | | | | | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | | 1.12 | | | | | | 0.0167 | U | | 0.0502 | | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | | | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | | | | | 12.4 | | | 0.0458 | J | P | 0.105 | | |
| PHENANTHRENE | | 2.57 | | | | | | 0.0167 | U | | 0.0502 | | |
| PYRENE | | 0.203 | | | | | | 0.0167 | U | | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-022-1010 | | | GKHMS-GW-023-1010 | | | GKHMS-GW-FD002-1010 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-05 | | | 1011003-06 | | | 1011003-08 | | | | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | | | |
| | DUP_OF | | | | | | | | | | GKHMS-GW-019-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.19 | J | Q | | | |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.126 | | |
| ACENAPHTHENE | | 0.0663 | | | 0.0167 | U | | | | | 0.135 | | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0888 | | |
| ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| FLUORENE | | 0.0523 | | | 0.0167 | U | | | | | 0.0397 | J | P |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |
| NAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0798 | | |
| PHENANTHRENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0406 | J | P |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | | | | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-FD003-1010 | | | | | |
|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-09 | | | | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | | | |
| MEDIA: WATER | QC_TYPE | NM | | | | | |
| | UNITS | UG/L | | | | | |
| | PCT_SOLIDS | 0.0 | | | | | |
| | DUP_OF | | | | GLKHMS-GW-022-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | | | |
| 2-METHYLNAPHTHALENE | | | | | 0.0167 | U | |
| ACENAPHTHENE | | | | | 0.0779 | | |
| ACENAPHTHYLENE | | | | | 0.0167 | U | |
| ANTHRACENE | | | | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | | | | 0.0167 | U | |
| BENZO(A)PYRENE | | | | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | | | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | | | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | | | | 0.0167 | U | |
| CHRYSENE | | | | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | | | | 0.0167 | U | |
| FLUORANTHENE | | | | | 0.0167 | U | |
| FLUORENE | | | | | 0.0652 | | |
| INDENO(1,2,3-CD)PYRENE | | | | | 0.0167 | U | |
| NAPHTHALENE | | | | | 0.03 | J | P |
| PHENANTHRENE | | | | | 0.0167 | U | |
| PYRENE | | | | | 0.0167 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-022-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|
| SDG: 1011003 | LAB_ID | 1011003-05 | | | 1011003-09 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | GKHMS-GW-022-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.006 | U | | 0.006 | U | |
| 4,4'-DDE | | 0.004 | U | | 0.004 | U | |
| 4,4'-DDT | | 0.006 | U | | 0.006 | U | |
| ALDRIN | | 0.003 | U | | 0.003 | U | |
| ALPHA-BHC | | 0.003 | U | | 0.003 | U | |
| ALPHA-CHLORDANE | | 0.004 | U | | 0.004 | U | |
| AROCLOR-1016 | | 0.094 | U | | 0.094 | U | |
| AROCLOR-1221 | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1232 | | 0.18 | U | | 0.18 | U | |
| AROCLOR-1242 | | 0.35 | U | | 0.35 | U | |
| AROCLOR-1248 | | 0.13 | U | | 0.13 | U | |
| AROCLOR-1254 | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1260 | | 0.058 | U | | 0.058 | U | |
| BETA-BHC | | 0.004 | U | | 0.004 | U | |
| CHLORDANE | | 0.017 | U | | 0.017 | U | |
| DELTA-BHC | | 0.003 | U | | 0.003 | U | |
| DIELDRIN | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN I | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN II | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN SULFATE | | 0.005 | U | | 0.005 | U | |
| ENDRIN | | 0.004 | U | | 0.004 | U | |
| ENDRIN ALDEHYDE | | 0.006 | U | | 0.006 | U | |
| ENDRIN KETONE | | 0.007 | U | | 0.007 | U | |
| GAMMA-BHC (LINDANE) | | 0.004 | U | | 0.004 | U | |
| GAMMA-CHLORDANE | | 0.007 | U | | 0.007 | U | |
| HEPTACHLOR | | 0.004 | U | | 0.004 | U | |
| HEPTACHLOR EPOXIDE | | 0.004 | U | | 0.004 | U | |
| HEXACHLOROBENZENE | | 0.01 | U | | 0.01 | U | |
| KEPONE | | 0.015 | U | | 0.015 | U | |
| METHOXYCHLOR | | 0.007 | U | | 0.007 | U | |
| MIREX | | 0.015 | U | | 0.015 | U | |
| TOXAPHENE | | 0.017 | U | | 0.017 | U | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-017-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 15:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 15:53 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 15:53 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 15:53 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 15:53 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 15:53 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 15:53 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 15:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-017-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 15:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Ethylbenzene | 100-41-4 | 1.65 | | 0.280 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Methylcyclohexane | 108-87-2 | 1.05 | | 0.430 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Naphthalene | 91-20-3 | 30.0 | | 0.540 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| n-Propylbenzene | 103-65-1 | 1.09 | | 0.440 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 15:53 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| tert-Butylbenzene | 98-06-6 | 1.09 | | 0.420 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 15:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-017-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 15:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 15:53 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:53 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 94 % | 70-120 | 1 | 11/5/10 15:53 |
| 4-Bromofluorobenzene | 460-00-4 | 108 % | 75-120 | 1 | 11/5/10 15:53 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/5/10 15:53 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-120 | 1 | 11/5/10 15:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-018-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 16:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 16:20 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 16:20 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 16:20 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 16:20 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 16:20 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 16:20 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 16:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-018-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 16:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Naphthalene | 91-20-3 | 2.02 | | 0.540 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 16:20 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 16:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-018-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 16:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 16:20 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:20 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 94 % | 70-120 | 1 | 11/5/10 16:20 |
| 4-Bromofluorobenzene | 460-00-4 | 104 % | 75-120 | 1 | 11/5/10 16:20 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/5/10 16:20 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/5/10 16:20 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-019-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 16:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 16:47 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 16:47 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 16:47 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 16:47 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 16:47 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 16:47 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 16:47 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-019-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 16:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 16:47 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 16:47 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-019-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 16:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 16:47 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 16:47 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 94 % | 70-120 | 1 | 11/5/10 16:47 |
| 4-Bromofluorobenzene | 460-00-4 | 102 % | 75-120 | 1 | 11/5/10 16:47 |
| Dibromofluoromethane | 1868-53-7 | 98 % | 85-115 | 1 | 11/5/10 16:47 |
| Toluene-d8 | 2037-26-5 | 96 % | 85-120 | 1 | 11/5/10 16:47 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-022-1010
Sample Date/Time: 11/02/10 10:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 17:13

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 17:13 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 17:13 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 17:13 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 17:13 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 17:13 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 17:13 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 17:13 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-022-1010
Sample Date/Time: 11/02/10 10:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 17:13

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 17:13 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 17:13 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-022-1010
Sample Date/Time: 11/02/10 10:50
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 17:13

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 17:13 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:13 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 93 % | 70-120 | 1 | 11/5/10 17:13 |
| 4-Bromofluorobenzene | 460-00-4 | 86 % | 75-120 | 1 | 11/5/10 17:13 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/5/10 17:13 |
| Toluene-d8 | 2037-26-5 | 96 % | 85-120 | 1 | 11/5/10 17:13 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-023-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 17:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 17:40 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 17:40 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 17:40 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 17:40 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 17:40 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 17:40 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 17:40 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-023-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 17:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 17:40 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 17:40 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-023-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 17:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 17:40 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 17:40 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 96 % | 70-120 | 1 | 11/5/10 17:40 |
| 4-Bromofluorobenzene | 460-00-4 | 100 % | 75-120 | 1 | 11/5/10 17:40 |
| Dibromofluoromethane | 1868-53-7 | 98 % | 85-115 | 1 | 11/5/10 17:40 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/5/10 17:40 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 18:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 18:07 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 18:07 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 18:07 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 18:07 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 18:07 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 18:07 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 18:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 18:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Cyclohexane | 110-82-7 | 1.16 | | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Ethylbenzene | 100-41-4 | 1.92 | | 0.280 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Methylcyclohexane | 108-87-2 | 1.31 | | 0.430 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Naphthalene | 91-20-3 | 33.8 | | 0.540 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| n-Butylbenzene | 104-51-8 | 1.09 | | 0.540 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| n-Propylbenzene | 103-65-1 | 1.22 | | 0.440 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 18:07 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| tert-Butylbenzene | 98-06-6 | 1.12 | | 0.420 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 18:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 18:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 18:07 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:07 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 94 % | 70-120 | 1 | 11/5/10 18:07 |
| 4-Bromofluorobenzene | 460-00-4 | 106 % | 75-120 | 1 | 11/5/10 18:07 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/5/10 18:07 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-120 | 1 | 11/5/10 18:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 18:34

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 18:34 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 18:34 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 18:34 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 18:34 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 18:34 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 18:34 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 18:34 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 18:34

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 18:34 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 18:34 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 18:34

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 18:34 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 18:34 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 89 % | 70-120 | 1 | 11/5/10 18:34 |
| 4-Bromofluorobenzene | 460-00-4 | 105 % | 75-120 | 1 | 11/5/10 18:34 |
| Dibromofluoromethane | 1868-53-7 | 94 % | 85-115 | 1 | 11/5/10 18:34 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/5/10 18:34 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD003-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 19:00

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 19:00 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 19:00 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 19:00 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 19:00 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 19:00 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 19:00 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 19:00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD003-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 19:00

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 19:00 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 19:00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD003-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-09
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 19:00

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 19:00 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 19:00 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 92 % | 70-120 | 1 | 11/5/10 19:00 |
| 4-Bromofluorobenzene | 460-00-4 | 89 % | 75-120 | 1 | 11/5/10 19:00 |
| Dibromofluoromethane | 1868-53-7 | 97 % | 85-115 | 1 | 11/5/10 19:00 |
| Toluene-d8 | 2037-26-5 | 91 % | 85-120 | 1 | 11/5/10 19:00 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-03
Sample Date/Time: 11/01/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 15:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/5/10 15:26 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/5/10 15:26 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/5/10 15:26 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/5/10 15:26 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 15:26 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/5/10 15:26 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/5/10 15:26 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-03
Sample Date/Time: 11/01/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 15:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/5/10 15:26 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/5/10 15:26 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-03
Sample Date/Time: 11/01/10 08:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011003-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/05/10 15:26

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/5/10 15:26 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/5/10 15:26 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 96 % | 70-120 | 1 | 11/5/10 15:26 |
| 4-Bromofluorobenzene | 460-00-4 | 98 % | 75-120 | 1 | 11/5/10 15:26 |
| Dibromofluoromethane | 1868-53-7 | 99 % | 85-115 | 1 | 11/5/10 15:26 |
| Toluene-d8 | 2037-26-5 | 96 % | 85-120 | 1 | 11/5/10 15:26 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-TB-03

Sample Date/Time: 11/01/10 08:00

File ID: B02890258.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-01

Percent solids: N/A

Preparation Method: EPA 5030B

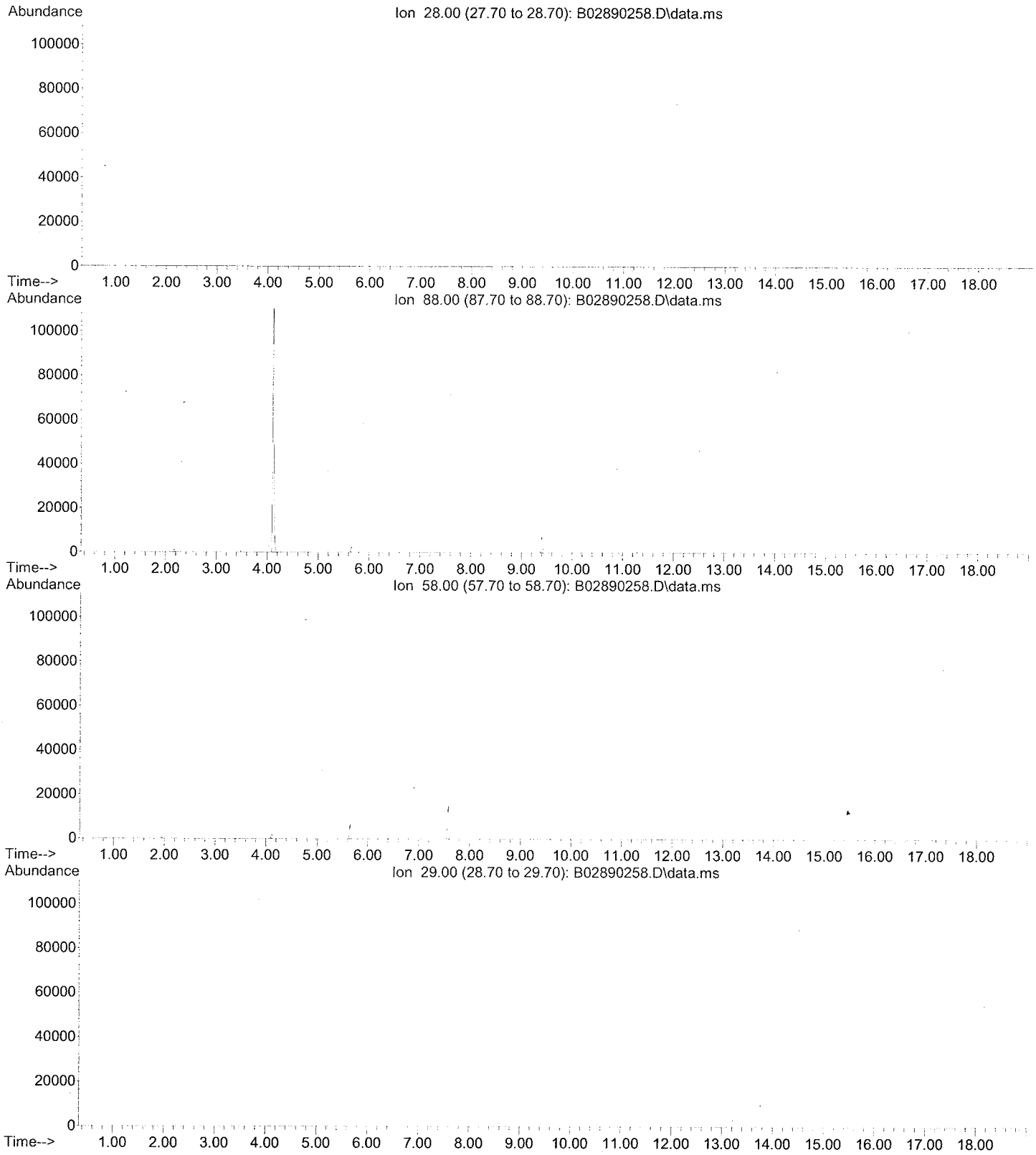
Prepared Date/Time: 11/05/10 15:26

Analyzed Date/Time: 11/05/10 15:26

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890258.D
Operator : MP
Acquired : 5 Nov 2010 3:26 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-01
Misc Info : TETRA TECH, WATER
Vial Number: 17



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-017-1010

Sample Date/Time: 11/01/10 08:40

File ID: B02890259.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-02

Percent solids: N/A

Preparation Method: EPA 5030B

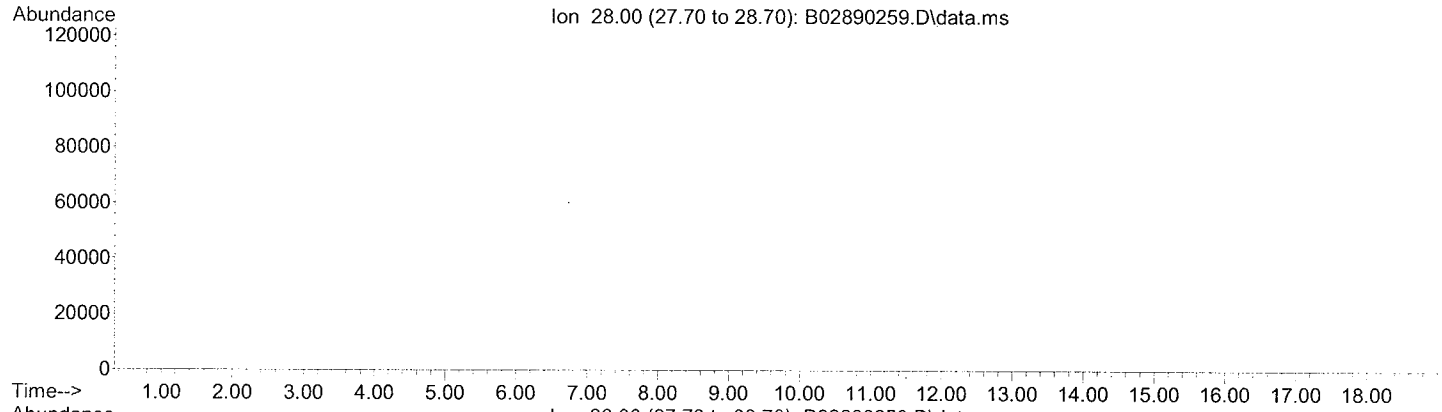
Prepared Date/Time: 11/05/10 15:53

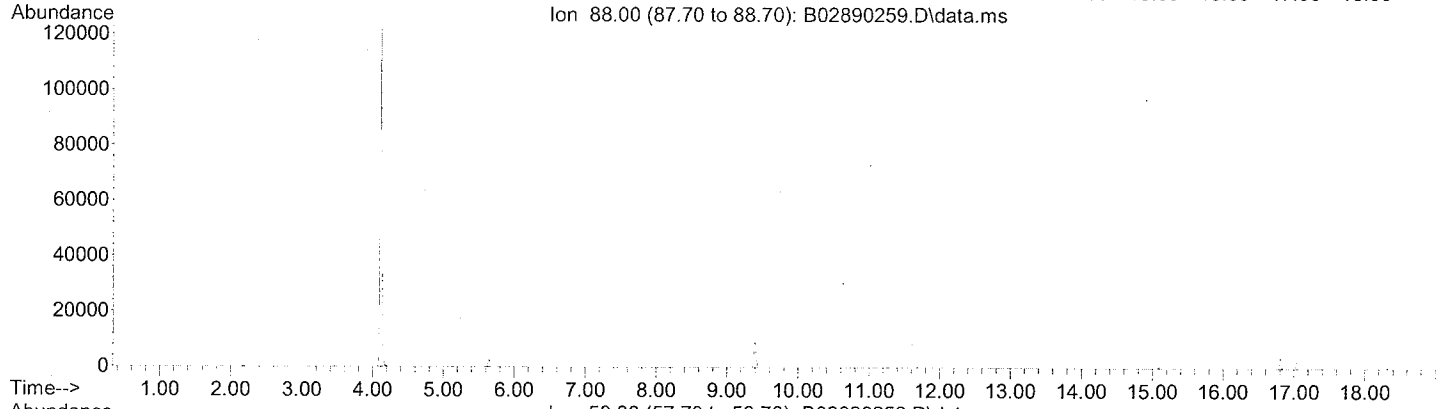
Analyzed Date/Time: 11/05/10 15:53

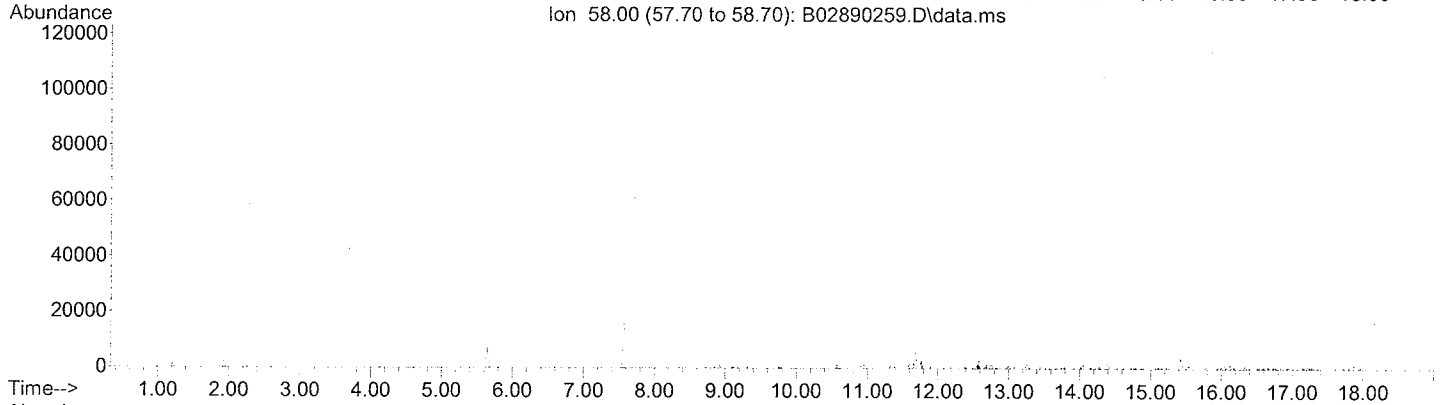
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

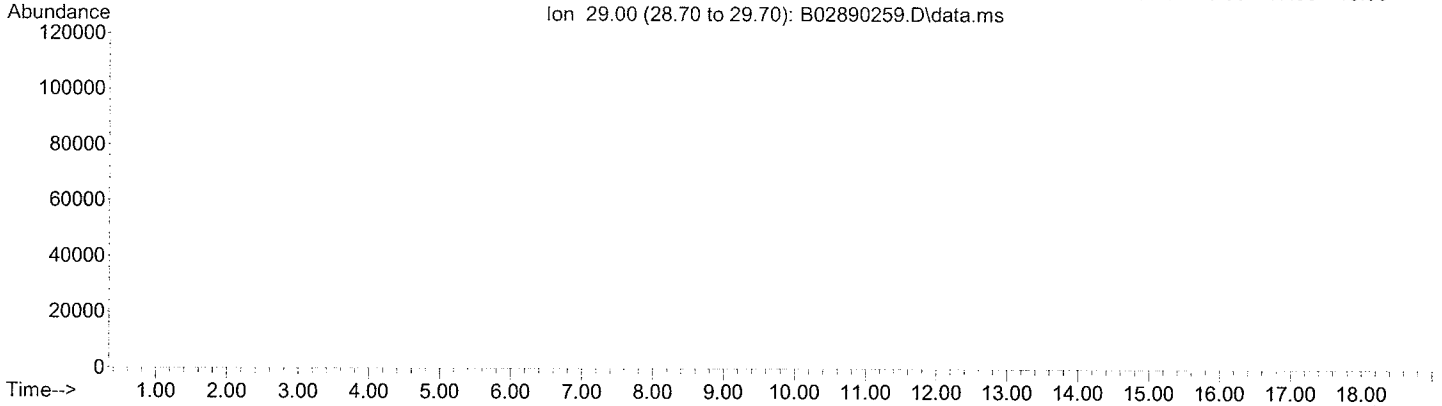
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890259.D
Operator : MP
Acquired : 5 Nov 2010 3:53 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-02
Misc Info : TETRA TECH, WATER
Vial Number: 18



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-018-1010

Sample Date/Time: 11/02/10 08:00

File ID: B02890260.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-03

Percent solids: N/A

Preparation Method: EPA 5030B

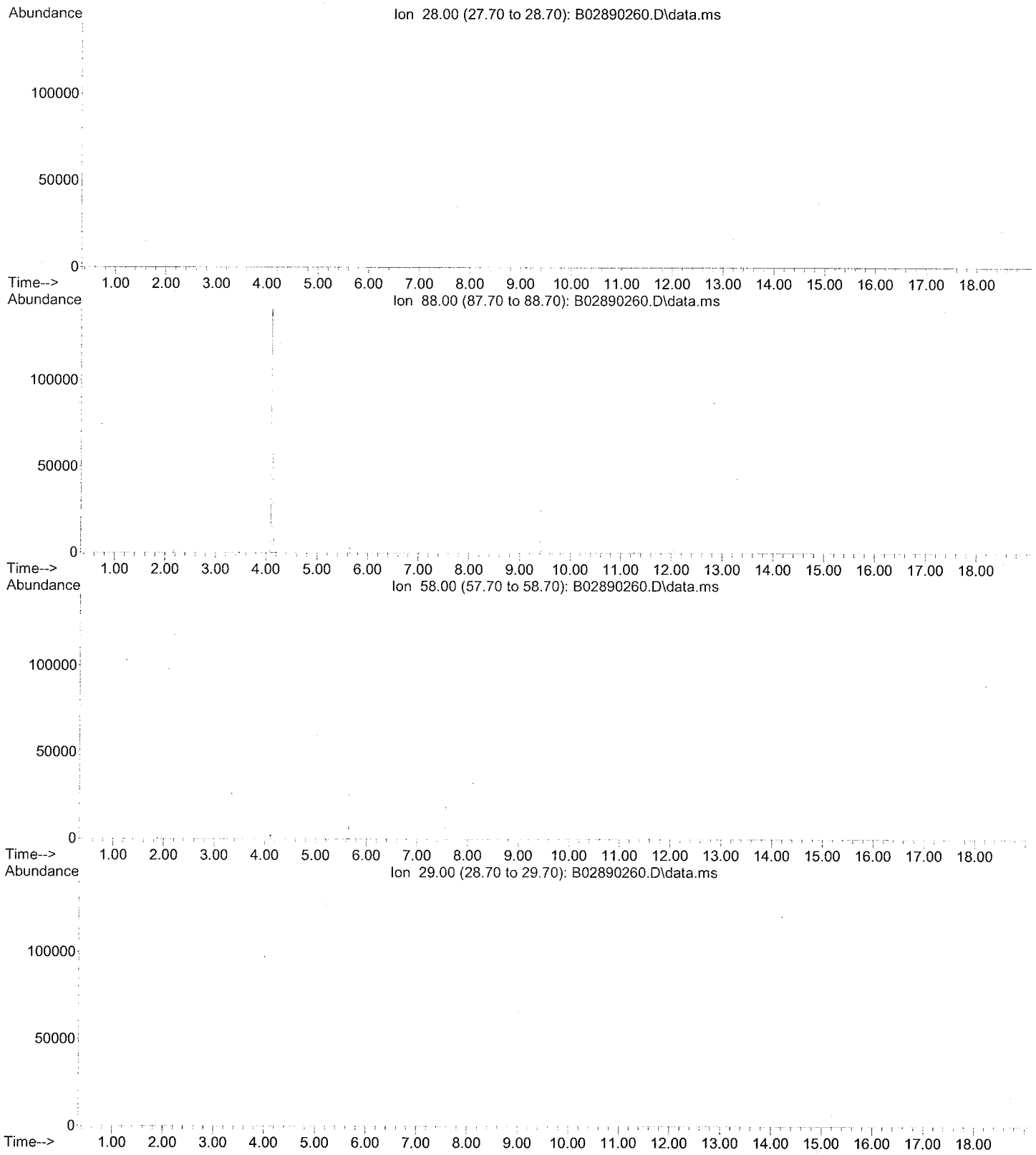
Prepared Date/Time: 11/05/10 16:20

Analyzed Date/Time: 11/05/10 16:20

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890260.D
Operator : MP
Acquired : 5 Nov 2010 4:20 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-03
Misc Info : TETRA TECH, WATER
Vial Number: 19



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-019-1010

Sample Date/Time: 11/02/10 09:20

File ID: B02890261.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-04

Percent solids: N/A

Preparation Method: EPA 5030B

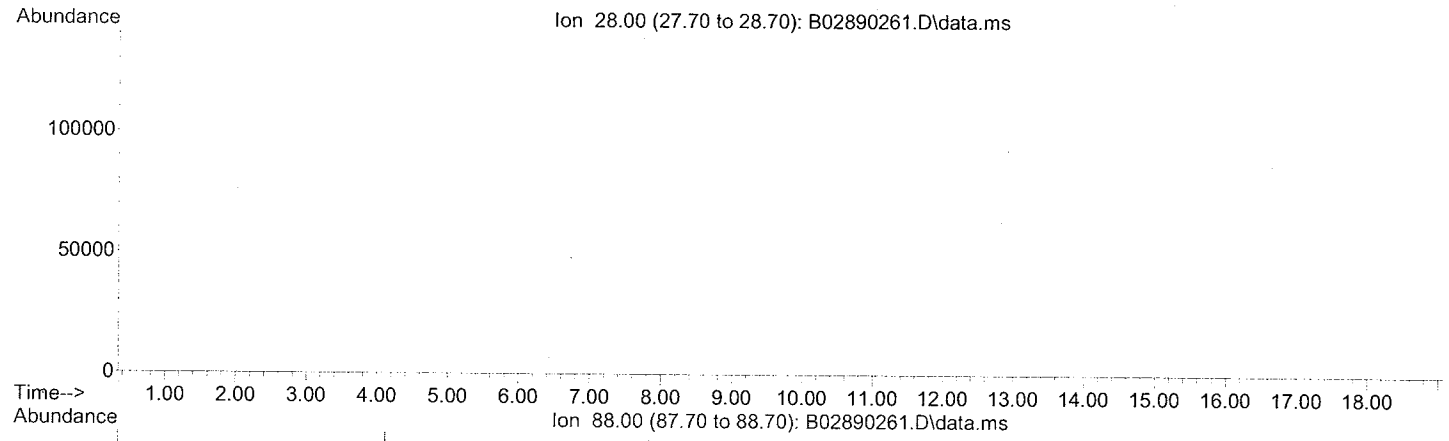
Prepared Date/Time: 11/05/10 16:47

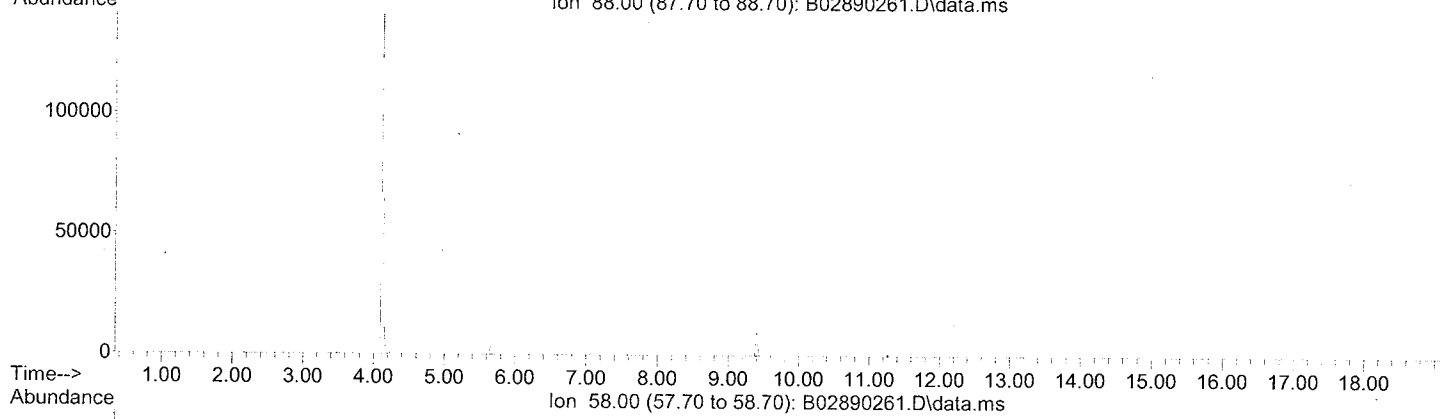
Analyzed Date/Time: 11/05/10 16:47

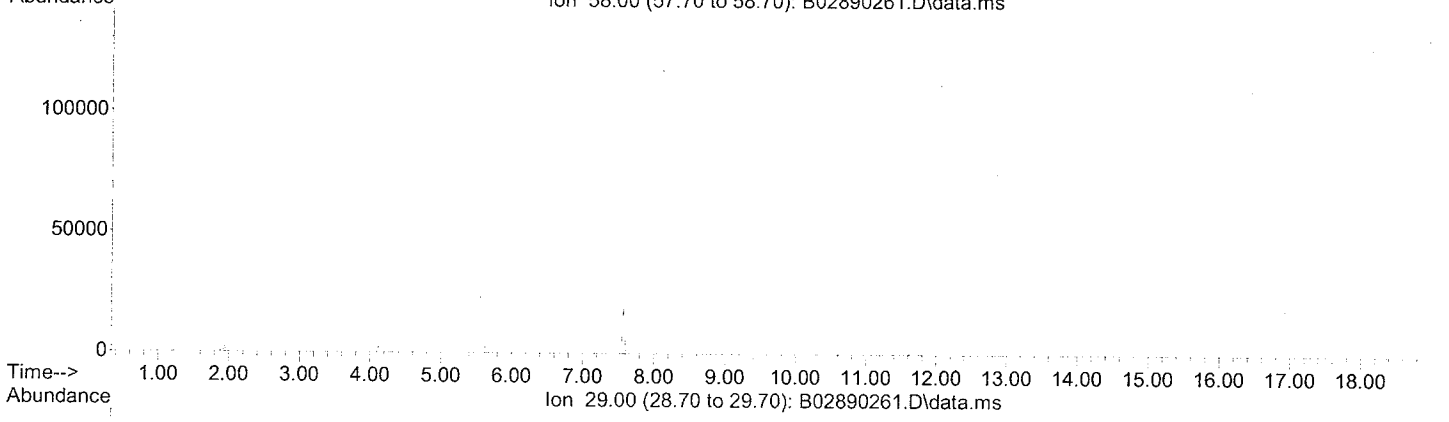
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

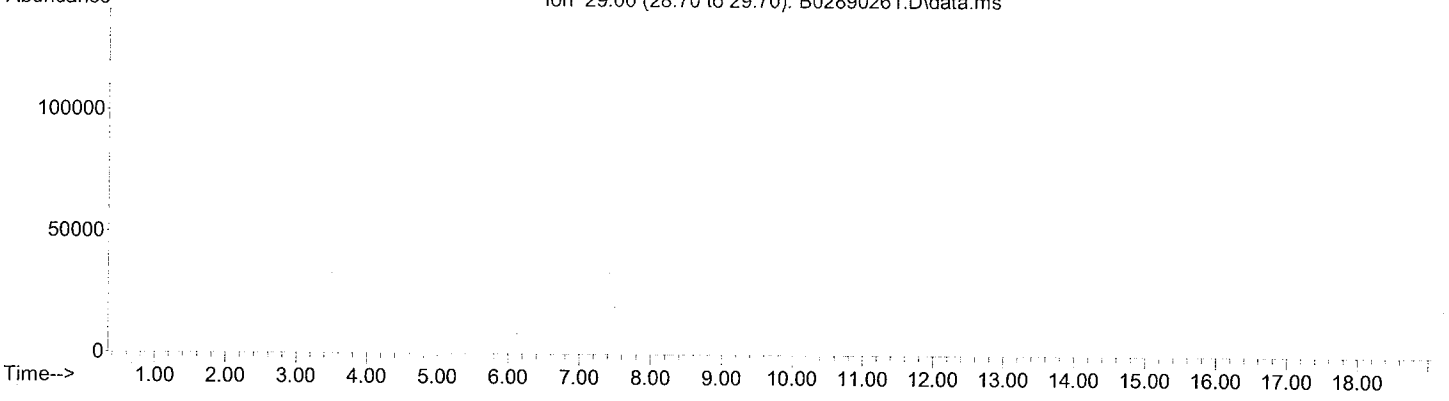
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890261.D
Operator : MP
Acquired : 5 Nov 2010 4:47 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-04
Misc Info : TETRA TECH, WATER
Vial Number: 20



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-022-1010

Sample Date/Time: 11/02/10 10:50

File ID: B02890262.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-05

Percent solids: N/A

Preparation Method: EPA 5030B

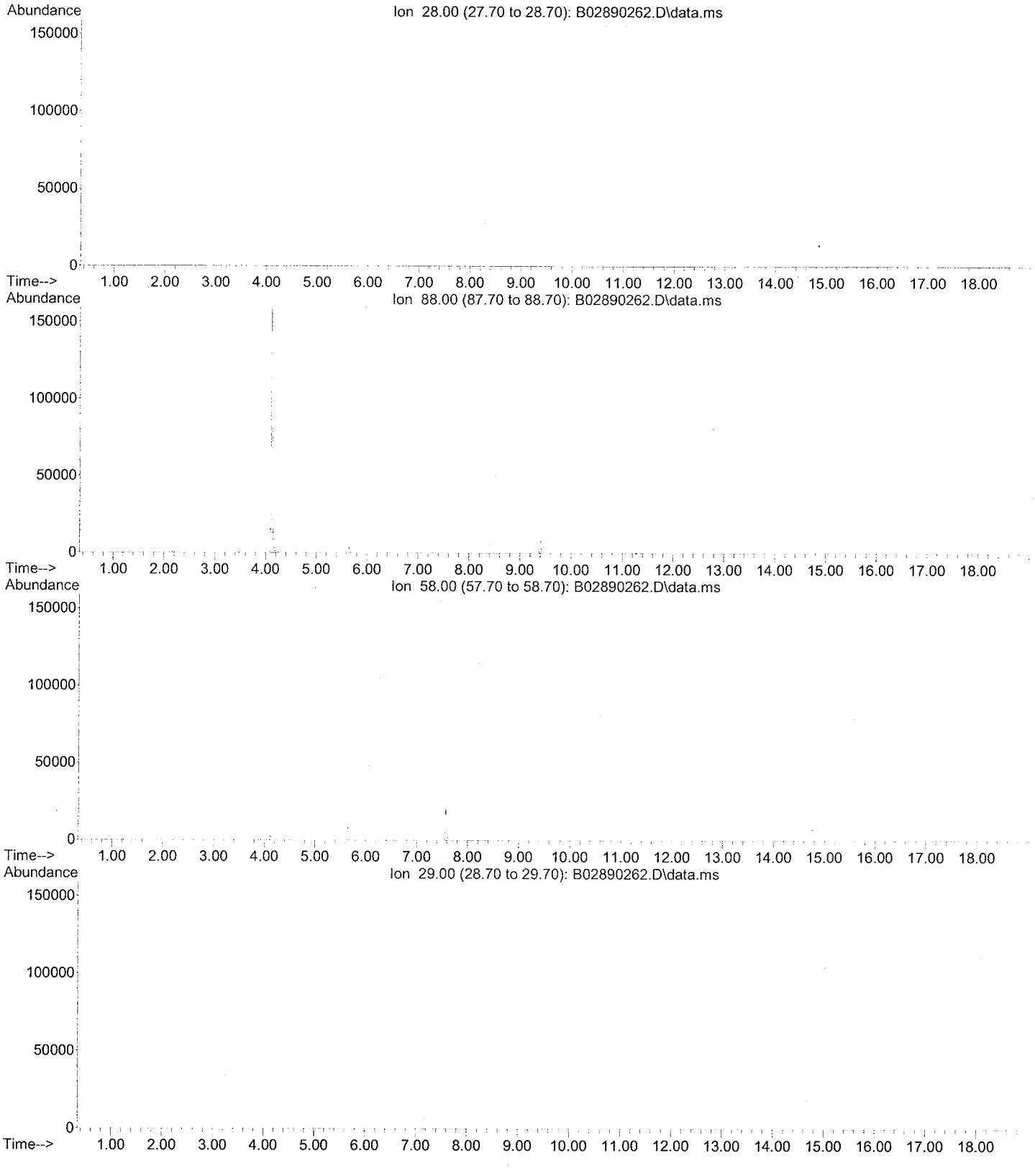
Prepared Date/Time: 11/05/10 17:13

Analyzed Date/Time: 11/05/10 17:13

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890262.D
Operator : MP
Acquired : 5 Nov 2010 5:13 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-05
Misc Info : TETRA TECH, WATER
Vial Number: 21



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-023-1010

Sample Date/Time: 11/02/10 10:00

File ID: B02890263.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-06

Percent solids: N/A

Preparation Method: EPA 5030B

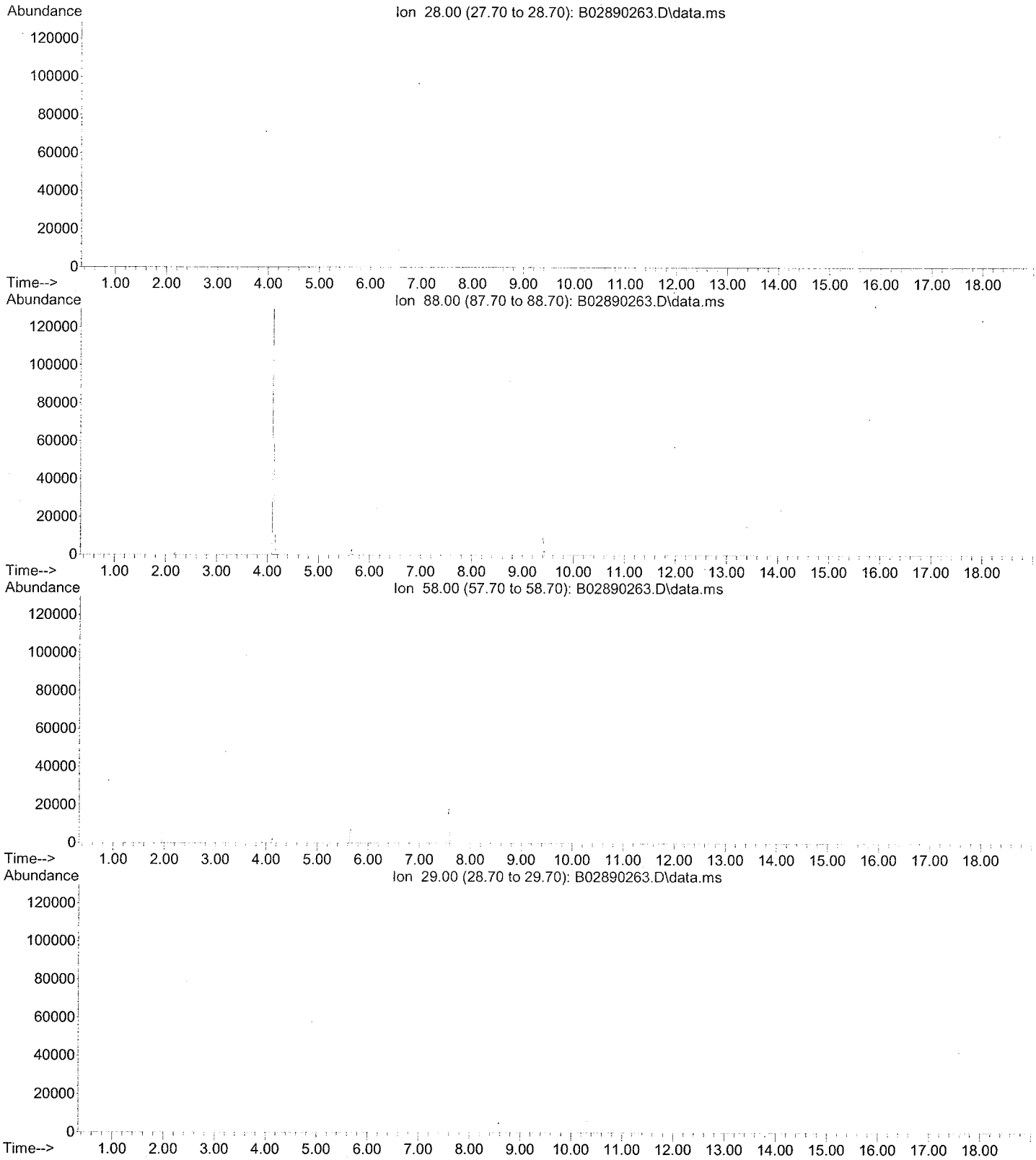
Prepared Date/Time: 11/05/10 17:40

Analyzed Date/Time: 11/05/10 17:40

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890263.D
Operator : MP
Acquired : 5 Nov 2010 5:40 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-06
Misc Info : TETRA TECH, WATER
Vial Number: 22



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-FD001-1010

Sample Date/Time: 11/02/10 00:00

File ID: B02890264.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-07

Percent solids: N/A

Preparation Method: EPA 5030B

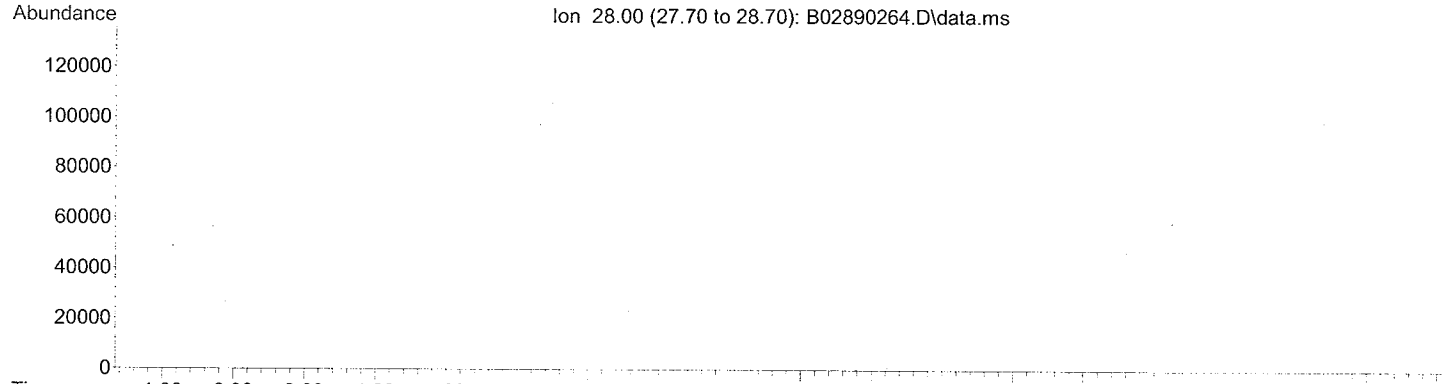
Prepared Date/Time: 11/05/10 18:07

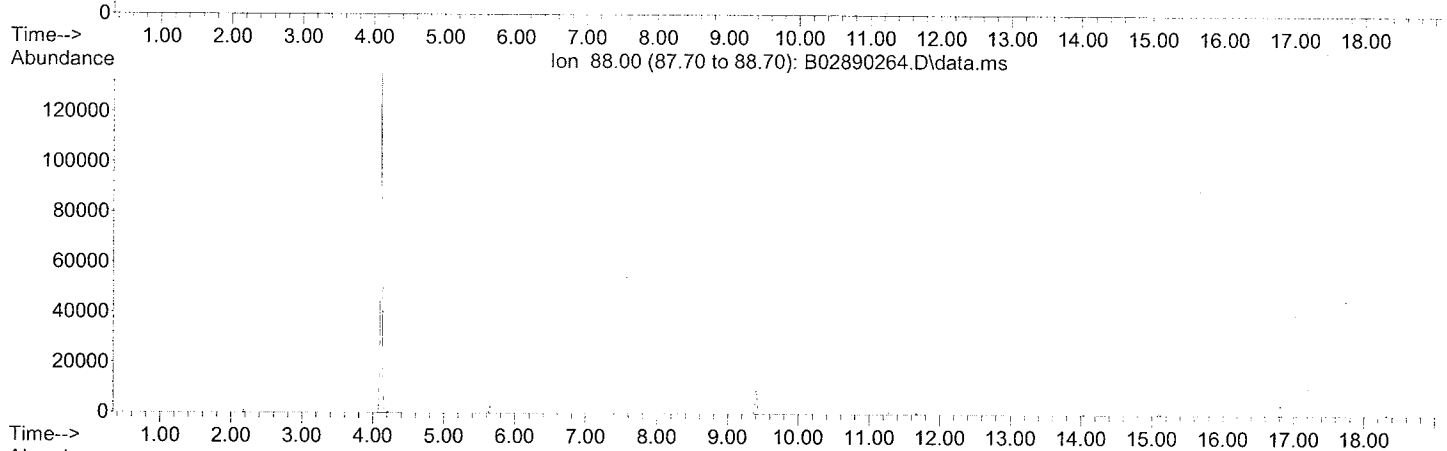
Analyzed Date/Time: 11/05/10 18:07

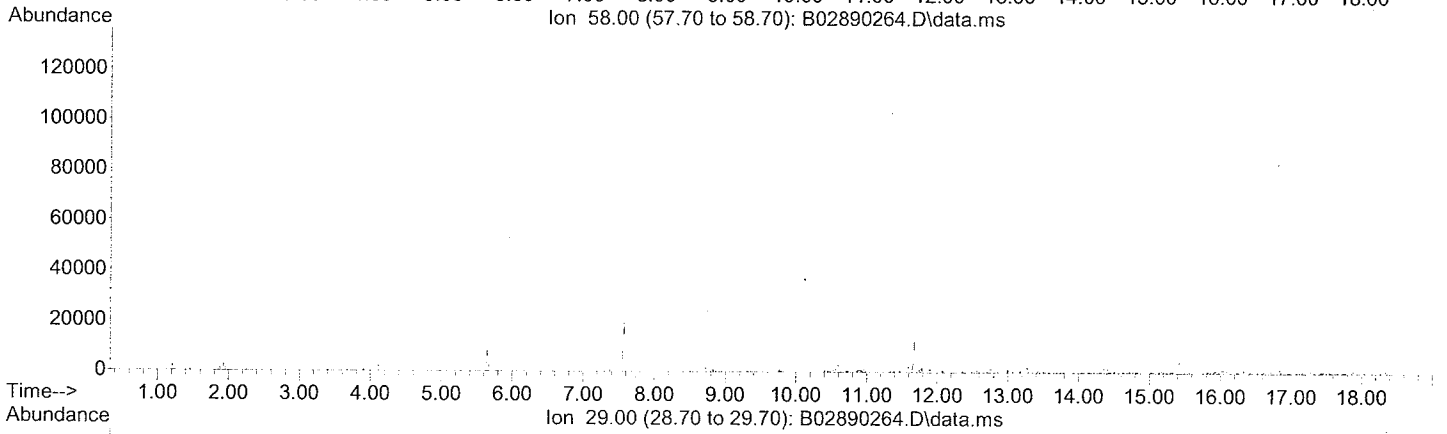
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

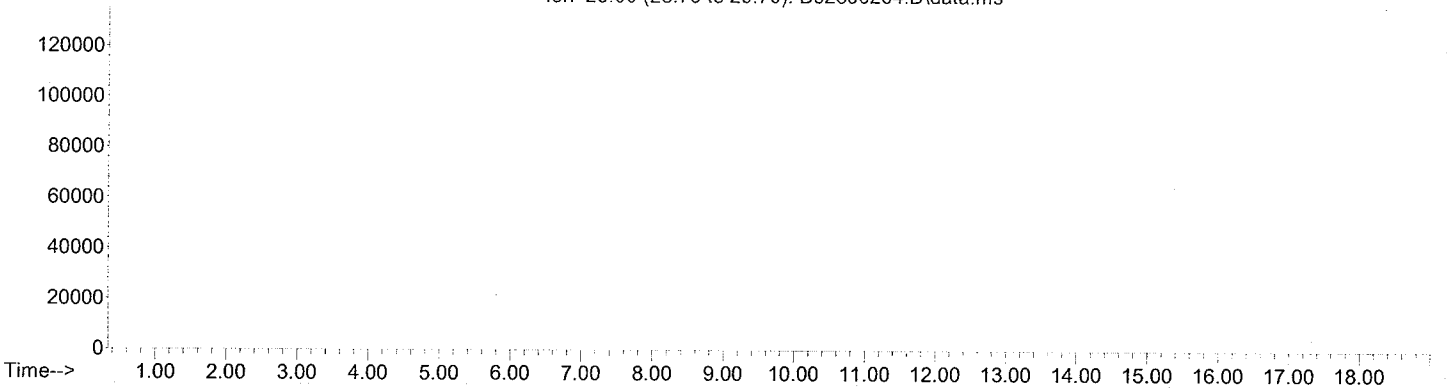
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890264.D
Operator : MP
Acquired : 5 Nov 2010 6:07 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-07
Misc Info : TETRA TECH, WATER
Vial Number: 23



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-FD002-1010

Sample Date/Time: 11/02/10 00:00

File ID: B02890265.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-08

Percent solids: N/A

Preparation Method: EPA 5030B

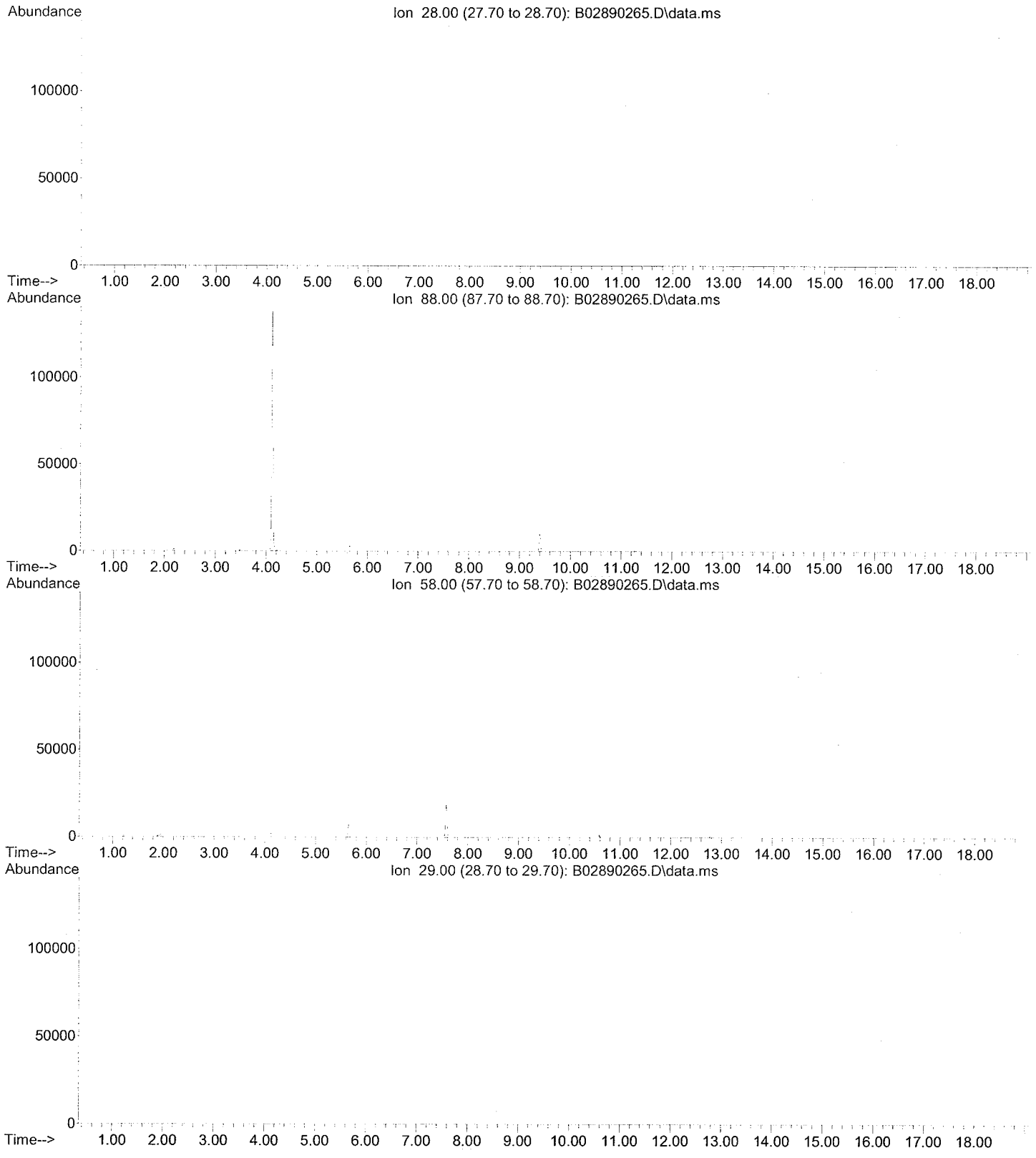
Prepared Date/Time: 11/05/10 18:34

Analyzed Date/Time: 11/05/10 18:34

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890265.D
Operator : MP
Acquired : 5 Nov 2010 6:34 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-08
Misc Info : TETRA TECH, WATER
Vial Number: 24



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-FD003-1010

Sample Date/Time: 11/02/10 00:00

File ID: B02890266.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011003-09

Percent solids: N/A

Preparation Method: EPA 5030B

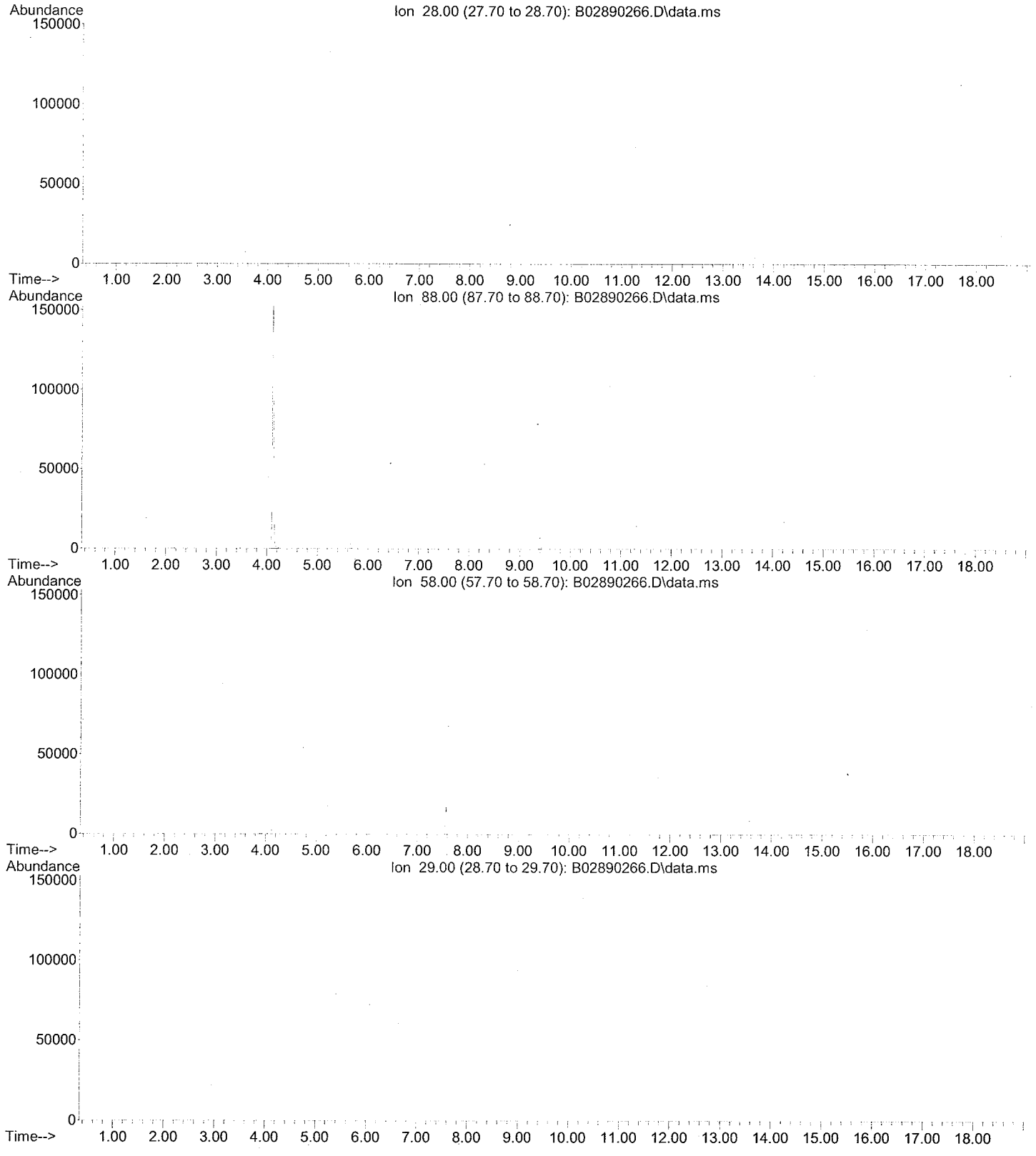
Prepared Date/Time: 11/05/10 19:00

Analyzed Date/Time: 11/05/10 19:00

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\110510\B02890266.D
Operator : MP
Acquired : 5 Nov 2010 7:00 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011003-09
Misc Info : TETRA TECH, WATER
Vial Number: 25



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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-017-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-02
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 22200 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Acenaphthene | 83-32-9 | 2410 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Anthracene | 120-12-7 | 377 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Fluoranthene | 206-44-0 | 117 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Fluorene | 86-73-7 | 1120 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Naphthalene | 91-20-3 | 12700 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Phenanthrene | 85-01-8 | 2570 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |
| Pyrene | 129-00-0 | 203 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:01 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 88 % | 50-110 | 1 | 11/15/10 18:01 |
| Nitrobenzene-d5 | 4165-60-0 | 110 % | 40-110 | 1 | 11/15/10 18:01 |
| Terphenyl-d14 | 1718-51-0 | 94 % | 50-135 | 1 | 11/15/10 18:01 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-017-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-02RE1
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 23100 | D | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Acenaphthene | 83-32-9 | 2260 | D | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Acenaphthylene | 208-96-8 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Anthracene | 120-12-7 | 447 | JD | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Chrysene | 218-01-9 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Fluoranthene | 206-44-0 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Fluorene | 86-73-7 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Naphthalene | 91-20-3 | 12400 | D | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Phenanthrene | 85-01-8 | BQL | U | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |
| Pyrene | 129-00-0 | 341 | JD | 167 | 500 | 10 | ng/L | 11/16/10 22:07 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 81 % | 50-110 | 10 | 11/16/10 22:07 |
| Nitrobenzene-d5 | 4165-60-0 | 89 % | 40-110 | 10 | 11/16/10 22:07 |
| Terphenyl-d14 | 1718-51-0 | 130 % | 50-135 | 10 | 11/16/10 22:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-018-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-03
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Acenaphthene | 83-32-9 | 600 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Acenaphthylene | 208-96-8 | 55.1 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Anthracene | 120-12-7 | 83.2 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Naphthalene | 91-20-3 | 45.8 | J | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:26 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 86 % | 50-110 | 1 | 11/15/10 18:26 |
| Nitrobenzene-d5 | 4165-60-0 | 90 % | 40-110 | 1 | 11/15/10 18:26 |
| Terphenyl-d14 | 1718-51-0 | 102 % | 50-135 | 1 | 11/15/10 18:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-019-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-04
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 184 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Acenaphthene | 83-32-9 | 143 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Acenaphthylene | 208-96-8 | 86.3 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Fluorene | 86-73-7 | 50.2 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Naphthalene | 91-20-3 | 105 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Phenanthrene | 85-01-8 | 50.2 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 18:50 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 82 % | 50-110 | 1 | 11/15/10 18:50 |
| Nitrobenzene-d5 | 4165-60-0 | 86 % | 40-110 | 1 | 11/15/10 18:50 |
| Terphenyl-d14 | 1718-51-0 | 97 % | 50-135 | 1 | 11/15/10 18:50 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-022-1010
Sample Date/Time: 11/02/10 10:50
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-05
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Acenaphthene | 83-32-9 | 66.3 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Fluorene | 86-73-7 | 52.3 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:14 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 77 % | 50-110 | 1 | 11/15/10 19:14 |
| Nitrobenzene-d5 | 4165-60-0 | 75 % | 40-110 | 1 | 11/15/10 19:14 |
| Terphenyl-d14 | 1718-51-0 | 99 % | 50-135 | 1 | 11/15/10 19:14 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-023-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-06
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 19:39 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 86 % | 50-110 | 1 | 11/15/10 19:39 |
| Nitrobenzene-d5 | 4165-60-0 | 84 % | 40-110 | 1 | 11/15/10 19:39 |
| Terphenyl-d14 | 1718-51-0 | 95 % | 50-135 | 1 | 11/15/10 19:39 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-08
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 126 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Acenaphthene | 83-32-9 | 135 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Acenaphthylene | 208-96-8 | 88.8 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Fluorene | 86-73-7 | 39.7 | J | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Naphthalene | 91-20-3 | 79.8 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Phenanthrene | 85-01-8 | 40.6 | J | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:03 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 90 % | 50-110 | 1 | 11/15/10 20:03 |
| Nitrobenzene-d5 | 4165-60-0 | 92 % | 40-110 | 1 | 11/15/10 20:03 |
| Terphenyl-d14 | 1718-51-0 | 109 % | 50-135 | 1 | 11/15/10 20:03 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD003-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011003-09
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Acenaphthene | 83-32-9 | 77.9 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Fluorene | 86-73-7 | 65.2 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Naphthalene | 91-20-3 | 30.0 | J | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:28 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 85 % | 50-110 | 1 | 11/15/10 20:28 |
| Nitrobenzene-d5 | 4165-60-0 | 82 % | 40-110 | 1 | 11/15/10 20:28 |
| Terphenyl-d14 | 1718-51-0 | 102 % | 50-135 | 1 | 11/15/10 20:28 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-017-1010

Sample Date/Time: 11/2/10 08:40

File ID: D46247.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011003-02

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 18:01

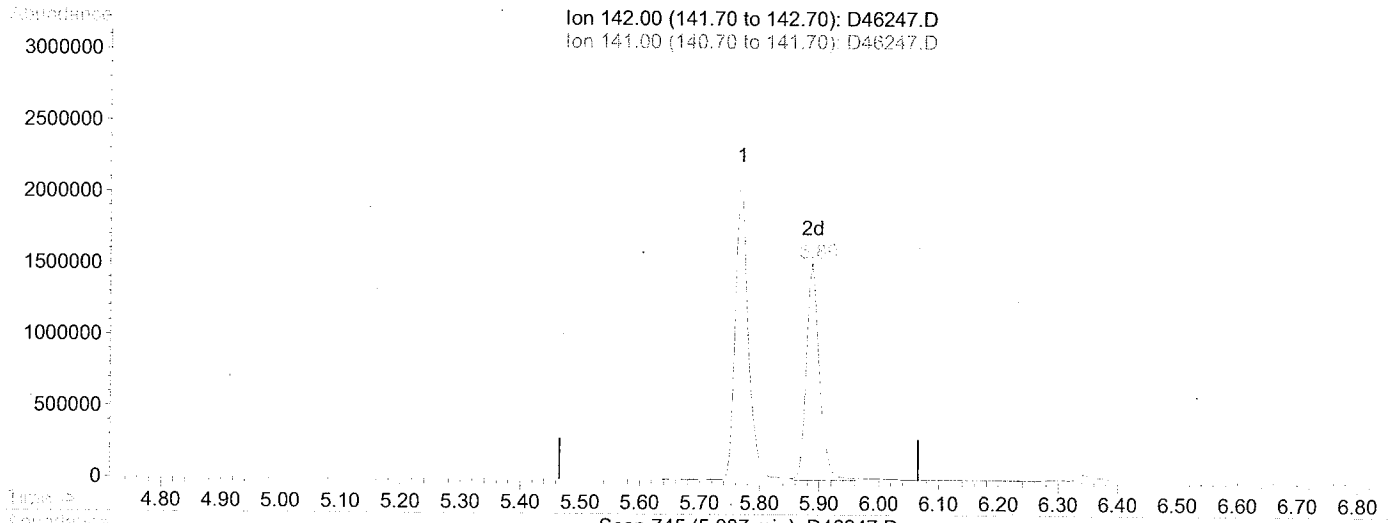
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 16000 | J | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

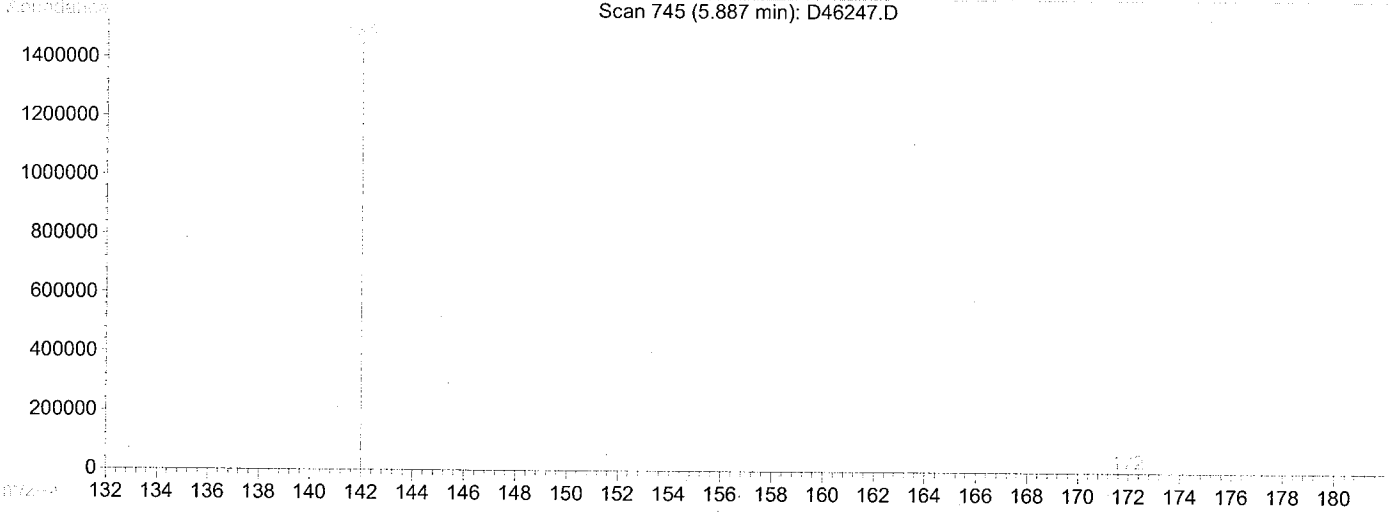
Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46247.D Vial: 7
Acq On : 15 Nov 2010 18:01 Operator: JI
Sample : 1011003-02 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:50 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




Scan 745 (5.887 min): D46247.D




TIC: D46247.D

(5) 2-Methylnaphthalene (T)

5.89min 16237.00ug/L m

response 2310239

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-018-1010

Sample Date/Time: 11/2/10 08:00

File ID: D46248.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011003-03

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 18:26

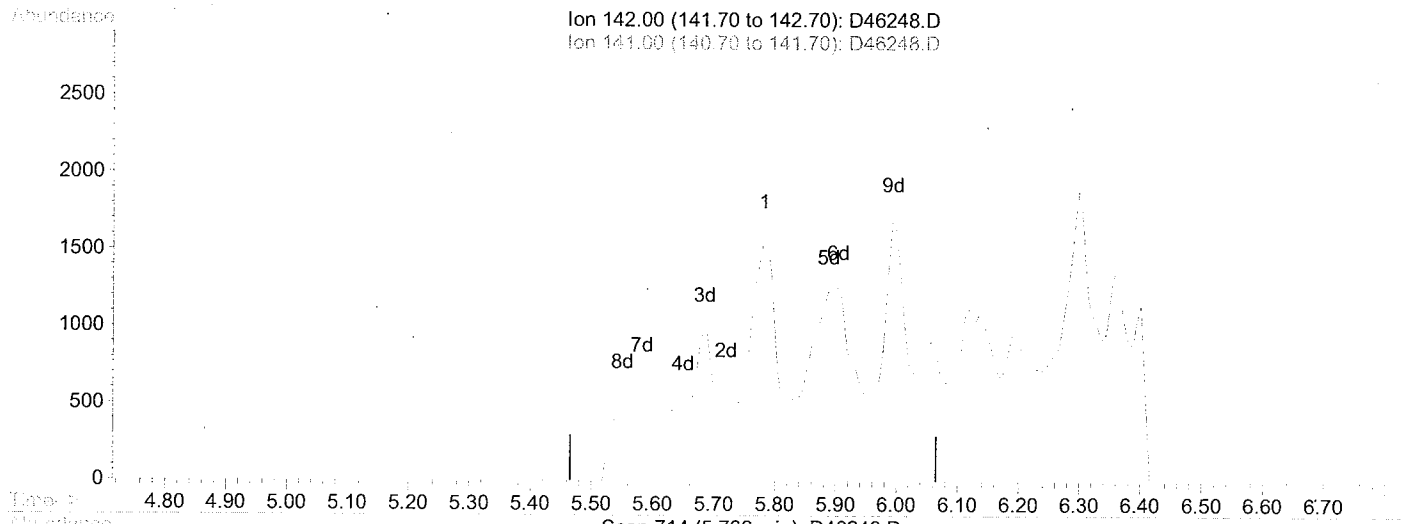
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

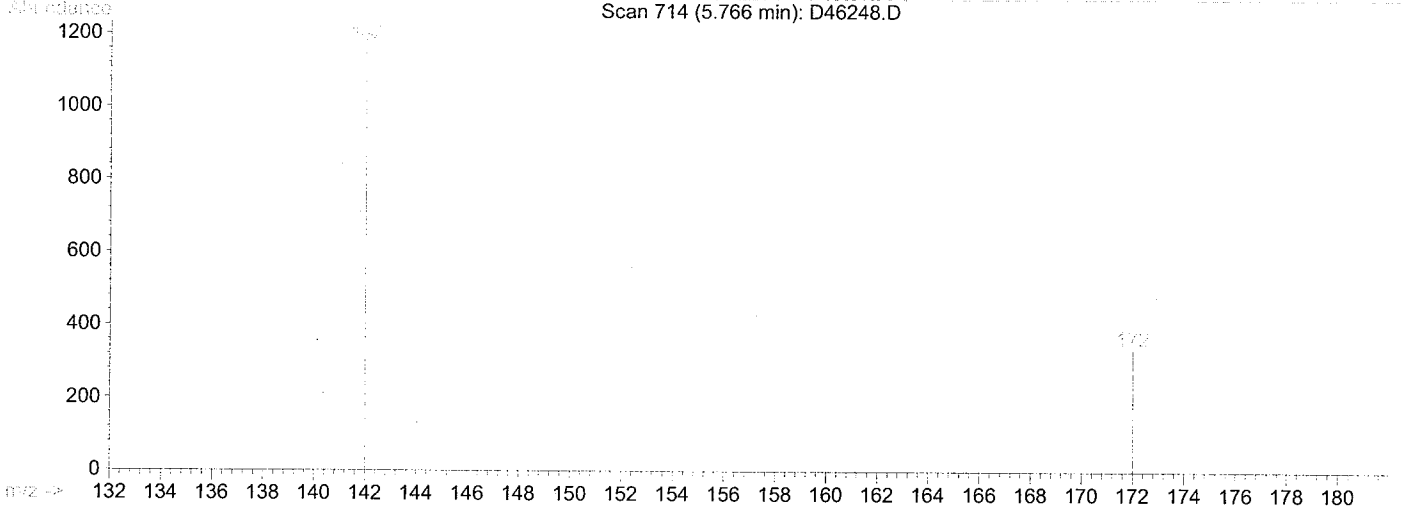
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46248.D Vial: 8
Acq On : 15 Nov 2010 18:26 Operator: JI
Sample : 1011003-03 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:51 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46248.D

(5) 2-Methylnaphthalene (T)

5.77min 0.00ug/L d

response 0

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 0.00 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-019-1010

Sample Date/Time: 11/2/10 09:20

File ID: D46249.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011003-04

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 18:50

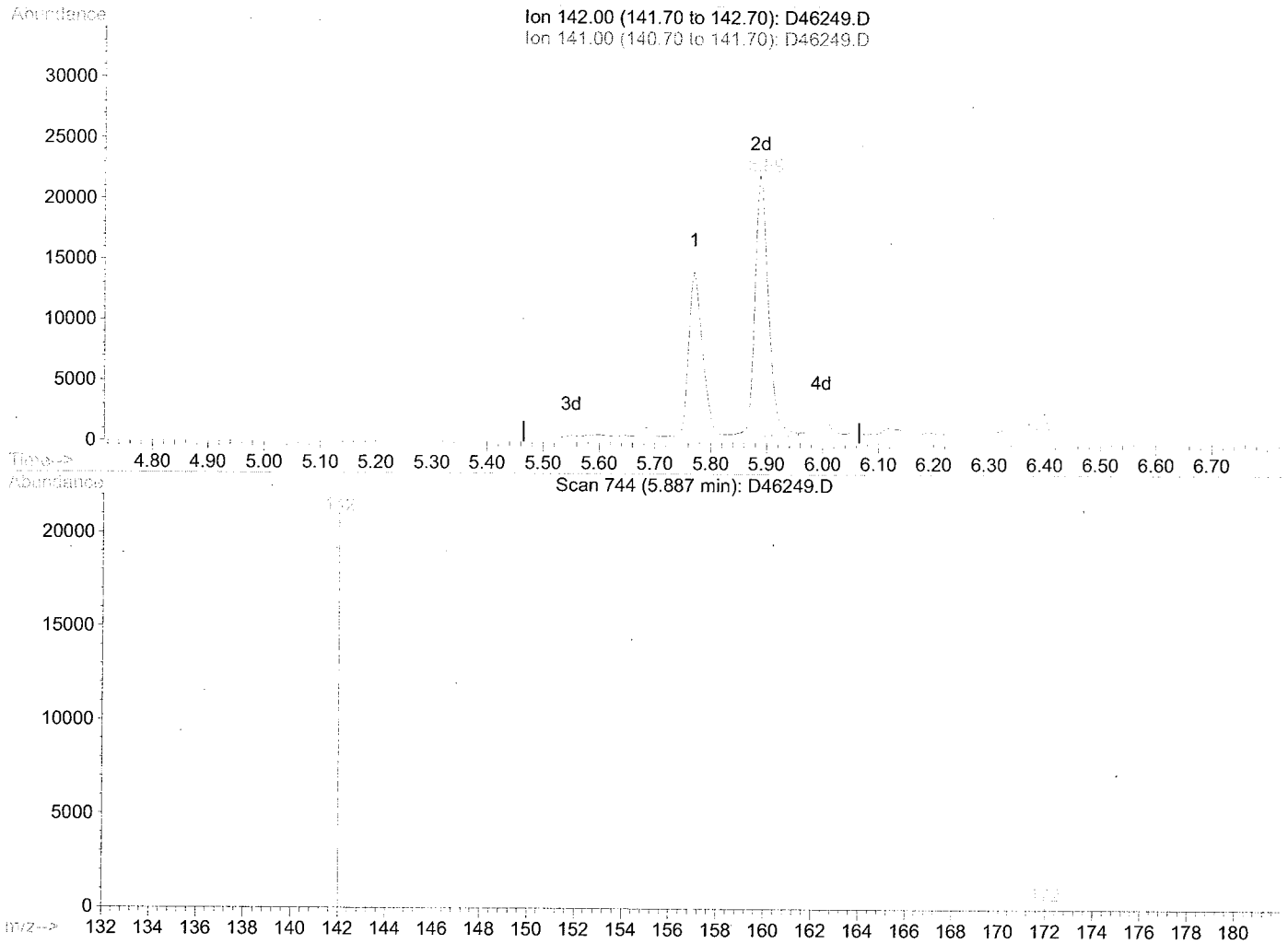
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 280 | J | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46249.D Vial: 9
Acq On : 15 Nov 2010 18:50 Operator: JI
Sample : 1011003-04 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:51 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46249.D

(5) 2-Methylnaphthalene (T)

5.89min 283.10ug/L m

response 36123

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-022-1010

Sample Date/Time: 11/2/10 10:50

File ID: D46250.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011003-05

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 19:14

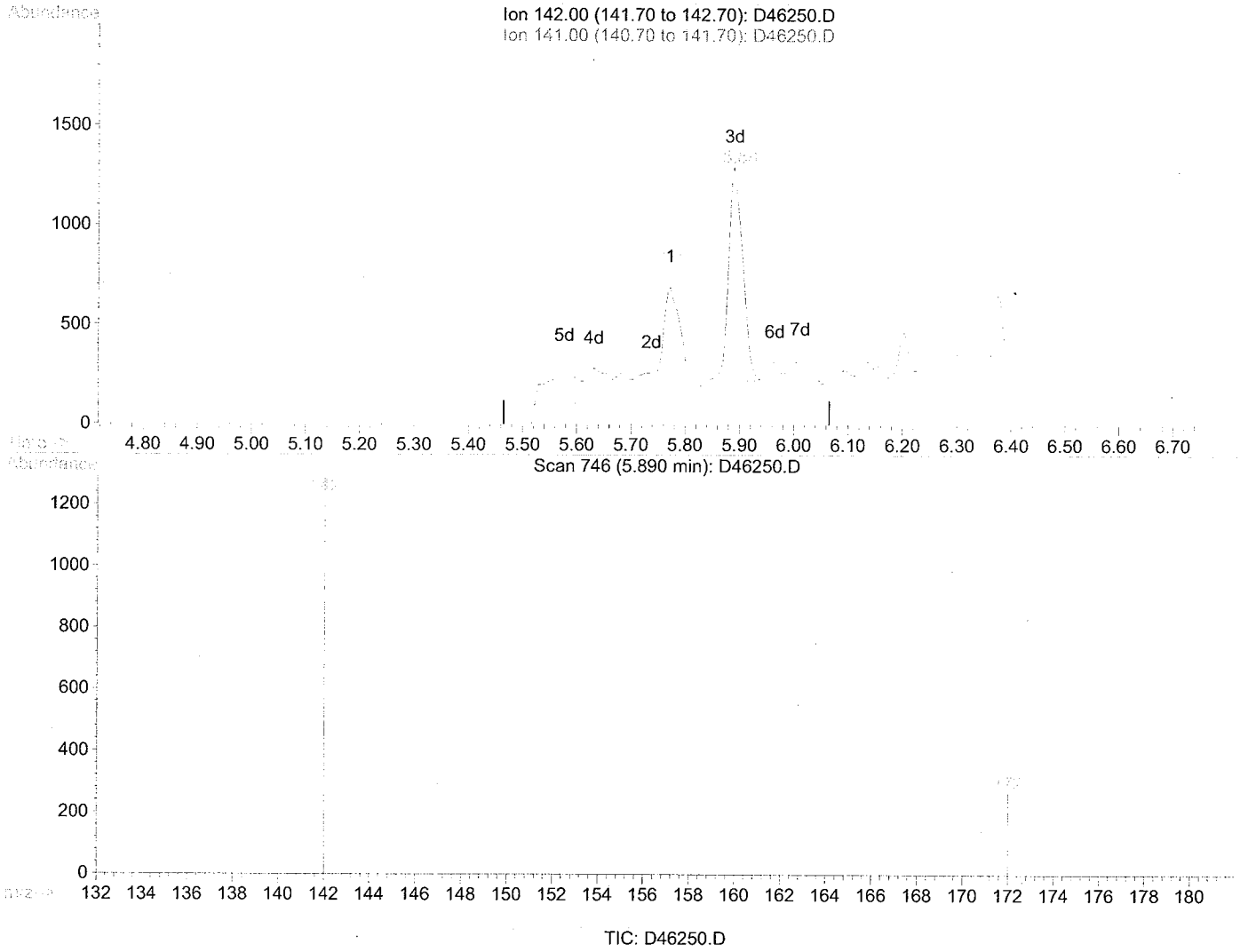
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46250.D Vial: 10
Acq On : 15 Nov 2010 19:14 Operator: JI
Sample : 1011003-05 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:51 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46250.D

(5) 2-Methylnaphthalene (T)

5.89min 15.21ug/L m

response 1912

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-023-1010

Sample Date/Time: 11/2/10 10:00

File ID: D46251.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011003-06

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 19:29

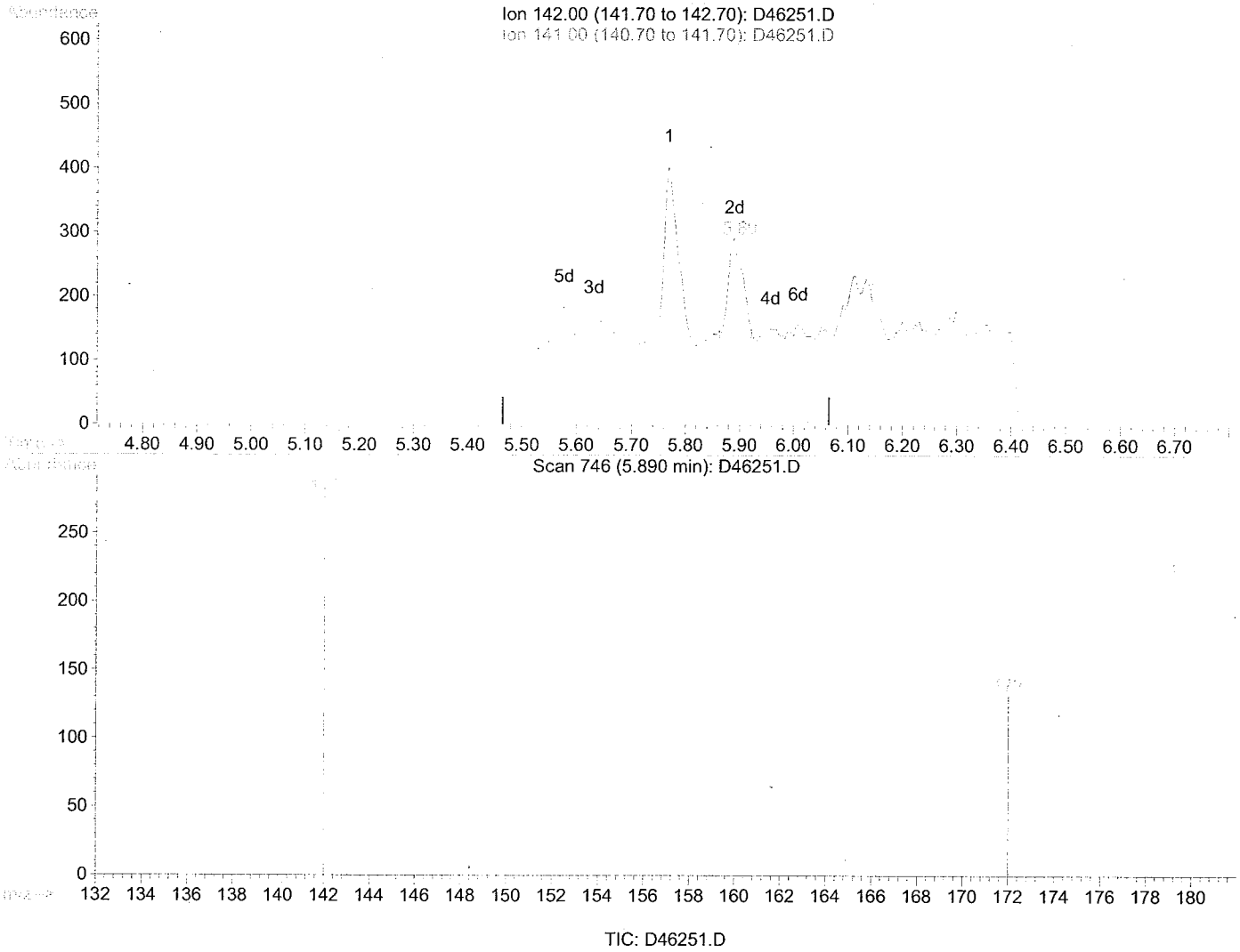
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46251.D Vial: 11
Acq On : 15 Nov 2010 19:39 Operator: JI
Sample : 1011003-06 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:51 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




(5) 2-Methylnaphthalene (T)

5.89min 2.30ug/L m

response 284

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-FD002-1010

Sample Date/Time: 11/2/10 00:00

File ID: D46252.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011003-08

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 20:03

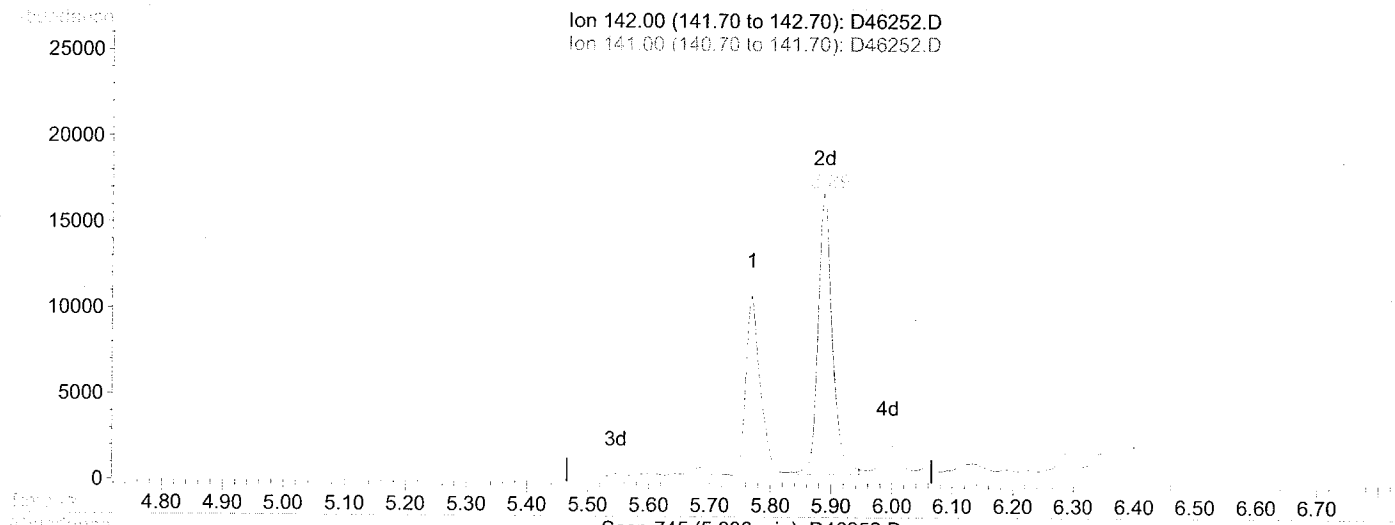
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 190 | J | 50 | 1 | ng/L |

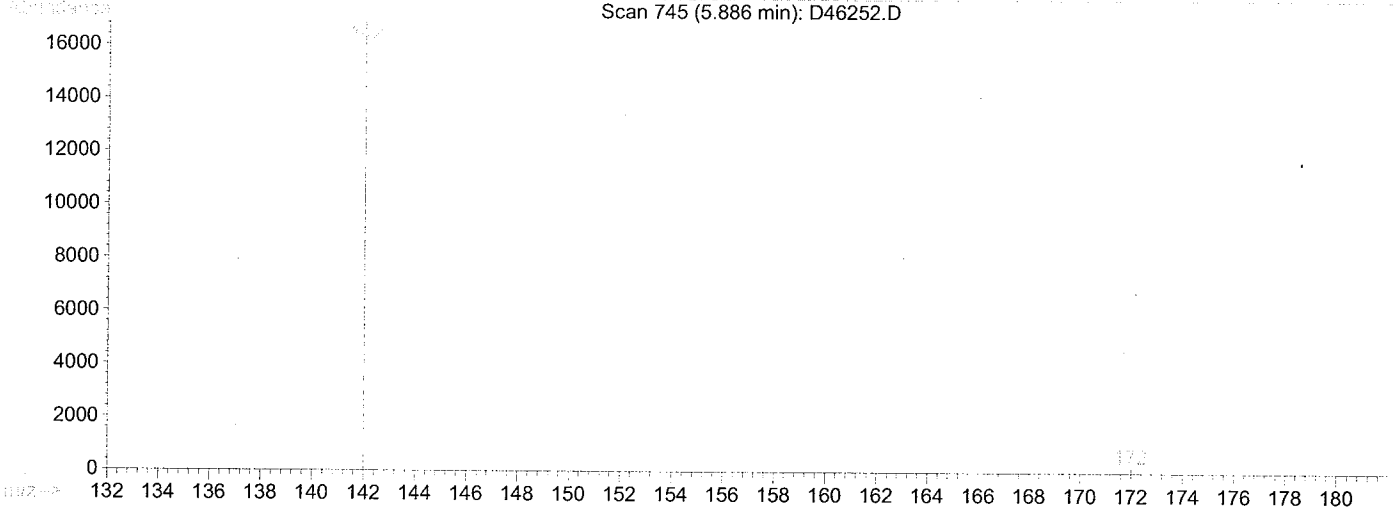
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46252.D Vial: 12
Acq On : 15 Nov 2010 20:03 Operator: JI
Sample : 1011003-08 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:51 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46252.D

(5) 2-Methylnaphthalene (T)

5.89min 193.31ug/L m

response 26493

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-FD003-1010

Sample Date/Time: 11/2/10 00:00

File ID: D46253.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011003-09

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 20:28

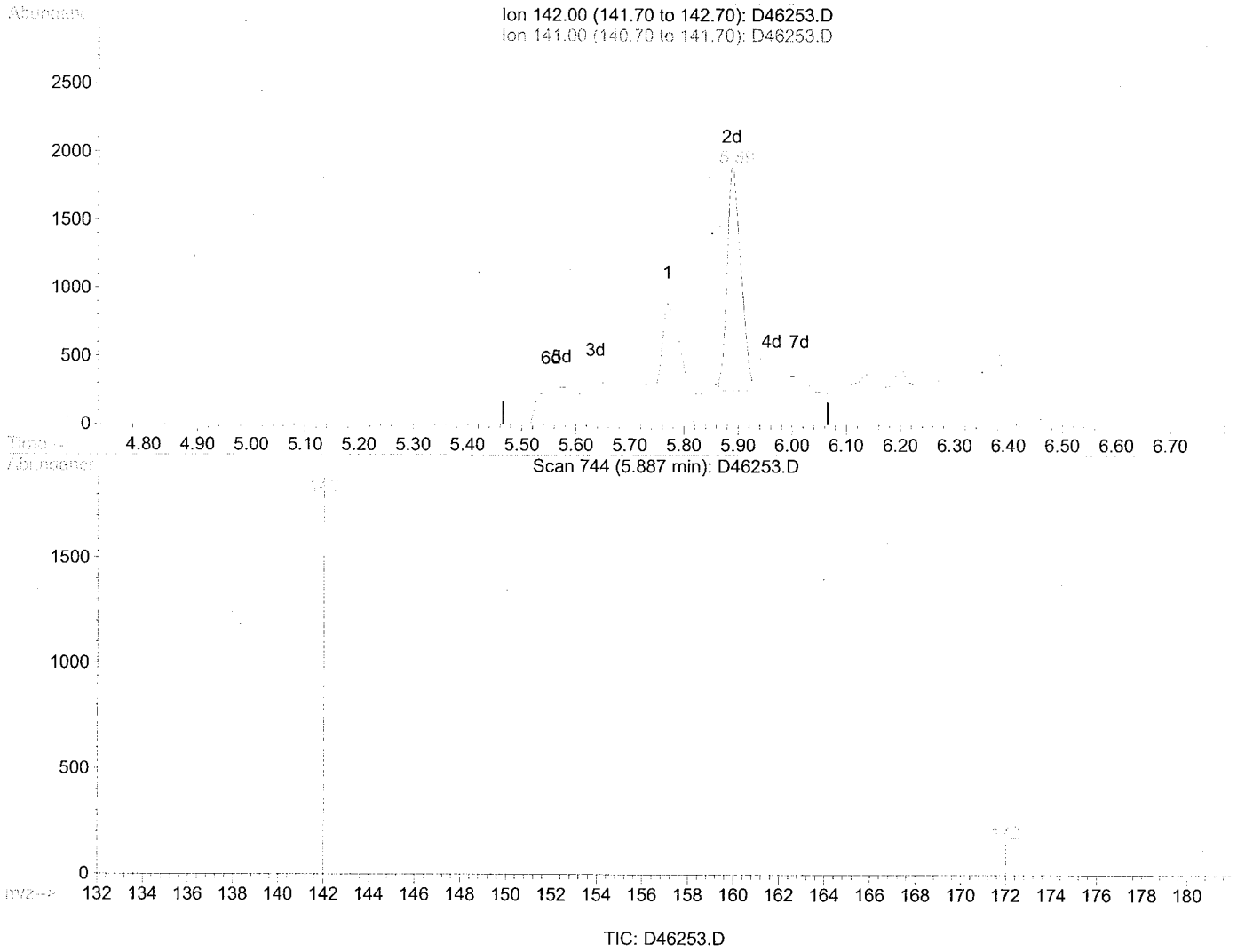
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46253.D Vial: 13
Acq On : 15 Nov 2010 20:28 Operator: JI
Sample : 1011003-09 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:52 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46253.D

(5) 2-Methylnaphthalene (T)

5.89min 20.94ug/L m

response 2891

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-022-1010
Sample Date/Time: 11/02/10 10:50
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011003-05
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 21:40 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 21:40 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 21:40 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 21:40 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 118 % | 25-140 | 1 | 11/15/10 21:40 |
| DCB | 2051-24-3 | 40 % | 30-135 | 1 | 11/15/10 21:40 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD003-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011003-09
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 22:12 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 22:12 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 22:12 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 22:12 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 126 % | 25-140 | 1 | 11/15/10 22:12 |
| DCB | 2051-24-3 | 75 % | 30-135 | 1 | 11/15/10 22:12 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-022-1010
Sample Date/Time: 11/02/10 10:50
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011003-05
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 19:49 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 19:49 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:49 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 19:49 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 19:49 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 19:49 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 19:49 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 75 % | 25-140 | 1 | 11/4/10 19:49 |
| DCB | 2051-24-3 | 54 % | 40-135 | 1 | 11/4/10 19:49 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD003-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011003-09
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/03/10 12:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/4/10 19:17 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 19:17 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/4/10 19:17 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/4/10 19:17 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/4/10 19:17 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/4/10 19:17 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/4/10 19:17 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 108 % | 25-140 | 1 | 11/4/10 19:17 |
| DCB | 2051-24-3 | 49 % | 40-135 | 1 | 11/4/10 19:17 |

# ANALYSIS DATA SHEET

## GKHMS-GW-022-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | SDG: | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011003-05 | File ID: | U0324423.D |
| Sampled: | 11/02/10 10:50 | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 19:49 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | 1 |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 |
| Instrument: | GCECD-U | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

CENTAURI LABS™

# ANALYSIS DATA SHEET

## GKHMS-GW-FD003-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | SDG: | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011003-09 | File ID: | U0324422.D |
| Sampled: | 11/02/10 00:00 | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 19:17 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | 1 |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 |
| Instrument: | GCECD-U | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-FD003-1010

Sample Date/Time: 11/2/10 00:00

File ID: U0324422.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1011003-09

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 19:18

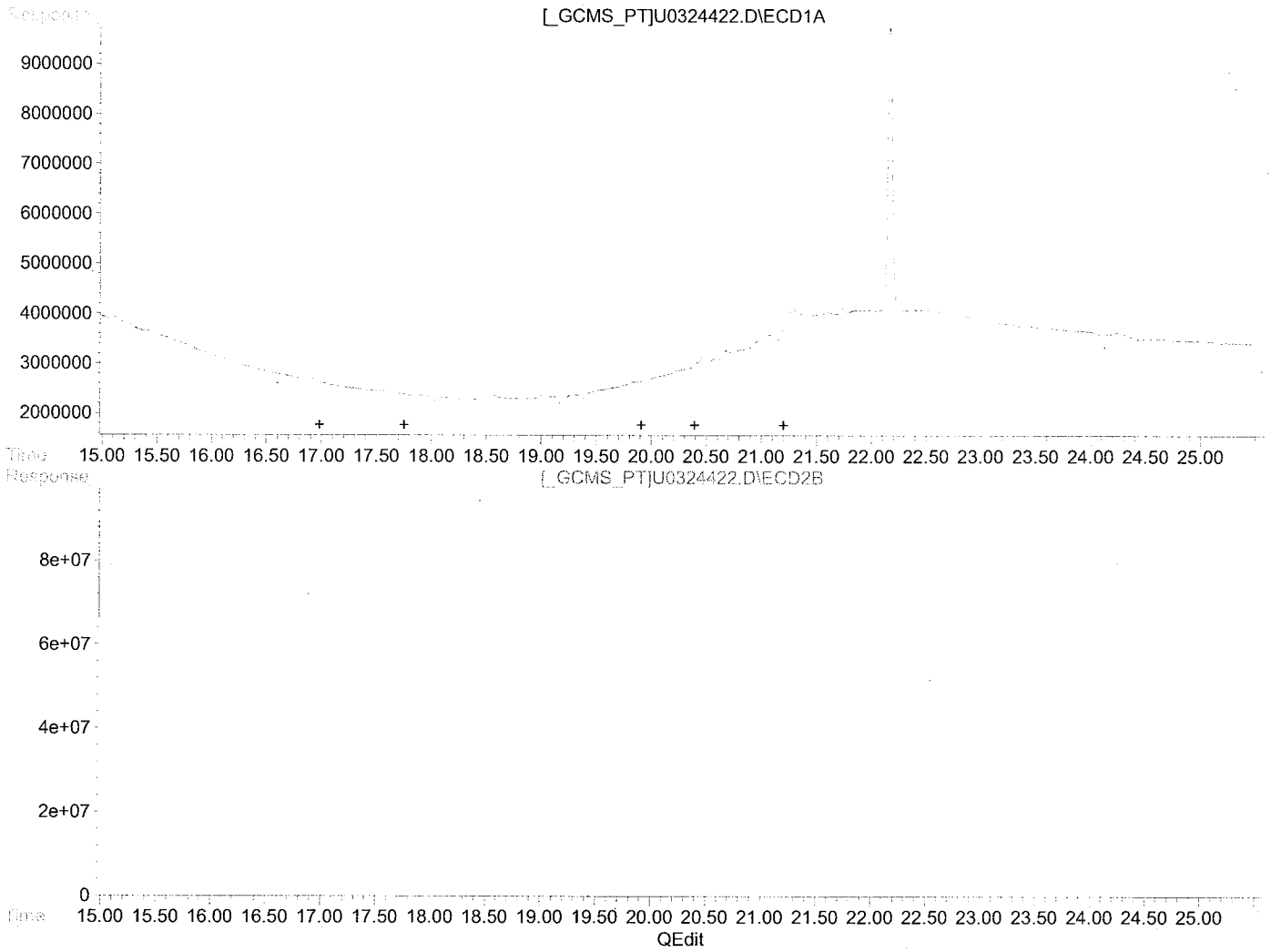
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324422.D\ECD1A.CH Vial: 17
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324422.D\ECD2B.CH
Acq On : 11-4-2010 19:17:48 Operator: RP
Sample : 1011003-09 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:53 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

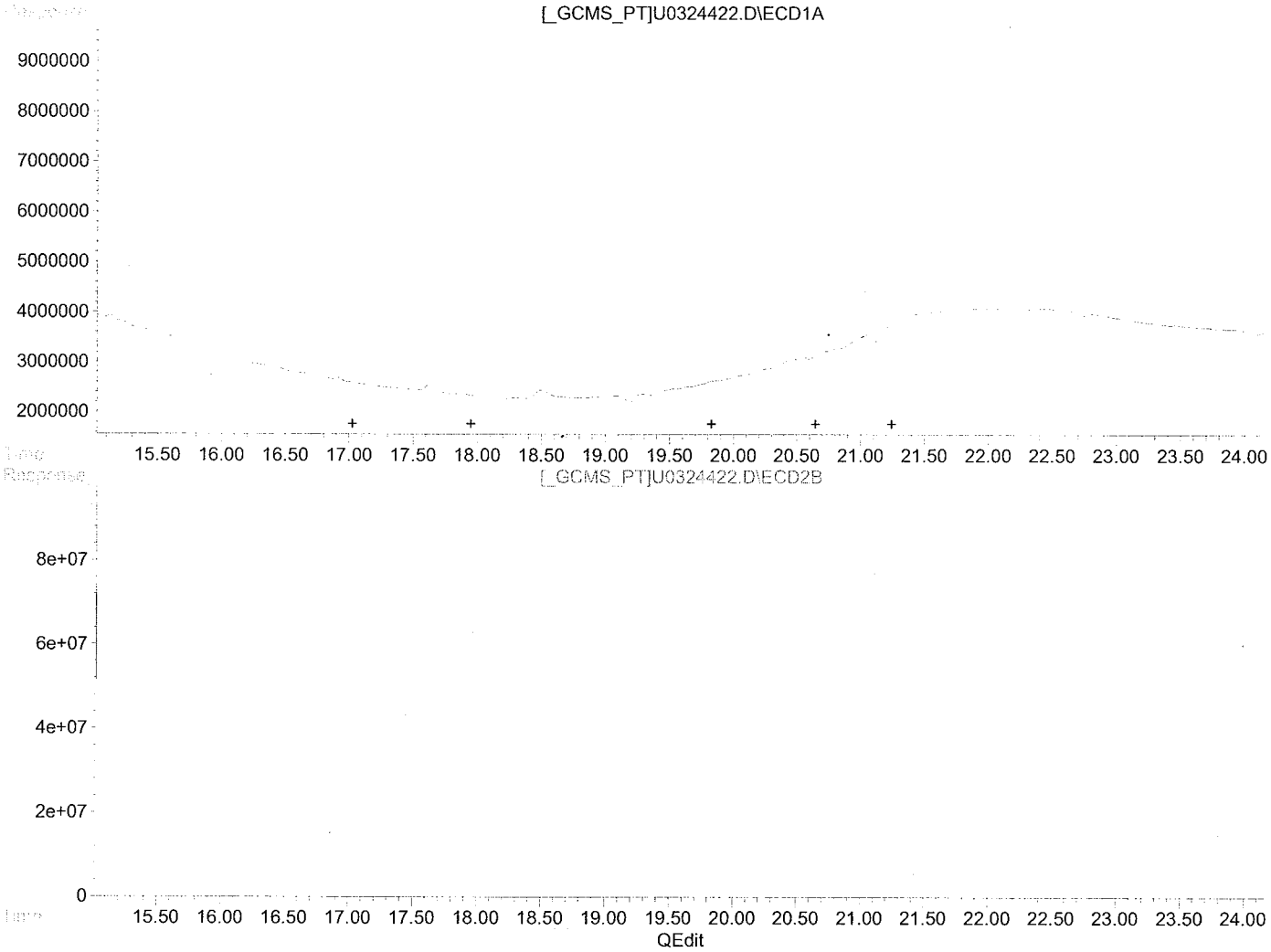
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324422.D\ECD1A.CH Vial: 17
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324422.D\ECD2B.CH
Acq On : 11-4-2010 19:17:48 Operator: RP
Sample : 1011003-09 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:53 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-022-1010

Sample Date/Time: 11/2/10 10:50

File ID: U0324423.D

Analytical Method: SW8082

Sample Matrix: Water

Sample ID: 1011003-05

Percent solids: N/A

Preparation Method: SW 3510C

Prepared Date/Time: 11/3/10 12:15

Analyzed Date/Time: 11/4/10 19:50

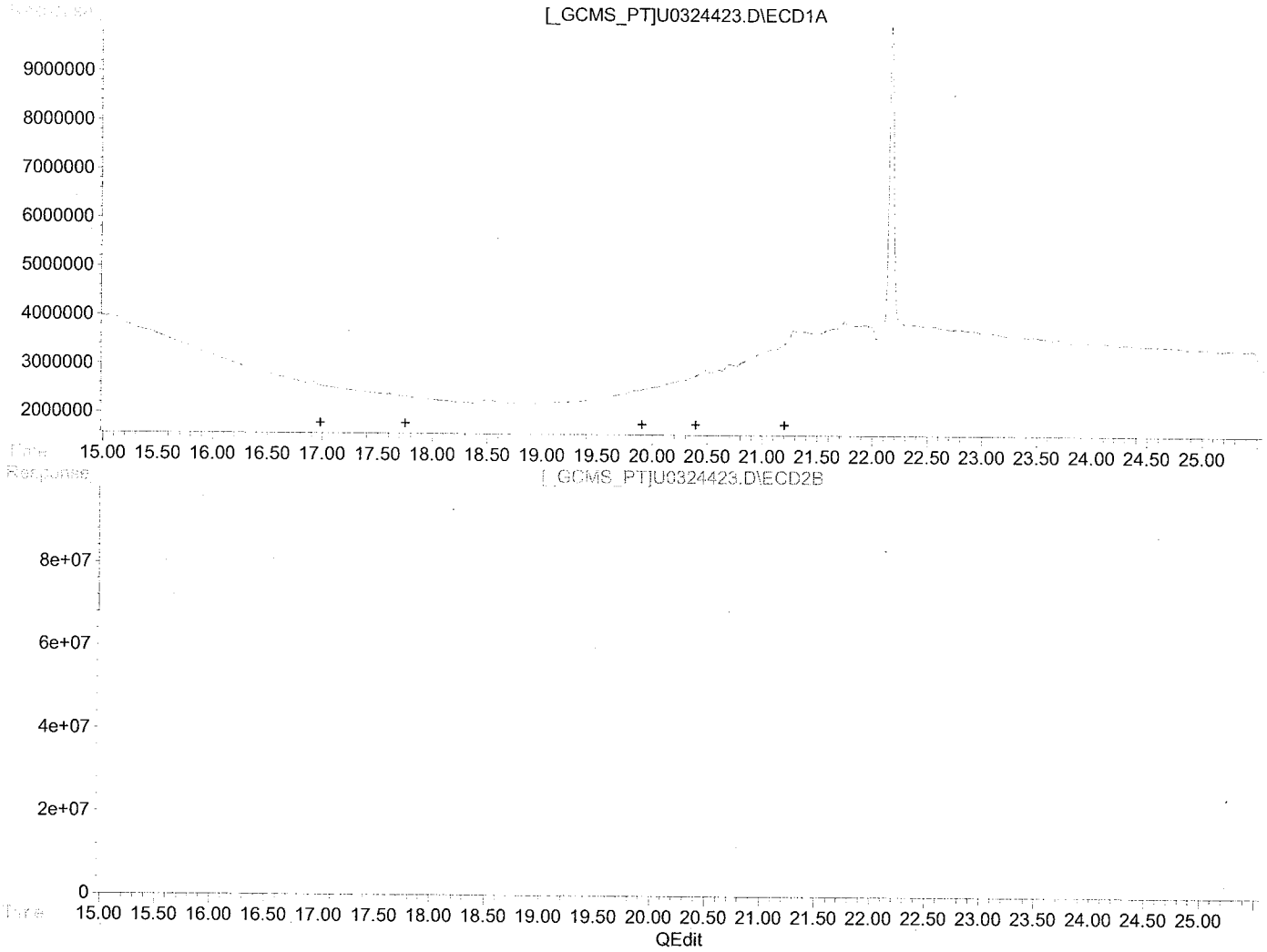
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 1.0 | 1 | ug/L |
| Ar-1268 | 11100-14-4 | BQL | U | 1.0 | 1 | ug/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324423.D\ECD1A.CH Vial: 18
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324423.D\ECD2B.CH
Acq On : 11-4-2010 19:49:53 Operator: RP
Sample : 1011003-05 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:54 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

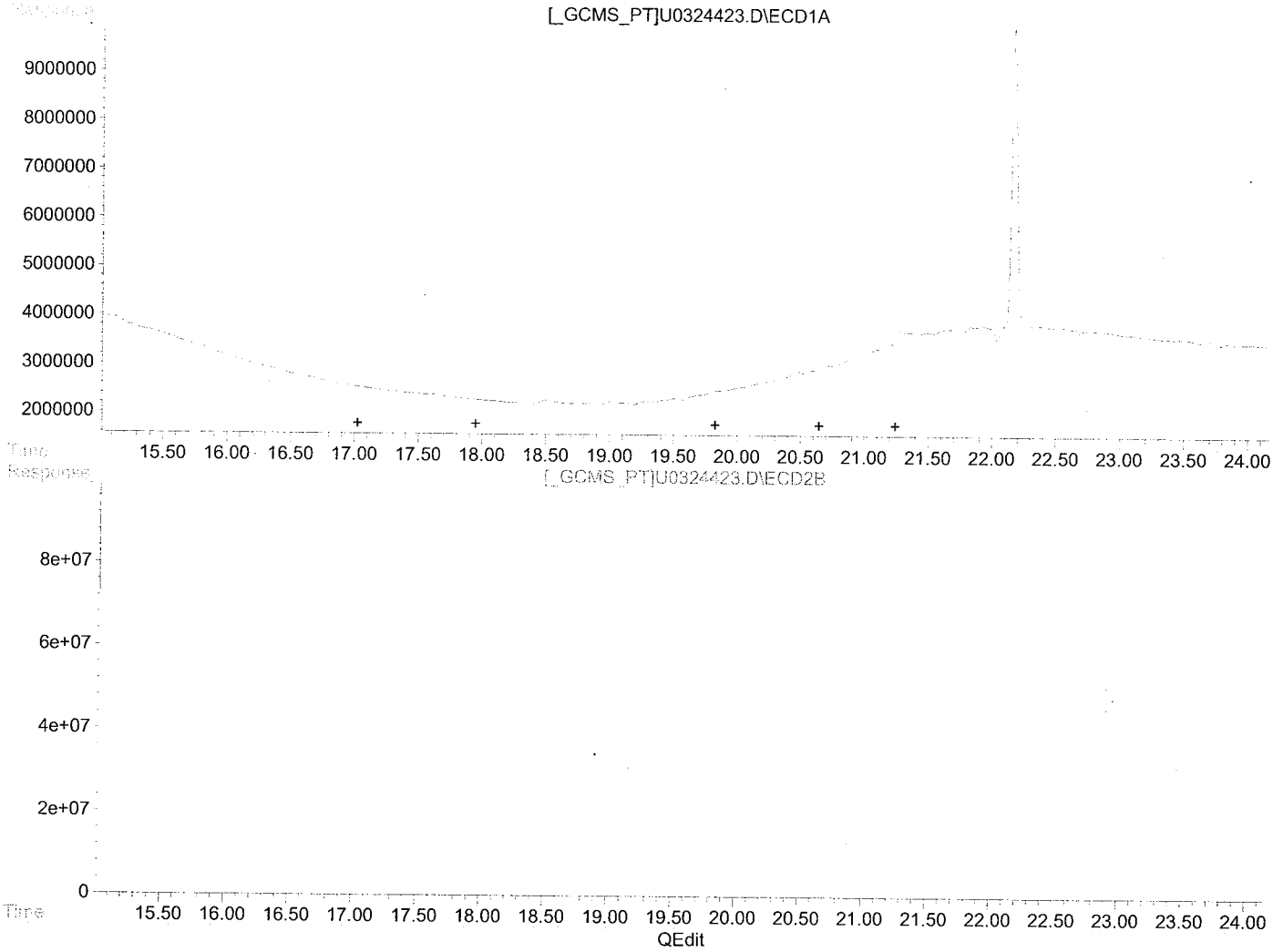
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324423.D\ECD1A.CH Vial: 18
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\110410AB\110410\U0324423.D\ECD2B.CH
Acq On : 11-4-2010 19:49:53 Operator: RP
Sample : 1011003-05 Inst : GCECD-U
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Feb 2 10:54 2011 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

# APPENDIX C

## SUPPORT DOCUMENTATION

## SAMPLE RECIEPT

Nine water samples were received on 11/03/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/06/2010.

## VOLATILES

Nine water samples were analyzed for volatile organic compounds by the SW846 method 8260B.
The samples were analyzed within the holding time.

All surrogate recoveries and internal standard responses were within the QC limits.

A matrix spike and matrix spike duplicate were performed on sample GKHMS-GW-018-1010.
The recovery of four analytes in the MS and five analytes in the MSD were outside QC limits. The % RPD for three compounds was above the QC limits for the pair.

A laboratory control sample was analyzed along with the batch.

Recoveries of two compounds in the LCS were above the QC limits.
Because those compounds were not detected above the reporting limit in the associated client samples, there is no effect on the results reported. The recoveries of four analytes were below QC limits in the LCS. Because that compound was not detected above the method detection limit in the samples, the data is not affected.

The response for three compounds was above the QC limits in the daily CCV and one was below QC limits. None of the affected compounds were detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

## SW8270LL-PAH SIM

Seven water samples were extracted by method 3520C. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
Sample GKHMS-GW-017-1010 required reanalysis at 10X dilution to fit the results within the calibration range.
All surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.

Matrix spike and matrix spike duplicate analyses were performed on sample GKHMS-GW-018-1010. Three spike recoveries were slightly above the QC.
A laboratory control sample was extracted and analyzed with this batch. Six spike recoveries were above the QC.

**PCBs**

Two water samples were extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead, a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

**PESTICIDES**

Two water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. All recoveries were within the QC limits.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011003

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

Pesticides

Raw data and evaluation reports for Chlordane and Toxaphene daily continuing check standards are provided.

PCBs

The complete original PCB data package is provided.
Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Virginia Zusman, Laboratory Director
Chemtech

2/4/2011

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-6

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/01/2010 | GKHMS-TB-03 | 08:00 | SW846 8260B | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 11/02/2010 | GKHMS-GW-017-1010 | 08:40 | SW846 8260B | GKHMS-GW017 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-017-1010 | 08:40 | SW846 8720D/8270DSIM | GKHMS-GW017 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-017-1010 | 08:40 | SW846 6020A | GKHMS-GW017 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-018-1010 | 08:00 | SW846 8260B | GKHMS-GW018 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | run ms/msd |
| 11/02/2010 | GKHMS-GW-018-1010 | 08:00 | SW846 8720D/8270DSIM | GKHMS-GW018 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | run ms/msd |
| 11/02/2010 | GKHMS-GW-018-1010 | 08:00 | SW846 6020A | GKHMS-GW018 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | run ms/msd |
| 11/02/2010 | GKHMS-GW-019-1010 | 09:20 | SW846 8260B | GKHMS-GW019 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-019-1010 | 09:20 | SW846 8720D/8270DSIM | GKHMS-GW019 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-019-1010 | 09:20 | SW846 6020A | GKHMS-GW019 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | SW846 8260B | GKHMS-GW022 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | SW846 8720D/8270DSIM | GKHMS-GW022 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | SW846 6020A | GKHMS-GW022 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | SW846 8082A | GKHMS-GW022 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | SW846 8081B | GKHMS-GW022 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-023-1010 | 10:00 | SW846 8260B | GKHMS-GW023 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-023-1010 | 10:00 | SW846 8720D/8270DSIM | GKHMS-GW023 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-023-1010 | 10:00 | SW846 6020A | GKHMS-GW023 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD001-1010 | 00:00 | SW846 8260B | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-FD001-1010 | 00:00 | SW846 6020A | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD001-1010 | 00:00 | SW846 8720D/8270DSIM | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD002-1010 | 00:00 | SW846 8260B | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |

1011003

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-GW-FD002-1010 | 00:00 | **SW846 8720D/8270DSIM** | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD002-1010 | 00:00 | **SW846 6020A** | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 6020A** | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8260B** | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8720D/8270DSIM** | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8081B** | QC | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8082A** | QC | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By:<br>**Gary Braganza** | Date:<br>11/02/2010 | Time:<br>15:32 | Received By:<br>**Federal Express** | Date:<br>11/02/2010 | Time:<br>16:32 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date:<br>11/3/10 | Time:<br>10:00 |

Comments:

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1011003 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 11/3/2010 9:38:00AM |
| Date Received: | 11/3/2010 10:10:00AM | Logged In By: | Chino Ortiz |
| Received By: | Chino Ortiz | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

Shipping Container in good condition? Y

Custody seals present on shipping container? Y

Condition: *Intact-signed and dated*

Chain-of-Custody present? Y

COC agrees with sample labels? Y

COC signed? Y

Packing present in shipping container? Y

Custody seals present on sample bottles? N

Condition: *Intact*

Samples intact? Y

Sufficient volume for requested tests? Y

Preservation confirmed? Y

Are there Volatiles samples present? N

Has Zero Headspace? N/A

Total number of bottles:

Total number of samples: 9

Comments:

**SDG** 1011003

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | UG/L | GKHMS-GW-018-1010 | 1011003-03 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-FD001-1010 | 1011003-07 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-FD002-1010 | 1011003-08 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-FD003-1010 | 1011003-09 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-FD003-1010 | 1011003-09 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |
| OV | UG/L | GKHMS-GW-017-1010 | 1011003-02 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-022-1010 | 1011003-05 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-023-1010 | 1011003-06 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-GW-019-1010 | 1011003-04 | NM | 11/02/2010 | 11/05/2010 | 11/05/2010 | 3 | 0 | 3 |
| OV | UG/L | GKHMS-TB-03 | 1011003-01 | NM | 11/01/2010 | 11/05/2010 | 11/05/2010 | 4 | 0 | 4 |
| SIM | NG/L | GKHMS-GW-017-1010 | 1011003-02 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |
| SIM | NG/L | GKHMS-GW-017-1010-DL | 1011003-02RE1 | NM | 11/02/2010 | 11/09/2010 | 11/16/2010 | 7 | 7 | 14 |
| SIM | NG/L | GKHMS-GW-018-1010 | 1011003-03 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |
| SIM | NG/L | GKHMS-GW-019-1010 | 1011003-04 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |
| SIM | NG/L | GKHMS-GW-022-1010 | 1011003-05 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| SIM | NG/L | GKHMS-GW-023-1010 | 1011003-06 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |
| SIM | NG/L | GKHMS-GW-FD002-1010 | 1011003-08 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |
| SIM | NG/L | GKHMS-GW-FD003-1010 | 1011003-09 | NM | 11/02/2010 | 11/09/2010 | 11/15/2010 | 7 | 6 | 13 |
| PCB | UG/L | GKHMS-GW-FD003-1010 | 1011003-09 | NM | 11/02/2010 | 11/03/2010 | 11/04/2010 | 1 | 1 | 2 |
| PCB | UG/L | GKHMS-GW-022-1010 | 1011003-05 | NM | 11/02/2010 | 11/03/2010 | 11/04/2010 | 1 | 1 | 2 |
| PEST | UG/L | GKHMS-GW-022-1010 | 1011003-05 | NM | 11/02/2010 | 11/03/2010 | 11/15/2010 | 1 | 12 | 13 |
| PEST | UG/L | GKHMS-GW-FD003-1010 | 1011003-09 | NM | 11/02/2010 | 11/03/2010 | 11/15/2010 | 1 | 12 | 13 |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-GW-017-1010 | 1011003-02 | SW8260B | Water | 11/2/2010 | 11/3/2010 |
| | | SW8270C SIM | | | |
| | 1011003-02RE1 | SW8270C SIM | | | |
| GKHMS-GW-018-1010 | 1011003-03 | SW8260B | Water | 11/2/2010 | 11/3/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-019-1010 | 1011003-04 | SW8260B | Water | 11/2/2010 | 11/3/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-022-1010 | 1011003-05 | SW8081B | Water | 11/2/2010 | 11/3/2010 |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-023-1010 | 1011003-06 | SW8260B | Water | 11/2/2010 | 11/3/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-FD001-1010 | 1011003-07 | SW8260B | Water | 11/2/2010 | 11/3/2010 |
| GKHMS-GW-FD002-1010 | 1011003-08 | SW8260B | Water | 11/2/2010 | 11/3/2010 |
| | | SW8270C SIM | | | |
| GKHMS-GW-FD003-1010 | 1011003-09 | SW8081B | Water | 11/2/2010 | 11/3/2010 |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-TB-03 | 1011003-01 | SW8260B | Water | 11/1/2010 | 11/3/2010 |

# NAS KEY WEST
# WATER DATA
# 1011003

| FRACTION | CHEMICAL | GKHMS-GW-017-1010 | UNITS | GKHMS-GW-FD001-101( | RPD | D |
|---|---|---|---|---|---|---|
| PAH | 1-METHYLNAPHTHALENE | 16 J | UG/L | ND | 200.00 | 16.00 ok |
| PAH | ANTHRACENE | 0.377 | UG/L | ND | 200.00 | 0.38 ok |
| PAH | FLUORANTHENE | 0.117 | UG/L | ND | 200.00 | 0.12 ok |
| PAH | FLUORENE | 1.12 | UG/L | ND | 200.00 | 1.12 ok |
| PAH | PHENANTHRENE | 2.57 | UG/L | ND | 200.00 | 2.57 ok |
| PAH | PYRENE | 0.203 | UG/L | ND | 200.00 | 0.20 ok |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# NAS KEY WEST
# WATER DATA
# 1011003

| FRACTION | CHEMICAL | GKHMS-GW-022-1010 | UNITS | GKHMS-GW-FD003-101( | RPD | D |
|---|---|---|---|---|---|---|
| PAH | ACENAPHTHENE | 0.0663 | UG/L | 0.0779 | 16.09 | 0.01 |
| PAH | FLUORENE | 0.0523 | UG/L | 0.0652 | 21.96 | 0.01 |
| PAH | NAPHTHALENE | ND | UG/L | 0.03 J | 200.00 | 0.03 |

OK

Current RPD Quality Control Limit: 30 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

# NAS KEY WEST
# WATER DATA
# 1011003

| FRACTION | CHEMICAL | GKHMS-GW-019-1010 | UNITS | GKHMS-GW-FD002-101( | RPD | D | |
|---|---|---|---|---|---|---|---|
| PAH | 1-METHYLNAPHTHALENE | 0.28 J | UG/L | 0.19 J | 38.30 | 0.09 | ok |
| PAH | 2-METHYLNAPHTHALENE | 0.184 | UG/L | 0.126 | 37.42 | 0.06 | ok |
| PAH | ACENAPHTHENE | 0.143 | UG/L | 0.135 | 5.76 | 0.01 | |
| PAH | ACENAPHTHYLENE | 0.0863 | UG/L | 0.0888 | 2.86 | 0.00 | |
| PAH | FLUORENE | 0.0502 | UG/L | 0.0397 J | 23.36 | 0.01 | |
| PAH | NAPHTHALENE | 0.105 | UG/L | 0.0798 | 27.27 | 0.03 | |
| PAH | PHENANTHRENE | 0.0502 | UG/L | 0.0406 J | 21.15 | 0.01 | |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890183.D | Injection Date: | 11/02/10 |
| Instrument ID: | GCMS-B | Injection Time: | 16:48 |
| Sequence: | S047018 | Lab Sample ID: | S047018-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 20.9 | PASS |
| 75 | 30 - 60% of 95 | 51 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.48 | PASS |
| 173 | Less than 2% of 174 | 0.0442 | PASS |
| 174 | 50 - 200% of 95 | 94.8 | PASS |
| 175 | 5 - 9% of 174 | 7.27 | PASS |
| 176 | 95 - 101% of 174 | 96.3 | PASS |
| 177 | 5 - 9% of 176 | 6.45 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047018-CAL1 | B02890184.D | 11/02/2010 | 17:14:00 |
| Cal Standard | S047018-CAL2 | B02890185.D | 11/02/2010 | 17:41:00 |
| Cal Standard | S047018-CAL3 | B02890186.D | 11/02/2010 | 18:08:00 |
| Cal Standard | S047018-CAL4 | B02890187.D | 11/02/2010 | 18:34:00 |
| Cal Standard | S047018-CAL5 | B02890188.D | 11/02/2010 | 19:01:00 |
| Cal Standard | S047018-CAL6 | B02890189.D | 11/02/2010 | 19:28:00 |
| Cal Standard | S047018-CAL7 | B02890190.D | 11/02/2010 | 19:54:00 |
| Cal Standard | S047018-CAL8 | B02890191.D | 11/02/2010 | 20:21:00 |
| Secondary Cal Check | S047018-SCV1 | B02890193.D | 11/03/2010 | 7:56:00 |

# INITIAL CALIBRATION STANDARDS

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047018 | Instrument: | GCMS-B |
| Calibration: | 0111603 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001918 | VOA Tune (GC/MS-B) | S047018-TUN1 | B02890183.D | 11/02/10 16:48 |
| 0002205 | VOA ICAL 0.5 PPB ELEMENT | S047018-CAL1 | B02890184.D | 11/02/10 17:14 |
| 0002207 | VOA ICAL 1.0 PPB ELEMENT | S047018-CAL2 | B02890185.D | 11/02/10 17:41 |
| 0002208 | VOA ICAL 2.0 PPB ELEMENT | S047018-CAL3 | B02890186.D | 11/02/10 18:08 |
| 0002209 | VOA ICAL 5.0 PPB ELEMENT | S047018-CAL4 | B02890187.D | 11/02/10 18:34 |
| 0002210 | VOA ICAL 10.0 PPB ELEMENT | S047018-CAL5 | B02890188.D | 11/02/10 19:01 |
| 0002211 | VOA ICAL 20.0 PPB ELEMENT | S047018-CAL6 | B02890189.D | 11/02/10 19:28 |
| 0002212 | VOA ICAL 40.0 PPB ELEMENT | S047018-CAL7 | B02890190.D | 11/02/10 19:54 |
| 0002213 | VOA ICAL 50.0 PPB ELEMENT | S047018-CAL8 | B02890191.D | 11/02/10 20:21 |
| 0002214 | VOA MIX SECOND SOURCE ELEMENT | S047018-SCV1 | B02890193.D | 11/03/10 07:56 |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 1.116484 | 8.78287 | | | 15 | |
| 1,1,1-Trichloroethane | 0.6624498 | 8.964297 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.5107566 | 13.43412 | | | 15 | |
| 1,1,2-Trichloroethane | 0.2283942 | 33.04235 | | | 15 | * |
| 1,1-Dichloroethane | 0.7717732 | 12.39146 | | | 15 | |
| 1,1-Dichloroethene | 0.3711489 | 11.32993 | | | 15 | |
| 1,1-Dichloropropene | 1.087045 | 25.28223 | | | 15 | * |
| 1,2,3-Trichlorobenzene | 9.684893E-02 | 63.57313 | 0.9832031 | | | |
| 1,2,3-Trichloropropane | 0.4473402 | 10.60114 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.1341797 | 63.44623 | 0.9839389 | | | |
| 1,2,4-Trimethylbenzene | 5.114888 | 20.03623 | 0.9985987 | | | |
| 1,2-Dibromo-3-chloropropane | 1.014216E-02 | 18.75626 | | | 15 | * |
| 1,2-Dibromoethane | 0.4713555 | 9.195251 | | | 15 | |
| 1,2-Dichlorobenzene | 0.3515131 | 10.70968 | | 0.9992979 | | |
| 1,2-Dichloroethane | 0.5246059 | 41.2223 | | | 15 | * |
| 1,2-Dichloroethene (total) | 0.5027585 | 8.233519 | | | 15 | |
| 1,2-Dichloropropane | 0.5683593 | 31.66195 | | | 15 | * |
| 1,3,5-Trimethylbenzene | 5.952263 | 14.20284 | | | 15 | |
| 1,3-Dichlorobenzene | 2.43776 | 14.29359 | | | 15 | |
| 1,3-Dichloropropane | 1.091156 | 9.968286 | | | 15 | |
| 1,4-Dichlorobenzene | 2.374472 | 12.58217 | | | 15 | |
| 2,2-Dichloropropane | 0.3365477 | 9.227036 | | | 15 | |
| 2-Butanone | 7.242459E-02 | 32.46569 | | | 15 | * |
| 2-Chloroethylvinyl Ether | 8907.764 | 50.18028 | 0.9980411 | | | |
| 2-Chlorotoluene | 4.631978 | 9.316767 | | | 15 | |
| 2-Hexanone | 0.2190266 | 6.713678 | | | 15 | |
| 4-Chlorotoluene | 4.95554 | 12.37025 | | | 15 | |

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# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.4276112 | 30.61629 | 0.9991402 | | | |
| Acetone | 0.0456676 | 39.26457 | | 0.9996086 OK | | |
| Acetonitrile | 18346.21 | 13.78049 | 0.9962317 | | | |
| Acrylonitrile | 43710.6 | 9.625617 | | | 15 | |
| Benzene | 2.819357 | 27.91782 | | | 15 | * |
| Bromobenzene | 1.278368 | 7.367428 | | | 15 | |
| Bromochloromethane | 0.1022042 | 10.4447 | | | 15 | |
| Bromodichloromethane | 0.6221092 | 29.48529 | | | 15 | * |
| Bromoform | 0.3684413 | 9.2223 | | | 15 | |
| Bromomethane | 0.080217 | 30.2169 | 0.9964676 | | | |
| Carbon disulfide | 1.261127 | 12.00646 | | | 15 | |
| Carbon tetrachloride | 0.7442417 | 13.15656 | | | 15 | |
| Chlorobenzene | 3.699172 | 7.113433 | | | 15 | |
| Chlorodibromomethane | 0.6831609 | 9.045344 | 0.9979304 | | | |
| Chloroethane | 0.3386901 | 16.14272 | 0.9998514 OK | | | |
| Chloroform | 0.6088983 | 6.842336 | | | 15 | |
| Chloromethane | 0.5083799 | 14.52575 | | | 15 | |
| cis-1,2-Dichloroethene | 0.3758816 | 5.663625 | | | 15 | |
| cis-1,3-Dichloropropene | 0.4054395 | 20.34171 | | | 15 | * |
| Cyclohexane | 1292555 | 32.68008 | | | 15 | * |
| Dibromomethane | 0.1725585 | 36.68483 | | | 15 | * |
| Dichlorodifluoromethane | 0.3558482 | 13.16741 | | | 15 | |
| Ethyl methacrylate | 211158.5 | 24.84804 | | | 15 | * |
| Ethylbenzene | 7.575219 | 9.713854 | | | 15 | |
| Freon 113 | 1293474 | 15.78787 | | | 15 | * |
| Hexachlorobutadiene | 0.2714185 | 37.07245 | | | 15 | * |
| Iodomethane | 3599342 | 12.55451 | | | 15 | |

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# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111603 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/2/2010 4:48:59PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 5258.805 | 43.50744 | | | 15 | * |
| Isopropylbenzene | 7.217441 | 13.32835 | | | 15 | |
| m,p-Xylenes | 2.975394 | 8.976698 | | | 15 | |
| Methacrylonitrile | 53524.73 | 23.64737 | | | 15 | * |
| Methyl Acetate | 31372.81 | 15.14661 | | | 15 | * |
| Methyl tert-Butyl Ether | 0.4306216 | 18.45499 | 0.9976476 | | | |
| Methylcyclohexane | 1143584 | 34.18692 | 0.9910474 | | | |
| Methylene Chloride | 0.3506711 | 39.63032 | | 0.9978228 | | |
| Methylmethacrylate | 733813.5 | 30.1738 | | | 15 | * |
| Naphthalene | 0.1034311 | 50.15162 | 0.9766376 | | | |
| n-Butylbenzene | 4.34243 | 45.61511 | 0.9977579 | | | |
| n-Propylbenzene | 8.565694 | 14.07401 | | | 15 | |
| o-Xylene | 2.489593 | 9.112564 | 0.9996328 | | | |
| p-Isopropyltoluene | 6.076664 | 23.19845 | 0.9973411 | | | |
| Propionitrile | 15194.65 | 27.87815 | | | 15 | * |
| sec-Butylbenzene | 8.048094 | 19.26544 | 0.9965027 | | | |
| Styrene | 3.786209 | 10.74699 | | | 15 | |
| tert-Butylbenzene | 5.062972 | 16.1811 | 0.9990533 | | | |
| Tetrachloroethene | 2.138238 | 13.15271 | | | 15 | |
| Toluene | 1.743137 | 28.86084 | | | 15 | * |
| trans-1,2-Dichloroethene | 0.6296353 | 10.42258 | | | 15 | |
| trans-1,3-Dichloropropene | 0.4054395 | 20.34171 | | | 15 | * |
| Trichloroethene | 0.7738535 | 33.79619 | | | 15 | * |
| Trichlorofluoromethane | 0.8976513 | 12.19688 | | | 15 | |
| Vinyl acetate | 241788.3 | 21.39966 | | | 15 | * |
| Vinyl chloride | 0.4399842 | 8.081486 | | | 15 | |
| Xylene (Total) | 2.813461 | 8.877199 | | | 15 | |

CENTAURI LABS™

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 11.3 | 1.116484 | 1.261601 | | 13.0 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.5 | 0.6624498 | 0.697089 | | 5.2 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 10.7 | 0.5107566 | 0.5448295 | | 6.7 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 10.3 | 0.2283942 | 0.2104327 | | -7.9 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 8.87 | 0.7717732 | 0.6838138 | | -11.4 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 9.94 | 0.3711489 | 0.3685955 | | -0.7 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 11.6 | 1.087045 | 1.14185 | | 5.0 | 20 | |
| 1,2,3-Trichlorobenzene | L | 10.0 | 9.73 | 9.684893E-02 | 0.1166532 | | -2.7 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 10.4 | 0.4473402 | 0.1617811 | | -63.8 | 20 | * |
| 1,2,4-Trichlorobenzene | L | 10.0 | 9.72 | 0.1341797 | 0.1615187 | | -2.8 | 20 | |
| 1,2,4-Trimethylbenzene | L | 10.0 | 11.6 | 5.114888 | 5.932434 | | 16.0 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 11.9 | 1.014216E-02 | 1.139088E-02 | | 12.3 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 10.6 | 0.4713555 | 0.5020824 | | 6.5 | 20 | |
| 1,2-Dichlorobenzene | Q | 10.0 | 10.6 | 0.3515131 | 0.3921635 | | 5.9 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 10.1 | 0.5246059 | 0.4613697 | | -12.1 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 10.9 | 0.5683593 | 0.553574 | | -2.6 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 11.5 | 5.952263 | 6.645256 | | 11.6 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 11.6 | 2.43776 | 2.837107 | | 16.4 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 10.5 | 1.091156 | 1.147173 | | 5.1 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 11.6 | 2.374472 | 2.751832 | | 15.9 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 10.2 | 0.3365477 | 0.4949447 | | 47.1 | 20 | * |
| 2-Chloroethylvinyl Ether | L | 20.0 | 35.5 | 8907.764 | 16644.05 | | 77.3 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 10.8 | 4.631978 | 5.002964 | | 8.0 | 20 | |
| 2-Hexanone | A | 10.0 | 11.0 | 0.2190266 | 0.2405687 | | 9.8 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 12.0 | 4.95554 | 5.568265 | | 12.4 | 20 | |

CENTAURI LABS™

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | L | 10.0 | 11.9 | 0.4276112 | 0.5086613 | | 19.0 | 20 | |
| Acetone | Q | 10.0 | 13.4 | 0.0456676 | 5.146875E-02 | | 34.2 | 20 | * |
| Acetonitrile | L | 100 | 85.2 | 18346.21 | 17831.37 | | -14.8 | 20 | |
| Acrylonitrile | A | 10.0 | 8.03 | 43710.6 | 49100.2 | | 12.3 | 20 | |
| Benzene | A | 10.0 | 10.7 | 2.819357 | 2.712077 | | -3.8 | 20 | |
| Bromobenzene | A | 10.0 | 10.6 | 1.278368 | 1.348085 | | 5.5 | 20 | |
| Bromochloromethane | A | 10.0 | 10.0 | 0.1022042 | 0.1021656 | | -0.04 | 20 | |
| Bromodichloromethane | A | 10.0 | 10.3 | 0.6221092 | 0.5729184 | | -7.9 | 20 | |
| Bromoform | A | 10.0 | 10.9 | 0.3684413 | 0.4030498 | | 9.4 | 20 | |
| Bromomethane | L | 10.0 | 15.1 | 0.080217 | 9.105054E-02 | | 51.4 | 20 | * |
| Carbon disulfide | A | 10.0 | 9.19 | 1.261127 | 1.140899 | | -9.5 | 20 | |
| Carbon tetrachloride | A | 10.0 | 10.2 | 0.7442417 | 0.7358584 | | -1.1 | 20 | |
| Chlorobenzene | A | 10.0 | 10.7 | 3.699172 | 3.974428 | | 7.4 | 20 | |
| Chlorodibromomethane | L | 10.0 | 11.3 | 0.6831609 | 0.7677271 | | 13.0 | 20 | |
| Chloroethane | L | 10.0 | 9.44 | 0.3386901 | 0.2444077 | | -5.6 | 20 | |
| Chloroform | A | 10.0 | 9.64 | 0.6088983 | 0.5865968 | | -3.7 | 20 | |
| Chloromethane | A | 10.0 | 8.87 | 0.5083799 | 0.4506533 | | -11.4 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 11.3 | 0.3758816 | 0.4193716 | | 11.6 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 10.8 | 0.4054395 | 0.5963415 | | 47.1 | 20 | * |
| Cyclohexane | A | 10.0 | 9.68 | 1292555 | 1345088 | | 4.1 | 20 | |
| Dibromomethane | A | 10.0 | 9.70 | 0.1725585 | 0.1476224 | | -14.5 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 6.64 | 0.3558482 | 0.2362156 | | -33.6 | 20 | * |
| Ethyl methacrylate | A | 10.0 | 9.52 | 211158.5 | 206851.5 | | -2.0 | 20 | |
| Ethylbenzene | A | 10.0 | 10.9 | 7.575219 | 8.285065 | | 9.4 | 20 | |
| Freon 113 | A | 10.0 | 9.18 | 1293474 | 649434 | | -49.8 | 20 | * |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 10.4 | 0.2714185 | 0.2886467 | | 6.3 | 20 | |
| Iodomethane | A | 10.0 | 5.30 | 3599342 | 150821.2 | | -95.8 | 20 | * |
| Isobutyl alcohol | A | 100 | 106 | 5258.805 | 7181.59 | | 36.6 | 20 | * |
| Isopropylbenzene | A | 10.0 | 11.7 | 7.217441 | 8.464713 | | 17.3 | 20 | |
| m,p-Xylenes | A | 20.0 | 22.4 | 2.975394 | 3.3282 | | 11.9 | 20 | |
| Methacrylonitrile | A | 10.0 | 10.8 | 53524.73 | 124961.4 | | 133 | 20 | * |
| Methyl Acetate | A | 10.0 | 6.11 | 31372.81 | 102018.6 | | 225 | 20 | * |
| Methyl tert-Butyl Ether | L | 10.0 | 9.15 | 0.4306216 | 0.3936453 | | -8.5 | 20 | |
| Methylcyclohexane | L | 10.0 | 11.2 | 1143584 | 1310446 | | 12.4 | 20 | |
| Methylene Chloride | Q | 10.0 | 9.45 | 0.3506711 | 0.2686458 | | -5.5 | 20 | |
| Methylmethacrylate | A | 10.0 | 9.56 | 733813.5 | 754175 | | 2.8 | 20 | |
| Naphthalene | L | 10.0 | 9.10 | 0.1034311 | 9.757436E-02 | | -9.0 | 20 | |
| n-Butylbenzene | L | 10.0 | 10.5 | 4.34243 | 6.034982 | | 5.0 | 20 | |
| n-Propylbenzene | A | 10.0 | 10.5 | 8.565694 | 8.96611 | | 4.7 | 20 | |
| o-Xylene | L | 10.0 | 11.2 | 2.489593 | 2.789448 | | 12.0 | 20 | |
| p-Isopropyltoluene | L | 10.0 | 12.0 | 6.076664 | 7.279825 | | 19.8 | 20 | |
| Propionitrile | A | 10.0 | 12.1 | 15194.65 | 17650.4 | | 16.2 | 20 | |
| sec-Butylbenzene | L | 10.0 | 11.5 | 8.048094 | 9.233374 | | 14.7 | 20 | |
| Styrene | A | 10.0 | 10.7 | 3.786209 | 4.047715 | | 6.9 | 20 | |
| tert-Butylbenzene | L | 10.0 | 12.5 | 5.062972 | 6.315792 | | 24.7 | 20 | * |
| Tetrachloroethene | A | 10.0 | 11.7 | 2.138238 | 2.509678 | | 17.4 | 20 | |
| Toluene | A | 10.0 | 10.0 | 1.743137 | 1.572096 | | -9.8 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 8.77 | 0.6296353 | 0.3531023 | | -43.9 | 20 | * |
| trans-1,3-Dichloropropene | A | 10.0 | 10.4 | 0.4054395 | 0.3858979 | | -4.8 | 20 | |
| Trichloroethene | A | 10.0 | 10.1 | 0.7738535 | 0.6945938 | | -10.2 | 20 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890193.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047018 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S047018-SCV1 | Injection Time: | 07:56 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Trichlorofluoromethane | A | 10.0 | 9.47 | 0.8976513 | 0.849166 | | -5.4 | 20 |
| Vinyl acetate | A | 20.0 | 17.9 | 241788.3 | 226070.9 | | -6.5 | 20 |
| Vinyl chloride | A | 10.0 | 10.1 | 0.4399842 | 0.4424203 | | 0.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890243.D | Injection Date: | 11/05/10 |
| Instrument ID: | GCMS-B | Injection Time: | 08:22 |
| Sequence: | S047021 | Lab Sample ID: | S047021-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 19.7 | PASS |
| 75 | 30 - 60% of 95 | 49.7 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.53 | PASS |
| 173 | Less than 2% of 174 | 0.195 | PASS |
| 174 | 50 - 200% of 95 | 98.1 | PASS |
| 175 | 5 - 9% of 174 | 6.76 | PASS |
| 176 | 95 - 101% of 174 | 96.2 | PASS |
| 177 | 5 - 9% of 176 | 6.44 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047021-CCV1 | B02890244.D | 11/05/2010 | 8:49:00 |
| Blank | B047033-BLK1 | B02890245.D | 11/05/2010 | 9:16:00 |
| LCS | B047033-BS1 | B02890246.D | 11/05/2010 | 10:03:00 |
| GKHMS-TB-03 | 1011003-01 | B02890258.D | 11/05/2010 | 15:26:00 |
| GKHMS-GW-017-1010 | 1011003-02 | B02890259.D | 11/05/2010 | 15:53:00 |
| GKHMS-GW-018-1010 | 1011003-03 | B02890260.D | 11/05/2010 | 16:20:00 |
| GKHMS-GW-019-1010 | 1011003-04 | B02890261.D | 11/05/2010 | 16:47:00 |
| GKHMS-GW-022-1010 | 1011003-05 | B02890262.D | 11/05/2010 | 17:13:00 |
| GKHMS-GW-023-1010 | 1011003-06 | B02890263.D | 11/05/2010 | 17:40:00 |
| GKHMS-GW-FD001-1010 | 1011003-07 | B02890264.D | 11/05/2010 | 18:07:00 |
| GKHMS-GW-FD002-1010 | 1011003-08 | B02890265.D | 11/05/2010 | 18:34:00 |
| GKHMS-GW-FD003-1010 | 1011003-09 | B02890266.D | 11/05/2010 | 19:00:00 |
| Matrix Spike | B047033-MS1 | B02890267.D | 11/05/2010 | 19:27:00 |
| Matrix Spike Dup | B047033-MSD1 | B02890268.D | 11/05/2010 | 19:54:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890244.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047021 | Injection Date: | 11/05/10 |
| Lab Sample ID: | S047021-CCV1 | Injection Time: | 08:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 9.67 | 1.116484 | 1.079102 | | -3.3 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.0 | 0.6624498 | 0.6657361 | | 0.5 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 11.6 | 0.5107566 | 0.5933797 | | 16.2 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 10.5 | 0.2283942 | 0.1905303 | | -16.6 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 9.05 | 0.7717732 | 0.698452 | | -9.5 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 9.33 | 0.3711489 | 0.3463654 | | -6.7 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 10.7 | 1.087045 | 0.9391744 | | -13.6 | 20 | |
| 1,2,3-Trichlorobenzene | L | 10.0 | 10.4 | 9.684893E-02 | 0.1416008 | | 4.4 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 11.2 | 0.4473402 | 0.5070673 | | 13.4 | 20 | |
| 1,2,4-Trichlorobenzene | L | 10.0 | 10.4 | 0.1341797 | 0.1949765 | | 3.9 | 20 | |
| 1,2,4-Trimethylbenzene | L | 10.0 | 10.2 | 5.114888 | 5.983803 | | 1.8 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 8.09 | 1.014216E-02 | 8.661538E-03 | | -14.6 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 10.6 | 0.4713555 | 0.5012819 | | 6.3 | 20 | |
| 1,2-Dichlorobenzene | Q | 10.0 | 10.1 | 0.3515131 | 0.4203053 | | 0.7 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 10.2 | 0.5246059 | 0.4176919 | | -20.4 | 20 | * |
| 1,2-Dichloropropane | A | 10.0 | 10.5 | 0.5683593 | 0.4750886 | | -16.4 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 11.2 | 5.952263 | 6.683451 | | 12.3 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 11.6 | 2.43776 | 2.838921 | | 16.5 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 10.3 | 1.091156 | 1.119322 | | 2.6 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 11.7 | 2.374472 | 2.772206 | | 16.8 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 11.3 | 0.3365477 | 0.378874 | | 12.6 | 20 | |
| 2-Butanone | A | 20.0 | 21.4 | 7.242459E-02 | 6.527984E-02 | | -9.9 | 20 | |
| 2-Chlorotoluene | A | 10.0 | 11.0 | 4.631978 | 5.082338 | | 9.7 | 20 | |
| 2-Hexanone | A | 20.0 | 23.1 | 0.2190266 | 0.252571 | | 15.3 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 11.4 | 4.95554 | 5.675175 | | 14.5 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890244.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047021 | Injection Date: | 11/05/10 |
| Lab Sample ID: | S047021-CCV1 | Injection Time: | 08:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | L | 20.0 | 20.9 | 0.4276112 | 0.3816445 | | 4.4 | 20 | |
| Acetone | Q | 20.0 | 17.5 | 0.0456676 | 3.233664E-02 | | -12.4 | 20 | |
| Acetonitrile | L | 100 | 117 | 18346.21 | 17570.32 | | 16.9 | 20 | |
| Acrylonitrile | A | 50.0 | 47.1 | 43710.6 | 40788.26 | | -6.7 | 20 | |
| Benzene | A | 10.0 | 10.5 | 2.819357 | 2.371364 | | -15.9 | 20 | |
| Bromobenzene | A | 10.0 | 11.0 | 1.278368 | 1.407837 | | 10.1 | 20 | |
| Bromochloromethane | A | 10.0 | 10.6 | 0.1022042 | 0.1088895 | | 6.5 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.82 | 0.6221092 | 0.4888969 | | -21.4 | 20 | * |
| Bromoform | A | 10.0 | 8.27 | 0.3684413 | 0.3048284 | | -17.3 | 20 | |
| Bromomethane | L | 10.0 | 2.43 | 0.080217 | 2.052319E-02 | | -75.7 | 20 | * |
| Carbon disulfide | A | 20.0 | 20.1 | 1.261127 | 1.269567 | | 0.7 | 20 | |
| Carbon tetrachloride | A | 10.0 | 8.64 | 0.7442417 | 0.6428065 | | -13.6 | 20 | |
| Chlorobenzene | A | 10.0 | 10.3 | 3.699172 | 3.797848 | | 2.7 | 20 | |
| Chlorodibromomethane | L | 10.0 | 8.82 | 0.6831609 | 0.6172838 | | -11.8 | 20 | |
| Chloroethane | L | 10.0 | 12.2 | 0.3386901 | 0.352104 | | 21.7 | 20 | * |
| Chloroform | A | 10.0 | 9.82 | 0.6088983 | 0.5977343 | | -1.8 | 20 | |
| Chloromethane | A | 10.0 | 9.91 | 0.5083799 | 0.5040352 | | -0.9 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 10.5 | 0.3758816 | 0.3935467 | | 4.7 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 9.76 | 0.4054395 | 0.32414 | | -20.1 | 20 | * |
| Cyclohexane | A | 10.0 | 11.2 | 1292555 | 1412947 | | 9.3 | 20 | |
| Dibromomethane | A | 10.0 | 10.9 | 0.1725585 | 0.1483915 | | -14.0 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 10.6 | 0.3558482 | 0.3758027 | | 5.6 | 20 | |
| Ethyl methacrylate | A | 10.0 | 11.4 | 211158.5 | 228506.7 | | 8.2 | 20 | |
| Ethylbenzene | A | 10.0 | 10.6 | 7.575219 | 8.035543 | | 6.1 | 20 | |
| Freon 113 | A | 5.00 | 10.5 | 1293474 | 1381955 | | 6.8 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890244.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047021 | Injection Date: | 11/05/10 |
| Lab Sample ID: | S047021-CCV1 | Injection Time: | 08:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 9.06 | 0.2714185 | 0.282526 | | 4.1 | 20 | |
| Iodomethane | A | 10.0 | 10.4 | 3599342 | 3483047 | | -3.2 | 20 | |
| Isopropylbenzene | A | 10.0 | 10.9 | 7.217441 | 7.850167 | | 8.8 | 20 | |
| m,p-Xylenes | A | 20.0 | 22.1 | 2.975394 | 3.286564 | | 10.5 | 20 | |
| Methacrylonitrile | A | 10.0 | 10.6 | 53524.73 | 56734.1 | | 6.0 | 20 | |
| Methyl Acetate | A | 10.0 | 9.94 | 31372.81 | 28889.6 | | -7.9 | 20 | |
| Methyl tert-Butyl Ether | L | 10.0 | 11.2 | 0.4306216 | 0.4262215 | | 11.8 | 20 | |
| Methylcyclohexane | L | 10.0 | 10.1 | 1143584 | 1239228 | | 1.4 | 20 | |
| Methylene Chloride | Q | 10.0 | 9.25 | 0.3506711 | 0.2867381 | | -7.5 | 20 | |
| Methylmethacrylate | A | 10.0 | 11.0 | 733813.5 | 792158.8 | | 8.0 | 20 | |
| Naphthalene | L | 10.0 | 9.48 | 0.1034311 | 0.1149529 | | -5.2 | 20 | |
| n-Butylbenzene | L | 10.0 | 10.2 | 4.34243 | 5.866193 | | 2.0 | 20 | |
| n-Propylbenzene | A | 10.0 | 11.2 | 8.565694 | 9.560248 | | 11.6 | 20 | |
| o-Xylene | L | 10.0 | 10.4 | 2.489593 | 2.740424 | | 4.0 | 20 | |
| p-Isopropyltoluene | L | 10.0 | 10.0 | 6.076664 | 7.132273 | | 0.2 | 20 | |
| Propionitrile | A | 10.0 | 12.0 | 15194.65 | 17320.3 | | 14.0 | 20 | |
| sec-Butylbenzene | L | 10.0 | 10.2 | 8.048094 | 9.350215 | | 1.8 | 20 | |
| Styrene | A | 10.0 | 11.0 | 3.786209 | 4.184239 | | 10.5 | 20 | |
| tert-Butylbenzene | L | 10.0 | 10.3 | 5.062972 | 5.842296 | | 3.0 | 20 | |
| Tetrachloroethene | A | 10.0 | 10.0 | 2.138238 | 2.14453 | | 0.3 | 20 | |
| Toluene | A | 10.0 | 10.4 | 1.743137 | 1.452482 | | -16.7 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 9.32 | 0.6296353 | 0.5867388 | | -6.8 | 20 | |
| trans-1,3-Dichloropropene | A | 10.0 | 9.76 | 0.4054395 | 0.32414 | | -20.1 | 20 | * |
| Trichloroethene | A | 10.0 | 9.71 | 0.7738535 | 0.5966126 | | -22.9 | 20 | * |
| Trichlorofluoromethane | A | 10.0 | 10.6 | 0.8976513 | 0.9470594 | | 5.5 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111603 |
| Lab File ID: | B02890244.D | Calibration Date: | 11/02/10 16:48 |
| Sequence: | S047021 | Injection Date: | 11/05/10 |
| Lab Sample ID: | S047021-CCV1 | Injection Time: | 08:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Vinyl acetate | A | 20.0 | 25.2 | 241788.3 | 307350.5 | | 27.1 | 20 | * |
| Vinyl chloride | A | 10.0 | 11.0 | 0.4399842 | 0.4845485 | | 10.1 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047033-BLK1 | Batch: | B047033 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B047033-MSD1 | B02890268.D | 19:54 |
| Matrix Spike | B047033-MS1 | B02890267.D | 19:27 |
| GKHMS-GW-FD003-1010 | 1011003-09 | B02890266.D | 19:00 |
| GKHMS-GW-FD002-1010 | 1011003-08 | B02890265.D | 18:34 |
| GKHMS-GW-FD001-1010 | 1011003-07 | B02890264.D | 18:07 |
| GKHMS-GW-023-1010 | 1011003-06 | B02890263.D | 17:40 |
| GKHMS-GW-022-1010 | 1011003-05 | B02890262.D | 17:13 |
| GKHMS-GW-019-1010 | 1011003-04 | B02890261.D | 16:47 |
| GKHMS-GW-018-1010 | 1011003-03 | B02890260.D | 16:20 |
| GKHMS-GW-017-1010 | 1011003-02 | B02890259.D | 15:53 |
| GKHMS-TB-03 | 1011003-01 | B02890258.D | 15:26 |
| LCS | B047033-BS1 | B02890246.D | 10:03 |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047033-BLK1 | File ID: | B02890245.D |
| Sampled: | | Prepared: | 11/05/10 09:16 | Analyzed: | 11/05/10 09:16 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047033 | Sequence: | S047021 | Calibration: | 0111603 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.00 | U |
| 78-93-3 | 2-Butanone | 5.00 | U |
| 95-49-8 | 2-Chlorotoluene | 1.00 | U |
| 591-78-6 | 2-Hexanone | 5.00 | U |
| 106-43-4 | 4-Chlorotoluene | 1.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047033-BLK1 | File ID: | B02890245.D |
| Sampled: | | Prepared: | 11/05/10 09:16 | Analyzed: | 11/05/10 09:16 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047033 | Sequence: | S047021 | Calibration: | 0111603 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.00 | U |
| 75-05-8 | Acetonitrile | 10.0 | U |
| 107-13-1 | Acrylonitrile | 5.00 | U |
| 71-43-2 | Benzene | 1.00 | U |
| 108-86-1 | Bromobenzene | 1.00 | U |
| 74-97-5 | Bromochloromethane | 1.00 | U |
| 75-27-4 | Bromodichloromethane | 1.00 | U |
| 75-25-2 | Bromoform | 1.00 | U |
| 74-83-9 | Bromomethane | 1.00 | U |
| 75-15-0 | Carbon disulfide | 1.00 | U |
| 56-23-5 | Carbon tetrachloride | 1.00 | U |
| 108-90-7 | Chlorobenzene | 1.00 | U |
| 124-48-1 | Chlorodibromomethane | 1.00 | U |
| 75-00-3 | Chloroethane | 1.00 | U |
| 67-66-3 | Chloroform | 1.00 | U |
| 74-87-3 | Chloromethane | 1.00 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U |
| 110-82-7 | Cyclohexane | 1.00 | U |
| 74-95-3 | Dibromomethane | 1.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U |
| 97-63-2 | Ethyl methacrylate | 1.00 | U |
| 100-41-4 | Ethylbenzene | 1.00 | U |
| 76-13-1 | Freon 113 | 1.00 | U |
| 87-68-3 | Hexachlorobutadiene | 1.00 | U |
| 74-88-4 | Iodomethane | 1.00 | U |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047033-BLK1 | File ID: | B02890245.D |
| Sampled: | | Prepared: | 11/05/10 09:16 | Analyzed: | 11/05/10 09:16 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047033 | Sequence: | S047021 | Calibration: | 0111603 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 98-82-8 | Isopropylbenzene | 1.00 | U |
| | m,p-Xylenes | 1.00 | U |
| 126-98-7 | Methacrylonitrile | 1.00 | U |
| 76-20-9 | Methyl Acetate | 1.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 1.00 | U |
| 108-87-2 | Methylcyclohexane | 1.00 | U |
| 75-09-2 | Methylene Chloride | 1.00 | U |
| 80-62-6 | Methylmethacrylate | 1.00 | U |
| 91-20-3 | Naphthalene | 1.00 | U |
| 104-51-8 | n-Butylbenzene | 1.00 | U |
| 103-65-1 | n-Propylbenzene | 1.00 | U |
| 95-47-6 | o-Xylene | 1.00 | U |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U |
| 107-12-0 | Propionitrile | 10.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.00 | U |
| 100-42-5 | Styrene | 1.00 | U |
| 98-06-6 | tert-Butylbenzene | 1.00 | U |
| 127-18-4 | Tetrachloroethene | 1.00 | U |
| 108-88-3 | Toluene | 1.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.00 | U |
| 79-01-6 | Trichloroethene | 1.00 | U |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U |
| 108-05-4 | Vinyl acetate | 1.00 | U |
| 75-01-4 | Vinyl chloride | 1.00 | U |

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (75 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 120) |
|---|---|---|---|---|
| 1011003-01 | 96 | 98 | 99 | 96 |
| 1011003-02 | 94 | 108 | 97 | 99 |
| 1011003-03 | 94 | 104 | 97 | 97 |
| 1011003-04 | 94 | 102 | 98 | 96 |
| 1011003-05 | 93 | 86 | 97 | 96 |
| 1011003-06 | 96 | 100 | 98 | 97 |
| 1011003-07 | 94 | 106 | 97 | 99 |
| 1011003-08 | 89 | 105 | 94 | 98 |
| 1011003-09 | 92 | 89 | 97 | 91 |
| B047033-BLK1 | 91 | 98 | 105 | 95 |
| B047033-BS1 | 97 | 105 | 110 | 98 |
| B047033-MS1 | 98 | 102 | 104 | 94 |
| B047033-MSD1 | 95 | 98 | 99 | 90 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B047033 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B047033-MS1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 1.00 U | 10.4 | 104 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 1.00 U | 10.3 | 103 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 1.00 U | 10.9 | 109 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 1.00 U | 9.95 | 100 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 1.00 U | 8.94 | 89 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 1.00 U | 8.90 | 89 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 1.00 U | 10.3 | 103 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 1.00 U | 14.6 | 146 * | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 1.00 U | 10.2 | 102 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 1.00 U | 13.5 | 135 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 0.660 | 8.56 | 79 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 1.00 U | 12.8 | 128 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 1.00 U | 11.4 | 114 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 1.00 U | 10.1 | 101 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 1.00 U | 10.0 | 100 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 1.00 U | 10.3 | 103 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 1.00 U | 9.39 | 94 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 1.00 U | 9.47 | 95 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 1.00 U | 10.1 | 101 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 1.00 U | 9.39 | 94 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 1.00 U | 9.93 | 99 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 1.00 U | 9.50 | 95 | 75 - 125 |
| 2-Hexanone | 10.0 | 5.00 U | 11.8 | 118 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 1.00 U | 9.59 | 96 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 5.00 U | 11.7 | 117 | 60 - 135 |
| Acetone | 10.0 | 1.94 | 11.8 | 98 | 40 - 140 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B047033 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B047033-MS1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| Acetonitrile | 100 | 10.0 U | 114 | 114 | 75 - 125 |
| Acrylonitrile | 10.0 | 5.00 U | 7.96 | 80 | 75 - 125 |
| Benzene | 10.0 | 1.00 U | 10.1 | 101 | 80 - 120 |
| Bromobenzene | 10.0 | 1.00 U | 9.74 | 97 | 75 - 125 |
| Bromochloromethane | 10.0 | 1.00 U | 10.0 | 100 | 65 - 130 |
| Bromodichloromethane | 10.0 | 1.00 U | 9.71 | 97 | 75 - 120 |
| Bromoform | 10.0 | 1.00 U | 9.38 | 94 | 70 - 130 |
| Bromomethane | 10.0 | 1.00 U | 2.28 | 23 * | 30 - 145 |
| Carbon disulfide | 10.0 | 1.00 U | 10.7 | 107 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 1.00 U | 9.25 | 92 | 75 - 125 |
| Chlorobenzene | 10.0 | 1.00 U | 10.1 | 101 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 1.00 U | 9.90 | 99 | 60 - 135 |
| Chloroethane | 10.0 | 1.00 U | 11.5 | 115 | 60 - 135 |
| Chloroform | 10.0 | 1.00 U | 9.79 | 98 | 65 - 135 |
| Chloromethane | 10.0 | 1.00 U | 8.03 | 80 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 1.00 U | 11.2 | 112 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 1.00 U | 9.77 | 98 | 70 - 130 |
| Cyclohexane | 10.0 | 1.00 U | 9.38 | 94 | 75 - 125 |
| Dibromomethane | 10.0 | 1.00 U | 10.6 | 106 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 1.00 U | 6.34 | 63 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 1.00 U | 9.61 | 96 | 75 - 125 |
| Ethylbenzene | 10.0 | 1.00 U | 9.99 | 100 | 75 - 125 |
| Freon 113 | 10.0 | 1.00 U | 8.72 | 87 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 1.00 U | 8.92 | 89 | 50 - 140 |
| Iodomethane | 10.0 | 1.00 U | 5.50 | 55 * | 75 - 125 |
| Isopropylbenzene | 10.0 | 1.00 U | 10.5 | 105 | 75 - 125 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B047033 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B047033-MS1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| m,p-Xylenes | 20.0 | 1.00 U | 20.1 | 101 | 75 - 130 |
| Methacrylonitrile | 10.0 | 1.00 U | 9.48 | 95 | 75 - 125 |
| Methyl Acetate | 10.0 | 1.00 U | 7.48 | 75 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 1.00 U | 10.1 | 101 | 65 - 125 |
| Methylcyclohexane | 10.0 | 1.00 U | 9.18 | 92 | 75 - 125 |
| Methylene Chloride | 10.0 | 1.00 U | 9.29 | 93 | 55 - 140 |
| Methylmethacrylate | 10.0 | 1.00 U | 9.22 | 92 | 75 - 125 |
| Naphthalene | 10.0 | 2.02 | 17.0 | 150 * | 55 - 140 |
| n-Butylbenzene | 10.0 | 1.00 U | 10.4 | 104 | 70 - 135 |
| n-Propylbenzene | 10.0 | 1.00 U | 9.01 | 90 | 70 - 130 |
| o-Xylene | 10.0 | 1.00 U | 9.69 | 97 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 1.00 U | 8.17 | 82 | 75 - 130 |
| Propionitrile | 10.0 | 10.0 U | 11.8 | 118 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 1.00 U | 8.14 | 81 | 70 - 125 |
| Styrene | 10.0 | 1.00 U | 7.55 | 76 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 0.700 | 8.87 | 82 | 70 - 130 |
| Tetrachloroethene | 10.0 | 1.00 U | 10.5 | 105 | 45 - 150 |
| Toluene | 10.0 | 1.00 U | 9.60 | 96 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 1.00 U | 8.19 | 82 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 1.00 U | 9.77 | 98 | 55 - 140 |
| Trichloroethene | 10.0 | 1.00 U | 9.31 | 93 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 1.00 U | 9.04 | 90 | 50 - 145 |
| Vinyl acetate | 20.0 | 1.00 U | 17.0 | 85 | 75 - 125 |
| Vinyl chloride | 10.0 | 1.00 U | 9.44 | 94 | 50 - 145 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B047033 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B047033-MSD1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 9.83 | 98 | 6 | 30 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 9.63 | 96 | 7 | 30 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 8.95 | 90 | 20 | 30 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 8.77 | 88 | 13 | 30 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 7.86 | 79 | 13 | 30 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 7.93 | 79 | 12 | 30 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 9.88 | 99 | 4 | 30 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 14.4 | 144 * | 2 | 30 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 8.38 | 84 | 20 | 30 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 13.3 | 133 | 2 | 30 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 8.14 | 75 | 5 | 30 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 11.1 | 111 | 14 | 30 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 10.1 | 101 | 12 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 9.61 | 96 | 5 | 30 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 8.78 | 88 | 13 | 30 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 9.45 | 94 | 8 | 30 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 8.60 | 86 | 9 | 30 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 9.16 | 92 | 3 | 30 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 9.56 | 96 | 5 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 9.20 | 92 | 2 | 30 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 8.70 | 87 | 13 | 30 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 8.58 | 86 | 10 | 30 | 75 - 125 |
| 2-Hexanone | 10.0 | 9.20 | 92 | 24 | 30 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 8.71 | 87 | 10 | 30 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 9.84 | 98 | 17 | 30 | 60 - 135 |
| Acetone | 10.0 | 9.84 | 79 | 18 | 30 | 40 - 140 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B047033 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B047033-MSD1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Acetonitrile | 100 | 79.2 | 79 | 36 * | 30 | 75 - 125 |
| Acrylonitrile | 10.0 | 6.21 | 62 * | 25 | 30 | 75 - 125 |
| Benzene | 10.0 | 9.34 | 93 | 7 | 30 | 80 - 120 |
| Bromobenzene | 10.0 | 8.69 | 87 | 11 | 30 | 75 - 125 |
| Bromochloromethane | 10.0 | 8.08 | 81 | 21 | 30 | 65 - 130 |
| Bromodichloromethane | 10.0 | 8.74 | 87 | 11 | 30 | 75 - 120 |
| Bromoform | 10.0 | 7.69 | 77 | 20 | 30 | 70 - 130 |
| Bromomethane | 10.0 | 4.00 | 40 | 55 * | 30 | 30 - 145 |
| Carbon disulfide | 10.0 | 8.61 | 86 | 21 | 30 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 8.76 | 88 | 5 | 30 | 75 - 125 |
| Chlorobenzene | 10.0 | 9.31 | 93 | 9 | 30 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 9.12 | 91 | 8 | 30 | 60 - 135 |
| Chloroethane | 10.0 | 8.07 | 81 | 35 * | 30 | 60 - 135 |
| Chloroform | 10.0 | 8.81 | 88 | 11 | 30 | 65 - 135 |
| Chloromethane | 10.0 | 6.10 | 61 | 27 | 30 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 10.1 | 101 | 11 | 30 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 8.22 | 82 | 17 | 30 | 70 - 130 |
| Cyclohexane | 10.0 | 8.79 | 88 | 6 | 30 | 75 - 125 |
| Dibromomethane | 10.0 | 8.68 | 87 | 20 | 30 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 5.37 | 54 | 17 | 30 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 7.99 | 80 | 18 | 30 | 75 - 125 |
| Ethylbenzene | 10.0 | 9.10 | 91 | 9 | 30 | 75 - 125 |
| Freon 113 | 10.0 | 7.96 | 80 | 9 | 30 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 8.03 | 80 | 11 | 30 | 50 - 140 |
| Iodomethane | 10.0 | 4.44 | 44 * | 21 | 30 | 75 - 125 |
| Isopropylbenzene | 10.0 | 9.19 | 92 | 13 | 30 | 75 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B047033 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B047033-MSD1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| m,p-Xylenes | 20.0 | 18.2 | 91 | 10 | 30 | 75 - 130 |
| Methacrylonitrile | 10.0 | 8.31 | 83 | 13 | 30 | 75 - 125 |
| Methyl Acetate | 10.0 | 6.25 | 62 * | 18 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 8.18 | 82 | 21 | 30 | 65 - 125 |
| Methylcyclohexane | 10.0 | 8.49 | 85 | 8 | 30 | 75 - 125 |
| Methylene Chloride | 10.0 | 6.89 | 69 | 30 * OK | 30 | 55 - 140 |
| Methylmethacrylate | 10.0 | 8.65 | 86 | 6 | 30 | 75 - 125 |
| Naphthalene | 10.0 | 16.2 | 141 * | 5 | 30 | 55 - 140 |
| n-Butylbenzene | 10.0 | 9.46 | 95 | 9 | 30 | 70 - 135 |
| n-Propylbenzene | 10.0 | 7.96 | 80 | 12 | 30 | 70 - 130 |
| o-Xylene | 10.0 | 8.76 | 88 | 10 | 30 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 7.65 | 76 | 7 | 30 | 75 - 130 |
| Propionitrile | 10.0 | 9.72 | 97 | 19 | 30 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 7.42 | 74 | 9 | 30 | 70 - 125 |
| Styrene | 10.0 | 7.11 | 71 | 6 | 30 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 8.09 | 74 | 9 | 30 | 70 - 130 |
| Tetrachloroethene | 10.0 | 10.1 | 101 | 4 | 30 | 45 - 150 |
| Toluene | 10.0 | 8.47 | 85 | 13 | 30 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 7.49 | 75 | 9 | 30 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 8.22 | 82 | 17 | 30 | 55 - 140 |
| Trichloroethene | 10.0 | 8.75 | 88 | 6 | 30 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 7.98 | 80 | 12 | 30 | 50 - 145 |
| Vinyl acetate | 20.0 | 15.6 | 78 | 9 | 30 | 75 - 125 |
| Vinyl chloride | 10.0 | 8.10 | 81 | 15 | 30 | 50 - 145 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047033 | Laboratory ID: | B047033-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 9.97 | 100 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 10.1 | 101 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.5 | 105 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.4 | 104 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 8.77 | 88 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 9.66 | 97 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.0 | 110 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 11.0 | 110 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 11.6 | 116 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 11.2 | 112 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 9.64 | 96 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 9.43 | 94 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 10.6 | 106 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 9.87 | 99 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 10.4 | 104 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 10.7 | 107 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 10.8 | 108 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 9.64 | 96 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 10.7 | 107 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 5.61 | 56 * | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 10.7 | 107 | 75 - 125 |
| 2-Hexanone | 10.0 | 16.0 | 160 * | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 10.8 | 108 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 12.8 | 128 | 60 - 135 |
| Acetone | 10.0 | 19.0 | 190 * | 40 - 140 |
| Acetonitrile | 100 | 118 | 118 | 75 - 125 |
| Acrylonitrile | 10.0 | 3.56 | 36 * | 75 - 125 |
| Benzene | 10.0 | 10.2 | 102 | 80 - 120 |
| Bromobenzene | 10.0 | 10.6 | 106 | 75 - 125 |
| Bromochloromethane | 10.0 | 10.6 | 106 | 65 - 130 |
| Bromodichloromethane | 10.0 | 9.57 | 96 | 75 - 120 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047033 | Laboratory ID: | B047033-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 8.48 | 85 | 70 - 130 |
| Bromomethane | 10.0 | 4.33 | 43 | 30 - 145 |
| Carbon disulfide | 10.0 | 9.71 | 97 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 9.08 | 91 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.6 | 106 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 8.91 | 89 | 60 - 135 |
| Chloroethane | 10.0 | 10.2 | 102 | 60 - 135 |
| Chloroform | 10.0 | 9.84 | 98 | 65 - 135 |
| Chloromethane | 10.0 | 6.51 | 65 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 11.4 | 114 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 9.63 | 96 | 70 - 130 |
| Cyclohexane | 10.0 | 9.64 | 96 | 75 - 125 |
| Dibromomethane | 10.0 | 10.6 | 106 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 6.33 | 63 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 10.8 | 108 | 75 - 125 |
| Ethylbenzene | 10.0 | 10.7 | 107 | 75 - 125 |
| Freon 113 | 10.0 | 8.71 | 87 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 9.87 | 99 | 50 - 140 |
| Iodomethane | 10.0 | 5.08 | 51 * | 75 - 125 |
| Isopropylbenzene | 10.0 | 11.8 | 118 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.0 | 110 | 75 - 130 |
| Methacrylonitrile | 10.0 | 9.47 | 95 | 75 - 125 |
| Methyl Acetate | 10.0 | 5.99 | 60 * | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.6 | 106 | 65 - 125 |
| Methylcyclohexane | 10.0 | 9.86 | 99 | 75 - 125 |
| Methylene Chloride | 10.0 | 8.79 | 88 | 55 - 140 |
| Methylmethacrylate | 10.0 | 9.64 | 96 | 75 - 125 |
| Naphthalene | 10.0 | 9.51 | 95 | 55 - 140 |
| n-Butylbenzene | 10.0 | 11.0 | 110 | 70 - 135 |
| n-Propylbenzene | 10.0 | 11.4 | 114 | 70 - 130 |
| o-Xylene | 10.0 | 10.4 | 104 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 9.66 | 97 | 75 - 130 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047033 | Laboratory ID: | B047033-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Propionitrile | 10.0 | 11.4 | 114 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 9.69 | 97 | 70 - 125 |
| Styrene | 10.0 | 10.3 | 103 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 10.7 | 107 | 70 - 130 |
| Tetrachloroethene | 10.0 | 10.9 | 109 | 45 - 150 |
| Toluene | 10.0 | 10.4 | 104 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 8.71 | 87 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 55 - 140 |
| Trichloroethene | 10.0 | 9.90 | 99 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 9.50 | 95 | 50 - 145 |
| Vinyl acetate | 20.0 | 17.1 | 86 | 75 - 125 |
| Vinyl chloride | 10.0 | 9.62 | 96 | 50 - 145 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047021 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047021-CCV1 )** | | | *Lab File ID: B02890244.D* | | | *Analyzed: 11/05/10 08:49* | | |
| 1,4-Difluorobenzene | 15820170 | 4.121 | 1.541656E+07 | 4.122 | 103 | 50 - 200 | -0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 9506227 | 11.276 | 7201022 | 11.276 | 132 | 50 - 200 | 0.0000 | +/-0.50 |
| Chlorobenzene-d5 | 3353618 | 7.578 | 3291138 | 7.578 | 102 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 13717460 | 3.484 | 1.310695E+07 | 3.485 | 105 | 50 - 200 | -0.0010 | +/-0.50 |
| **Blank (B047033-BLK1 )** | | | *Lab File ID: B02890245.D* | | | *Analyzed: 11/05/10 09:16* | | |
| 1,4-Difluorobenzene | 15217470 | 4.122 | 15820170 | 4.121 | 96 | 50 - 200 | 0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 5902127 | 11.281 | 9506227 | 11.276 | 62 | 50 - 200 | 0.0050 | +/-0.50 |
| Chlorobenzene-d5 | 3038612 | 7.578 | 3353618 | 7.578 | 91 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 13042920 | 3.486 | 13717460 | 3.484 | 95 | 50 - 200 | 0.0020 | +/-0.50 |
| **LCS (B047033-BS1 )** | | | *Lab File ID: B02890246.D* | | | *Analyzed: 11/05/10 10:03* | | |
| 1,4-Difluorobenzene | 16740140 | 4.12 | 15820170 | 4.121 | 106 | 50 - 200 | -0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 9475629 | 11.274 | 9506227 | 11.276 | 100 | 50 - 200 | -0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 3570267 | 7.576 | 3353618 | 7.578 | 106 | 50 - 200 | -0.0020 | +/-0.50 |
| Pentafluorobenzene | 14598750 | 3.483 | 13717460 | 3.484 | 106 | 50 - 200 | -0.0010 | +/-0.50 |
| **GKHMS-TB-03 (1011003-01 )** | | | *Lab File ID: B02890258.D* | | | *Analyzed: 11/05/10 15:26* | | |
| 1,4-Difluorobenzene | 12541640 | 4.122 | 15820170 | 4.121 | 79 | 50 - 200 | 0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 5248455 | 11.281 | 9506227 | 11.276 | 55 | 50 - 200 | 0.0050 | +/-0.50 |
| Chlorobenzene-d5 | 2557927 | 7.578 | 3353618 | 7.578 | 76 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 10372330 | 3.485 | 13717460 | 3.484 | 76 | 50 - 200 | 0.0010 | +/-0.50 |
| **GKHMS-GW-017-1010 (1011003-02 )** | | | *Lab File ID: B02890259.D* | | | *Analyzed: 11/05/10 15:53* | | |
| 1,4-Difluorobenzene | 14146280 | 4.118 | 15820170 | 4.121 | 89 | 50 - 200 | -0.0030 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7621063 | 11.274 | 9506227 | 11.276 | 80 | 50 - 200 | -0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 3011204 | 7.576 | 3353618 | 7.578 | 90 | 50 - 200 | -0.0020 | +/-0.50 |
| Pentafluorobenzene | 11859120 | 3.48 | 13717460 | 3.484 | 86 | 50 - 200 | -0.0040 | +/-0.50 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047021 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-018-1010 (1011003-03 )** | | | *Lab File ID: B02890260.D* | | | *Analyzed: 11/05/10 16:20* | | |
| 1,4-Difluorobenzene | 16714080 | 4.121 | 15820170 | 4.121 | 106 | 50 - 200 | 0.0000 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7463316 | 11.275 | 9506227 | 11.276 | 79 | 50 - 200 | -0.0010 | +/-0.50 |
| Chlorobenzene-d5 | 3522401 | 7.578 | 3353618 | 7.578 | 105 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 14067180 | 3.485 | 13717460 | 3.484 | 103 | 50 - 200 | 0.0010 | +/-0.50 |
| **GKHMS-GW-019-1010 (1011003-04 )** | | | *Lab File ID: B02890261.D* | | | *Analyzed: 11/05/10 16:47* | | |
| 1,4-Difluorobenzene | 16511240 | 4.122 | 15820170 | 4.121 | 104 | 50 - 200 | 0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7283693 | 11.276 | 9506227 | 11.276 | 77 | 50 - 200 | 0.0000 | +/-0.50 |
| Chlorobenzene-d5 | 3401748 | 7.579 | 3353618 | 7.578 | 101 | 50 - 200 | 0.0010 | +/-0.50 |
| Pentafluorobenzene | 13850890 | 3.485 | 13717460 | 3.484 | 101 | 50 - 200 | 0.0010 | +/-0.50 |
| **GKHMS-GW-022-1010 (1011003-05 )** | | | *Lab File ID: B02890262.D* | | | *Analyzed: 11/05/10 17:13* | | |
| 1,4-Difluorobenzene | 18691690 | 4.123 | 15820170 | 4.121 | 118 | 50 - 200 | 0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 6592739 | 11.279 | 9506227 | 11.276 | 69 | 50 - 200 | 0.0030 | +/-0.50 |
| Chlorobenzene-d5 | 3641749 | 7.579 | 3353618 | 7.578 | 109 | 50 - 200 | 0.0010 | +/-0.50 |
| Pentafluorobenzene | 15886550 | 3.487 | 13717460 | 3.484 | 116 | 50 - 200 | 0.0030 | +/-0.50 |
| **GKHMS-GW-023-1010 (1011003-06 )** | | | *Lab File ID: B02890263.D* | | | *Analyzed: 11/05/10 17:40* | | |
| 1,4-Difluorobenzene | 15282430 | 4.122 | 15820170 | 4.121 | 97 | 50 - 200 | 0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 6107999 | 11.278 | 9506227 | 11.276 | 64 | 50 - 200 | 0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 3198453 | 7.579 | 3353618 | 7.578 | 95 | 50 - 200 | 0.0010 | +/-0.50 |
| Pentafluorobenzene | 12880530 | 3.485 | 13717460 | 3.484 | 94 | 50 - 200 | 0.0010 | +/-0.50 |
| **GKHMS-GW-FD001-1010 (1011003-07 )** | | | *Lab File ID: B02890264.D* | | | *Analyzed: 11/05/10 18:07* | | |
| 1,4-Difluorobenzene | 15786660 | 4.118 | 15820170 | 4.121 | 100 | 50 - 200 | -0.0030 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7430228 | 11.274 | 9506227 | 11.276 | 78 | 50 - 200 | -0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 3367848 | 7.577 | 3353618 | 7.578 | 100 | 50 - 200 | -0.0010 | +/-0.50 |
| Pentafluorobenzene | 13465390 | 3.48 | 13717460 | 3.484 | 98 | 50 - 200 | -0.0040 | +/-0.50 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047021 | Instrument: | GCMS-B |
| | | Calibration: | 0111603 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-FD002-1010 (1011003-08 )** | | | *Lab File ID: B02890265.D* | | | *Analyzed: 11/05/10 18:34* | | |
| 1,4-Difluorobenzene | 16277920 | 4.122 | 15820170 | 4.121 | 103 | 50 - 200 | 0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7084574 | 11.276 | 9506227 | 11.276 | 75 | 50 - 200 | 0.0000 | +/-0.50 |
| Chlorobenzene-d5 | 3370970 | 7.578 | 3353618 | 7.578 | 101 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 13910240 | 3.484 | 13717460 | 3.484 | 101 | 50 - 200 | 0.0000 | +/-0.50 |
| **GKHMS-GW-FD003-1010 (1011003-09 )** | | | *Lab File ID: B02890266.D* | | | *Analyzed: 11/05/10 19:00* | | |
| 1,4-Difluorobenzene | 18123600 | 4.123 | 15820170 | 4.121 | 115 | 50 - 200 | 0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 6002962 | 11.278 | 9506227 | 11.276 | 63 | 50 - 200 | 0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 3159138 | 7.579 | 3353618 | 7.578 | 94 | 50 - 200 | 0.0010 | +/-0.50 |
| Pentafluorobenzene | 15411890 | 3.487 | 13717460 | 3.484 | 112 | 50 - 200 | 0.0030 | +/-0.50 |
| **Matrix Spike (B047033-MS1 )** | | | *Lab File ID: B02890267.D* | | | *Analyzed: 11/05/10 19:27* | | |
| 1,4-Difluorobenzene | 17482630 | 4.122 | 15820170 | 4.121 | 111 | 50 - 200 | 0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 8112957 | 11.276 | 9506227 | 11.276 | 85 | 50 - 200 | 0.0000 | +/-0.50 |
| Chlorobenzene-d5 | 3407170 | 7.578 | 3353618 | 7.578 | 102 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 15457870 | 3.486 | 13717460 | 3.484 | 113 | 50 - 200 | 0.0020 | +/-0.50 |
| **Matrix Spike Dup (B047033-MSD1 )** | | | *Lab File ID: B02890268.D* | | | *Analyzed: 11/05/10 19:54* | | |
| 1,4-Difluorobenzene | 19528000 | 4.123 | 15820170 | 4.121 | 123 | 50 - 200 | 0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 8749893 | 11.275 | 9506227 | 11.276 | 92 | 50 - 200 | -0.0010 | +/-0.50 |
| Chlorobenzene-d5 | 3496886 | 7.579 | 3353618 | 7.578 | 104 | 50 - 200 | 0.0010 | +/-0.50 |
| Pentafluorobenzene | 16861810 | 3.487 | 13717460 | 3.484 | 123 | 50 - 200 | 0.0030 | +/-0.50 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |

# INITIAL CALIBRATION STANDARDS

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046039 | Instrument: | GCMS-D |
| Calibration: | 0111602 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001979 | DFTPP050 WORKING STANDARD | S046039-TUN1 | D46148.D | 11/03/10 11:30 |
| 0001565 | SSTD001 8270LL 1/5ppm | S046039-CAL5 | D46149.D | 11/03/10 11:53 |
| 0001811 | SSTD00.05 8270LL 0.05/0.25ppm | S046039-CAL1 | D46150.D | 11/03/10 12:17 |
| 0001810 | SSTD00.1 8270LL 0.1/0.5ppm | S046039-CAL2 | D46151.D | 11/03/10 12:41 |
| 0001562 | SSTD00.2 8270LL 0.2/1ppm | S046039-CAL3 | D46152.D | 11/03/10 13:06 |
| 0001563 | SSTD00.5 8270LL 0.5/2.5ppm | S046039-CAL4 | D46153.D | 11/03/10 13:30 |
| 0001566 | SSTD02.5 8270LL 2.5/12.5ppm | S046039-CAL6 | D46154.D | 11/03/10 13:54 |
| 0001567 | SSTD005 8270LL 5/25ppm | S046039-CAL7 | D46155.D | 11/03/10 14:19 |
| 0001568 | SSTD010 8270LL 10/50ppm | S046039-CAL8 | D46156.D | 11/03/10 14:43 |
| 0001561 | SSTD020 8270LL 20/100ppm | S046039-CAL9 | D46157.D | 11/03/10 15:07 |
| 0002011 | SSTD02.5ICV 8270LL 2.5 PPM | S046039-SCV1 | D46158.D | 11/03/10 15:49 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46158.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S046039 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S046039-SCV1 | Injection Time: | 15:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 2500 | 2450 | 0.6958117 | 0.6817819 | | -2.0 | 20 |
| Acenaphthene | A | 2500 | 2370 | 1.324787 | 1.25343 | | -5.4 | 20 |
| Acenaphthylene | A | 2500 | 2390 | 2.222404 | 2.121 | | -4.6 | 20 |
| Anthracene | A | 2500 | 2380 | 1.227584 | 1.168661 | | -4.8 | 20 |
| Benzo[a]anthracene | A | 2500 | 2330 | 1.605312 | 1.496478 | | -6.8 | 20 |
| Benzo[a]pyrene | A | 2500 | 2370 | 2.253927 | 2.136756 | | -5.2 | 20 |
| Benzo[b]fluoranthene | A | 2500 | 2270 | 2.546752 | 2.312748 | | -9.2 | 20 |
| Benzo[g,h,i]perylene | A | 2500 | 2450 | 1.707555 | 1.675813 | | -1.9 | 20 |
| Benzo[k]fluoranthene | A | 2500 | 2380 | 2.564201 | 2.441688 | | -4.8 | 20 |
| Chrysene | A | 2500 | 2280 | 1.591607 | 1.453402 | | -8.7 | 20 |
| Dibenz[a,h]anthracene | A | 2500 | 2440 | 1.626379 | 1.584666 | | -2.6 | 20 |
| Fluoranthene | A | 2500 | 2350 | 1.235125 | 1.161404 | | -6.0 | 20 |
| Fluorene | A | 2500 | 2370 | 1.373122 | 1.301104 | | -5.2 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 2500 | 2260 | 2.228926 | 2.014394 | | -9.6 | 20 |
| Naphthalene | A | 2500 | 2480 | 1.230131 | 1.221897 | | -0.7 | 20 |
| Phenanthrene | A | 2500 | 2280 | 1.255689 | 1.144927 | | -8.8 | 20 |
| Pyrene | A | 2500 | 2400 | 2.168287 | 2.080985 | | -4.0 | 20 |
| 2-Fluorobiphenyl | A | 2500 | 2440 | 1.591732 | 1.552743 | | -2.4 | 20 |
| Nitrobenzene-d5 | A | 2500 | 2470 | 0.3971127 | 0.3917262 | | -1.4 | 20 |
| Terphenyl-d14 | A | 2500 | 2360 | 1.040014 | 0.9812326 | | -5.7 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46241.D | Injection Date: | 11/15/10 |
| Instrument ID: | GCMS-D | Injection Time: | 15:44 |
| Sequence: | S047051 | Lab Sample ID: | S047051-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.3 | PASS |
| 70 | Less than 2% of 69 | 0.983 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 49.1 | PASS |
| 197 | Less than 1% of 198 | 0.0964 | PASS |
| 199 | 5 - 9% of 198 | 6.29 | PASS |
| 275 | 10 - 30% of 198 | 20.4 | PASS |
| 365 | 1 - 200% of 198 | 2.37 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |
| 441 | Less than 100% of 443 | 76 | PASS |
| 442 | 40 - 200% of 198 | 53.9 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047051-CCV1 | D46242.D | 11/15/2010 | 15:59:00 |
| Blank | B048003-BLK1 | D46243.D | 11/15/2010 | 16:24:00 |
| LCS | B048003-BS1 | D46244.D | 11/15/2010 | 16:48:00 |
| Matrix Spike | B048003-MS1 | D46245.D | 11/15/2010 | 17:13:00 |
| Matrix Spike Dup | B048003-MSD1 | D46246.D | 11/15/2010 | 17:37:00 |
| GKHMS-GW-017-1010 | 1011003-02 | D46247.D | 11/15/2010 | 18:01:00 |
| GKHMS-GW-018-1010 | 1011003-03 | D46248.D | 11/15/2010 | 18:26:00 |
| GKHMS-GW-019-1010 | 1011003-04 | D46249.D | 11/15/2010 | 18:50:00 |
| GKHMS-GW-022-1010 | 1011003-05 | D46250.D | 11/15/2010 | 19:14:00 |
| GKHMS-GW-023-1010 | 1011003-06 | D46251.D | 11/15/2010 | 19:39:00 |
| GKHMS-GW-FD002-1010 | 1011003-08 | D46252.D | 11/15/2010 | 20:03:00 |
| GKHMS-GW-FD003-1010 | 1011003-09 | D46253.D | 11/15/2010 | 20:28:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46242.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S047051 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S047051-CCV1 | Injection Time: | 15:59 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1000 | 0.6958117 | 0.6971865 | | 0.2 | 20 |
| Acenaphthene | A | 1000 | 1050 | 1.324787 | 1.391577 | | 5.0 | 20 |
| Acenaphthylene | A | 1000 | 1090 | 2.222404 | 2.428374 | | 9.3 | 20 |
| Anthracene | A | 1000 | 1050 | 1.227584 | 1.293011 | | 5.3 | 20 |
| Benzo[a]anthracene | A | 1000 | 1050 | 1.605312 | 1.692061 | | 5.4 | 20 |
| Benzo[a]pyrene | A | 1000 | 1100 | 2.253927 | 2.469795 | | 9.6 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1040 | 2.546752 | 2.645648 | | 3.9 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 1010 | 1.707555 | 1.731324 | | 1.4 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1170 | 2.564201 | 3.006795 | | 17.3 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.754186 | | 10.2 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 995 | 1.626379 | 1.617862 | | -0.5 | 20 |
| Fluoranthene | A | 1000 | 1020 | 1.235125 | 1.261707 | | 2.2 | 20 |
| Fluorene | A | 1000 | 1040 | 1.373122 | 1.428469 | | 4.0 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 1030 | 2.228926 | 2.291624 | | 2.8 | 20 |
| Naphthalene | A | 1000 | 972 | 1.230131 | 1.19618 | | -2.8 | 20 |
| Phenanthrene | A | 1000 | 999 | 1.255689 | 1.254105 | | -0.1 | 20 |
| Pyrene | A | 1000 | 1030 | 2.168287 | 2.224069 | | 2.6 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1080 | 1.591732 | 1.717497 | | 7.9 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1120 | 0.3971127 | 0.444155 | | 11.8 | 20 |
| Terphenyl-d14 | A | 1000 | 995 | 1.040014 | 1.034785 | | -0.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048003-BLK1 | Batch: | B048003 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B048003-MSD1 | D46246.D | 17:37 |
| Matrix Spike | B048003-MS1 | D46245.D | 17:13 |
| LCS | B048003-BS1 | D46244.D | 16:48 |
| GKHMS-GW-FD003-1010 | 1011003-09 | D46253.D | 20:28 |
| GKHMS-GW-FD002-1010 | 1011003-08 | D46252.D | 20:03 |
| GKHMS-GW-023-1010 | 1011003-06 | D46251.D | 19:39 |
| GKHMS-GW-022-1010 | 1011003-05 | D46250.D | 19:14 |
| GKHMS-GW-019-1010 | 1011003-04 | D46249.D | 18:50 |
| GKHMS-GW-018-1010 | 1011003-03 | D46248.D | 18:26 |
| GKHMS-GW-017-1010 | 1011003-02RE1 | D46294.D | 22:07 |
| GKHMS-GW-017-1010 | 1011003-02 | D46247.D | 18:01 |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B048003-BLK1 | File ID: | D46243.D |
| Sampled: | | Prepared: | 11/09/10 08:30 | Analyzed: | 11/15/10 16:24 |
| Solids: | | Preparation: | 3520C Cont. | Dilution: | |
| Batch: | B048003 | Sequence: | S047051 | Calibration: | 0111602 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ng/L) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 50.0 | U |
| 83-32-9 | Acenaphthene | 50.0 | U |
| 208-96-8 | Acenaphthylene | 50.0 | U |
| 120-12-7 | Anthracene | 50.0 | U |
| 56-55-3 | Benzo[a]anthracene | 50.0 | U |
| 50-32-8 | Benzo[a]pyrene | 50.0 | U |
| 205-99-2 | Benzo[b]fluoranthene | 50.0 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 50.0 | U |
| 207-08-9 | Benzo[k]fluoranthene | 50.0 | U |
| 218-01-9 | Chrysene | 50.0 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 50.0 | U |
| 206-44-0 | Fluoranthene | 50.0 | U |
| 86-73-7 | Fluorene | 50.0 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 50.0 | U |
| 91-20-3 | Naphthalene | 50.0 | U |
| 85-01-8 | Phenanthrene | 50.0 | U |
| 129-00-0 | Pyrene | 50.0 | U |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46265.D | Injection Date: | 11/16/10 |
| Instrument ID: | GCMS-D | Injection Time: | 10:25 |
| Sequence: | S048009 | Lab Sample ID: | S048009-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 39.6 | PASS |
| 70 | Less than 2% of 69 | 0.608 | PASS |
| 68 | Less than 2% of 69 | 0.477 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.8 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.63 | PASS |
| 275 | 10 - 30% of 198 | 20 | PASS |
| 365 | 1 - 200% of 198 | 2.75 | PASS |
| 443 | 17 - 23% of 442 | 19 | PASS |
| 441 | Less than 100% of 443 | 77.8 | PASS |
| 442 | 40 - 200% of 198 | 50.4 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S048009-CCV1 | D46266.D | 11/16/2010 | 10:40:00 |
| GKHMS-GW-017-1010 | 1011003-02RE1 | D46294.D | 11/16/2010 | 22:07:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46266.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S048009 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S048009-CCV1 | Injection Time: | 10:40 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 2-Methylnaphthalene | A | 1000 | 1020 | 0.6958117 | 0.7076517 | | 1.7 | 20 | |
| Acenaphthene | A | 1000 | 1020 | 1.324787 | 1.345497 | | 1.6 | 20 | |
| Acenaphthylene | A | 1000 | 967 | 2.222404 | 2.150074 | | -3.3 | 20 | |
| Anthracene | A | 1000 | 1030 | 1.227584 | 1.26095 | | 2.7 | 20 | |
| Benzo[a]anthracene | A | 1000 | 1050 | 1.605312 | 1.687734 | | 5.1 | 20 | |
| Benzo[a]pyrene | A | 1000 | 1090 | 2.253927 | 2.46392 | | 9.3 | 20 | |
| Benzo[b]fluoranthene | A | 1000 | 1130 | 2.546752 | 2.869626 | | 12.7 | 20 | |
| Benzo[g,h,i]perylene | A | 1000 | 820 | 1.707555 | 1.400757 | | -18.0 | 20 | |
| Benzo[k]fluoranthene | A | 1000 | 1230 | 2.564201 | 3.165423 | | 23.4 | 20 | * |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.743988 | | 9.6 | 20 | |
| Dibenz[a,h]anthracene | A | 1000 | 837 | 1.626379 | 1.361885 | | -16.3 | 20 | |
| Fluoranthene | A | 1000 | 1140 | 1.235125 | 1.414208 | | 14.5 | 20 | |
| Fluorene | A | 1000 | 942 | 1.373122 | 1.293941 | | -5.8 | 20 | |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 857 | 2.228926 | 1.91056 | | -14.3 | 20 | |
| Naphthalene | A | 1000 | 1100 | 1.230131 | 1.349731 | | 9.7 | 20 | |
| Phenanthrene | A | 1000 | 1010 | 1.255689 | 1.265699 | | 0.8 | 20 | |
| Pyrene | A | 1000 | 1250 | 2.168287 | 2.702163 | | 24.6 | 20 | * |
| 2-Fluorobiphenyl | A | 1000 | 1080 | 1.591732 | 1.718975 | | 8.0 | 20 | |
| Nitrobenzene-d5 | A | 1000 | 933 | 0.3971127 | 0.3703808 | | -6.7 | 20 | |
| Terphenyl-d14 | A | 1000 | 1130 | 1.040014 | 1.174007 | | 12.9 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-D |

| | 2FBPL (50 - 110) | NB-d5 (40 - 110) | TRPL-D14 (50 - 135) |
|---|---|---|---|
| 1011003-02 | 88 | 110 | 94 |
| 1011003-02RE1 | 81 | 89 | 130 |
| 1011003-03 | 86 | 90 | 102 |
| 1011003-04 | 82 | 86 | 97 |
| 1011003-05 | 77 | 75 | 99 |
| 1011003-06 | 86 | 84 | 95 |
| 1011003-08 | 90 | 92 | 109 |
| 1011003-09 | 85 | 82 | 102 |
| B048003-BLK1 | 92 | 98 | 102 |
| B048003-BS1 | 93 | 102 | 100 |
| B048003-MS1 | 91 | 98 | 98 |
| B048003-MSD1 | 85 | 86 | 98 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048003 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048003-MS1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ng/L) | SAMPLE CONCENTRATION (ng/L) | MS CONCENTRATION (ng/L) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 50.0 U | 4790 | 96 | | 45 - 105 |
| Acenaphthene | 5000 | 600 | 5210 | 92 | | 45 - 110 |
| Acenaphthylene | 5000 | 55.1 | 4360 | 86 | | 50 - 105 |
| Anthracene | 5000 | 83.2 | 4560 | 90 | | 55 - 110 |
| Benzo[a]anthracene | 5000 | 50.0 U | 4970 | 99 | | 55 - 110 |
| Benzo[a]pyrene | 5000 | 50.0 U | 5890 | 118 | * | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 50.0 U | 6430 | 129 | * | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 50.0 U | 6270 | 125 | | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 50.0 U | 5960 | 119 | | 45 - 125 |
| Chrysene | 5000 | 50.0 U | 5050 | 101 | | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 50.0 U | 5860 | 117 | | 40 - 125 |
| Fluoranthene | 5000 | 50.0 U | 5050 | 101 | | 55 - 115 |
| Fluorene | 5000 | 50.0 U | 4660 | 93 | | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 50.0 U | 5720 | 114 | | 45 - 125 |
| Naphthalene | 5000 | 45.8 | 4470 | 88 | | 40 - 100 |
| Phenanthrene | 5000 | 50.0 U | 4680 | 94 | | 50 - 115 |
| Pyrene | 5000 | 50.0 U | 4660 | 93 | | 50 - 130 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-GW-018-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048003 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048003-MSD1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ng/L) | MSD CONCENTRATION (ng/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 4360 | 87 | 10 | 20 | 45 - 105 |
| Acenaphthene | 5000 | 4810 | 84 | 8 | 20 | 45 - 110 |
| Acenaphthylene | 5000 | 3920 | 77 | 10 | 20 | 50 - 105 |
| Anthracene | 5000 | 4380 | 86 | 4 | 20 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4870 | 97 | 2 | 20 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5700 | 114 * | 3 | 20 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 6000 | 120 | 7 | 20 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 5920 | 118 | 6 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 6150 | 123 | 3 | 20 | 45 - 125 |
| Chrysene | 5000 | 4860 | 97 | 4 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 5620 | 112 | 4 | 20 | 40 - 125 |
| Fluoranthene | 5000 | 4880 | 98 | 4 | 20 | 55 - 115 |
| Fluorene | 5000 | 4490 | 90 | 4 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 5450 | 109 | 5 | 20 | 45 - 125 |
| Naphthalene | 5000 | 3980 | 79 | 11 | 20 | 40 - 100 |
| Phenanthrene | 5000 | 4530 | 91 | 3 | 20 | 50 - 115 |
| Pyrene | 5000 | 4520 | 90 | 3 | 20 | 50 - 130 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B048003 | Laboratory ID: | B048003-BS1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5150 | 103 | 45 - 105 |
| Acenaphthene | 5000 | 5050 | 101 | 45 - 110 |
| Acenaphthylene | 5000 | 4760 | 95 | 50 - 105 |
| Anthracene | 5000 | 5100 | 102 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 5380 | 108 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 6490 | 130 * | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 7110 | 142 * | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 6900 | 138 * | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 6560 | 131 * | 45 - 125 |
| Chrysene | 5000 | 5470 | 109 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 6410 | 128 * | 40 - 125 |
| Fluoranthene | 5000 | 5240 | 105 | 55 - 115 |
| Fluorene | 5000 | 5120 | 102 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 6300 | 126 * | 45 - 125 |
| Naphthalene | 5000 | 4820 | 96 | 40 - 100 |
| Phenanthrene | 5000 | 4980 | 100 | 50 - 115 |
| Pyrene | 5000 | 5180 | 104 | 50 - 130 |

CENTAURI LABS™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047051-CCV1 )** | | | *Lab File ID: D46242.D* | | | *Analyzed: 11/15/10 15:59* | | |
| 1,4-Dichlorobenzene-d4 | 325841 | 3.77 | 524277 | 3.79 | 62 | 50 - 200 | -0.0200 | +/-30.00 |
| Acenaphthene-d10 | 464052 | 6.88 | 890160 | 6.91 | 52 | 50 - 200 | -0.0300 | +/-30.00 |
| Chrysene-d12 | 405437 | 11.32 | 837431 | 11.37 | 48 | 50 - 200 | -0.0500 | +/-30.00 |
| Naphthalene-d8 | 1103894 | 5.05 | 1909751 | 5.08 | 58 | 50 - 200 | -0.0300 | +/-30.00 |
| Perylene-d12 | 215613 | 14.04 | 457505 | 14.11 | 47 | 50 - 200 | -0.0700 | +/-30.00 |
| Phenanthrene-d10 | 703035 | 8.41 | 1402237 | 8.45 | 50 | 50 - 200 | -0.0400 | +/-30.00 |
| **Blank (B048003-BLK1 )** | | | *Lab File ID: D46243.D* | | | *Analyzed: 11/15/10 16:24* | | |
| 1,4-Dichlorobenzene-d4 | 261328 | 3.76 | 325841 | 3.77 | 80 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 356280 | 6.88 | 464052 | 6.88 | 77 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 255985 | 11.33 | 405437 | 11.32 | 63 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 848944 | 5.05 | 1103894 | 5.05 | 77 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 126482 | 14.04 | 215613 | 14.04 | 59 | 50 - 200 | 0.0000 | +/-30.00 |
| Phenanthrene-d10 | 495770 | 8.41 | 703035 | 8.41 | 71 | 50 - 200 | 0.0000 | +/-30.00 |
| **LCS (B048003-BS1 )** | | | *Lab File ID: D46244.D* | | | *Analyzed: 11/15/10 16:48* | | |
| 1,4-Dichlorobenzene-d4 | 255394 | 3.76 | 325841 | 3.77 | 78 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 351186 | 6.88 | 464052 | 6.88 | 76 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 311790 | 11.33 | 405437 | 11.32 | 77 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 818344 | 5.05 | 1103894 | 5.05 | 74 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 159763 | 14.04 | 215613 | 14.04 | 74 | 50 - 200 | 0.0000 | +/-30.00 |
| Phenanthrene-d10 | 521004 | 8.42 | 703035 | 8.41 | 74 | 50 - 200 | 0.0100 | +/-30.00 |
| **Matrix Spike (B048003-MS1 )** | | | *Lab File ID: D46245.D* | | | *Analyzed: 11/15/10 17:13* | | |
| 1,4-Dichlorobenzene-d4 | 251101 | 3.76 | 325841 | 3.77 | 77 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 353391 | 6.88 | 464052 | 6.88 | 76 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 324523 | 11.33 | 405437 | 11.32 | 80 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 820915 | 5.05 | 1103894 | 5.05 | 74 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 176312 | 14.05 | 215613 | 14.04 | 82 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 506760 | 8.42 | 703035 | 8.41 | 72 | 50 - 200 | 0.0100 | +/-30.00 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B048003-MSD1 )** | | | *Lab File ID: D46246.D* | | | *Analyzed: 11/15/10 17:37* | | |
| 1,4-Dichlorobenzene-d4 | 211734 | 3.77 | 325841 | 3.77 | 65 | 50 - 200 | 0.0000 | +/-30.00 |
| Acenaphthene-d10 | 304122 | 6.88 | 464052 | 6.88 | 66 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 277345 | 11.33 | 405437 | 11.32 | 68 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 701201 | 5.05 | 1103894 | 5.05 | 64 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 144219 | 14.05 | 215613 | 14.04 | 67 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 437104 | 8.42 | 703035 | 8.41 | 62 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-017-1010 (1011003-02 )** | | | *Lab File ID: D46247.D* | | | *Analyzed: 11/15/10 18:01* | | |
| 1,4-Dichlorobenzene-d4 | 250534 | 3.75 | 325841 | 3.77 | 77 | 50 - 200 | -0.0200 | +/-30.00 |
| Acenaphthene-d10 | 350183 | 6.88 | 464052 | 6.88 | 75 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 349705 | 11.33 | 405437 | 11.32 | 86 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 817936 | 5.05 | 1103894 | 5.05 | 74 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 174856 | 14.05 | 215613 | 14.04 | 81 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 505493 | 8.42 | 703035 | 8.41 | 72 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-018-1010 (1011003-03 )** | | | *Lab File ID: D46248.D* | | | *Analyzed: 11/15/10 18:26* | | |
| 1,4-Dichlorobenzene-d4 | 216459 | 3.76 | 325841 | 3.77 | 66 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 333435 | 6.88 | 464052 | 6.88 | 72 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 288343 | 11.33 | 405437 | 11.32 | 71 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 739640 | 5.05 | 1103894 | 5.05 | 67 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 143775 | 14.05 | 215613 | 14.04 | 67 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 479597 | 8.42 | 703035 | 8.41 | 68 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-019-1010 (1011003-04 )** | | | *Lab File ID: D46249.D* | | | *Analyzed: 11/15/10 18:50* | | |
| 1,4-Dichlorobenzene-d4 | 214714 | 3.76 | 325841 | 3.77 | 66 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 332164 | 6.88 | 464052 | 6.88 | 72 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 300853 | 11.33 | 405437 | 11.32 | 74 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 733510 | 5.05 | 1103894 | 5.05 | 66 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 139128 | 14.05 | 215613 | 14.04 | 65 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 486886 | 8.42 | 703035 | 8.41 | 69 | 50 - 200 | 0.0100 | +/-30.00 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-022-1010 (1011003-05 )** | | | *Lab File ID: D46250.D* | | | *Analyzed: 11/15/10 19:14* | | |
| 1,4-Dichlorobenzene-d4 | 208126 | 3.77 | 325841 | 3.77 | 64 | 50 - 200 | 0.0000 | +/-30.00 |
| Acenaphthene-d10 | 328758 | 6.88 | 464052 | 6.88 | 71 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 282941 | 11.33 | 405437 | 11.32 | 70 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 722485 | 5.05 | 1103894 | 5.05 | 65 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 132578 | 14.05 | 215613 | 14.04 | 61 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 480384 | 8.42 | 703035 | 8.41 | 68 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-023-1010 (1011003-06 )** | | | *Lab File ID: D46251.D* | | | *Analyzed: 11/15/10 19:39* | | |
| 1,4-Dichlorobenzene-d4 | 203067 | 3.77 | 325841 | 3.77 | 62 | 50 - 200 | 0.0000 | +/-30.00 |
| Acenaphthene-d10 | 312371 | 6.88 | 464052 | 6.88 | 67 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 267115 | 11.33 | 405437 | 11.32 | 66 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 709075 | 5.05 | 1103894 | 5.05 | 64 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 132807 | 14.05 | 215613 | 14.04 | 62 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 447713 | 8.42 | 703035 | 8.41 | 64 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-FD002-1010 (1011003-08 )** | | | *Lab File ID: D46252.D* | | | *Analyzed: 11/15/10 20:03* | | |
| 1,4-Dichlorobenzene-d4 | 225477 | 3.76 | 325841 | 3.77 | 69 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 356472 | 6.88 | 464052 | 6.88 | 77 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 302910 | 11.33 | 405437 | 11.32 | 75 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 787837 | 5.05 | 1103894 | 5.05 | 71 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 142399 | 14.05 | 215613 | 14.04 | 66 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 524902 | 8.42 | 703035 | 8.41 | 75 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-FD003-1010 (1011003-09 )** | | | *Lab File ID: D46253.D* | | | *Analyzed: 11/15/10 20:28* | | |
| 1,4-Dichlorobenzene-d4 | 228506 | 3.76 | 325841 | 3.77 | 70 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 358083 | 6.88 | 464052 | 6.88 | 77 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 298505 | 11.33 | 405437 | 11.32 | 74 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 793835 | 5.05 | 1103894 | 5.05 | 72 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 138361 | 14.05 | 215613 | 14.04 | 64 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 528678 | 8.42 | 703035 | 8.41 | 75 | 50 - 200 | 0.0100 | +/-30.00 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048009-CCV1 )** | | | *Lab File ID: D46266.D* | | | *Analyzed: 11/16/10 10:40* | | | |
| 1,4-Dichlorobenzene-d4 | 226981 | 3.77 | 524277 | 3.79 | 43 | 50 - 200 | -0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 335088 | 6.88 | 890160 | 6.91 | 38 | 50 - 200 | -0.0300 | +/-30.00 | |
| Chrysene-d12 | 263167 | 11.33 | 837431 | 11.37 | 31 | 50 - 200 | -0.0400 | +/-30.00 | |
| Naphthalene-d8 | 771973 | 5.05 | 1909751 | 5.08 | 40 | 50 - 200 | -0.0300 | +/-30.00 | |
| Perylene-d12 | 106708 | 14.06 | 457505 | 14.11 | 23 | 50 - 200 | -0.0500 | +/-30.00 | |
| Phenanthrene-d10 | 483499 | 8.42 | 1402237 | 8.45 | 34 | 50 - 200 | -0.0300 | +/-30.00 | |
| **GKHMS-GW-017-1010 (1011003-02RE1 )** | | | *Lab File ID: D46294.D* | | | *Analyzed: 11/16/10 22:07* | | | |
| 1,4-Dichlorobenzene-d4 | 162526 | 3.79 | 226981 | 3.77 | 72 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 274845 | 6.91 | 335088 | 6.88 | 82 | 50 - 200 | 0.0300 | +/-30.00 | |
| Chrysene-d12 | 191919 | 11.38 | 263167 | 11.33 | 73 | 50 - 200 | 0.0500 | +/-30.00 | |
| Naphthalene-d8 | 576009 | 5.08 | 771973 | 5.05 | 75 | 50 - 200 | 0.0300 | +/-30.00 | |
| Perylene-d12 | 70951 | 14.15 | 106708 | 14.06 | 66 | 50 - 200 | 0.0900 | +/-30.00 | |
| Phenanthrene-d10 | 446529 | 8.45 | 483499 | 8.42 | 92 | 50 - 200 | 0.0300 | +/-30.00 | |

6 RP 11/15

# GC ANALYSIS LOG

**Instrument ID:** HP5890 # V **Reviewed by:** JK **Date:** 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp ( °C): | 180 / 200 / 240 |
| Detector Temp ( °C): | 300 |
| Oven Initial Temp ( °C): | 60 / 150 |
| Initial Time (min): | 0.0 / 0.50 / 1.0 |
| Ramp Rate ( °C/min) : | 11-220-4 / 6-250-4 - 18-300-7 |
| Final Temp ( °C): | 200 / 275 / 300 |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30 meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: ~~1025~~ 111010V.M (12A 11/15) **Analyst:** RP

| File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|
| 111010 V | | | | | |

Injection Log

Directory: h:\gcdata\v\111010

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316231.d | 1. | EVAL MIX 2081 | STD 8081 | 10 Nov 10 11:24 |
| 2 | v0316232.d | 1. | TOX-3 2091 | STD 8081 | 10 Nov 10 12:07 |
| 3 | v0316233.d | 1. | CHLOR-3 2104 | STD 8081 | 10 Nov 10 12:39 |
| 4 | v0316234.d | 1. | SEQ CAL6 PEST-6 1720 | STD 8081 | 10 Nov 10 13:11 |
| 5 | v0316235.d | 1. | SEQ CAL5 PEST-5 1721 | STD 8081 | 10 Nov 10 13:43 |
| 6 | v0316236.d | 1. | SEQ CAL4 PEST-4 1722 | STD 8081 | 10 Nov 10 14:15 |
| 7 | v0316237.d | 1. | SEQ CAL3 PEST-3 1723 1107 LSC | STD 8081 | 10 Nov 10 14:47 |
| 8 | v0316238.d | 1. | SEQ CAL2 PEST-2 1724 | STD 8081 | 10 Nov 10 15:19 |
| 7 | v0316239.d | 1. | SEQ CAL3 PEST-3 1723 | STD 8081 | 10 Nov 10 16:23 |
| 9 | v0316240.d | 1. | SEQ SCV1 PEST-4 ICV 2066 RP 11/11 | STD 8081 | 10 Nov 10 16:55 |
| 10 | v0316241.d | 1. | EVAL MIX | STD 8081 | 10 Nov 10 17:27 |
| 11 | v0316242.d | 1. | BLK : BG47023 | BLK,W | 10 Nov 10 17:59 |
| 12 | v0316243.d | 1. | BS | BS,W | 10 Nov 10 18:31 |
| 13 | v0316244.d | 1. | BSD | BS,W | 10 Nov 10 19:03 |
| 14 | v0316245.d | 1. | 1004067-02 | WATER | 10 Nov 10 19:36 |
| 15 | v0316246.d | 1. | RP SEQ CCV1 PEST-4 11/16 | TD | 10 Nov 10 20:07 |

RP 11/15/10

Comments: S046058 011104.1

# INITIAL CALIBRATION DATA

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | | | 4228003 | 3967186 | 4201500 | 3047132 |
| 4,4'-DDD [2C] | | | 7792208 | 7234494 | 7619482 | 6131764 |
| 4,4'-DDE | | | 5306430 | 4930815 | 4905410 | 4373280 |
| 4,4'-DDE [2C] | | | 1.05443E+07 | 9945321 | 1.001526E+07 | 8982652 |
| 4,4'-DDT | | | 4631770 | 4366302 | 4478454 | 4147808 |
| 4,4'-DDT [2C] | | | 8748053 | 8157576 | 8180418 | 7352604 |
| Aldrin | | | 6761234 | 6460819 | 6690681 | 6307220 |
| Aldrin [2C] | | | 1.240337E+07 | 1.180853E+07 | 1.200809E+07 | 1.139338E+07 |
| alpha-BHC | | | 8488671 | 7949527 | 7538186 | 7296800 |
| alpha-BHC [2C] | | | 1.382115E+07 | 1.306267E+07 | 1.252462E+07 | 1.23821E+07 |
| alpha-Chlordane | | | 6201309 | 5986639 | 6256260 | 6030841 |
| alpha-Chlordane [2C] | | | 1.12669E+07 | 1.08037E+07 | 1.114199E+07 | 1.05152E+07 |
| beta-BHC | | | 7843279 | 7387674 | 7101254 | 7049252 |
| beta-BHC [2C] | | | 4931394 | 4828646 | 5176968 | 5031416 |
| Chlordane | | 517678.6 | | | | |
| Chlordane [2C] | | 789094 | | | | |
| delta-BHC | | | 7277924 | 6853354 | 7136828 | 6118556 |
| delta-BHC [2C] | | | 1.176847E+07 | 1.112517E+07 | 1.157096E+07 | 1.020546E+07 |
| Dieldrin | | | 6341216 | 6042704 | 6217778 | 5841492 |
| Dieldrin [2C] | | | 1.170951E+07 | 1.119844E+07 | 1.14154E+07 | 1.031153E+07 |
| Endosulfan I | | | 6125407 | 6050284 | 6438542 | 6003184 |
| Endosulfan I [2C] | | | 1.02781E+07 | 9912386 | 1.028405E+07 | 9704388 |
| Endosulfan II | | | 5308187 | 5140706 | 5390746 | 4924880 |
| Endosulfan II [2C] | | | 9538840 | 9171726 | 9648252 | 9191232 |
| Endosulfan sulfate | | | 4958684 | 4760022 | 5120770 | 4713624 |
| Endosulfan Sulfate [2C] | | | 8230730 | 7832858 | 8416440 | 7694276 |
| Endrin | | | 5364980 | 5128918 | 5398841 | 4949464 |
| Endrin [2C] | | | 9751123 | 9321387 | 9634690 | 8577168 |
| Endrin Aldehyde | | | 3195252 | 3201460 | 3474004 | 3271235 |
| Endrin Aldehyde [2C] | | | 5327351 | 5133040 | 5899840 | 5162072 |
| Endrin ketone | | | 5942327 | 5673715 | 5995198 | 5581840 |

# INITIAL CALIBRATION DATA

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Endrin Ketone [2C] | | | 9014131 | 8514627 | 9035220 | 8302084 |
| gamma-BHC [2C] | | | 1.252149E+07 | 1.192095E+07 | 1.213754E+07 | 1.145081E+07 |
| gamma-Chlordane | | | 6252519 | 5972695 | 6205992 | 5951332 |
| gamma-Chlordane [2C] | | | 1.151052E+07 | 1.100949E+07 | 1.127758E+07 | 1.058262E+07 |
| Heptachlor | | | 6807055 | 6619332 | 6970796 | 6834228 |
| Heptachlor [2C] | | | 1.340323E+07 | 1.289744E+07 | 1.319733E+07 | 1.272744E+07 |
| Heptachlor Epoxide | | | 6403914 | 6186826 | 6435112 | 6265156 |
| Heptachlor Epoxide [2C] | | | 1.151958E+07 | 1.110571E+07 | 1.145404E+07 | 1.091235E+07 |
| Methoxychlor | | | 2362743 | 2303264 | 2444272 | 2306283 |
| Methoxychlor [2C] | | | 4258555 | 3976531 | 4070250 | 4020820 |
| Toxaphene | 143490.1 | | | | | |
| Toxaphene [2C] | 320181.4 | | | | | |
| TCMX | ~~9564832~~ | ~~5491488~~ | 5073178 | 4913595 | 4674152 | 4976984 |
| TCMX [2C] | ~~1.430665E+07~~ | ~~8436756~~ | 7528036 | 7276810 | 6532528 | 7642860 |
| DCB | ~~5687836~~ | ~~3319555~~ | 3684320 | 3457805 | 3733342 | 3588711 |
| DCB [2C] | ~~8540948~~ | ~~5219928~~ | 5719084 | 5322371 | 5733588 | 5652922 |

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111010\V0316232.D\ECD1A.CH Vial: 2
Signal #2 : H:\GCDATA\V\111010\V0316232.D\ECD2B.CH
Acq On : 10 Nov 2010 12:07 Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:28 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Nov 10 15:16:18 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) S | Tetrachloro-m-xy | 5.70 | 6.47 | 239.1E6 | 357.7E6 | 25.000 | 25.000 |
| | Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 125.00% | 125.00% |
| 28) S | Decachlorobiphen | 22.15 | 24.09 | 142.2E6 | 213.5E6 | 25.000 | 25.000 |
| | Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 125.00% |
| | Target Compounds | | | | | | |
| 29) L8 | Toxaphene | 14.53 | 15.60 | 45822342 | 96815464 | 466.409m | 500.000 |
| 30) L8 | Toxaphene {2} | 15.66 | 17.38 | 110.4E6 | 154.8E6 | 502.234m | 499.650m |
| 31) L8 | Toxaphene {3} | 16.81 | 17.75 | 70668992 | 263.7E6 | 498.131m | 497.089m |
| 32) L8 | Toxaphene {4} | 17.55 | 18.78 | 48262374 | 147.0E6 | 500.695m | 468.075m |
| 33) L8 | Toxaphene {5} | 18.33 | 20.28 | 83566428 | 138.1E6 | 485.231m | 491.754m |
| | Sum Toxaphene | | | 358.7E6 | 800.5E6 | 2452.700 | 2456.569 |
| | Average Toxaphene | | | | | 490.540 | 491.314 |
| | Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| | Average Chlordane | | | | | 0.000 | 0.000 |

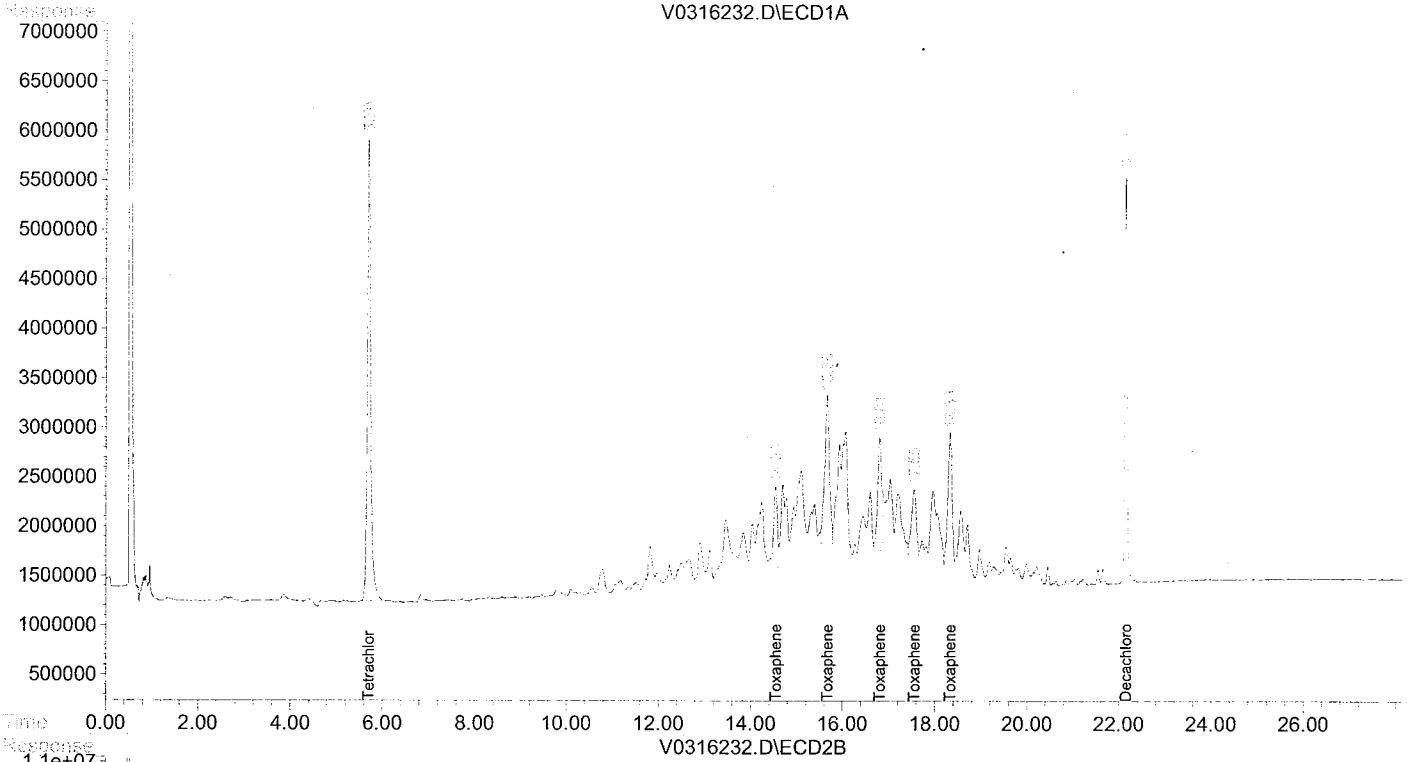
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

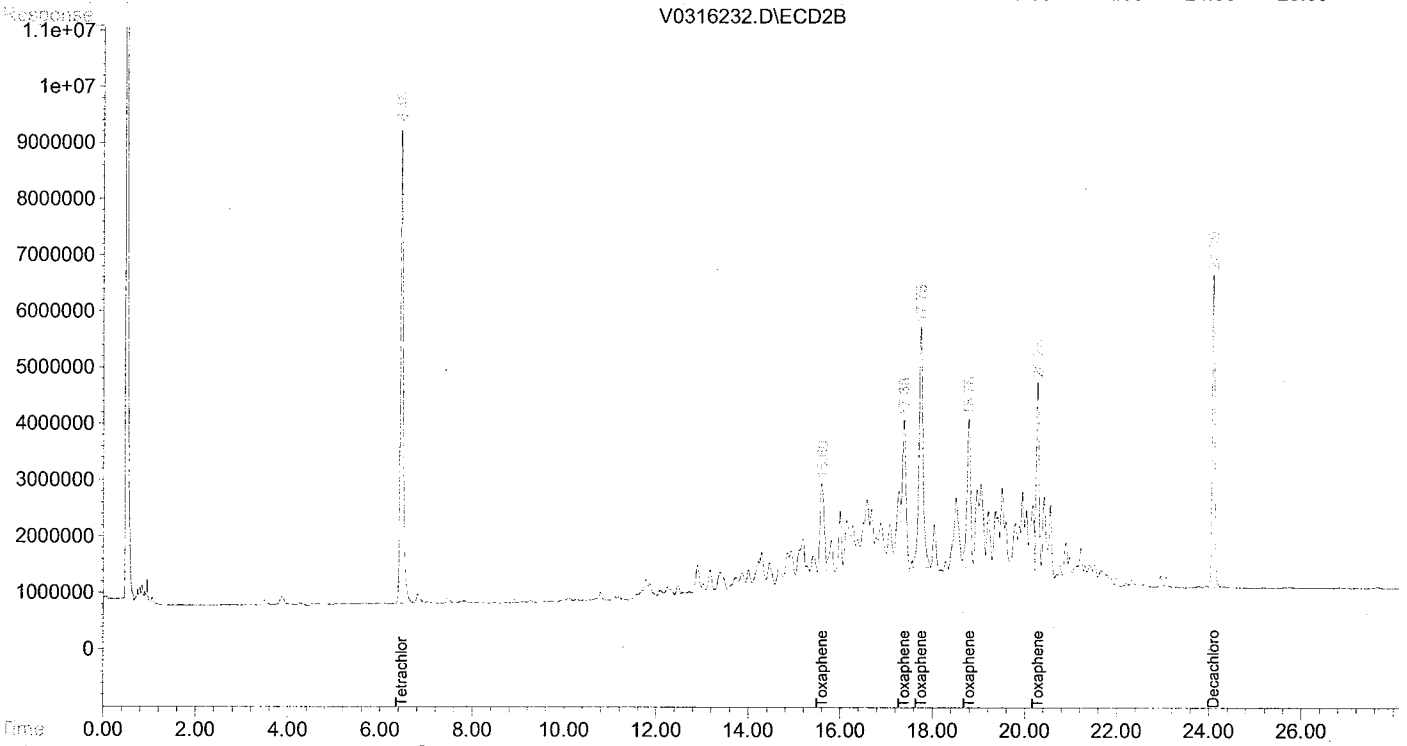
Quantitation Report

Signal #1 : H:\GCDATA\V\111010\V0316232.D\ECD1A.CH Vial: 2
Signal #2 : H:\GCDATA\V\111010\V0316232.D\ECD2B.CH
Acq On : 10 Nov 2010 12:07 Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:28 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Nov 10 15:16:18 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

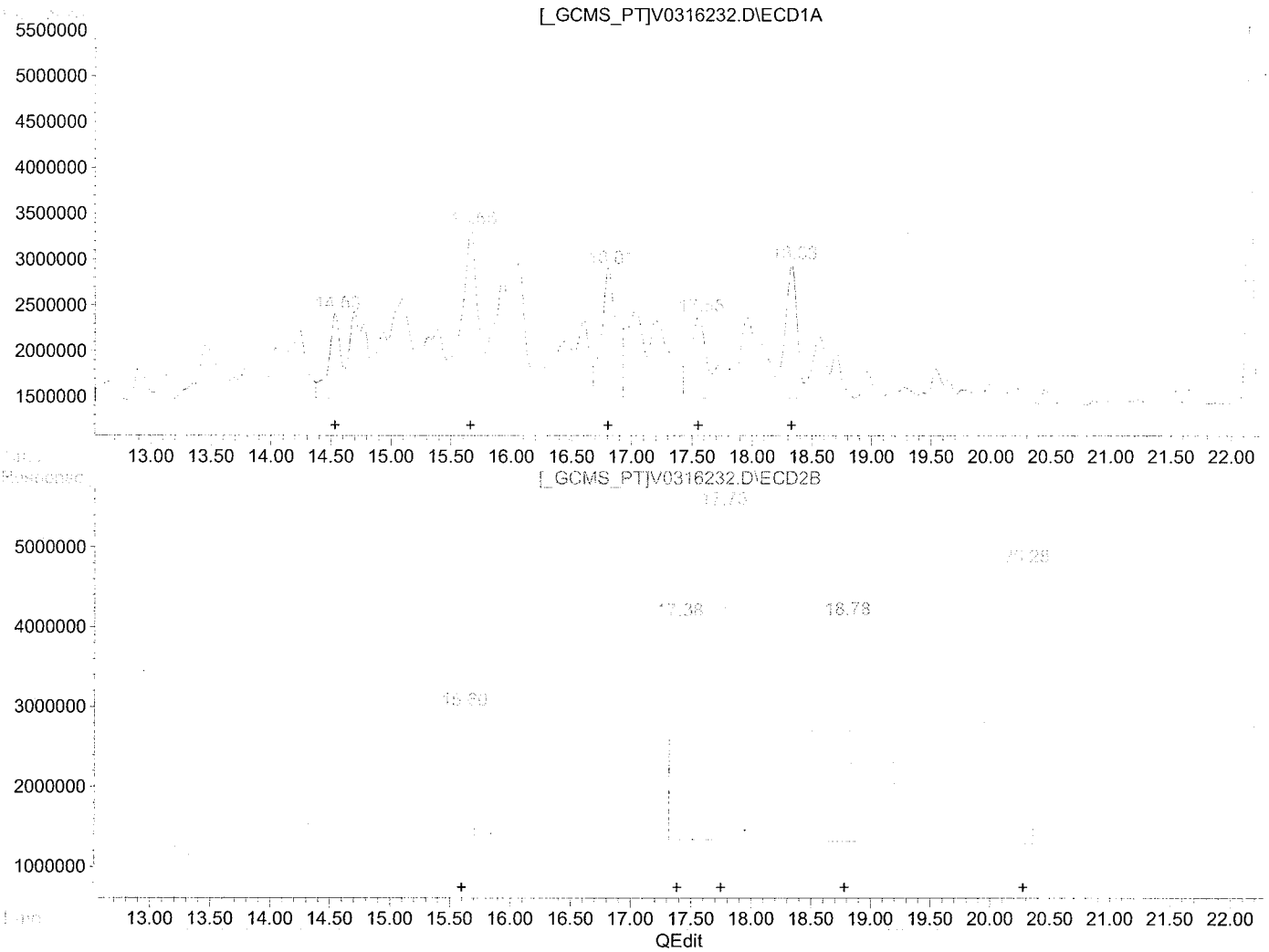


Quantitation Report

Signal #1 : H:\GCDATA\V\111010\V0316232.D\ECD1A.CH Vial: 2
Signal #2 : H:\GCDATA\V\111010\V0316232.D\ECD2B.CH
Acq On : 10 Nov 2010 12:07 Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:27 2010 Quant Results File: 111010VA.RES

Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Jul 21 13:24:16 2010
Response via : Multiple Level Calibration




(29) Toxaphene (L8)

| R.T. | Response | Conc |
|---|---|---|
| 14.54 | 64300332 | 654.49 |
| 15.66 | 181267426 | 824.59 |
| 16.81 | 128326501 | 904.55 |
| 17.56 | 81483939 | 845.35 |
| 18.33 | 102226111 | 593.58 |

(29) Toxaphene #2 (L8)

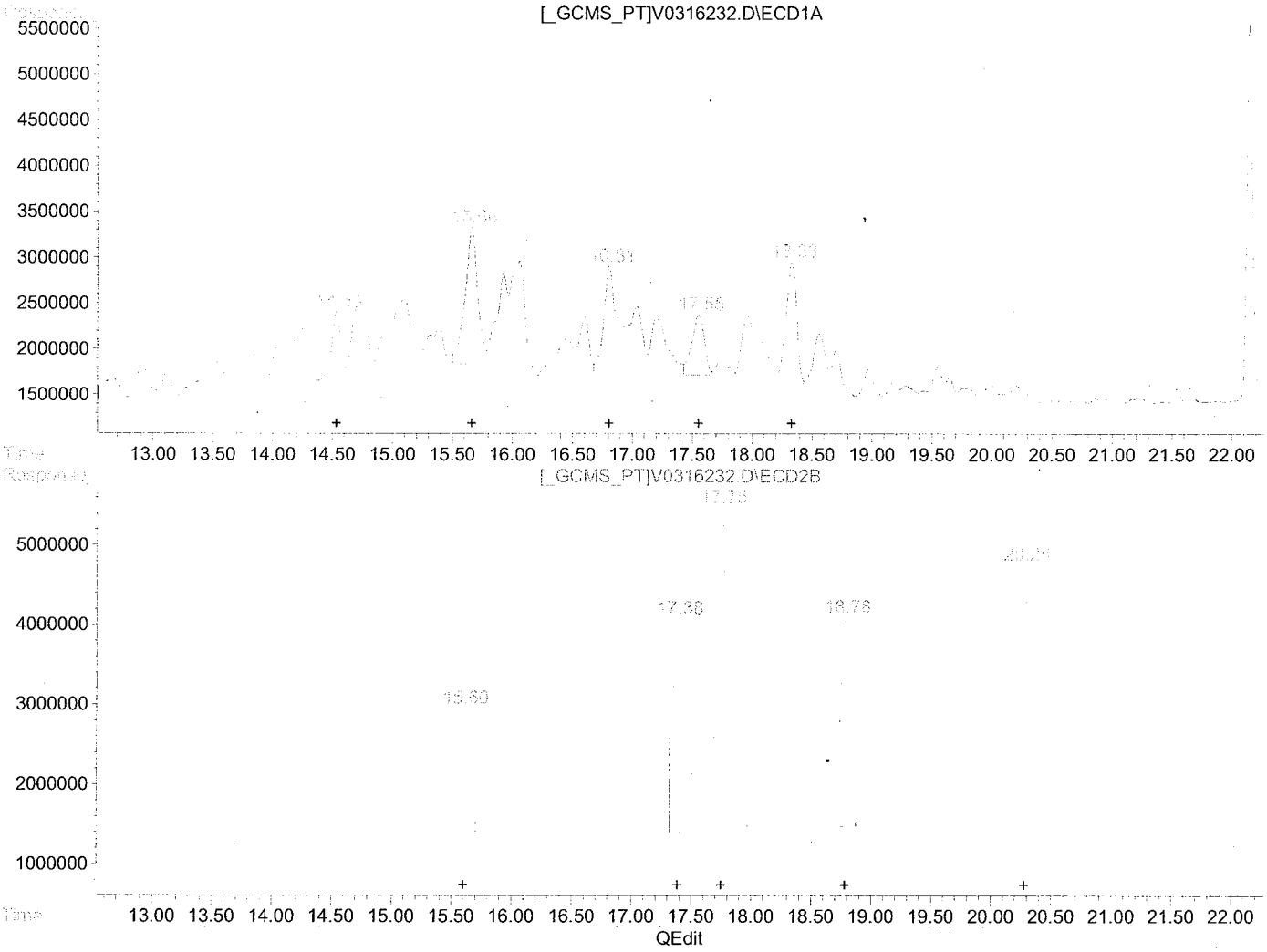
| R.T. | Response | Conc |
|---|---|---|
| 15.60 | 96815464 | 500.00 |
| 17.39 | 162405228 | 524.32 |
| 17.75 | 301416258 | 568.11 |
| 18.78 | 169772150 | 540.60 |
| 20.28 | 150711833 | 536.50 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\GCDATA\V\111010\V0316232.D\ECD1A.CH Vial: 2
Signal #2 : H:\GCDATA\V\111010\V0316232.D\ECD2B.CH
Acq On : 10 Nov 2010 12:07 Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:27 2010 Quant Results File: 111010VA.RES

Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Jul 21 13:24:16 2010
Response via : Multiple Level Calibration




(29) Toxaphene #2 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 14.53 | 45822342 | 466.41 |
| 15.66 | 110405108 | 502.23 |
| 16.81 | 70668992 | 498.13 |
| 17.55 | 48262374 | 500.69 |
| 18.33 | 83566428 | 485.23 |

M4

(29) Toxaphene #2 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 15.60 | 96815464 | 500.00 |
| 17.38 | 154764794 | 499.65 |
| 17.75 | 263734226 | 497.09 |
| 18.78 | 146996504 | 468.08 |
| 20.28 | 138142562 | 491.75 |

(+) = Expected Retention Time

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 3927132 | 12.80733 | 0.9931665 | | | |
| 4,4'-DDD [2C] | 7107345 | 9.49265 | 0.9953261 | | | |
| 4,4'-DDE | 4930684 | 7.136616 | 0.9957538 | | | |
| 4,4'-DDE [2C] | 9800288 | 5.974536 | 0.9975432 | | | |
| 4,4'-DDT | 4479399 | 5.376023 | 0.9976117 | | | |
| 4,4'-DDT [2C] | 8030693 | 6.567605 | 0.9967026 | | | |
| Aldrin | 6583499 | 2.916463 | 0.9986387 | | | |
| Aldrin [2C] | 1.159123E+07 | 6.790814 | 0.9987355 | | | |
| alpha-BHC | 7716550 | 6.557162 | 0.9958162 | | | |
| alpha-BHC [2C] | 1.261036E+07 | 7.470782 | 0.9972337 | | | |
| alpha-Chlordane | 6247204 | 4.939292 | 0.998986 | | | |
| alpha-Chlordane [2C] | 1.088866E+07 | 2.845215 | 0.9988789 | | | |
| beta-BHC | 7297870 | 4.555459 | 0.9967492 | | | |
| beta-BHC [2C] | 5176619 | 8.3482 | 0.9987438 | | | |
| Chlordane | | | 0 | | | |
| Chlordane [2C] | | | 0 | | | |
| delta-BHC | 6616362 | 10.30961 | 0.9974496 | | | |
| delta-BHC [2C] | 1.07974E+07 | 9.479932 | 0.9979358 | | | |
| Dieldrin | 6090391 | 3.179883 | 0.9985682 | | | |
| Dieldrin [2C] | 1.096383E+07 | 6.199808 | 0.9986072 | | | |
| Endosulfan I | 6244553 | 4.221736 | 0.9987476 | | | |
| Endosulfan I [2C] | 1.001925E+07 | 2.535149 | 0.9990434 | | | |
| Endosulfan II | 5350386 | 7.442338 | 0.9985825 | | | |
| Endosulfan II [2C] | 9402900 | 2.260476 | 0.9987657 | | | |
| Endosulfan sulfate | 5062108 | 8.324653 | 0.9978397 | | | |
| Endosulfan Sulfate [2C] | 8402078 | 10.15314 | 0.9973928 | | | |
| Endrin | 5312643 | 5.508657 | 0.9981912 | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Endrin [2C] | 9243818 | 5.289009 | 0.9983315 | | | |
| Endrin Aldehyde | 3560554 | 17.56286 | 0.9979873 | | | |
| Endrin Aldehyde [2C] | 5430906 | 6.052219 | 0.9937648 | | | |
| Endrin ketone | 5928980 | 5.741913 | 0.9981873 | | | |
| Endrin Ketone [2C] | 8895054 | 5.732912 | 0.9975023 | | | |
| gamma-BHC [2C] | 1.164672E+07 | 7.685229 | 0.9987495 | | | |
| gamma-Chlordane | 6144086 | 2.815292 | 0.9986504 | | | |
| gamma-Chlordane [2C] | 1.103789E+07 | 3.33242 | 0.9987641 | | | |
| Heptachlor | 6980938 | 5.827347 | 0.9991177 | | | |
| Heptachlor [2C] | 1.296502E+07 | 2.559587 | 0.9991483 | | | |
| Heptachlor Epoxide | 6437835 | 4.29548 | 0.9991091 | | | |
| Heptachlor Epoxide [2C] | 1.128674E+07 | 2.341002 | 0.9990929 | | | |
| Methoxychlor | 2351134 | 2.448607 | 0.998842 | | | |
| Methoxychlor [2C] | 4166551 | 5.240687 | 0.9970825 | | | |
| Toxaphene | | | 0 | | | |
| Toxaphene [2C] | | | 0 | | | |
| TCMX | 5103199 | 8.965449 | 0.9975621 | | | |
| TCMX [2C] | 7444112 | 8.3338 | 0.9937107 | | | |
| DCB | 3805969 | 11.49518 | 0.9968368 | | | |
| DCB [2C] | 5944703 | 13.0102 | 0.9962796 | | | |

# INITIAL CALIBRATION STANDARDS

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046056 | Instrument: | GCECD-V |
| Calibration: | 0111108 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002096 | TOXAPHENE LE-3 | S046056-CAL6 | V0316232.D | 11/10/10 12:07 |
| 0002104 | CHLORDANE LE-3 | S046056-CAL7 | V0316233.D | 11/10/10 12:39 |
| 0001720 | PEST MIX LE-6 | S046056-CAL5 | V0316234.D | 11/10/10 13:11 |
| 0001721 | PEST MIX LE-5 | S046056-CAL4 | V0316235.D | 11/10/10 13:43 |
| 0001721 | PEST MIX LE-5 | S046056-CAL4 | V0316235.D | 11/10/10 13:43 |
| 0001722 | PEST MIX LE-4 | S046056-CAL3 | V0316236.D | 11/10/10 14:15 |
| 0001724 | PEST MIX LE-2 | S046056-CAL1 | V0316238.D | 11/10/10 15:19 |
| 0001723 | PEST MIX LE-3 | S046056-CAL2 | V0316239.D | 11/10/10 16:23 |
| 0001723 | PEST MIX LE-3 | S046056-CAL2 | V0316239.D | 11/10/10 16:23 |
| 0002066 | PEST LEVEL-4(ICV) | S046056-SCV1 | V0316240.D | 11/10/10 16:55 |

V0316231BRKDWN

| % BREAKDOWN | SIGNAL 1 RTx-CLP | SIGNAL 2 RTx-CLP2 |
|---|---|---|
| **ENDRIN** | **6.58** | **4.63** |
| **DDT** | **1.53** | **1.29** |

| | RAW RESPONSE | |
|---|---|---|
| ENDRIN KETONE | 8092017.00 | 11915024.00 |
| ENDRIN ALDEHYDE | 5794209.00 | 5002648.00 |
| **ENDRIN** | 197300000.00 | 348700000.00 |

| | | |
|---|---|---|
| DDE | 0.00 | 0.00 |
| DDD | 2229613.00 | 3545463.00 |
| **DDT** | 143600000.00 | 270800000.00 |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316240.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-SCV1 | Injection Time: | 16:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.4 | 3927132 | 4038988 | | 2.8 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 51.8 | 7107345 | 7357034 | | 3.5 | 20 |
| 4,4'-DDE | L | 50.0 | 48.8 | 4930684 | 4816830 | | -2.3 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.3 | 9800288 | 9666454 | | -1.4 | 20 |
| 4,4'-DDT | L | 50.0 | 48.1 | 4479399 | 4306818 | | -3.9 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.0 | 8030693 | 7864020 | | -2.1 | 20 |
| Aldrin | L | 50.0 | 48.9 | 6583499 | 6441240 | | -2.2 | 20 |
| Aldrin [2C] | L | 50.0 | 50.7 | 1.159123E+07 | 1.17541E+07 | | 1.4 | 20 |
| alpha-BHC | L | 50.0 | 50.4 | 7716550 | 7785798 | | 0.9 | 20 |
| alpha-BHC [2C] | L | 50.0 | 51.4 | 1.261036E+07 | 1.296084E+07 | | 2.8 | 20 |
| alpha-Chlordane | L | 50.0 | 48.0 | 6247204 | 5994614 | | -4.0 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.4 | 1.088866E+07 | 1.076895E+07 | | -1.1 | 20 |
| beta-BHC | L | 50.0 | 49.9 | 7297870 | 7287814 | | -0.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.4 | 5176619 | 4909320 | | -5.2 | 20 |
| delta-BHC | L | 50.0 | 51.8 | 6616362 | 6860098 | | 3.7 | 20 |
| delta-BHC [2C] | L | 50.0 | 52.3 | 1.07974E+07 | 1.12966E+07 | | 4.6 | 20 |
| Dieldrin | L | 50.0 | 48.9 | 6090391 | 5959458 | | -2.1 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.1 | 1.096383E+07 | 1.097932E+07 | | 0.1 | 20 |
| Endosulfan I | L | 50.0 | 48.0 | 6244553 | 5998544 | | -3.9 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.4 | 1.001925E+07 | 9892124 | | -1.3 | 20 |
| Endosulfan II | L | 50.0 | 47.4 | 5350386 | 5070140 | | -5.2 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.0 | 9402900 | 9219596 | | -1.9 | 20 |
| Endosulfan sulfate | L | 50.0 | 48.1 | 5062108 | 4866284 | | -3.9 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 47.9 | 8402078 | 8049164 | | -4.2 | 20 |
| Endrin | L | 50.0 | 48.8 | 5312643 | 5186818 | | -2.4 | 20 |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316240.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-SCV1 | Injection Time: | 16:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 50.5 | 9243818 | 9343426 | | 1.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 52.1 | 3560554 | 3709280 | | 4.2 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 51.1 | 5430906 | 5551866 | | 2.2 | 20 |
| Endrin ketone | L | 50.0 | 47.8 | 5928980 | 5662886 | | -4.5 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 48.5 | 8895054 | 8620990 | | -3.1 | 20 |
| gamma-BHC [2C] | L | 50.0 | 50.9 | 1.164672E+07 | 1.185677E+07 | | 1.8 | 20 |
| gamma-Chlordane | L | 50.0 | 49.0 | 6144086 | 6014530 | | -2.1 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.3 | 1.103789E+07 | 1.088972E+07 | | -1.3 | 20 |
| Heptachlor | L | 50.0 | 48.6 | 6980938 | 6778736 | | -2.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.5 | 1.296502E+07 | 1.284027E+07 | | -1.0 | 20 |
| Heptachlor Epoxide | L | 50.0 | 48.2 | 6437835 | 6203680 | | -3.6 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.1 | 1.128674E+07 | 1.108669E+07 | | -1.8 | 20 |
| Methoxychlor | L | 50.0 | 50.2 | 2351134 | 2358820 | | 0.3 | 20 |
| Methoxychlor [2C] | L | 50.0 | 47.5 | 4166551 | 3956046 | | -5.1 | 20 |
| TCMX | L | 25.0 | 25.4 | 5103199 | 5193616 | | 1.8 | 20 |
| TCMX [2C] | L | 25.0 | 24.8 | 7444112 | 7389744 | | -0.7 | 20 |
| DCB | L | 25.0 | 23.2 | 3805969 | 3533777 | | -7.2 | 20 |
| DCB [2C] | L | 25.0 | 23.0 | 5944703 | 5465896 | | -8.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316246.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-CCV1 | Injection Time: | 20:07 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Heptachlor Epoxide | L | 50.0 | 45.8 | 6437835 | 5892178 | | -8.5 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 47.2 | 1.128674E+07 | 1.066511E+07 | | -5.5 | 20 |
| TCMX | L | 25.0 | 24.3 | 5103199 | 4956876 | | -2.9 | 20 |
| TCMX [2C] | L | 25.0 | 24.4 | 7444112 | 7259684 | | -2.5 | 20 |
| DCB | L | 25.0 | 21.8 | 3805969 | 3315558 | | -12.9 | 20 |
| DCB [2C] | L | 25.0 | 22.1 | 5944703 | 5252344 | | -11.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# GC ANALYSIS LOG

**Instrument ID:** HP5890 # V **Reviewed by:** MV **Date:** 11/18/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp ( °C): | 180 / 200 / 240 |
| Detector Temp ( °C): | 300 |
| Oven Initial Temp ( °C): | 60 / 150 |
| Initial Time (min): | 0.0 / 0.50 / 1.0 |
| Ramp Rate ( °C/min) : | 11-220-4 / 6-250-4 / 18-300-7 |
| Final Temp ( °C): | 200 / 275 / 300 |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30 meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 111010V.M Analyst: RP

| File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|
| 111510 | | | | | |

## Injection Log

Directory: h:\gcdata\v\111510

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316258.d | 1. | EVAL MIX 2081 | STD 8081 | 15 Nov 10 10:54 |
| 2 | v0316259.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 15 Nov 10 11:26 ✓ |
| 3 | v0316260.d | 1. | TOX-3 2096 | STD 8081 | 15 Nov 10 12:04 |
| 4 | v0316261.d | 1. | CHLOR-3 2104 | STD 8081 | 15 Nov 10 12:36 |
| 5 | v0316262.d | 1. | B046065-BLK1 | BLK,W | 15 Nov 10 13:08 |
| 6 | v0316263.d | 1. | B046065-BS1 | BS,W | 15 Nov 10 13:40 |
| 7 | v0316264.d | 1. | B046065-BSD1 | BS,W | 15 Nov 10 14:12 |
| 8 | v0316265.d | 1. | 1011015-01 | WATER | 15 Nov 10 14:44 |
| 9 | v0316266.d | 1. | 1011015-02 | WATER | 15 Nov 10 15:16 |
| 10 | v0316267.d | 1. | 1011015-03 | WATER | 15 Nov 10 15:48 |
| 11 | v0316268.d | 1. | B045083-BLK1 | WATER | 15 Nov 10 16:20 |
| 12 | v0316269.d | 1. | B045083-BS1 (RERUN) | BS WATER | 15 Nov 10 16:52 |
| 13 | v0316270.d | 1. | B045083-BSD1 | BSD WATER | 15 Nov 10 17:24 |
| 14 | v0316271.d | 1. | 1010098-04 | WATER | 15 Nov 10 17:56 |
| 15 | v0316272.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 15 Nov 10 18:28 ✓ |
| 16 | v0316273.d | 1. | 1010098-10 | WATER | 15 Nov 10 19:00 |
| 17 | v0316274.d | 1. | 1010098-11 | WATER | 15 Nov 10 19:32 |
| 18 | v0316275.d | 1. | 1011002-14 | WATER | 15 Nov 10 20:04 |
| 19 | v0316276.d | 1. | 1011002-15 | WATER | 15 Nov 10 20:36 |
| 20 | v0316277.d | 1. | 1011002-16 | WATER | 15 Nov 10 21:08 |
| 21 | v0316278.d | 1. | 1011003-05 | WATER | 15 Nov 10 21:40 |
| 22 | v0316279.d | 1. | 1011003-09 | WATER | 15 Nov 10 22:12 |
| 23 | v0316280.d | 1. | SEQ CCV3 PEST-4 1722 | STD | 15 Nov 10 22:44 ✓ |

## Injection Log

Directory: h:\gcdata\v\111610

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316281.d | 1. | EVAL MIX 2081 | STD 8081 | 16 Nov 10 09:48 |
| 2 | v0316282.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 16 Nov 10 10:35 |
| 3 | v0316283.d | 1. | B045083-BS1 | BS WATER | 16 Nov 10 11:48 |
| 4 | v0316284.d | 1. | B045083-BSD1 | WATER | 16 Nov 10 12:49 |
| 5 | v0316285.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 16 Nov 10 13:21 |
| 6 | v0316286.d | 1. | PEST-CHK 1932 | STD | 16 Nov 10 13:56 |

111610

**Comments:** S049004

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 5.103 | 5.480 | E6 | -7.4 | 117 |
| 2 | A | Hexachlorobenzene | 6.898 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 7.717 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 7.298 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 6.981 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 6.583 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 3.316 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 6.616 | 0.000 | E6 | 100.0# | -0# |
| 9 | A | 2,4-DDE | 0.000 | 891648.133 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 6.438 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 6.245 | 0.000 | E6 | 100.0# | -0# |
| 12 | A | gamma-Chlordane | 6.144 | 0.000 | E6 | 100.0# | -0# |
| 13 | A | alpha-Chlordane | 6.247 | 0.000 | E6 | 100.0# | -0# |
| 14 | B | Trans-Nonachlor | 0.000 | 10596299.210 | | 0.0 | 0# |
| 15 | B | 4,4-DDE | 4.931 | 0.000 | E6 | 100.0# | -0# |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# |
| 17 | MA | Dieldrin | 6.090 | 0.000 | E6 | 100.0# | -0# |
| 18 | MA | 2,4-DDT | 0.000 | 667655.967 | | 0.0 | 0# |
| 19 | MA | Endrin | 5.313 | 0.000 | E6 | 100.0# | -0# |
| 20 | B | Endosulfan II | 5.350 | 0.000 | E6 | 100.0# | -0# |
| 21 | A | 4,4-DDD | 3.927 | 0.000 | E6 | 100.0# | -0# |
| 22 | MA | 4,4-DDT | 4.479 | 0.000 | E6 | 100.0# | -0# |
| 23 | B | Endrin Aldehyde | 3.561 | 0.000 | E6 | 100.0# | -0# |
| 24 | B | Mirex | 0.000 | 0.000 | | 0.0 | 0# |
| 25 | B | Endosulfan Sulfate | 5.062 | 0.000 | E6 | 100.0# | -0# |
| 26 | A | Methoxychlor | 2.351 | 0.000 | E6 | 100.0# | -0# |
| 27 | B | Endrin Ketone | 5.929 | 0.000 | E6 | 100.0# | -0# |
| 28 | S | Decachlorobiphenyl | 3.806 | 3.806 | E6 | 0.0 | 102 |
| 29 | L8 | Toxaphene | 61.471 | 87.739 | E3 | -42.7# | 165# |
| 30 | L8 | Toxaphene (2) | 181.672 | 351.816 | E3 | -93.7# | 195# |
| 31 | L8 | Toxaphene (3) | 147.757 | 259.378 | E3 | -75.5# | 177# |
| 32 | L8 | Toxaphene (4) | 88.473 | 190.215 | E3 | -115.0# | 216# |
| 33 | L8 | Toxaphene (5) | 138.766 | 230.284 | E3 | -66.0# | 166# |
| 34 | L9 | Chlordane | 369.780 | 375.816 | E3 | -1.6 | 96 |
| 35 | L9 | Chlordane (2) | 263.821 | 308.850 | E3 | -17.1 | 94 |
| 36 | L9 | Chlordane (3) | 799.046 | 796.095 | E3 | 0.4 | 93 |
| 37 | L9 | Chlordane (4) | 1.265 | 1.060 | E6 | 16.2 | 93 |
| 38 | L9 | Chlordane (5) | 201.968 | 224.288 | E3 | -11.1 | 94 |

Signal #2
Continuing Calibration File: V0316261.D

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 7.444 | 8.714 | E6 | -17.1 | 133 |
| 2 | A | Hexachlorobenzene | 8.994 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 12.610 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 11.647 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 12.965 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 11.591 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 5.177 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 10.797 | 0.000 | E6 | 100.0# | -0# |
| 9 | B | 2,4-DDE | 0.000 | 0.000 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 11.287 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 10.019 | 0.000 | E6 | 100.0# | -0# |

(#) = Out of

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_1CAL\111010VC.M (Chemstation Integ.
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% | |
|---|---|---|---|---|---|---|---|---|
| 12 | A | gamma-Chlordane | 11.038 | 0.000 | E6 | 100.0# | -0# | |
| 13 | A | alpha-Chlordane | 10.889 | 0.000 | E6 | 100.0# | -0# | |
| 14 | B | Trans-Nonachlor | 0.000 | 693284.806 | | 0.0 | | 0# |
| 15 | B | 4,4-DDE | 9.800 | 0.000 | E6 | 100.0# | -0# | |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# | |
| 17 | MA | Dieldrin | 10.964 | 0.000 | E6 | 100.0# | -0# | |
| 18 | MA | 2,4-DDT | 0.000 | 0.000 | | 0.0 | 0# | |
| 19 | MA | Endrin | 9.244 | 0.000 | E6 | 100.0# | -0# | |
| 20 | B | Endosulfan II | 9.403 | 0.000 | E6 | 100.0# | -0# | |
| 21 | A | 4,4-DDD | 7.107 | 0.000 | E6 | 100.0# | -0# | |
| 22 | MA | 4,4-DDT | 8.031 | 0.000 | E6 | 100.0# | -0# | |
| 23 | B | Endrin Aldehyde | 5.431 | 0.000 | E6 | 100.0# | -0# | |
| 24 | B | Mirex | 0.000 | 218320.266 | | 0.0 | | 0# |
| 25 | B | Endosulfan Sulfate | 8.402 | 0.000 | E6 | 100.0# | -0# | |
| 26 | A | Methoxychlor | 4.167 | 0.000 | E6 | 100.0# | -0# | |
| 27 | B | Endrin Ketone | 8.895 | 0.000 | E6 | 100.0# | -0# | |
| 28 | S | Decachlorobiphenyl | 5.945 | 5.745 | E6 | 3.4 | 100 | |
| 29 | L8 | Toxaphene | 157.914 | 277.443 | E3 | -75.7# | 177# | |
| 30 | L8 | Toxaphene {2} | 225.226 | 400.309 | E3 | -77.7# | 177# | |
| 31 | L8 | Toxaphene {3} | 402.433 | 755.677 | E3 | -87.8# | 192# | |
| 32 | L8 | Toxaphene {4} | 230.642 | 406.774 | E3 | -76.4# | 177# | |
| 33 | L8 | Toxaphene {5} | 214.962 | 342.157 | E3 | -59.2# | 153# | |
| 34 | L9 | Chlordane | 637.234 | 668.034 | E3 | -4.8 | 99 | |
| 35 | L9 | Chlordane {2} | 377.539 | 469.046 | E3 | -24.2# | 97 | |
| 36 | L9 | Chlordane {3} | 1.258 | 1.357 | E6 | -7.8 | 97 | |
| 37 | L9 | Chlordane {4} | 979.278 | 1156.718 | E3 | -18.1 | 97 | |
| 38 | L9 | Chlordane {5} | 316.875 | 369.008 | E3 | -16.5 | 98 | |

Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD1A.CH Vial: 4
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD2B.CH
Acq On : 15 Nov 2010 12:36 pm Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:30 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.67f | 6.46 | 137.0E6 | 217.8E6 | 26.848 | 29.264 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 134.24%# | 146.32%# |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 95143598 | 143.6E6 | 24.999 | 24.160 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 120.80% |
| Target Compounds | | | | | | |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| 34) L9 Chlordane | 9.34 | 10.38 | 187.9E6 | 334.0E6 | 508.162 | 524.167 |
| 35) L9 Chlordane {2} | 10.59 | 11.96 | 154.4E6 | 234.5E6 | 585.340 | 621.188 |
| 36) L9 Chlordane {3} | 12.56 | 14.07 | 398.0E6 | 678.3E6 | 498.154 | 539.171 |
| 37) L9 Chlordane {4} | 12.99 | 14.56 | 529.8E6 | 578.4E6 | 418.808 | 590.598 # |
| 38) L9 Chlordane {5} | 15.49 | 17.59 | 112.1E6 | 184.5E6 | 555.256 | 582.261 |
| Sum Chlordane | | | 1382.3E6 | 2009.7E6 | 2565.719 | 2857.386 |
| Average Chlordane | | | | | 513.144 | 571.477 |

Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD1A.CH Vial: 3
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD2B.CH
Acq On : 15 Nov 2010 12:04 pm Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:28 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| | Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | | | |
| 1) | S Tetrachloro-m-xy | 5.70f | 6.46 | 254.7E6 | 366.8E6 | 49.909 | 49.280 |
| | Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 249.55%# | 246.40%# |
| 28) | S Decachlorobiphen | 22.14 | 24.09 | 167.2E6 | 245.7E6 | 43.941 | 41.335 |
| | Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 219.71%# | 206.68%# |
| | Target Compounds | | | | | | |
| 29) | L8 Toxaphene | 14.53 | 15.59 | 43869686 | 138.7E6 | 713.662 | 878.462 |
| 30) | L8 Toxaphene {2} | 15.66 | 17.38 | 175.9E6 | 200.2E6 | 968.273 | 888.684 |
| 31) | L8 Toxaphene {3} | 16.80 | 17.74 | 129.7E6 | 377.8E6 | 877.722 | 938.885 |
| 32) | L8 Toxaphene {4} | 17.55 | 18.78 | 95107616 | 203.4E6 | 1074.985 | 881.829 |
| 33) | L8 Toxaphene {5} | 18.33 | 20.28 | 115.1E6 | 171.1E6 | 829.759 | 795.855 |
| | Sum Toxaphene | | | 559.7E6 | 1091.2E6 | 4464.401 | 4383.715 |
| Average | Toxaphene | | | | | 892.880 | 876.743 |
| | Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average | Chlordane | | | | | 0.000 | 0.000 |

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.6 | 3927132 | 4056868 | | 3.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 51.2 | 7107345 | 7277152 | | 2.4 | 20 |
| 4,4'-DDE | L | 50.0 | 51.0 | 4930684 | 5028686 | | 2.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.8 | 9800288 | 9760268 | | -0.4 | 20 |
| 4,4'-DDT | L | 50.0 | 49.8 | 4479399 | 4464286 | | -0.3 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.8 | 8030693 | 8006086 | | -0.3 | 20 |
| Aldrin | L | 50.0 | 50.3 | 6583499 | 6623548 | | 0.6 | 20 |
| Aldrin [2C] | L | 50.0 | 50.9 | 1.159123E+07 | 1.179124E+07 | | 1.7 | 20 |
| alpha-BHC | L | 50.0 | 52.1 | 7716550 | 8040072 | | 4.2 | 20 |
| alpha-BHC [2C] | L | 50.0 | 52.3 | 1.261036E+07 | 1.318789E+07 | | 4.6 | 20 |
| alpha-Chlordane | L | 50.0 | 49.6 | 6247204 | 6196054 | | -0.8 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.3 | 1.088866E+07 | 1.073454E+07 | | -1.4 | 20 |
| beta-BHC | L | 50.0 | 52.1 | 7297870 | 7598910 | | 4.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.9 | 5176619 | 4956086 | | -4.3 | 20 |
| delta-BHC | L | 50.0 | 54.1 | 6616362 | 7156772 | | 8.2 | 20 |
| delta-BHC [2C] | L | 50.0 | 53.1 | 1.07974E+07 | 1.145907E+07 | | 6.1 | 20 |
| Dieldrin | L | 50.0 | 50.4 | 6090391 | 6138264 | | 0.8 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.4 | 1.096383E+07 | 1.10548E+07 | | 0.8 | 20 |
| Endosulfan I | L | 50.0 | 47.8 | 6244553 | 5963266 | | -4.5 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.3 | 1.001925E+07 | 9870438 | | -1.5 | 20 |
| Endosulfan II | L | 50.0 | 48.7 | 5350386 | 5211888 | | -2.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.8 | 9402900 | 9355800 | | -0.5 | 20 |
| Endosulfan sulfate | L | 50.0 | 49.7 | 5062108 | 5034586 | | -0.5 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.4 | 8402078 | 8129800 | | -3.2 | 20 |
| Endrin | L | 50.0 | 51.0 | 5312643 | 5415740 | | 1.9 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 51.7 | 9243818 | 9554568 | | 3.4 | 20 |
| Endrin Aldehyde | L | 50.0 | 46.6 | 3560554 | 3318566 | | -6.8 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 50.6 | 5430906 | 5501934 | | 1.3 | 20 |
| Endrin ketone | L | 50.0 | 49.0 | 5928980 | 5813120 | | -2.0 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 48.6 | 8895054 | 8652152 | | -2.7 | 20 |
| gamma-BHC [2C] | L | 50.0 | 51.6 | 1.164672E+07 | 1.202405E+07 | | 3.2 | 20 |
| gamma-Chlordane | L | 50.0 | 50.2 | 6144086 | 6163074 | | 0.3 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.2 | 1.103789E+07 | 1.087087E+07 | | -1.5 | 20 |
| Heptachlor | L | 50.0 | 49.0 | 6980938 | 6845460 | | -1.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.4 | 1.296502E+07 | 1.279548E+07 | | -1.3 | 20 |
| Heptachlor Epoxide | L | 50.0 | 49.4 | 6437835 | 6365172 | | -1.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.0 | 1.128674E+07 | 1.10573E+07 | | -2.0 | 20 |
| Methoxychlor | L | 50.0 | 51.8 | 2351134 | 2438070 | | 3.7 | 20 |
| Methoxychlor [2C] | L | 50.0 | 47.6 | 4166551 | 3963534 | | -4.9 | 20 |
| TCMX | L | 25.0 | 26.0 | 5103199 | 5303972 | | 3.9 | 20 |
| TCMX [2C] | L | 25.0 | 25.0 | 7444112 | 7455648 | | 0.2 | 20 |
| DCB | L | 25.0 | 24.7 | 3805969 | 3764899 | | -1.1 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5610868 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316272.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV2 | Injection Time: | 18:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 52.5 | 9243818 | 9713220 | | 5.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 47.5 | 3560554 | 3380038 | | -5.1 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 49.7 | 5430906 | 5401690 | | -0.5 | 20 |
| Endrin ketone | L | 50.0 | 47.2 | 5928980 | 5599254 | | -5.6 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8763520 | | -1.5 | 20 |
| gamma-BHC [2C] | L | 50.0 | 52.3 | 1.164672E+07 | 1.219179E+07 | | 4.7 | 20 |
| gamma-Chlordane | L | 50.0 | 46.8 | 6144086 | 5745286 | | -6.5 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.8 | 1.103789E+07 | 1.098883E+07 | | -0.4 | 20 |
| Heptachlor | L | 50.0 | 41.9 | 6980938 | 5845736 | | -16.3 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.3 | 1.296502E+07 | 1.278192E+07 | | -1.4 | 20 |
| Heptachlor Epoxide | L | 50.0 | 46.4 | 6437835 | 5980800 | | -7.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.5 | 1.128674E+07 | 1.117517E+07 | | -1.0 | 20 |
| Methoxychlor | L | 50.0 | 47.2 | 2351134 | 2221906 | | -5.5 | 20 |
| Methoxychlor [2C] | L | 50.0 | 48.0 | 4166551 | 4001668 | | -4.0 | 20 |
| TCMX | L | 25.0 | 24.6 | 5103199 | 5011176 | | -1.8 | 20 |
| TCMX [2C] | L | 25.0 | 25.3 | 7444112 | 7544380 | | 1.4 | 20 |
| DCB | L | 25.0 | 23.2 | 3805969 | 3532432 | | -7.2 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5609424 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 48.0 | 3927132 | 3770986 | | -4.0 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 48.3 | 7107345 | 6866646 | | -3.4 | 20 |
| 4,4'-DDE | L | 50.0 | 46.6 | 4930684 | 4591422 | | -6.9 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 51.2 | 9800288 | 1.002769E+07 | | 2.3 | 20 |
| 4,4'-DDT | L | 50.0 | 42.2 | 4479399 | 3782032 | | -15.6 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.9 | 8030693 | 8018976 | | -0.1 | 20 |
| Aldrin | L | 50.0 | 43.2 | 6583499 | 5685812 | | -13.6 | 20 |
| Aldrin [2C] | L | 50.0 | 51.7 | 1.159123E+07 | 1.197679E+07 | | 3.3 | 20 |
| alpha-BHC | L | 50.0 | 45.6 | 7716550 | 7040958 | | -8.8 | 20 |
| alpha-BHC [2C] | L | 50.0 | 53.0 | 1.261036E+07 | 1.336872E+07 | | 6.0 | 20 |
| alpha-Chlordane | L | 50.0 | 41.8 | 6247204 | 5227724 | | -16.3 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 50.1 | 1.088866E+07 | 1.091461E+07 | | 0.2 | 20 |
| beta-BHC | L | 50.0 | 44.9 | 7297870 | 2980204 | | -10.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 48.6 | 5176619 | 5037110 | | -2.7 | 20 |
| delta-BHC | L | 50.0 | 47.8 | 6616362 | 6326490 | | -4.4 | 20 |
| delta-BHC [2C] | L | 50.0 | 55.0 | 1.07974E+07 | 1.188226E+07 | | 10.0 | 20 |
| Dieldrin | L | 50.0 | 43.4 | 6090391 | 5288288 | | -13.2 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.8 | 1.096383E+07 | 1.112931E+07 | | 1.5 | 20 |
| Endosulfan I | L | 50.0 | 40.2 | 6244553 | 5014186 | | -19.7 | 20 |
| Endosulfan I [2C] | L | 50.0 | 50.2 | 1.001925E+07 | 1.004955E+07 | | 0.3 | 20 |
| Endosulfan II | L | 50.0 | 42.2 | 5350386 | 4515086 | | -15.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 48.5 | 9402900 | 9122232 | | -3.0 | 20 |
| Endosulfan sulfate | L | 50.0 | 43.0 | 5062108 | 4358376 | | -13.9 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.5 | 8402078 | 8149176 | | -3.0 | 20 |
| Endrin | L | 50.0 | 45.2 | 5312643 | 4798624 | | -9.7 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Endrin [2C] | L | 50.0 | 48.9 | 9243818 | 9041360 | | -2.2 | 20 | |
| Endrin Aldehyde | L | 50.0 | 44.1 | 3560554 | 3138266 | | -11.9 | 20 | |
| Endrin Aldehyde [2C] | L | 50.0 | 48.4 | 5430906 | 5259008 | | -3.2 | 20 | |
| Endrin ketone | L | 50.0 | 43.4 | 5928980 | 5151682 | | -13.1 | 20 | |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8766434 | | -1.4 | 20 | |
| gamma-BHC [2C] | L | 50.0 | 52.4 | 1.164672E+07 | 1.220732E+07 | | 4.8 | 20 | |
| gamma-Chlordane | L | 50.0 | 42.3 | 6144086 | 5202852 | | -15.3 | 20 | |
| gamma-Chlordane [2C] | L | 50.0 | 50.1 | 1.103789E+07 | 1.105896E+07 | | 0.2 | 20 | |
| Heptachlor | L | 50.0 | 36.8 | 6980938 | 5139642 | | -26.4 | 20 | * |
| Heptachlor [2C] | L | 50.0 | 48.5 | 1.296502E+07 | 1.256813E+07 | | -3.1 | 20 | |
| Heptachlor Epoxide | L | 50.0 | 42.0 | 6437835 | 5412026 | | -15.9 | 20 | |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.8 | 1.128674E+07 | 1.123936E+07 | | -0.4 | 20 | |
| Methoxychlor | L | 50.0 | 44.1 | 2351134 | 2071848 | | -11.9 | 20 | |
| Methoxychlor [2C] | L | 50.0 | 47.4 | 4166551 | 3949076 | | -5.2 | 20 | |
| TCMX | L | 25.0 | 21.2 | 5103199 | 4336128 | | -15.0 | 20 | |
| TCMX [2C] | L | 25.0 | 25.5 | 7444112 | 7604768 | | 2.2 | 20 | |
| DCB | L | 25.0 | 21.8 | 3805969 | 3320276 | | -12.8 | 20 | |
| DCB [2C] | L | 25.0 | 24.6 | 5944703 | 5852540 | | -1.6 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# GC ANALYSIS LOG

**Instrument ID:** HP5890 # V **Reviewed by:** MV **Date:** 11/17/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp ( °C): | 180 / 200 / 240 |
| Detector Temp ( °C): | 300 |
| Oven Initial Temp ( °C): | 60 / 150 |
| Initial Time (min): | 0.0 / 0.50 / 1.0 |
| Ramp Rate ( °C/min) : | 11-220-4 / 6-250-4 / 18-300-7 |
| Final Temp ( °C): | 200 / 275 / 300 |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30 meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 111010V.M Analyst: RP

| File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|
| 111510 | | | | | |

## Injection Log

Directory: h:\gcdata\v\111510

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316258.d | 1. | EVAL MIX 2081 | STD 8081 | 15 Nov 10 10:54 |
| 2 | v0316259.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 15 Nov 10 11:26 |
| 3 | v0316260.d | 1. | TOX-3 2096 | STD 8081 | 15 Nov 10 12:04 |
| 4 | v0316261.d | 1. | CHLOR-3 2104 | STD 8081 | 15 Nov 10 12:36 |
| 5 | v0316262.d | 1. | B046065-BLK1 | BLK,W | 15 Nov 10 13:08 |
| 6 | v0316263.d | 1. | B046065-BS1 | BS,W | 15 Nov 10 13:40 |
| 7 | v0316264.d | 1. | B046065-BSD1 | BS,W | 15 Nov 10 14:12 |
| 8 | v0316265.d | 1. | 1011015-01 | WATER | 15 Nov 10 14:44 |
| 9 | v0316266.d | 1. | 1011015-02 | WATER | 15 Nov 10 15:16 |
| 10 | v0316267.d | 1. | 1011015-03 | WATER | 15 Nov 10 15:48 |
| 11 | v0316268.d | 1. | B045083-BLK1 | WATER | 15 Nov 10 16:20 |
| 12 | v0316269.d | 1. | B045083-BS1 & RepAm | BS WATER | 15 Nov 10 16:52 |
| 13 | v0316270.d | 1. | B045083-BSD1 | BSD WATER | 15 Nov 10 17:24 |
| 14 | v0316271.d | 1. | 1010098-04 | WATER | 15 Nov 10 17:56 |
| 15 | v0316272.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 15 Nov 10 18:28 |
| 16 | v0316273.d | 1. | 1010098-10 | WATER | 15 Nov 10 19:00 |
| 17 | v0316274.d | 1. | 1010098-11 | WATER | 15 Nov 10 19:32 |
| 18 | v0316275.d | 1. | 1011002-14 | WATER | 15 Nov 10 20:04 |
| 19 | v0316276.d | 1. | 1011002-15 | WATER | 15 Nov 10 20:36 |
| 20 | v0316277.d | 1. | 1011002-16 | WATER | 15 Nov 10 21:08 |
| 21 | v0316278.d | 1. | 1011003-05 | WATER | 15 Nov 10 21:40 |
| 22 | v0316279.d | 1. | 1011003-09 | WATER | 15 Nov 10 22:12 |
| 23 | v0316280.d | 1. | SEQ CCV3 PEST-4 1722 | STD | 15 Nov 10 22:44 |

## Injection Log

Directory: h:\gcdata\v\111610

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316281.d | 1. | EVAL MIX 2081 | STD 8081 | 16 Nov 10 09:48 |
| 2 | v0316282.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 16 Nov 10 10:35 ✓ |
| 3 | v0316283.d | 1. | B045083-BS1 | BS WATER | 16 Nov 10 11:48 |
| 4 | v0316284.d | 1. | B045083-BSD1 | WATER | 16 Nov 10 12:49 |
| 5 | v0316285.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 16 Nov 10 13:21 |
| 6 | v0316286.d | 1. | PEST-CHK 1932 | STD | 16 Nov 10 13:56 |

111610

Comments: S049004

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316282.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049006 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S049006-CCV1 | Injection Time: | 10:35 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 46.8 | 3927132 | 3674090 | | -6.4 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 47.6 | 7107345 | 6771816 | | -4.7 | 20 |
| 4,4'-DDE | L | 50.0 | 47.0 | 4930684 | 4635430 | | -6.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 45.8 | 9800288 | 8982022 | | -8.3 | 20 |
| 4,4'-DDT | L | 50.0 | 41.7 | 4479399 | 3734408 | | -16.6 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 45.4 | 8030693 | 7295528 | | -9.2 | 20 |
| Aldrin | L | 50.0 | 47.1 | 6583499 | 6205982 | | -5.7 | 20 |
| Aldrin [2C] | L | 50.0 | 49.2 | 1.159123E+07 | 1.139398E+07 | | -1.7 | 20 |
| alpha-BHC | L | 50.0 | 51.3 | 7716550 | 7921396 | | 2.7 | 20 |
| alpha-BHC [2C] | L | 50.0 | 52.2 | 1.261036E+07 | 1.316394E+07 | | 4.4 | 20 |
| alpha-Chlordane | L | 50.0 | 44.6 | 6247204 | 5572488 | | -10.8 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 46.4 | 1.088866E+07 | 1.010659E+07 | | -7.2 | 20 |
| beta-BHC | L | 50.0 | 48.5 | 7297870 | 3216712 | | -3.0 | 20 |
| beta-BHC [2C] | L | 50.0 | 46.7 | 5176619 | 4836362 | | -6.6 | 20 |
| delta-BHC | L | 50.0 | 51.7 | 6616362 | 6835658 | | 3.3 | 20 |
| delta-BHC [2C] | L | 50.0 | 52.1 | 1.07974E+07 | 1.124157E+07 | | 4.1 | 20 |
| Dieldrin | L | 50.0 | 45.4 | 6090391 | 5529232 | | -9.2 | 20 |
| Dieldrin [2C] | L | 50.0 | 46.6 | 1.096383E+07 | 1.022374E+07 | | -6.8 | 20 |
| Endosulfan I | L | 50.0 | 43.9 | 6244553 | 5483608 | | -12.2 | 20 |
| Endosulfan I [2C] | L | 50.0 | 46.5 | 1.001925E+07 | 9322808 | | -7.0 | 20 |
| Endosulfan II | L | 50.0 | 43.3 | 5350386 | 4636128 | | -13.3 | 20 |
| Endosulfan II [2C] | L | 50.0 | 45.3 | 9402900 | 8510784 | | -9.5 | 20 |
| Endosulfan sulfate | L | 50.0 | 44.0 | 5062108 | 4455012 | | -12.0 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 44.2 | 8402078 | 7425192 | | -11.6 | 20 |
| Endrin | L | 50.0 | 46.8 | 5312643 | 4968480 | | -6.5 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316282.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049006 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S049006-CCV1 | Injection Time: | 10:35 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 48.7 | 9243818 | 8998574 | | -2.7 | 20 |
| Endrin Aldehyde | L | 50.0 | 41.0 | 3560554 | 2916404 | | -18.1 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 44.4 | 5430906 | 4825994 | | -11.1 | 20 |
| Endrin ketone | L | 50.0 | 43.4 | 5928980 | 5148184 | | -13.2 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 44.0 | 8895054 | 7822436 | | -12.1 | 20 |
| gamma-BHC [2C] | L | 50.0 | 51.3 | 1.164672E+07 | 1.195039E+07 | | 2.6 | 20 |
| gamma-Chlordane | L | 50.0 | 45.4 | 6144086 | 5584336 | | -9.1 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 46.5 | 1.103789E+07 | 1.025716E+07 | | -7.1 | 20 |
| Heptachlor | L | 50.0 | 41.1 | 6980938 | 5732790 | | -17.9* | 20 |
| Heptachlor [2C] | L | 50.0 | 48.2 | 1.296502E+07 | 1.250826E+07 | | -3.5 | 20 |
| Heptachlor Epoxide | L | 50.0 | 45.1 | 6437835 | 5812648 | | -9.7 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 46.7 | 1.128674E+07 | 1.054735E+07 | | -6.6 | 20 |
| Methoxychlor | L | 50.0 | 42.3 | 2351134 | 1988091 | | -15.4* | 20 |
| Methoxychlor [2C] | L | 50.0 | 43.2 | 4166551 | 3597072 | | -13.7 | 20 |
| TCMX | L | 25.0 | 24.8 | 5103199 | 5069524 | | -0.6 | 20 |
| TCMX [2C] | L | 25.0 | 25.4 | 7444112 | 7554220 | | 1.5 | 20 |
| DCB | L | 25.0 | 22.2 | 3805969 | 3385750 | | -11.0 | 20 |
| DCB [2C] | L | 25.0 | 21.6 | 5944703 | 5143388 | | -13.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316285.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049006 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S049006-CCV2 | Injection Time: | 13:21 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 59.2 | 3927132 | 4646986 | | 18.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 58.4 | 7107345 | 8304584 | | 16.8 | 20 |
| 4,4'-DDE | L | 50.0 | 56.4 | 4930684 | 5558574 | | 12.7 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 54.8 | 9800288 | 1.073336E+07 | | 9.5 | 20 |
| 4,4'-DDT | L | 50.0 | 53.4 | 4479399 | 4788878 | | 6.9 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 55.6 | 8030693 | 8922940 | | 11.1 | 20 |
| Aldrin | L | 50.0 | 53.6 | 6583499 | 7059100 | | 7.2 | 20 |
| Aldrin [2C] | L | 50.0 | 54.7 | 1.159123E+07 | 1.267862E+07 | | 9.4 | 20 |
| alpha-BHC | L | 50.0 | 55.0 | 7716550 | 8490166 | | 10.0 | 20 |
| alpha-BHC [2C] | L | 50.0 | 55.0 | 1.261036E+07 | 1.386523E+07 | | 10.0 | 20 |
| alpha-Chlordane | L | 50.0 | 52.8 | 6247204 | 6592668 | | 5.5 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 54.1 | 1.088866E+07 | 1.177295E+07 | | 8.1 | 20 |
| beta-BHC | L | 50.0 | 54.3 | 7297870 | 3602798 | | 8.7 | 20 |
| beta-BHC [2C] | L | 50.0 | 50.8 | 5176619 | 5261970 | | 1.6 | 20 |
| delta-BHC | L | 50.0 | 57.1 | 6616362 | 7550352 | | 14.1 | 20 |
| delta-BHC [2C] | L | 50.0 | 56.6 | 1.07974E+07 | 1.22317E+07 | | 13.3 | 20 |
| Dieldrin | L | 50.0 | 54.3 | 6090391 | 6612686 | | 8.6 | 20 |
| Dieldrin [2C] | L | 50.0 | 55.1 | 1.096383E+07 | 1.208803E+07 | | 10.3 | 20 |
| Endosulfan I | L | 50.0 | 52.2 | 6244553 | 6519730 | | 4.4 | 20 |
| Endosulfan I [2C] | L | 50.0 | 53.9 | 1.001925E+07 | 1.080882E+07 | | 7.9 | 20 |
| Endosulfan II | L | 50.0 | 53.2 | 5350386 | 5689402 | | 6.3 | 20 |
| Endosulfan II [2C] | L | 50.0 | 53.7 | 9402900 | 1.009653E+07 | | 7.4 | 20 |
| Endosulfan sulfate | L | 50.0 | 54.3 | 5062108 | 5501240 | | 8.7 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 53.7 | 8402078 | 9027732 | | 7.4 | 20 |
| Endrin | L | 50.0 | 56.0 | 5312643 | 5950876 | | 12.0 | 20 |

# METHOD BLANK SUMMARY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B045083-BLK1 | Batch: | B045083 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B045083-BSD1 | V0316284.D | 12:49 |
| LCS | B045083-BS1 | V0316283.D | 11:48 |
| GKHMS-GW-FD003-1010 | 1011003-09 | V0316279.D | 22:12 |
| GKHMS-GW-022-1010 | 1011003-05 | V0316278.D | 21:40 |

CENTAURI LABS™

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.050 | U |
| 72-55-9 | 4,4'-DDE | 0.050 | U |
| 50-29-3 | 4,4'-DDT | 0.050 | U |
| 309-00-2 | Aldrin | 0.050 | U |
| 319-84-6 | alpha-BHC | 0.050 | U |
| 5103-71-9 | alpha-Chlordane | 0.050 | U |
| 319-85-7 | beta-BHC | 0.050 | U |
| 57-74-9 | Chlordane | 1.00 | U |
| 319-86-8 | delta-BHC | 0.050 | U |
| 60-57-1 | Dieldrin | 0.050 | U |
| 959-98-8 | Endosulfan I | 0.050 | U |
| 33213-65-9 | Endosulfan II | 0.050 | U |
| 1031-07-8 | Endosulfan sulfate | 0.050 | U |
| 72-20-8 | Endrin | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde | 0.050 | U |
| 53494-70-5 | Endrin ketone | 0.050 | U |
| 58-89-9 | gamma-BHC | 0.050 | U |
| 5103-74-2 | gamma-Chlordane | 0.050 | U |
| 76-44-8 | Heptachlor | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide | 0.050 | U |
| 72-43-5 | Methoxychlor | 0.050 | U |
| 8001-35-2 | Toxaphene | 1.00 | U |
| 143-50-0 | Kepone | 0.050 | U |
| 143-50-0 | Kepone [2C] | 0.050 | U |
| 2385-85-5 | Mirex | 0.050 | U |
| 2385-85-5 | Mirex [2C] | 0.050 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011003 | |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS | |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Instrument: | GCECD-V | | | | |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 0.050 | U |
| 118-74-1 | Hexachlorobenzene [2C] | 0.050 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011003 | |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS | |
| Matrix: | Water | Laboratory ID: | B045083-BLK1 | File ID: | V0316268.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/15/10 16:20 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B045083 | Sequence: | S049004 | Calibration: | 0111108 |
| Instrument: | GCECD-V | | | | |
| Column: | 2 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD [2C] | 0.050 | U |
| 72-55-9 | 4,4'-DDE [2C] | 0.050 | U |
| 50-29-3 | 4,4'-DDT [2C] | 0.050 | U |
| 309-00-2 | Aldrin [2C] | 0.050 | U |
| 319-84-6 | alpha-BHC [2C] | 0.050 | U |
| 5103-71-9 | alpha-Chlordane [2C] | 0.050 | U |
| 319-85-7 | beta-BHC [2C] | 0.050 | U |
| 57-74-9 | Chlordane [2C] | 1.00 | U |
| 319-86-8 | delta-BHC [2C] | 0.050 | U |
| 60-57-1 | Dieldrin [2C] | 0.050 | U |
| 959-98-8 | Endosulfan I [2C] | 0.050 | U |
| 33213-65-9 | Endosulfan II [2C] | 0.050 | U |
| 1031-07-8 | Endosulfan Sulfate [2C] | 0.050 | U |
| 72-20-8 | Endrin [2C] | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde [2C] | 0.050 | U |
| 53494-70-5 | Endrin Ketone [2C] | 0.050 | U |
| 58-89-9 | gamma-BHC [2C] | 0.050 | U |
| 5103-74-2 | gamma-Chlordane [2C] | 0.050 | U |
| 76-44-8 | Heptachlor [2C] | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide [2C] | 0.050 | U |
| 72-43-5 | Methoxychlor [2C] | 0.050 | U |
| 8001-35-2 | Toxaphene [2C] | 1.00 | U |

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# SURROGATE SUMMARY SHEET

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-V |

| | DCB [2C] (30 - 135) | DCB (30 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| 1011003-05 | 45 | 40 | 93 | 118 |
| 1011003-09 | 25* | 75 | 89 | 126 |
| B045083-BLK1 | 87 | 83 | 93 | 91 |
| B045083-BS1 | 101 | 104 | 104 | 105 |
| B045083-BSD1 | 98 | 101 | 110 | 104 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.424 | 85 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.421 | 84 | 50 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.421 | 84 | 0.7 | 30 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.449 | 90 | 7 | 30 | 50 - 150 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.500 | 100 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.482 | 96 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.434 | 87 | 45 - 140 |
| Aldrin | 0.500 | 0.480 | 96 | 25 - 140 |
| alpha-BHC | 0.500 | 0.502 | 100 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.463 | 93 | 65 - 125 |
| beta-BHC | 0.500 | 0.491 | 98 | 65 - 125 |
| delta-BHC | 0.500 | 0.488 | 98 | 45 - 135 |
| Dieldrin | 0.500 | 0.474 | 95 | 60 - 130 |
| Endosulfan I | 0.500 | 0.446 | 89 | 50 - 110 |
| Endosulfan II | 0.500 | 0.463 | 93 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.456 | 91 | 55 - 135 |
| Endrin | 0.500 | 0.487 | 97 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.448 | 90 | 55 - 135 |
| Endrin ketone | 0.500 | 0.462 | 92 | 75 - 125 |
| gamma-BHC | 0.500 | 0.506 | 101 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.469 | 94 | 60 - 125 |
| Heptachlor | 0.500 | 0.431 | 86 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.466 | 93 | 60 - 130 |
| Methoxychlor | 0.500 | 0.449 | 90 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.506 | 101 | 1 | 20 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.503 | 101 | 4 | 20 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.444 | 89 | 2 | 20 | 45 - 140 |
| Aldrin | 0.500 | 0.530 | 106 | 10 | 20 | 25 - 140 |
| alpha-BHC | 0.500 | 0.548 | 110 | 9 | 20 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.480 | 96 | 4 | 20 | 65 - 125 |
| beta-BHC | 0.500 | 0.499 | 100 | 2 | 20 | 65 - 125 |
| delta-BHC | 0.500 | 0.515 | 103 | 5 | 20 | 45 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BSD1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Dieldrin | 0.500 | 0.489 | 98 | 3 | 20 | 60 - 130 |
| Endosulfan I | 0.500 | 0.474 | 95 | 6 | 20 | 50 - 110 |
| Endosulfan II | 0.500 | 0.468 | 94 | 1 | 20 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.462 | 92 | 1 | 20 | 55 - 135 |
| Endrin | 0.500 | 0.504 | 101 | 3 | 20 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.456 | 91 | 2 | 20 | 55 - 135 |
| Endrin ketone | 0.500 | 0.460 | 92 | 0.5 | 20 | 75 - 125 |
| gamma-BHC | 0.500 | 0.534 | 107 | 6 | 20 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.488 | 98 | 4 | 20 | 60 - 125 |
| Heptachlor | 0.500 | 0.449 | 90 | 4 | 20 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.486 | 97 | 4 | 20 | 60 - 130 |
| Methoxychlor | 0.500 | 0.443 | 89 | 1 | 20 | 55 - 150 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.488 | 98 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.467 | 93 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.450 | 90 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.492 | 98 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.509 | 102 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.471 | 94 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.468 | 94 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.487 | 97 | 45 - 135 |
| Dieldrin [2C] | 0.500 | 0.476 | 95 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.472 | 94 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.474 | 95 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.449 | 90 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.497 | 99 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.485 | 97 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.463 | 93 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.506 | 101 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.472 | 94 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.480 | 96 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.472 | 94 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.434 | 87 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.497 | 99 | 2 | 20 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.485 | 97 | 4 | 20 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.463 | 93 | 3 | 20 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.516 | 103 | 5 | 20 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.543 | 109 | 6 | 20 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.490 | 98 | 4 | 20 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.493 | 99 | 5 | 20 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.516 | 103 | 6 | 20 | 45 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B045083 | Laboratory ID: | B045083-BSD1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Dieldrin [2C] | 0.500 | 0.493 | 99 | 3 | 20 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.491 | 98 | 4 | 20 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.482 | 96 | 2 | 20 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.457 | 91 | 2 | 20 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.514 | 103 | 3 | 20 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.498 | 100 | 3 | 20 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.467 | 93 | 0.8 | 20 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.537 | 107 | 6 | 20 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.493 | 99 | 4 | 20 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.507 | 101 | 6 | 20 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.494 | 99 | 5 | 20 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.439 | 88 | 1 | 20 | 55 - 150 |

## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: MM Date: 11/8/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | 180 / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 18-300-7 |
| Final Temp(oC): | 200 / 275 / 300 |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 1014101U.M / 1014101UA.M Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 102410 | U0324366 | SEQ CCV1 AR1242-3 | — | STD | 102910 | 2124 |
| | U 67 | SEQ CAL5 AR1660-5 | | | | 2116 |
| | U 68 | CAL4 -4 | | | | 2117 |
| | U 69 | CAL3 -3 | | | | 2115 |
| | U 70 | CAL2 -2 | | | | 2119 |
| | U 71 | CAL1 -1 | | | | 2120 |
| | U 72 | AR1660 -3 CCV | | | | 2140 |
| | U 73 | BLK | 1.0 | water | | |
| | U 74 | BKS | | | | |
| | U 75 | BKSD | | | | |
| | U 76 | BLK | | soil | | |
| | U 77 | BS | | | | |
| | U 78 | 10100092 -83 | | W | | |
| | U 79 | -AN | | | | |
| | U 80 | 69 | | soil | | |
| | U 81 | 8072 11-3-10 | | | | |
| | U 82 | 8475 | | | | |
| | U 83 | SEQ CCV1 8A AR1660-3 | — | STD | | 2118 |
| | U 84 | 10100092 9079 | | S | | |
| | U 85 | 9560 | | | | |
| | U 86 | 9984 | | | | |
| | U 87 | AF87 | | | | |
| | U 88 | AFMS 90 | | | 103010 | |

Comments: RP 11/3/10

S046052 - ICAL ANC 01/11/03

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111103 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 2:46:38PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| PCB-1016 | 12075.8 | 8.566025 | | | 20 | |
| PCB-1016 [2C] | 3937.657 | 13.28868 | | | 20 | |
| PCB-1221 | | | | | 20 | |
| PCB-1221 [2C] | | | | | 20 | |
| PCB-1232 | | | | | 20 | |
| PCB-1232 [2C] | | | | | 20 | |
| PCB-1242 | 8074.333 | 11.21551 | | | 20 | |
| PCB-1242 [2C] | 3192.754 | 14.34754 | | | 20 | |
| PCB-1248 | | | | | 20 | |
| PCB-1248 [2C] | | | | | 20 | |
| PCB-1254 | | | | | 20 | |
| PCB-1254 [2C] | | | | | 20 | |
| PCB-1260 | 31974.47 | 4.749315 | | | 20 | |
| PCB-1260 [2C] | 11271.14 | 8.013692 | | | 20 | |
| TCMX | 540967.2 | 5.496186 | | | 20 | |
| TCMX [2C] | 215389.7 | 7.246717 | | | 20 | |
| DCB | 557860.6 | 11.70303 | | | 20 | |
| DCB [2C] | 191768.3 | 17.64599 | | | 20 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324332.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S046052 | Injection Date: | 10/14/10 |
| Lab Sample ID: | S046052-SCV1 | Injection Time: | 15:50 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 524 | 8074.333 | 8359.768 | | 3.5 | 20 |
| PCB-1242 [2C] | A | 500 | 516 | 3192.754 | 3285.708 | | 2.9 | 20 |
| TCMX | A | 25.0 | 27.4 | 540967.2 | 592474.8 | | 9.5 | 20 |
| TCMX [2C] | A | 25.0 | 27.0 | 215389.7 | 232329.9 | | 7.9 | 20 |
| DCB | A | 25.0 | 25.1 | 557860.6 | 560996.8 | | 0.6 | 20 |
| DCB [2C] | A | 25.0 | 24.1 | 191768.3 | 184970.6 | | -3.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324372.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S046052 | Injection Date: | 10/29/10 |
| Lab Sample ID: | S046052-SCV2 | Injection Time: | 14:54 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| PCB-1016 | A | 500 | 503 | 12075.8 | 11945.03 | | -1.1 | 20 | |
| PCB-1016 [2C] | A | 500 | 479 | 3937.657 | 3652.758 | | -7.2 | 20 | |
| PCB-1260 | A | 500 | 493 | 31974.47 | 31779 | | -0.6 | 20 | |
| PCB-1260 [2C] | A | 500 | 490 | 11271.14 | 11061.22 | | -1.9 | 20 | |
| TCMX | A | 25.0 | 25.8 | 540967.2 | 453705.6 | | -16.1 | 20 | |
| TCMX [2C] | A | 25.0 | 25.8 | 215389.7 | 181729.1 | | -15.6 | 20 | |
| DCB | A | 25.0 | 23.1 | 557860.6 | 392718.6 | | -29.6 | 20 | * |
| DCB [2C] | A | 25.0 | 20.8 | 191768.3 | 127925.6 | | -33.3 | 20 | * |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

## GC ANALYSIS LOG

Intrument ID: HP6890 # U

Reviewed by: JR Date: 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | 180 / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 18-300-7 |
| Final Temp(oC): | 200 / 275 / 300 / |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 101410U-M

Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 110410 | U | | | | | |
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Injection Log

Directory: h:\gcdata\u\110410

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | u0324406.d | 1. | SEQ CCV 1AR1242-3 2\24 | STD | 4 Nov 10 10:14 |
| 2 | u0324407.d | 1. | B045035-BLK-1 | BLK,W | 4 Nov 10 11:08 |
| 3 | u0324408.d | 1. | B045035-BS-1 | BS,W | 4 Nov 10 11:41 |
| 4 | u0324409.d | 1. | B045035-BSD-1 | BS,W | 4 Nov 10 12:13 |
| 5 | u0324410.d | 1. | 1010079-02 | WATER | 4 Nov 10 12:45 |
| 6 | u0324411.d | 1. | 1010079-04 | WATER | 4 Nov 10 13:17 |
| 7 | u0324412.d | 1. | BLK (B046145) | BLK,WATER | 4 Nov 10 13:56 |
| 8 | u0324413.d | 1. | BS | BLK,WATER | 4 Nov 10 14:28 |
| 9 | u0324414.d | 1. | BSD | BLK,WATER | 4 Nov 10 15:00 |
| 10 | u0324415.d | 1. | 1010098-04 | WATER | 4 Nov 10 15:32 |
| 11 | u0324416.d | 1. | 1010098-10 | WATER | 4 Nov 10 16:04 |
| 12 | u0324417.d | 1. | SEQ CCV2 AR1242-3 2\24 | STD | 4 Nov 10 16:37 |
| 13 | u0324418.d | 1. | 1010098-11 | WATER | 4 Nov 10 17:09 |
| 14 | u0324419.d | 1. | 1011002-14 | WATER | 4 Nov 10 17:41 |
| 15 | u0324420.d | 1. | 1011002-15 | WATER | 4 Nov 10 18:13 |
| 16 | u0324421.d | 1. | 1011002-16 | WATER | 4 Nov 10 18:45 |
| 17 | u0324422.d | 1. | 1011003-09 | WATER | 4 Nov 10 19:17 |
| 18 | u0324423.d | 1. | 1011003-05 | WATER | 4 Nov 10 19:49 |
| 19 | u0324424.d | 1. | SEQ CCV3 AR1242-3 2\24 | STD | 4 Nov 10 20:22 |

RP 11/10/10

Comments: 5042017

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324406.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV1 | Injection Time: | 10:14 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 498 | 8074.333 | 7962.836 | | -1.4 | 20 |
| PCB-1242 [2C] | A | 500 | 452 | 3192.754 | 2875.162 | | -9.9 | 20 |
| TCMX | A | 25.0 | 23.4 | 540967.2 | 507237.2 | | -6.2 | 20 |
| TCMX [2C] | A | 25.0 | 23.6 | 215389.7 | 203194.2 | | -5.7 | 20 |
| DCB | A | 25.0 | 22.8 | 557860.6 | 508900 | | -8.8 | 20 |
| DCB [2C] | A | 25.0 | 21.1 | 191768.3 | 162150.4 | | -15.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324417.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV2 | Injection Time: | 16:37 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 483 | 8074.333 | 7590.648 | | -6.0 | 20 |
| PCB-1242 [2C] | A | 500 | 475 | 3192.754 | 3015.672 | | -5.5 | 20 |
| TCMX | A | 25.0 | 24.4 | 540967.2 | 526981.2 | | -2.6 | 20 |
| TCMX [2C] | A | 25.0 | 24.5 | 215389.7 | 211427.7 | | -1.8 | 20 |
| DCB | A | 25.0 | 25.0 | 557860.6 | 556967.6 | | -0.2 | 20 |
| DCB [2C] | A | 25.0 | 22.4 | 191768.3 | 172092.7 | | -10.3 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111103 |
| Lab File ID: | U0324424.D | Calibration Date: | 11/11/10 14:46 |
| Sequence: | S047017 | Injection Date: | 11/04/10 |
| Lab Sample ID: | S047017-CCV3 | Injection Time: | 20:22 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 480 | 8074.333 | 7586.302 | | -6.0 | 20 |
| PCB-1242 [2C] | A | 500 | 489 | 3192.754 | 3127.35 | | -2.0 | 20 |
| TCMX | A | 25.0 | 24.7 | 540967.2 | 533532 | | -1.4 | 20 |
| TCMX [2C] | A | 25.0 | 24.5 | 215389.7 | 211402.7 | | -1.9 | 20 |
| DCB | A | 25.0 | 25.5 | 557860.6 | 568225.2 | | 1.9 | 20 |
| DCB [2C] | A | 25.0 | 22.9 | 191768.3 | 175832.2 | | -8.3 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046145-BLK1 | Batch: | B046145 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B046145-BSD1 | U0324414.D | 15:00 |
| LCS | B046145-BS1 | U0324413.D | 14:28 |
| GKHMS-GW-FD003-1010 | 1011003-09 | U0324422.D | 19:17 |
| GKHMS-GW-022-1010 | 1011003-05 | U0324423.D | 19:49 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B046145-BLK1 | File ID: | U0324412.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 13:56 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 |
| Column: | 1 | | | | |

Instrument: GCECD-U

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B046145-BLK1 | File ID: | U0324412.D |
| Sampled: | | Prepared: | 11/03/10 12:15 | Analyzed: | 11/04/10 13:56 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B046145 | Sequence: | S047017 | Calibration: | 0111103 |
| Column: | 2 | | | | |

Instrument: GCECD-U

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 [2C] | 1.00 | U |
| 11104-28-2 | PCB-1221 [2C] | 1.00 | U |
| 11141-16-5 | PCB-1232 [2C] | 1.00 | U |
| 53469-21-9 | PCB-1242 [2C] | 1.00 | U |
| 12672-29-6 | PCB-1248 [2C] | 1.00 | U |
| 11097-69-1 | PCB-1254 [2C] | 1.00 | U |
| 11096-82-5 | PCB-1260 [2C] | 1.00 | U |

# SURROGATE SUMMARY SHEET

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-U |

| | DCB [2C] (40 - 135) | DCB (40 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| 1011003-05 | 57 | 54 | 76 | 75 |
| 1011003-09 | 47 | 49 | 67 | 108 |
| B046145-BLK1 | 94 | 94 | 87 | 84 |
| B046145-BS1 | 87 | 91 | 86 | 85 |
| B046145-BSD1 | 82 | 89 | 69 | 62 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046145 | Laboratory ID: | B046145-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 | 5.00 | 5.54 | 111 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 | 5.00 | 4.37 | 87 | 23 | 30 | 25 - 125 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011003 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046145 | Laboratory ID: | B046145-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 5.00 | 100 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 5.05 | 101 | 1 | 30 | 25 - 125 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 16, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – VOC / PAH / PEST / PCB**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – 1011013**

**SAMPLES:** 21 / Soil / VOC / PAH / PEST / PCB

| | | |
|---|---|---|
| GKHMS-SO-001-1010 | GKHMS-SO-002-1010 | GKHMS-SO-003-1010 |
| GKHMS-SO-005-1010 | GKHMS-SO-007-1010 | GKHMS-SO-011-1010 |
| GKHMS-SO-012-1010 | GKHMS-SO-014-1010 | GKHMS-SO-017-1010 |
| GKHMS-SO-019-1010 | GKHMS-SO-021-1010 | GKHMS-SO-022-1010 |
| GKHMS-SO-023-1010 | GKHMS-SO-025-1010 | GKHMS-SO-028-1010 |
| GKHMS-SO-030-1010 | GKHMS-SO-031-1010 | GKHMS-SO-032-1010 |
| GKHMS-SO-034-1010 | GKHMS-SO-FD001-1010 | |
| GKHMS-SO-FD002-1010 | | |

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011013 consisted of twenty-one (21) soil environmental samples. The samples were analyzed for volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PAH), organochloride pesticides (PEST), and polychlorinated biphenyls (PCB) as indicated above. Two field duplicate sample pairs were included in the Sample Delivery Group (SDG); GKHMS-SO-FD001-1010 / GKHMS-SO-021-1010 and GKHMS-SO-FD002-1010 / GKHMS-SO-031-1010.

The samples were collected by Tetra Tech NUS on November 2, 2010 and analyzed by Centauri Labs. The analysis was conducted in accordance with SW-846 Method 8260B, 8270C SIM, 8081A and 8082 analytical and reporting protocols. The data contained in this SDG were fully validated with regard to the following parameters:

- Data Completeness
- * Holding Times
- Initial and Continuing Calibration
- * Laboratory Blank Analyses
- Blank Spike/Blank Spike Duplicate Results
- System Monitoring Compound/Surrogate Recovery
- Internal Standard Recovery
- Compound Quantitation
- Compound Identification
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. ChemTech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not reported by the laboratory. In the VOC fraction 1,4-dioxane was one of these analytes. This is further discussed in the additional problems section. There were a number of issues with the initial calibration data provided by Centauri for VOCs. ChemTech was contacted and they provided some revised forms for this package. A comparison of the revised initial calibration form with the original initial calibration forms revealed some data inconsistencies which were not able to be resolved. As a result of these inconsistencies the following positive and non-detected VOC analytes were qualified estimated, (J) and (UJ), unless rejected for other reasons: bromomethane, chloroethane, methyl acetate, vinyl acetate, methyl methacrylate, methacrylonitrile, isobutyl alcohol, trichloroethene, n-butylbenzene, and 1,2,3-trichlorobenzene. The revised initial calibration data did not indicate for a number of analytes if a linear or quadratic calibration curve was applied for the analytes that had relative standard deviations (RSDs) >15%. If the analyte relative response factors (RRF) and the RSDs were the same for the revised calibration forms as the initial calibration forms, it was assumed that the linear or quadratic calibration curve was applied as in the initial calibration data and no action was taken for those analytes with RSDs >15%.

The initial calibration and continuing calibration relative response factors (RRFs) for 1,2-dibromo-3-chloropropane, 2-butanone, acetone, acetonitrile, acrylonitrile, bromomethane, methyl acetate, methacrylonitrile, and propionitrile were less than the 0.05 quality control limit on instrument GCMS-B on 11/11/10 and on 11/12/10 @ 20:02. The non-detected 1,2-dibromo-3-chloropropane, 2-butanone, acetone, acetonitrile, acrylonitrile, bromomethane, methyl acetate, methacrylonitrile, propionitrile, and results in all samples were qualified as rejected (UR).

The initial calibration r factor for the linear calibration was less than the 0.995 quality control limit for methylene chloride, and as the revised r factor was not available for chloroethane, the original r factor was used, which was also less than 0.995. The methylene chloride and chloroethane non-detected results for all samples were qualified estimated, (UJ).

The continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control limit for chloromethane, cis-1,3-dichloropropene, methyl tert-butyl ether, methylene chloride, naphthalene, and vinyl chloride for instrument GCMS-B on 11/12/10 @ 20:02 affecting samples GKHMS-SO-001-1010, GKHMS-SO-002-1010, GKHMS-SO-003-1010, GKHMS-SO-005-1010, GKHMS-SO-007-1010, GKHMS-SO-011-1010, GKHMS-SO-012-1010, GKHMS-SO-014-1010, GKHMS-SO-017-1010, GKHMS-SO-019-1010, GKHMS-SO-021-1010, GKHMS-SO-022-1010, GKHMS-SO-025-1010, GKHMS-SO-028-1010, GKHMS-SO-030-1010, GKHMS-SO-031-1010, and GKHMS-SO-032-1010. The positive and non-detected aforementioned analytes for the aforementioned samples were qualified estimated, (J) and (UJ), unless rejected for other issues.

The laboratory control sample (LCS) and the LCS duplicate (LCSD) percent recoveries (%Rs) were less than the lower quality control limit for methyl iodide for batch B047059 affecting batch samples GKHMS-SO-001-1010, GKHMS-SO-002-1010, GKHMS-SO-003-1010, GKHMS-SO-005-1010, GKHMS-SO-007-1010, GKHMS-SO-011-1010, GKHMS-SO-012-1010, GKHMS-SO-014-1010, GKHMS-SO-017-1010, GKHMS-SO-019-1010, GKHMS-SO-021-1010, GKHMS-SO-022-1010, GKHMS-SO-025-1010, GKHMS-SO-028-1010, GKHMS-SO-030-1010, GKHMS-SO-031-1010, and GKHMS-SO-032-1010. The non-detected results for methyl iodide for the aforementioned samples were qualified estimated, (UJ).

The matrix spike (MS) and the MS duplicate (MSD) %Rs were greater than the quality control limit for 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, acetone, naphthalene, tetrachloroethene, and trichloroethene for spiked sample GKHMS-SO-FD001-1010. The aforementioned sample non-detected analytes were not qualified and the positive naphthalene result for the sample was qualified estimated, (J). The MS and MSD %Rs were less than the quality control limit for acetonitrile, bromomethane, chloroethane, methyl iodide, methylene chloride, trichlorofluoromethane, vinyl acetate, and vinyl chloride for spiked sample GKHMS-SO-FD001-1010. The non-detected aforementioned sample analytes were qualified estimated, (UJ), except where rejected for other issues. Other MS or MSD analyte %Rs were outside the quality control limits for the spiked sample GKHMS-SO-FD001-1010, but were not qualified as the alternate %R in the MS or MSD results were within the quality control limits.

The continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control limit for 1,2,3-trichlorobenzene, bromomethane, chloroethane, cis-1,3-dichloropropene, methylene chloride, naphthalene, and N-butyl benzene for instrument GCMS-B on 11/15/10 @ 09:49 affecting samples GKHMS-SO-023-1010, GKHMS-SO-034-1010, GKHMS-SO-FD001-1010, and GKHMS-SO-FD002-1010. The positive and non-detected aforementioned analytes for the aforementioned samples were qualified estimated, (J) and (UJ), unless rejected for other issues.

The LCS %Rs were less than the lower quality control limit and less than 10% for methyl iodide and methylene chloride for batch B048008 affecting batch samples GKHMS-SO-023-1010, GKHMS-SO-034-1010, GKHMS-SO-FD001-1010, and GKHMS-SO-FD002-1010. The positive methyl iodide and methylene chloride results for the aforementioned samples were qualified estimated, (J), and the non-detected methyl iodide and methylene chloride results for the aforementioned samples were qualified rejected, (UR).

The LCS %Rs were less than the lower quality control limit (>10%) for methyl acetate and vinyl acetate for batch B048008 affecting batch samples GKHMS-SO-023-1010, GKHMS-SO-034-1010, GKHMS-SO-FD001-1010, and GKHMS-SO-FD002-1010. The non-detected vinyl acetate results for the aforementioned samples were qualified estimated, (UJ). The non-detected methyl acetate sample results were previously qualified rejected and no further action was taken.

The LCS %Rs were greater than the higher quality control limit for acetone and naphthalene for batch B048008 affecting batch samples GKHMS-SO-023-1010, GKHMS-SO-034-1010, GKHMS-SO-FD001-1010, and GKHMS-SO-FD002-1010. The positive results for the aforementioned samples were qualified estimated, (J), and the non-detected results were not qualified.

The VOC surrogate %R was less than the quality control limit for the surrogate 4-bromofluorobenzene for sample GKHMS-SO-001-1010. The sample non-detected analytes were qualified estimated, (UJ), except where qualified rejected for other issues.

The VOC surrogate %R was less than the quality control limit for the surrogate 4-bromofluorobenzene for sample GKHMS-SO-019-1010. The sample non-detected analytes were qualified estimated, (UJ), except where qualified rejected for other issues.

The VOC surrogate %Rs were less than the quality control limit for the surrogates bromofluorobenzene and dibromofluoromethane for sample GKHMS-SO-031-1010. The sample non-detected analytes were qualified estimated, (UJ), except where qualified rejected for other issues.

The internal standard recoveries were less than the quality control limit for all internal standards for sample GKHMS-SO-019-1010. The non-detected analytes for the sample were qualified estimated, (UJ), except were rejected for other issues.

The internal standard recoveries were less than the quality control limit for the internal standard 1,4-dichlorobenzene-d4 for samples GKHMS-SO-001-1010, GKHMS-SO-025-1010, GKHMS-SO-030-1010, GKHMS-SO-031-1010, GKHMS-SO-032-1010, and GKHMS-SO-FD002-1010. The non-detected analytes associated with the internal standard 1,4-dichlorobenzene-d4 for the aforementioned samples were qualified estimated, (UJ).

The internal standard recoveries were less than the quality control limit for the internal standard 1,4-dichlorobenzene-d4 and pentafluorobenzene for sample GKHMS-SO-023-1010. The non-detected analytes associated with the internal standard 1,4-dichlorobenzene-d4 and pentafluorobenzene for the sample was qualified estimated, (UJ), except were rejected for other issues.

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PAH

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The retention time and response factor for 1-methylnaphthalene are very similar to 2-methylnaphthalene. The non-detected 1-methylnaphthalene results were qualified as estimated (UJ).

The CCV %Ds were greater than the 20% quality control limit for benzo(k)fluoranthene and pyrene on instrument GCMS-D on 11/16/10 @ 10:40 affecting all SDG samples with the exception of sample GKHMS-SO-FD001-1010. The positive and non-detected benzo(k)-fluoranthene and pyrene results for the aforementioned samples were qualified estimated, (J) and (UJ), respectively.

The LCS %Rs were greater than the quality control limit for benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene for batch B048004 affecting all samples with the exception of sample GKHMS-SO-FD001-1010. The positive results for benzo(a)pyrene, benzo(b)-fluoranthene, and benzo(k)fluoranthene were qualified estimated, (J), for the aforementioned samples, and the non-detected results were not qualified.

The LCS %Rs were greater than the quality control limit for 2-methylnaphthalene, benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene for batch B046136 affecting all sample GKHMS-SO-FD001-1010. The positive result for 2-methylnaphthalene was qualified estimated, (J), for sample GKHMS-SO-FD001-1010, and the non-detected results were not qualified.

The matrix spike (MS) and the MS duplicate (MSD) %Rs were greater than the quality control limit for benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene for spiked sample GKHMS-SO-001-1010. The positive results for the aforementioned analytes for sample GKHMS-SO-001-1010 were qualified estimated, (J). The MS %R for benzo(a)anthracene was greater than the quality control limit and the MSD %R for benzo(a)anthracene was within the quality control limit for spiked sample GKHMS-SO-001-1010. Therefore, the positive benzo(a)anthracene result for the sample was not qualified.

Surrogate %Rs were greater than the quality control limit for terphenyl-d14 for all samples except samples GKHMS-SO-001-1010 and GKHMS-SO-003-1010. Additionally, samples GKHMS-SO-011-1010, GKHMS-SO-014-1010, GKHMS-SO-017-1010, GKHMS-SO-021-1010, GKHMS-SO-022-1010, GKHMS-SO-023-1010, and GKHMS-SO-FD001-1010 had surrogate %Rs greater than the quality control limit for nitrobenzene-d5. The non-detected results for the aforementioned samples were not qualified. The

positive results for the affected samples were qualified estimated, (J).

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PEST

The initial calibration linear calibration r value was less than the 0.995 quality control limit for both columns for the PEST analytes endrin aldehyde and methoxychlor. All samples had non-detected results for methoxychlor which were qualified estimated, (UJ). The positive endrin aldehyde results were qualified estimated, (J), and the non-detected endrin aldehyde sample results were qualified estimated, (UJ).

The CCV percent difference (%D) was greater than the 20% quality control limit for 4,4'-DDD, 4,4"-DDT, and methoxychlor for the column RTX-CLP for instrument GCECD-W on 11/18/10 @ 22:29 affecting all samples for this SDG. All SDG positive sample results were reported from the RTX-CLP column and therefore all positive 4,4'-DDD and 4,4'-DDT sample results were qualified estimated, (J). The CCV %Ds for 4,4'-DDT and methoxychlor were greater than the 20% quality control limit for the column RTX-CLP2 for instrument GCECD-W on 11/18/10 @ 22:29 affecting all samples for this SDG. As both the analytical column CVs were greater than the 15% quality control limit for 4,4'-DDT and methoxychlor, the non-detected results for all samples were qualified estimated, (UJ). The 4,4'-DDD sample GKHMS-SO-001-1010, GKHMS-SO-002-1010, GKHMS-SO-003-1010, and GKHMS-SO-005-1010 non-detected results were not qualified as the alternate column CV %Ds were within the quality control limits.

The closing CV %D was greater than the 20% quality control limit for 4,4'-DDD, 4,4'-DDT, and methoxychlor for both analytical columns for instrument GCECD-W on 11/19/10 @ 09:34 affecting samples GKHMS-SO-007-1010, GKHMS-SO-011-1010, GKHMS-SO-012-1010, GKHMS-SO-014-1010, GKHMS-SO-017-1010, GKHMS-SO-019-1010, GKHMS-SO-021-1010, GKHMS-SO-022-1010, GKHMS-SO-023-1010, GKHMS-SO-025-1010, GKHMS-SO-028-1010, GKHMS-SO-030-1010, GKHMS-SO-031-1010, GKHMS-SO-032-1010, GKHMS-SO-034-1010, GKHMS-SO-FD001-1010, and GKHMS-SO-FD002-1010. The aforementioned sample 4,4'-DDD, 4,4'-DDT, and methoxychlor positive and non-detected results were qualified estimated, (J) and (UJ), respectively.

The PEST surrogate %Rs DCB and TCMX were greater than the quality control limit for a number of samples for either one or both of the analytical columns. The non-detected PEST results for the affected samples were not qualified. The positive PEST results for samples GKHMS-SO-001-1010, GKHMS-SO-003-1010, GKHMS-SO-005-1010, GKHMS-SO-007-1010, GKHMS-SO-011-1010, GKHMS-SO-017-1010, GKHMS-SO-019-1010, GKHMS-SO-031-1010, GKHMS-SO-034-1010, and GKHMS-SO-FD002-1010 were reported from the affected RTX-CLP column and were qualified estimated, (J).

The MS and the MSD %Rs for all PEST were greater than the quality control limit for the RTX-CLP column, except for the MSD alpha-BHC %R at 0% for the RTX-CLP column, for the spiked sample GKHMS-SO-001-1010. Additionally, there were many PEST MS/MSD RTX-CLP2 column %Rs greater than the quality control limit. The non-detected sample GKHMS-SO-001-1010 PEST results were not qualified. The positive gamma-chlordane result for sample GKHMS-SO-001-1010 was qualified estimated, (J). No action was taken for the alpha-BHC non-detected result for the sample as the MS %R for the RTX-CLP column and the MS/MSD %Rs for the alternate RTX-CLP2 column were greater than the quality control limit.

The relative percent difference (RPD) between the two analytical column results was greater than the 40% quality control limit for many different PESTs as listed below. The RPD was manually calculated by the data validation chemist as the laboratory had calculated %D between columns. The PEST results with RPDs which the exceeded the 40% quality control limit were qualified estimated, (J).

| Sample | Analyte | Qualified |
|---|---|---|
| GKHMS-SO-001-1010 | Gamma-chlordane | J |
| GKHMS-SO-011-1010 | 4,4'-DDT | J |
| | Chlordane | J |
| GKHMS-SO-012-1010 | Chlordane | J |

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PCB

A multi-level initial calibration resulting in an average response factor was performed only for Aroclor-1242. All other Aroclors detected were quantified using a single calibration level response factor for the specific Aroclor. Additionally, there were only CCVs performed by the laboratory for Aroclor-1242. Therefore, sample GKHMS-SO-001-1010 Aroclor-1248, Aroclor-1254, and Aroclor-1260 positive results and sample GKHMS-SO-017-1010 Aroclor-1016, Aroclor-1232, Aroclor-1248, Aroclor-1254, and Aroclor-1260 positive results were qualified estimated, (J). No data qualification action was taken for sample non-detected Aroclor results.

The MS and MSD %Rs were greater than the quality control limit for Aroclor-1242 for spiked sample GKHMS-SO-001-1010 for the RTX-CLP column. The sample had a positive result for Aroclor-1242 which was reported from the RTX-CLP column, therefore, the positive Aroclor-1242 result for the sample was qualified estimated, (J).

The %Rs for the surrogate TCMX for both analytical columns and the surrogate DCB for the RTX-CLP2 column were less than the quality control limit for sample GKHMS-SO-001-1010. The positive and non-detected Aroclor results for the sample were qualified estimated, (J) and (UJ), respectively.

The %Rs for both the surrogates TCMX and DCB were less than the quality control limit for sample GKHMS-SO-025-1010 for both analytical columns. All non-detected sample GKHMS-SO-025-1010 Aroclor results were qualified estimated, (UJ).

Sample positive Aroclor results were qualified due the relative percent difference (RPD) between columns which exceeded the 40% quality control limit. The RPD was manually calculated by the data validation chemist as the laboratory had calculated %D between columns. Sample GKHMS-SO-001-1010 (Aroclor-1248) and sample GKHMS-SO-017-1010 (Aroclor-1016) results were qualified estimated, (J), due to RPDs between analytical columns which exceeded the 40% quality control limit.

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Additional Comments

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. ChemTech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not originally reported by the Centauri laboratory. Also, the continuing calibration data for pesticides chlordane and toxaphene were missing and all quality control data was not received for the PCB fraction. The following tables outline the discrepancies between the compounds reported/not reported initially by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC |
| 1-methylnaphthalene | PAH |
| Aroclor-1262 | PCB |
| Aroclor-1268 | PCB |

The VOC analyte 1,4-dioxane was not originally analyzed for by the Centauri Laboratory as was required by the Sample Analysis Plan. The laboratory data from this SDG was forwarded to Chemtech Laboratory after the Centauri Laboratory closed for a re-examination of the VOC raw data from this SDG. Chemtech has reported that all sample data files were scanned for the presence of the 1,4-dioxane's major ions (88, 58, and 29) and none were detected. No 1,4-dioxane results were included in this report and no further action is being taken on this issue.

The laboratory provided the missing chromatograms which indicated the absence of positive results for Aroclor-1262 and Aroclor-1268. As the laboratory did not calibrate for these PCBs, the non-detected Aroclor-1262 and Aroclor-1268 sample results were not added to the database and no further action is being taken on this issue.

| Compounds Reported by the Lab not listed in the SAP in the Pesticide Fraction |
|---|
| Chlordane |
| Kepone |
| mirex |

Naphthalene was reported in both the VOC and PAH fractions in this SDG.

The following compounds were reported by the laboratory but were not required per the SAP.

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |
| 1,2,3-trichloropropane |
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Isobutanol |
| Methacrylonitrile |

| |
|---|
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

The 1,1-dichloropropene result for sample GKHMS-SO-021-1010 was changed from a positive result to a non-detected result per ChemTech laboratories revised forms which are included in this data package.

The VOC LCS %Rs were less than the lower quality control limit for methyl tert-butyl ether and vinyl acetate for batch B047059. The LCSD %Rs were within the quality control limits for methyl tert-butyl ether and vinyl acetate for batch B047059, therefore, no action was taken for the analytes for the batch samples for this issue.

The VOC laboratory control sample (LCS) and the LCS duplicate (LCSD) percent recoveries (%R) were greater than the high quality control limit for a large number of VOC analytes for batch B047059 affecting batch samples GKHMS-SO-001-1010, GKHMS-SO-002-1010, GKHMS-SO-003-1010, GKHMS-SO-005-1010, GKHMS-SO-007-1010, GKHMS-SO-011-1010, GKHMS-SO-012-1010, GKHMS-SO-014-1010, GKHMS-SO-017-1010, GKHMS-SO-019-1010, GKHMS-SO-021-1010, GKHMS-SO-022-1010, GKHMS-SO-025-1010, GKHMS-SO-028-1010, GKHMS-SO-030-1010, GKHMS-SO-031-1010, and GKHMS-SO-032-1010. The non-detected results affected by these analyte LCS/LCSD exceedances for the aforementioned samples were not qualified. The positive trichloroethene result for sample GKHMS-SO-022-1010 was not qualified as the LCSD result was within the quality control limits for trichloroethene. No other positive analyte sample results were affected by this LCS/LCSD issue.

The PAH MS/MSD for batch B046136 had %Rs greater than a number of PAH analytes. No action was taken as the sample spiked was not from this SDG.

All PEST positive results were reported by the laboratory from the RTX-CLP column regardless if they were the highest or the lowest of the two analytical column results.

The PEST surrogate %R was less than the quality control limit for tetrachloro-m-xylene for the RTX-CLP2 column for sample GKHMS-SO-025-1010. No action was taken as all PEST results were non-detected and the alternate column %R for the surrogate was within the quality control limits.

All Aroclor positive results were reported by the laboratory from the RTX-CLP column regardless if they were the highest or the lowest of the two analytical column results.

The Aroclor %Rs for the surrogates TCMX were greater than the quality control limit for sample GKHMS-SO-022-1010 for both analytical columns. All sample GKHMS-SO-022-1010 non-detected Aroclor results were non-detected and were not qualified.

Aroclor %Rs for surrogates were outside the quality control limits for samples GKHMS-SO-003-1010, GKHMS-SO-021-1010, GKHMS-SO-028-1010, GKHMS-SO-031-1010, and GKHMS-SO-034-1010. No action was taken for these non-compliances as the alternate column was within compliance for those surrogates and the sample had non-detected results for all Aroclors.

**Executive Summary**

**Laboratory Performance:** VOC initial and continuing calibration RRFs less than the quality control limit resulted in rejection of some non-detected VOC analytes. VOC initial calibration RSDs and CCV %Ds greater than the quality control limit resulted in qualification of VOC analytes. VOC LCS/LCSD %Rs less than the quality control limit resulted in the qualification of positive VOC analytes and the qualification and rejection of VOC analytes. Sample GKHMS-SO-FD001-1010 positive and non-detected VOC results were qualified due to MS/MSD quality control limit exceedances. Internal standard and surrogate recoveries less than the quality control limit resulted in the qualification of non-detected VOC analytes.

PAH CCV %D quality control limit exceedances for benzo(k)fluoranthene and pyrene resulted in the qualification of positive and non-detected sample PAH results. PAH LCS %Rs greater than the quality control limit resulted in qualification of positive PAH results. PAH results for sample GKHMS-SO-001-1010 were qualified due to MS/MSD %R quality control limit exceedances. PAH results were qualified due to surrogate %R quality control limit exceedances. 1-Methylnaphthalene results were calculated based on the 2-methylnaphthalene CF from the associated calibration and all positive and non-detected 1-methylnaphthalene results were qualified.

PEST endrin aldehyde and methoxychlor initial calibration quality control limit non-compliances resulted in PEST data qualifications for the analytes. PEST continuing calibration verification %Ds quality control limit non-compliances resulted in the qualification of pesticide positive and non-detected results. PEST results for sample GKHMS-SO-001-1010 were qualified due to MS/MSD %R quality control limit exceedances. PEST results were qualified due to surrogate %R quality control limit exceedances.

PCB results for sample GKHMS-SO-001-1010 were qualified due to MS/MSD %R quality control limit exceedances. PCB results were qualified due to surrogate %R quality control limit exceedances.

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J). The RPD quality control limit exceedance between analytical column results resulted in a data qualification for sample PEST and Aroclor analytes. The closing of Centauri Laboratories affected the ability of the data validator to obtain missing data.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site Sample Analysis Plan (SAP), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
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Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

**Appendix A**

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-01 | | | 1011013-02 | | | 1011013-03 | | | 1011013-04 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.232 | U | | 0.229 | U | | 0.231 | U | | 0.233 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.29 | U | | 0.286 | U | | 0.289 | U | | 0.292 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.383 | U | | 0.377 | U | | 0.381 | U | | 0.385 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.279 | U | | 0.274 | U | | 0.277 | U | | 0.28 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 5.81 | U | | 5.71 | U | | 5.77 | U | | 5.83 | U | |
| 1,1-DICHLOROETHANE | | 0.209 | U | | 0.206 | U | | 0.208 | U | | 0.21 | U | |
| 1,1-DICHLOROETHENE | | 0.325 | U | | 0.32 | U | | 0.323 | U | | 0.327 | U | |
| 1,1-DICHLOROPROPENE | | 0.395 | U | | 0.389 | U | | 0.393 | U | | 0.397 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.569 | UJ | CN | 0.56 | UJ | C | 0.566 | UJ | C | 0.572 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.418 | U | | 0.411 | U | | 0.416 | U | | 0.42 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.557 | UJ | N | 0.549 | U | | 0.554 | U | | 0.56 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.499 | U | | 0.491 | U | | 0.497 | U | | 0.502 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.685 | UR | C | 0.674 | UR | C | 0.681 | UR | C | 0.688 | UR | C |
| 1,2-DIBROMOETHANE | | 0.244 | U | | 0.24 | U | | 0.242 | U | | 0.245 | U | |
| 1,2-DICHLOROBENZENE | | 0.348 | UJ | N | 0.343 | U | | 0.346 | U | | 0.35 | U | |
| 1,2-DICHLOROETHANE | | 0.592 | U | | 0.583 | U | | 0.589 | U | | 0.595 | U | |
| 1,2-DICHLOROPROPANE | | 0.221 | U | | 0.217 | U | | 0.219 | U | | 0.222 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 0.523 | U | | 0.514 | U | | 0.52 | U | | 0.525 | U | |
| 1,3-DICHLOROBENZENE | | 0.511 | U | | 0.503 | U | | 0.508 | U | | 0.513 | U | |
| 1,3-DICHLOROPROPANE | | 0.267 | U | | 0.263 | U | | 0.266 | U | | 0.268 | U | |
| 1,4-DICHLOROBENZENE | | 0.499 | U | | 0.491 | U | | 0.497 | U | | 0.502 | U | |
| 2,2-DICHLOROPROPANE | | 0.244 | U | | 0.24 | U | | 0.242 | U | | 0.245 | U | |
| 2-BUTANONE | | 0.407 | UR | C | 0.4 | UR | C | 0.404 | UR | C | 0.408 | UR | C |
| 2-CHLOROTOLUENE | | 0.441 | U | | 0.434 | U | | 0.439 | U | | 0.443 | U | |
| 2-HEXANONE | | 0.36 | U | | 0.354 | U | | 0.358 | U | | 0.362 | U | |
| 4-CHLOROTOLUENE | | 0.465 | U | | 0.457 | U | | 0.462 | U | | 0.467 | U | |
| 4-ISOPROPYLTOLUENE | | 0.639 | U | | 0.629 | U | | 0.635 | U | | 0.642 | U | |
| 4-METHYL-2-PENTANONE | | 0.267 | U | | 0.263 | U | | 0.266 | U | | 0.268 | U | |
| ACETONE | | 0.929 | UR | C | 0.914 | UR | C | 0.924 | UR | C | 0.933 | UR | C |
| ACETONITRILE | | 5.81 | UR | C | 5.71 | UR | C | 5.77 | UR | C | 5.83 | UR | C |
| ACROLEIN | | 5.81 | U | | 5.71 | U | | 5.77 | U | | 5.83 | U | |
| ACRYLONITRILE | | 5.81 | UR | C | 5.71 | UR | C | 5.77 | UR | C | 5.83 | UR | C |
| BENZENE | | 0.244 | U | | 0.24 | U | | 0.242 | U | | 0.245 | U | |
| BROMOBENZENE | | 0.36 | U | | 0.354 | U | | 0.358 | U | | 0.362 | U | |
| BROMOCHLOROMETHANE | | 0.279 | U | | 0.274 | U | | 0.277 | U | | 0.28 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-01 | | | 1011013-02 | | | 1011013-03 | | | 1011013-04 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.232 | UJ | R | 0.229 | U | | 0.231 | U | | 0.233 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.29 | UJ | R | 0.286 | U | | 0.289 | U | | 0.292 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.383 | UJ | R | 0.377 | U | | 0.381 | U | | 0.385 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.279 | UJ | R | 0.274 | U | | 0.277 | U | | 0.28 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 5.81 | UJ | R | 5.71 | U | | 5.77 | U | | 5.83 | U | |
| 1,1-DICHLOROETHANE | | 0.209 | UJ | R | 0.206 | U | | 0.208 | U | | 0.21 | U | |
| 1,1-DICHLOROETHENE | | 0.325 | UJ | R | 0.32 | U | | 0.323 | U | | 0.327 | U | |
| 1,1-DICHLOROPROPENE | | 0.395 | UJ | R | 0.389 | U | | 0.393 | U | | 0.397 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.569 | UJ | CNR | 0.56 | UJ | C | 0.566 | UJ | C | 0.572 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.418 | UJ | R | 0.411 | U | | 0.416 | U | | 0.42 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.557 | UJ | NR | 0.549 | U | | 0.554 | U | | 0.56 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.499 | UJ | R | 0.491 | U | | 0.497 | U | | 0.502 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.685 | UR | CR | 0.674 | UR | C | 0.681 | UR | C | 0.688 | UR | C |
| 1,2-DIBROMOETHANE | | 0.244 | UJ | R | 0.24 | U | | 0.242 | U | | 0.245 | U | |
| 1,2-DICHLOROBENZENE | | 0.348 | UJ | NR | 0.343 | U | | 0.346 | U | | 0.35 | U | |
| 1,2-DICHLOROETHANE | | 0.592 | UJ | R | 0.583 | U | | 0.589 | U | | 0.595 | U | |
| 1,2-DICHLOROPROPANE | | 0.221 | UJ | R | 0.217 | U | | 0.219 | U | | 0.222 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 0.523 | UJ | R | 0.514 | U | | 0.52 | U | | 0.525 | U | |
| 1,3-DICHLOROBENZENE | | 0.511 | UJ | R | 0.503 | U | | 0.508 | U | | 0.513 | U | |
| 1,3-DICHLOROPROPANE | | 0.267 | UJ | R | 0.263 | U | | 0.266 | U | | 0.268 | U | |
| 1,4-DICHLOROBENZENE | | 0.499 | UJ | R | 0.491 | U | | 0.497 | U | | 0.502 | U | |
| 2,2-DICHLOROPROPANE | | 0.244 | UJ | R | 0.24 | U | | 0.242 | U | | 0.245 | U | |
| 2-BUTANONE | | 0.407 | UR | C | 0.4 | UR | C | 0.404 | UR | C | 0.408 | UR | C |
| 2-CHLOROTOLUENE | | 0.441 | UJ | R | 0.434 | U | | 0.439 | U | | 0.443 | U | |
| 2-HEXANONE | | 0.36 | UJ | R | 0.354 | U | | 0.358 | U | | 0.362 | U | |
| 4-CHLOROTOLUENE | | 0.465 | UJ | R | 0.457 | U | | 0.462 | U | | 0.467 | U | |
| 4-ISOPROPYLTOLUENE | | 0.639 | UJ | R | 0.629 | U | | 0.635 | U | | 0.642 | U | |
| 4-METHYL-2-PENTANONE | | 0.267 | UJ | R | 0.263 | U | | 0.266 | U | | 0.268 | U | |
| ACETONE | | 0.929 | UR | C | 0.914 | UR | C | 0.924 | UR | C | 0.933 | UR | C |
| ACETONITRILE | | 5.81 | UR | C | 5.71 | UR | C | 5.77 | UR | C | 5.83 | UR | C |
| ACROLEIN | | 5.81 | UJ | R | 5.71 | U | | 5.77 | U | | 5.83 | U | |
| ACRYLONITRILE | | 5.81 | UR | C | 5.71 | UR | C | 5.77 | UR | C | 5.83 | UR | C |
| BENZENE | | 0.244 | UJ | R | 0.24 | U | | 0.242 | U | | 0.245 | U | |
| BROMOBENZENE | | 0.36 | UJ | R | 0.354 | U | | 0.358 | U | | 0.362 | U | |
| BROMOCHLOROMETHANE | | 0.279 | UJ | R | 0.274 | U | | 0.277 | U | | 0.28 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-05 | | | 1011013-06 | | | 1011013-07 | | | 1011013-08 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.228 | U | | 0.249 | U | | 0.239 | U | | 0.234 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.285 | U | | 0.311 | U | | 0.299 | U | | 0.293 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.376 | U | | 0.41 | U | | 0.395 | U | | 0.386 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.273 | U | | 0.299 | U | | 0.287 | U | | 0.281 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 5.69 | U | | 6.22 | U | | 5.98 | U | | 5.85 | U | |
| 1,1-DICHLOROETHANE | | 0.205 | U | | 0.224 | U | | 0.215 | U | | 0.211 | U | |
| 1,1-DICHLOROETHENE | | 0.319 | U | | 0.348 | U | | 0.335 | U | | 0.328 | U | |
| 1,1-DICHLOROPROPENE | | 0.387 | U | | 0.423 | U | | 0.407 | U | | 0.398 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.558 | UJ | C | 0.609 | UJ | C | 0.586 | UJ | C | 0.574 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.41 | U | | 0.448 | U | | 0.431 | U | | 0.422 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.547 | U | | 0.597 | U | | 0.574 | U | | 0.562 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.49 | U | | 0.535 | U | | 0.514 | U | | 0.504 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.672 | UR | C | 0.734 | UR | C | 0.706 | UR | C | 0.691 | UR | C |
| 1,2-DIBROMOETHANE | | 0.239 | U | | 0.261 | U | | 0.251 | U | | 0.246 | U | |
| 1,2-DICHLOROBENZENE | | 0.342 | U | | 0.373 | U | | 0.359 | U | | 0.351 | U | |
| 1,2-DICHLOROETHANE | | 0.581 | U | | 0.634 | U | | 0.61 | U | | 0.597 | U | |
| 1,2-DICHLOROPROPANE | | 0.216 | U | | 0.236 | U | | 0.227 | U | | 0.222 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 0.513 | U | | 0.56 | U | | 0.538 | U | | 0.527 | U | |
| 1,3-DICHLOROBENZENE | | 0.501 | U | | 0.547 | U | | 0.526 | U | | 0.515 | U | |
| 1,3-DICHLOROPROPANE | | 0.262 | U | | 0.286 | U | | 0.275 | U | | 0.269 | U | |
| 1,4-DICHLOROBENZENE | | 0.49 | U | | 0.535 | U | | 0.514 | U | | 0.504 | U | |
| 2,2-DICHLOROPROPANE | | 0.239 | U | | 0.261 | U | | 0.251 | U | | 0.246 | U | |
| 2-BUTANONE | | 0.399 | UR | C | 0.435 | UR | C | 0.419 | UR | C | 0.41 | UR | C |
| 2-CHLOROTOLUENE | | 0.433 | U | | 0.473 | U | | 0.455 | U | | 0.445 | U | |
| 2-HEXANONE | | 0.353 | U | | 0.386 | U | | 0.371 | U | | 0.363 | U | |
| 4-CHLOROTOLUENE | | 0.456 | U | | 0.498 | U | | 0.478 | U | | 0.468 | U | |
| 4-ISOPROPYLTOLUENE | | 0.626 | U | | 0.684 | U | | 0.658 | U | | 0.644 | U | |
| 4-METHYL-2-PENTANONE | | 0.262 | U | | 0.286 | U | | 0.275 | U | | 0.269 | U | |
| ACETONE | | 0.911 | UR | C | 0.995 | UR | C | 0.957 | UR | C | 0.937 | UR | C |
| ACETONITRILE | | 5.69 | UR | C | 6.22 | UR | C | 5.98 | UR | C | 5.85 | UR | C |
| ACROLEIN | | 5.69 | U | | 6.22 | U | | 5.98 | U | | 5.85 | U | |
| ACRYLONITRILE | | 5.69 | UR | C | 6.22 | UR | C | 5.98 | UR | C | 5.85 | UR | C |
| BENZENE | | 0.239 | U | | 0.261 | U | | 0.251 | U | | 0.246 | U | |
| BROMOBENZENE | | 0.353 | U | | 0.386 | U | | 0.371 | U | | 0.363 | U | |
| BROMOCHLOROMETHANE | | 0.273 | U | | 0.299 | U | | 0.287 | U | | 0.281 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-09 | | | 1011013-10 | | | 1011013-11 | | | 1011013-12 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.228 | U | | 0.231 | UJ | R | 0.23 | U | | 0.234 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.285 | U | | 0.288 | UJ | R | 0.287 | U | | 0.293 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.376 | U | | 0.381 | UJ | R | 0.379 | U | | 0.387 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.273 | U | | 0.277 | UJ | R | 0.276 | U | | 0.281 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 5.69 | U | | 5.77 | UJ | R | 5.75 | U | | 5.86 | U | |
| 1,1-DICHLOROETHANE | | 0.205 | U | | 0.208 | UJ | R | 0.207 | U | | 0.211 | U | |
| 1,1-DICHLOROETHENE | | 0.319 | U | | 0.323 | UJ | R | 0.322 | U | | 0.328 | U | |
| 1,1-DICHLOROPROPENE | | 0.387 | U | | 0.392 | UJ | R | 0.391 | U | | 0.399 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.558 | UJ | C | 0.565 | UJ | CNR | 0.563 | UJ | C | 0.574 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.41 | U | | 0.415 | UJ | R | 0.414 | U | | 0.422 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.547 | U | | 0.554 | UJ | R | 0.552 | U | | 0.563 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.49 | U | | 0.496 | UJ | R | 0.494 | U | | 0.504 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.672 | UR | C | 0.681 | UR | C | 0.678 | UR | C | 0.692 | UR | C |
| 1,2-DIBROMOETHANE | | 0.239 | U | | 0.242 | UJ | R | 0.241 | U | | 0.246 | U | |
| 1,2-DICHLOROBENZENE | | 0.342 | U | | 0.346 | UJ | R | 0.345 | U | | 0.352 | U | |
| 1,2-DICHLOROETHANE | | 0.581 | U | | 0.588 | UJ | R | 0.586 | U | | 0.598 | U | |
| 1,2-DICHLOROPROPANE | | 0.216 | U | | 0.219 | UJ | R | 0.218 | U | | 0.223 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 0.513 | U | | 0.519 | UJ | R | 0.517 | U | | 0.528 | U | |
| 1,3-DICHLOROBENZENE | | 0.501 | U | | 0.507 | UJ | R | 0.506 | U | | 0.516 | U | |
| 1,3-DICHLOROPROPANE | | 0.262 | U | | 0.265 | UJ | R | 0.264 | U | | 0.27 | U | |
| 1,4-DICHLOROBENZENE | | 0.49 | U | | 0.496 | UJ | R | 0.494 | U | | 0.504 | U | |
| 2,2-DICHLOROPROPANE | | 0.239 | U | | 0.242 | UJ | R | 0.241 | U | | 0.246 | U | |
| 2-BUTANONE | | 0.399 | UR | C | 0.404 | UR | C | 0.402 | UR | C | 0.41 | UR | C |
| 2-CHLOROTOLUENE | | 0.433 | U | | 0.438 | UJ | R | 0.437 | U | | 0.445 | U | |
| 2-HEXANONE | | 0.353 | U | | 0.358 | UJ | R | 0.356 | U | | 0.363 | U | |
| 4-CHLOROTOLUENE | | 0.456 | U | | 0.461 | UJ | R | 0.46 | U | | 0.469 | U | |
| 4-ISOPROPYLTOLUENE | | 0.626 | U | | 0.634 | UJ | R | 0.632 | U | | 0.645 | U | |
| 4-METHYL-2-PENTANONE | | 0.262 | U | | 0.265 | UJ | R | 0.264 | U | | 0.27 | U | |
| ACETONE | | 0.911 | UR | C | 0.923 | UR | C | 0.92 | UR | C | 0.938 | UR | C |
| ACETONITRILE | | 5.69 | UR | C | 5.77 | UR | C | 5.75 | UR | C | 5.86 | UR | C |
| ACROLEIN | | 5.69 | U | | 5.77 | UJ | R | 5.75 | U | | 5.86 | U | |
| ACRYLONITRILE | | 5.69 | UR | C | 5.77 | UR | C | 5.75 | UR | C | 5.86 | UR | C |
| BENZENE | | 0.239 | U | | 0.242 | UJ | R | 0.241 | U | | 0.246 | U | |
| BROMOBENZENE | | 0.353 | U | | 0.358 | UJ | R | 0.356 | U | | 0.363 | U | |
| BROMOCHLOROMETHANE | | 0.273 | U | | 0.277 | UJ | R | 0.276 | U | | 0.281 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-13 | | | 1011013-14 | | | 1011013-15 | | | 1011013-16 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.232 | U | | 0.238 | U | | 0.233 | U | | 0.228 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.29 | UJ | NR | 0.297 | U | | 0.292 | U | | 0.284 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.383 | U | | 0.392 | U | | 0.385 | U | | 0.375 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.278 | U | | 0.285 | U | | 0.28 | U | | 0.273 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 5.8 | UJ | N | 5.95 | U | | 5.83 | U | | 5.69 | U | |
| 1,1-DICHLOROETHANE | | 0.209 | UJ | N | 0.214 | U | | 0.21 | U | | 0.205 | U | |
| 1,1-DICHLOROETHENE | | 0.325 | UJ | N | 0.333 | U | | 0.327 | U | | 0.319 | U | |
| 1,1-DICHLOROPROPENE | | 0.394 | U | | 0.404 | U | | 0.397 | U | | 0.387 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.568 | UJ | C | 0.583 | UJ | CN | 0.572 | UJ | C | 0.557 | UJ | CN |
| 1,2,3-TRICHLOROPROPANE | | 0.418 | UJ | N | 0.428 | U | | 0.42 | U | | 0.41 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.557 | UJ | N | 0.571 | UJ | N | 0.56 | U | | 0.546 | UJ | N |
| 1,2,4-TRIMETHYLBENZENE | | 0.499 | UJ | N | 0.511 | U | | 0.502 | U | | 0.489 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.684 | UR | C | 0.702 | UR | C | 0.688 | UR | C | 0.671 | UR | C |
| 1,2-DIBROMOETHANE | | 0.244 | U | | 0.25 | U | | 0.245 | U | | 0.239 | U | |
| 1,2-DICHLOROBENZENE | | 0.348 | UJ | N | 0.357 | UJ | N | 0.35 | U | | 0.341 | UJ | N |
| 1,2-DICHLOROETHANE | | 0.592 | U | | 0.606 | U | | 0.595 | U | | 0.58 | U | |
| 1,2-DICHLOROPROPANE | | 0.22 | U | | 0.226 | U | | 0.222 | U | | 0.216 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 0.522 | U | | 0.535 | U | | 0.525 | U | | 0.512 | U | |
| 1,3-DICHLOROBENZENE | | 0.51 | UJ | N | 0.523 | U | | 0.513 | U | | 0.501 | U | |
| 1,3-DICHLOROPROPANE | | 0.267 | U | | 0.273 | U | | 0.268 | U | | 0.262 | U | |
| 1,4-DICHLOROBENZENE | | 0.499 | UJ | N | 0.511 | U | | 0.502 | U | | 0.489 | U | |
| 2,2-DICHLOROPROPANE | | 0.244 | UJ | N | 0.25 | U | | 0.245 | U | | 0.239 | U | |
| 2-BUTANONE | | 0.406 | UR | C | 0.416 | UR | C | 0.408 | UR | C | 0.398 | UR | C |
| 2-CHLOROTOLUENE | | 0.441 | U | | 0.452 | U | | 0.443 | U | | 0.432 | U | |
| 2-HEXANONE | | 0.36 | U | | 0.369 | U | | 0.362 | U | | 0.353 | U | |
| 4-CHLOROTOLUENE | | 0.464 | U | | 0.476 | U | | 0.467 | U | | 0.455 | U | |
| 4-ISOPROPYLTOLUENE | | 0.638 | U | | 0.654 | U | | 0.642 | U | | 0.626 | U | |
| 4-METHYL-2-PENTANONE | | 0.267 | U | | 0.273 | U | | 0.268 | U | | 0.262 | U | |
| ACETONE | | 0.928 | UR | C | 0.951 | UR | C | 0.933 | UR | C | 0.91 | UR | C |
| ACETONITRILE | | 5.8 | UR | C | 5.95 | UR | C | 5.83 | UR | C | 5.69 | UR | C |
| ACROLEIN | | | | | 5.95 | U | | 5.83 | U | | 5.69 | U | |
| ACRYLONITRILE | | 5.8 | UR | C | 5.95 | UR | C | 5.83 | UR | C | 5.69 | UR | C |
| BENZENE | | 0.244 | U | | 0.25 | U | | 0.245 | U | | 0.239 | U | |
| BROMOBENZENE | | 0.36 | U | | 0.369 | U | | 0.362 | U | | 0.353 | U | |
| BROMOCHLOROMETHANE | | 0.278 | UJ | N | 0.285 | U | | 0.28 | U | | 0.273 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD001-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-17 | | | 1011013-18 | | | 1011013-19 | | | 1011013-21 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | GKHMS-SO-017-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.228 | UJ | R | 0.245 | U | | 0.233 | U | | 0.249 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.284 | UJ | R | 0.307 | U | | 0.291 | U | | 0.311 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.375 | UJ | R | 0.405 | U | | 0.385 | U | | 0.41 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.273 | UJ | R | 0.294 | U | | 0.28 | U | | 0.299 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 5.69 | UJ | R | 6.13 | U | | 5.83 | U | | 6.22 | U | |
| 1,1-DICHLOROETHANE | | 0.205 | UJ | R | 0.221 | U | | 0.21 | U | | 0.224 | U | |
| 1,1-DICHLOROETHENE | | 0.319 | UJ | R | 0.344 | U | | 0.326 | U | | 0.348 | U | |
| 1,1-DICHLOROPROPENE | | 0.387 | UJ | R | 0.417 | U | | 0.396 | U | | 0.423 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.557 | UJ | CNR | 0.601 | UJ | CN | 0.571 | UJ | C | 0.609 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 0.41 | UJ | R | 0.442 | U | | 0.42 | U | | 0.448 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.546 | UJ | NR | 0.589 | UJ | N | 0.559 | U | | 0.597 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 0.489 | UJ | R | 0.528 | U | | 0.501 | U | | 0.535 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.671 | UR | C | 0.724 | UR | C | 0.688 | UR | C | 0.734 | UR | C |
| 1,2-DIBROMOETHANE | | 0.239 | UJ | R | 0.258 | U | | 0.245 | U | | 0.261 | U | |
| 1,2-DICHLOROBENZENE | | 0.341 | UJ | NR | 0.368 | UJ | N | 0.35 | U | | 0.373 | U | |
| 1,2-DICHLOROETHANE | | 0.58 | UJ | R | 0.626 | U | | 0.594 | U | | 0.634 | U | |
| 1,2-DICHLOROPROPANE | | 0.216 | UJ | R | 0.233 | U | | 0.221 | U | | 0.236 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 0.512 | UJ | R | 0.552 | U | | 0.524 | U | | 0.56 | U | |
| 1,3-DICHLOROBENZENE | | 0.501 | UJ | R | 0.54 | U | | 0.513 | U | | 0.547 | U | |
| 1,3-DICHLOROPROPANE | | 0.262 | UJ | R | 0.282 | U | | 0.268 | U | | 0.286 | U | |
| 1,4-DICHLOROBENZENE | | 0.489 | UJ | R | 0.528 | U | | 0.501 | U | | 0.535 | U | |
| 2,2-DICHLOROPROPANE | | 0.239 | UJ | R | 0.258 | U | | 0.245 | U | | 0.261 | U | |
| 2-BUTANONE | | 0.398 | UR | C | 0.429 | UR | C | 0.408 | UR | C | 0.435 | UR | C |
| 2-CHLOROTOLUENE | | 0.432 | UJ | R | 0.466 | U | | 0.443 | U | | 0.473 | U | |
| 2-HEXANONE | | 0.353 | UJ | R | 0.38 | U | | 0.361 | U | | 0.386 | U | |
| 4-CHLOROTOLUENE | | 0.455 | UJ | R | 0.491 | U | | 0.466 | U | | 0.498 | U | |
| 4-ISOPROPYLTOLUENE | | 0.626 | UJ | R | 0.675 | U | | 0.641 | U | | 0.684 | U | |
| 4-METHYL-2-PENTANONE | | 0.262 | UJ | R | 0.282 | U | | 0.268 | U | | 0.286 | U | |
| ACETONE | | 0.91 | UR | C | 0.982 | UR | C | 0.932 | UR | C | 0.995 | UR | C |
| ACETONITRILE | | 5.69 | UR | C | 6.13 | UR | C | 5.83 | UR | C | 6.22 | UR | C |
| ACROLEIN | | 5.69 | UJ | R | 6.13 | U | | | | | | | |
| ACRYLONITRILE | | 5.69 | UR | C | 6.13 | UR | C | 5.83 | UR | C | 6.22 | UR | C |
| BENZENE | | 0.239 | UJ | R | 0.258 | U | | 0.245 | U | | 0.261 | U | |
| BROMOBENZENE | | 0.353 | UJ | R | 0.38 | U | | 0.361 | U | | 0.386 | U | |
| BROMOCHLOROMETHANE | | 0.273 | UJ | R | 0.294 | U | | 0.28 | U | | 0.299 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD002-1010 | | |
|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-20 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | |
| | UNITS | UG/KG | | |
| | PCT_SOLIDS | | | |
| | DUP_OF | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 0.228 | U | |
| 1,1,1-TRICHLOROETHANE | | 0.285 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 0.376 | U | |
| 1,1,2-TRICHLOROETHANE | | 0.274 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 5.7 | U | |
| 1,1-DICHLOROETHANE | | 0.205 | U | |
| 1,1-DICHLOROETHENE | | 0.319 | U | |
| 1,1-DICHLOROPROPENE | | 0.388 | U | |
| 1,2,3-TRICHLOROBENZENE | | 0.559 | UJ | CN |
| 1,2,3-TRICHLOROPROPANE | | 0.41 | U | |
| 1,2,4-TRICHLOROBENZENE | | 0.547 | UJ | N |
| 1,2,4-TRIMETHYLBENZENE | | 0.49 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 0.673 | UR | C |
| 1,2-DIBROMOETHANE | | 0.239 | U | |
| 1,2-DICHLOROBENZENE | | 0.342 | UJ | N |
| 1,2-DICHLOROETHANE | | 0.582 | U | |
| 1,2-DICHLOROPROPANE | | 0.217 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 0.513 | U | |
| 1,3-DICHLOROBENZENE | | 0.502 | U | |
| 1,3-DICHLOROPROPANE | | 0.262 | U | |
| 1,4-DICHLOROBENZENE | | 0.49 | U | |
| 2,2-DICHLOROPROPANE | | 0.239 | U | |
| 2-BUTANONE | | 0.399 | UR | C |
| 2-CHLOROTOLUENE | | 0.433 | U | |
| 2-HEXANONE | | 0.353 | U | |
| 4-CHLOROTOLUENE | | 0.456 | U | |
| 4-ISOPROPYLTOLUENE | | 0.627 | U | |
| 4-METHYL-2-PENTANONE | | 0.262 | U | |
| ACETONE | | 0.912 | UR | C |
| ACETONITRILE | | 5.7 | UR | C |
| ACROLEIN | | | | |
| ACRYLONITRILE | | 5.7 | UR | C |
| BENZENE | | 0.239 | U | |
| BROMOBENZENE | | 0.353 | U | |
| BROMOCHLOROMETHANE | | 0.274 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-01 | | | 1011013-02 | | | 1011013-03 | | | 1011013-04 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMODICHLOROMETHANE | | 0.221 | UJ | R | 0.217 | U | | 0.219 | U | | 0.222 | U | |
| BROMOFORM | | 0.279 | UJ | R | 0.274 | U | | 0.277 | U | | 0.28 | U | |
| BROMOMETHANE | | 0.453 | UR | C | 0.446 | UR | C | 0.45 | UR | C | 0.455 | UR | C |
| CARBON DISULFIDE | | 0.337 | UJ | R | 0.331 | U | | 0.335 | U | | 0.338 | U | |
| CARBON TETRACHLORIDE | | 0.302 | UJ | R | 0.297 | U | | 0.3 | U | | 0.303 | U | |
| CHLOROBENZENE | | 0.279 | UJ | R | 0.274 | U | | 0.277 | U | | 0.28 | U | |
| CHLORODIBROMOMETHANE | | 0.302 | UJ | R | 0.297 | U | | 0.3 | U | | 0.303 | U | |
| CHLOROETHANE | | 0.267 | UJ | CR | 0.263 | UJ | C | 0.266 | UJ | C | 0.268 | UJ | C |
| CHLOROFORM | | 0.209 | UJ | R | 0.206 | U | | 0.208 | U | | 0.21 | U | |
| CHLOROMETHANE | | 0.918 | UJ | CR | 0.903 | UJ | C | 0.912 | UJ | C | 0.922 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.232 | UJ | R | 0.229 | U | | 0.231 | U | | 0.233 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.244 | UJ | CR | 0.24 | UJ | C | 0.242 | UJ | C | 0.245 | UJ | C |
| CYCLOHEXANE | | 5.81 | UJ | R | 5.71 | U | | 5.77 | U | | 5.83 | U | |
| DIBROMOMETHANE | | 0.302 | UJ | R | 0.297 | U | | 0.3 | U | | 0.303 | U | |
| DICHLORODIFLUOROMETHANE | | 0.488 | UJ | R | 0.48 | U | | 0.485 | U | | 0.49 | U | |
| ETHYL METHACRYLATE | | 5.81 | UJ | R | 5.71 | U | | 5.77 | U | | 5.83 | U | |
| ETHYLBENZENE | | 0.325 | UJ | R | 0.32 | U | | 0.323 | U | | 0.327 | U | |
| HEXACHLOROBUTADIENE | | 0.674 | UJ | NR | 0.663 | U | | 0.67 | U | | 0.677 | U | |
| ISOPROPYLBENZENE | | 0.43 | UJ | R | 0.423 | U | | 0.427 | U | | 0.432 | U | |
| M+P-XYLENES | | 0.778 | UJ | R | 0.766 | U | | 0.774 | U | | 0.782 | U | |
| METHACRYLONITRILE | | 5.81 | UR | C | 5.71 | UR | C | 5.77 | UR | C | 5.83 | UR | C |
| METHYL ACETATE | | 5.81 | UR | C | 5.71 | UR | C | 5.77 | UR | C | 5.83 | UR | C |
| METHYL CYCLOHEXANE | | 5.81 | UJ | R | 5.71 | U | | 5.77 | U | | 5.83 | U | |
| METHYL IODIDE | | 5.81 | UJ | CER | 5.71 | UJ | CE | 5.77 | UJ | CE | 5.83 | UJ | CE |
| METHYL METHACRYLATE | | 5.81 | UJ | CR | 5.71 | UJ | C | 5.77 | UJ | C | 5.83 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.29 | UJ | CR | 0.286 | UJ | C | 0.289 | UJ | C | 0.292 | UJ | C |
| METHYLENE CHLORIDE | | 0.197 | UJ | CR | 0.194 | UJ | C | 0.196 | UJ | C | 0.198 | UJ | C |
| NAPHTHALENE | | 0.627 | UJ | CNR | 0.617 | UJ | C | 0.624 | UJ | C | 0.63 | UJ | C |
| N-BUTYLBENZENE | | 0.627 | UJ | CNR | 0.617 | UJ | C | 0.624 | UJ | C | 0.63 | UJ | C |
| N-PROPYLBENZENE | | 0.511 | UJ | R | 0.503 | U | | 0.508 | U | | 0.513 | U | |
| O-XYLENE | | 0.337 | UJ | R | 0.331 | U | | 0.335 | U | | 0.338 | U | |
| PROPIONITRILE | | 5.81 | UR | C | 5.71 | UR | C | 5.77 | UR | C | 5.83 | UR | C |
| SEC-BUTYLBENZENE | | 0.581 | UJ | R | 0.571 | U | | 0.577 | U | | 0.583 | U | |
| STYRENE | | 0.418 | UJ | R | 0.411 | U | | 0.416 | U | | 0.42 | U | |
| TERT-BUTYLBENZENE | | 0.488 | UJ | R | 0.48 | U | | 0.485 | U | | 0.49 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-05 | | | 1011013-06 | | | 1011013-07 | | | 1011013-08 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMODICHLOROMETHANE | | 0.216 | U | | 0.236 | U | | 0.227 | U | | 0.222 | U | |
| BROMOFORM | | 0.273 | U | | 0.299 | U | | 0.287 | U | | 0.281 | U | |
| BROMOMETHANE | | 0.444 | UR | C | 0.485 | UR | C | 0.467 | UR | C | 0.457 | UR | C |
| CARBON DISULFIDE | | 0.33 | U | | 0.361 | U | | 0.347 | U | | 0.34 | U | |
| CARBON TETRACHLORIDE | | 0.296 | U | | 0.323 | U | | 0.311 | U | | 0.304 | U | |
| CHLOROBENZENE | | 0.273 | U | | 0.299 | U | | 0.287 | U | | 0.281 | U | |
| CHLORODIBROMOMETHANE | | 0.296 | U | | 0.323 | U | | 0.311 | U | | 0.304 | U | |
| CHLOROETHANE | | 0.262 | UJ | C | 0.286 | UJ | C | 0.275 | UJ | C | 0.269 | UJ | C |
| CHLOROFORM | | 0.205 | U | | 0.224 | U | | 0.215 | U | | 0.211 | U | |
| CHLOROMETHANE | | 0.9 | UJ | C | 0.983 | UJ | C | 0.945 | UJ | C | 0.925 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.228 | U | | 0.249 | U | | 0.239 | U | | 0.234 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.239 | UJ | C | 0.261 | UJ | C | 0.251 | UJ | C | 0.246 | UJ | C |
| CYCLOHEXANE | | 5.69 | U | | 6.22 | U | | 5.98 | U | | 5.85 | U | |
| DIBROMOMETHANE | | 0.296 | U | | 0.323 | U | | 0.311 | U | | 0.304 | U | |
| DICHLORODIFLUOROMETHANE | | 0.478 | U | | 0.522 | U | | 0.502 | U | | 0.492 | U | |
| ETHYL METHACRYLATE | | 5.69 | U | | 6.22 | U | | 5.98 | U | | 5.85 | U | |
| ETHYLBENZENE | | 0.319 | U | | 0.348 | U | | 0.335 | U | | 0.328 | U | |
| HEXACHLOROBUTADIENE | | 0.661 | U | | 0.721 | U | | 0.694 | U | | 0.679 | U | |
| ISOPROPYLBENZENE | | 0.421 | U | | 0.46 | U | | 0.443 | U | | 0.433 | U | |
| M+P-XYLENES | | 0.763 | U | | 0.833 | U | | 0.801 | U | | 0.785 | U | |
| METHACRYLONITRILE | | 5.69 | UR | C | 6.22 | UR | C | 5.98 | UR | C | 5.85 | UR | C |
| METHYL ACETATE | | 5.69 | UR | C | 6.22 | UR | C | 5.98 | UR | C | 5.85 | UR | C |
| METHYL CYCLOHEXANE | | 5.69 | U | | 6.22 | U | | 5.98 | U | | 5.85 | U | |
| METHYL IODIDE | | 5.69 | UJ | CE | 6.22 | UJ | CE | 5.98 | UJ | CE | 5.85 | UJ | CE |
| METHYL METHACRYLATE | | 5.69 | UJ | C | 6.22 | UJ | C | 5.98 | UJ | C | 5.85 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.285 | UJ | C | 0.311 | UJ | C | 0.299 | UJ | C | 0.293 | UJ | C |
| METHYLENE CHLORIDE | | 0.194 | UJ | C | 0.211 | UJ | C | 0.203 | UJ | C | 0.199 | UJ | C |
| NAPHTHALENE | | 0.615 | UJ | C | 0.672 | UJ | C | 0.646 | UJ | C | 0.632 | UJ | C |
| N-BUTYLBENZENE | | 0.615 | UJ | C | 0.672 | UJ | C | 0.646 | UJ | C | 0.632 | UJ | C |
| N-PROPYLBENZENE | | 0.501 | U | | 0.547 | U | | 0.526 | U | | 0.515 | U | |
| O-XYLENE | | 0.33 | U | | 0.361 | U | | 0.347 | U | | 0.34 | U | |
| PROPIONITRILE | | 5.69 | UR | C | 6.22 | UR | C | 5.98 | UR | C | 5.85 | UR | C |
| SEC-BUTYLBENZENE | | 0.569 | U | | 0.622 | U | | 0.598 | U | | 0.585 | U | |
| STYRENE | | 0.41 | U | | 0.448 | U | | 0.431 | U | | 0.422 | U | |
| TERT-BUTYLBENZENE | | 0.478 | U | | 0.522 | U | | 0.502 | U | | 0.492 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-09 | | | 1011013-10 | | | 1011013-11 | | | 1011013-12 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMODICHLOROMETHANE | | 0.216 | U | | 0.219 | UJ | R | 0.218 | U | | 0.223 | U | |
| BROMOFORM | | 0.273 | U | | 0.277 | UJ | R | 0.276 | U | | 0.281 | U | |
| BROMOMETHANE | | 0.444 | UR | C | 0.45 | UR | C | 0.448 | UR | C | 0.457 | UR | C |
| CARBON DISULFIDE | | 0.33 | U | | 0.334 | UJ | R | 0.333 | U | | 0.34 | U | |
| CARBON TETRACHLORIDE | | 0.296 | U | | 0.3 | UJ | R | 0.299 | U | | 0.305 | U | |
| CHLOROBENZENE | | 0.273 | U | | 0.277 | UJ | R | 0.276 | U | | 0.281 | U | |
| CHLORODIBROMOMETHANE | | 0.296 | U | | 0.3 | UJ | R | 0.299 | U | | 0.305 | U | |
| CHLOROETHANE | | 0.262 | UJ | C | 0.265 | UJ | CR | 0.264 | UJ | C | 0.27 | UJ | C |
| CHLOROFORM | | 0.205 | U | | 0.208 | UJ | R | 0.207 | U | | 0.211 | U | |
| CHLOROMETHANE | | 0.9 | UJ | C | 0.911 | UJ | CR | 0.908 | UJ | C | 0.926 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.228 | U | | 0.231 | UJ | R | 0.23 | U | | 0.234 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.239 | UJ | C | 0.242 | UJ | CR | 0.241 | UJ | C | 0.246 | UJ | C |
| CYCLOHEXANE | | 5.69 | U | | 5.77 | UJ | R | 5.75 | U | | 5.86 | U | |
| DIBROMOMETHANE | | 0.296 | U | | 0.3 | UJ | R | 0.299 | U | | 0.305 | U | |
| DICHLORODIFLUOROMETHANE | | 0.478 | U | | 0.484 | UJ | R | 0.483 | U | | 0.492 | U | |
| ETHYL METHACRYLATE | | 5.69 | U | | 5.77 | UJ | R | 5.75 | U | | 5.86 | U | |
| ETHYLBENZENE | | 0.319 | U | | 0.323 | UJ | R | 0.322 | U | | 0.328 | U | |
| HEXACHLOROBUTADIENE | | 0.661 | U | | 0.669 | UJ | R | 0.667 | U | | 0.68 | U | |
| ISOPROPYLBENZENE | | 0.421 | U | | 0.427 | UJ | R | 0.425 | U | | 0.434 | U | |
| M+P-XYLENES | | 0.763 | U | | 0.773 | UJ | R | 0.77 | U | | 0.785 | U | |
| METHACRYLONITRILE | | 5.69 | UR | C | 5.77 | UR | C | 5.75 | UR | C | 5.86 | UR | C |
| METHYL ACETATE | | 5.69 | UR | C | 5.77 | UR | C | 5.75 | UR | C | 5.86 | UR | C |
| METHYL CYCLOHEXANE | | 5.69 | U | | 5.77 | UJ | R | 5.75 | U | | 5.86 | U | |
| METHYL IODIDE | | 5.69 | UJ | CE | 5.77 | UJ | CENR | 5.75 | UJ | CE | 5.86 | UJ | CE |
| METHYL METHACRYLATE | | 5.69 | UJ | C | 5.77 | UJ | CR | 5.75 | UJ | C | 5.86 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.285 | UJ | C | 0.288 | UJ | CR | 0.287 | UJ | C | 0.293 | UJ | C |
| METHYLENE CHLORIDE | | 0.194 | UJ | C | 0.196 | UJ | CR | 0.195 | UJ | C | 0.199 | UJ | C |
| NAPHTHALENE | | 0.615 | UJ | C | 0.623 | UJ | CR | 0.621 | UJ | C | 0.633 | UJ | C |
| N-BUTYLBENZENE | | 0.615 | UJ | C | 0.623 | UJ | CR | 0.621 | UJ | C | 0.633 | UJ | C |
| N-PROPYLBENZENE | | 0.501 | U | | 0.507 | UJ | R | 0.506 | U | | 0.516 | U | |
| O-XYLENE | | 0.33 | U | | 0.334 | UJ | R | 0.333 | U | | 0.34 | U | |
| PROPIONITRILE | | 5.69 | UR | C | 5.77 | UR | C | 5.75 | UR | C | 5.86 | UR | C |
| SEC-BUTYLBENZENE | | 0.569 | U | | 0.577 | UJ | R | 0.575 | U | | 0.586 | U | |
| STYRENE | | 0.41 | U | | 0.415 | UJ | R | 0.414 | U | | 0.422 | U | |
| TERT-BUTYLBENZENE | | 0.478 | U | | 0.484 | UJ | R | 0.483 | U | | 0.492 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-13 | | | 1011013-14 | | | 1011013-15 | | | 1011013-16 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMODICHLOROMETHANE | | 0.22 | U | | 0.226 | U | | 0.222 | U | | 0.216 | U | |
| BROMOFORM | | 0.278 | U | | 0.285 | U | | 0.28 | U | | 0.273 | U | |
| BROMOMETHANE | | 0.452 | UR | C | 0.464 | UR | C | 0.455 | UR | C | 0.444 | UR | C |
| CARBON DISULFIDE | | 0.336 | UJ | N | 0.345 | U | | 0.338 | U | | 0.33 | U | |
| CARBON TETRACHLORIDE | | 0.302 | UJ | N | 0.309 | U | | 0.303 | U | | 0.296 | U | |
| CHLOROBENZENE | | 0.278 | U | | 0.285 | U | | 0.28 | U | | 0.273 | U | |
| CHLORODIBROMOMETHANE | | 0.302 | U | | 0.309 | U | | 0.303 | U | | 0.296 | U | |
| CHLOROETHANE | | 0.267 | UJ | C | 0.273 | UJ | C | 0.268 | UJ | C | 0.262 | UJ | C |
| CHLOROFORM | | 0.209 | UJ | N | 0.214 | U | | 0.21 | U | | 0.205 | U | |
| CHLOROMETHANE | | 0.916 | UJ | N | 0.939 | UJ | C | 0.922 | UJ | C | 0.899 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 0.232 | UJ | N | 0.238 | U | | 0.233 | U | | 0.228 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.244 | UJ | C | 0.25 | UJ | C | 0.245 | UJ | C | 0.239 | UJ | C |
| CYCLOHEXANE | | 5.8 | UJ | N | 5.95 | U | | 5.83 | U | | 5.69 | U | |
| DIBROMOMETHANE | | 0.302 | U | | 0.309 | U | | 0.303 | U | | 0.296 | U | |
| DICHLORODIFLUOROMETHANE | | 0.487 | UJ | N | 0.499 | U | | 0.49 | U | | 0.478 | U | |
| ETHYL METHACRYLATE | | 5.8 | UJ | N | 5.95 | U | | 5.83 | U | | 5.69 | U | |
| ETHYLBENZENE | | 0.325 | U | | 0.333 | U | | 0.327 | U | | 0.319 | U | |
| HEXACHLOROBUTADIENE | | 0.673 | U | | 0.69 | UJ | N | 0.677 | U | | 0.66 | UJ | N |
| ISOPROPYLBENZENE | | 0.429 | U | | 0.44 | U | | 0.432 | U | | 0.421 | U | |
| M+P-XYLENES | | 0.777 | U | | 0.797 | U | | 0.782 | U | | 0.762 | U | |
| METHACRYLONITRILE | | 5.8 | UR | C | 5.95 | UR | C | 5.83 | UR | C | 5.69 | UR | C |
| METHYL ACETATE | | 5.8 | UR | C | 5.95 | UR | C | 5.83 | UR | C | 5.69 | UR | C |
| METHYL CYCLOHEXANE | | 5.8 | U | | 5.95 | U | | 5.83 | U | | 5.69 | U | |
| METHYL IODIDE | | 5.8 | UR | E | 5.95 | UJ | CE | 5.83 | UJ | CE | 5.69 | UJ | CE |
| METHYL METHACRYLATE | | 5.8 | UJ | CN | 5.95 | UJ | C | 5.83 | UJ | C | 5.69 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.29 | UJ | N | 0.297 | UJ | C | 0.292 | UJ | C | 0.284 | UJ | C |
| METHYLENE CHLORIDE | | 0.197 | UR | CE | 0.202 | UJ | C | 0.198 | UJ | C | 0.193 | UJ | C |
| NAPHTHALENE | | 0.626 | UJ | C | 0.642 | UJ | CN | 0.63 | UJ | C | 0.614 | UJ | CN |
| N-BUTYLBENZENE | | 0.626 | UJ | C | 0.642 | UJ | CN | 0.63 | UJ | C | 0.614 | UJ | CN |
| N-PROPYLBENZENE | | 0.51 | U | | 0.523 | U | | 0.513 | U | | 0.501 | U | |
| O-XYLENE | | 0.336 | U | | 0.345 | U | | 0.338 | U | | 0.33 | U | |
| PROPIONITRILE | | 5.8 | UR | C | 5.95 | UR | C | 5.83 | UR | C | 5.69 | UR | C |
| SEC-BUTYLBENZENE | | 0.58 | U | | 0.595 | U | | 0.583 | U | | 0.569 | U | |
| STYRENE | | 0.418 | U | | 0.428 | U | | 0.42 | U | | 0.41 | U | |
| TERT-BUTYLBENZENE | | 0.487 | U | | 0.499 | U | | 0.49 | U | | 0.478 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD001-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-17 | | | 1011013-18 | | | 1011013-19 | | | 1011013-21 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | GKHMS-SO-017-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMODICHLOROMETHANE | | 0.216 | UJ | R | 0.233 | U | | 0.221 | U | | 0.236 | U | |
| BROMOFORM | | 0.273 | UJ | R | 0.294 | U | | 0.28 | U | | 0.299 | U | |
| BROMOMETHANE | | 0.444 | UR | C | 0.479 | UR | C | 0.455 | UR | C | 0.485 | UR | C |
| CARBON DISULFIDE | | 0.33 | UJ | R | 0.356 | U | | 0.338 | U | | 0.361 | U | |
| CARBON TETRACHLORIDE | | 0.296 | UJ | R | 0.319 | U | | 0.303 | U | | 0.323 | U | |
| CHLOROBENZENE | | 0.273 | UJ | R | 0.294 | U | | 0.28 | U | | 0.299 | U | |
| CHLORODIBROMOMETHANE | | 0.296 | UJ | R | 0.319 | U | | 0.303 | U | | 0.323 | U | |
| CHLOROETHANE | | 0.262 | UJ | C | 0.282 | UJ | C | 0.268 | UJ | C | 0.286 | UJ | C |
| CHLOROFORM | | 0.205 | UJ | R | 0.221 | U | | 0.21 | U | | 0.224 | U | |
| CHLOROMETHANE | | 0.899 | UJ | CR | 0.969 | UJ | C | 0.921 | U | | 0.983 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.228 | UJ | R | 0.245 | U | | 0.233 | U | | 0.249 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.239 | UJ | CR | 0.258 | UJ | C | 0.245 | UJ | C | 0.261 | UJ | C |
| CYCLOHEXANE | | 5.69 | UJ | R | 6.13 | U | | 5.83 | U | | 6.22 | U | |
| DIBROMOMETHANE | | 0.296 | UJ | R | 0.319 | U | | 0.303 | U | | 0.323 | U | |
| DICHLORODIFLUOROMETHANE | | 0.478 | UJ | R | 0.515 | U | | 0.49 | U | | 0.522 | U | |
| ETHYL METHACRYLATE | | 5.69 | UJ | R | 6.13 | U | | 5.83 | U | | 6.22 | U | |
| ETHYLBENZENE | | 0.319 | UJ | R | 0.344 | U | | 0.326 | U | | 0.348 | U | |
| HEXACHLOROBUTADIENE | | 0.66 | UJ | NR | 0.712 | UJ | N | 0.676 | U | | 0.721 | U | |
| ISOPROPYLBENZENE | | 0.421 | UJ | R | 0.454 | U | | 0.431 | U | | 0.659 | J | P |
| M+P-XYLENES | | 0.762 | UJ | R | 0.822 | U | | 0.781 | U | | 0.833 | U | |
| METHACRYLONITRILE | | 5.69 | UR | C | 6.13 | UR | C | 5.83 | UR | C | 6.22 | UR | C |
| METHYL ACETATE | | 5.69 | UR | C | 6.13 | UR | C | 5.83 | UR | C | 6.22 | UR | C |
| METHYL CYCLOHEXANE | | 5.69 | UJ | R | 6.13 | U | | 5.83 | U | | 6.22 | U | |
| METHYL IODIDE | | 5.69 | UJ | CER | 6.13 | UJ | CE | 5.83 | UR | E | 6.22 | UR | E |
| METHYL METHACRYLATE | | 5.69 | UJ | CR | 6.13 | UJ | C | 5.83 | UJ | C | 6.22 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.284 | UJ | CR | 0.307 | UJ | C | 0.291 | U | | 0.311 | U | |
| METHYLENE CHLORIDE | | 0.193 | UJ | C | 0.209 | UJ | C | 0.198 | UR | CE | 0.211 | UJ | CE |
| NAPHTHALENE | | 0.614 | UJ | CNR | 0.663 | UJ | CN | 0.629 | UJ | C | 28.6 | J | CDE |
| N-BUTYLBENZENE | | 0.614 | UJ | CNR | 0.663 | UJ | CN | 0.629 | UJ | C | 2.26 | J | CP |
| N-PROPYLBENZENE | | 0.501 | UJ | R | 0.54 | U | | 0.513 | U | | 1.23 | J | P |
| O-XYLENE | | 0.33 | UJ | R | 0.356 | U | | 0.338 | U | | 0.361 | U | |
| PROPIONITRILE | | 5.69 | UR | C | 6.13 | UR | C | 5.83 | UR | C | 6.22 | UR | C |
| SEC-BUTYLBENZENE | | 0.569 | UJ | R | 0.613 | U | | 0.583 | U | | 1.7 | J | P |
| STYRENE | | 0.41 | UJ | R | 0.442 | U | | 0.42 | U | | 0.448 | U | |
| TERT-BUTYLBENZENE | | 0.478 | UJ | R | 0.515 | U | | 0.49 | U | | 0.522 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD002-1010 | | |
|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-20 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | |
| | UNITS | UG/KG | | |
| | PCT_SOLIDS | | | |
| | DUP_OF | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD |
| BROMODICHLOROMETHANE | | 0.217 | U | |
| BROMOFORM | | 0.274 | U | |
| BROMOMETHANE | | 0.445 | UR | C |
| CARBON DISULFIDE | | 0.331 | U | |
| CARBON TETRACHLORIDE | | 0.296 | U | |
| CHLOROBENZENE | | 0.274 | U | |
| CHLORODIBROMOMETHANE | | 0.296 | U | |
| CHLOROETHANE | | 0.262 | UJ | C |
| CHLOROFORM | | 0.205 | U | |
| CHLOROMETHANE | | 0.901 | U | |
| CIS-1,2-DICHLOROETHENE | | 0.228 | U | |
| CIS-1,3-DICHLOROPROPENE | | 0.239 | UJ | C |
| CYCLOHEXANE | | 5.7 | U | |
| DIBROMOMETHANE | | 0.296 | U | |
| DICHLORODIFLUOROMETHANE | | 0.479 | U | |
| ETHYL METHACRYLATE | | 5.7 | U | |
| ETHYLBENZENE | | 0.319 | U | |
| HEXACHLOROBUTADIENE | | 0.661 | UJ | N |
| ISOPROPYLBENZENE | | 0.422 | U | |
| M+P-XYLENES | | 0.764 | U | |
| METHACRYLONITRILE | | 5.7 | UR | C |
| METHYL ACETATE | | 5.7 | UR | C |
| METHYL CYCLOHEXANE | | 5.7 | U | |
| METHYL IODIDE | | 5.7 | UR | E |
| METHYL METHACRYLATE | | 5.7 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 0.285 | U | |
| METHYLENE CHLORIDE | | 0.194 | UJ | CE |
| NAPHTHALENE | | 0.616 | UJ | CN |
| N-BUTYLBENZENE | | 0.616 | UJ | CN |
| N-PROPYLBENZENE | | 0.502 | U | |
| O-XYLENE | | 0.331 | U | |
| PROPIONITRILE | | 5.7 | UR | C |
| SEC-BUTYLBENZENE | | 0.57 | U | |
| STYRENE | | 0.41 | U | |
| TERT-BUTYLBENZENE | | 0.479 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-01 | | | 1011013-02 | | | 1011013-03 | | | 1011013-04 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.441 | UJ | R | 0.434 | U | | 0.439 | U | | 0.443 | U | |
| TOLUENE | | 0.314 | UJ | R | 0.309 | U | | 0.312 | U | | 0.315 | U | |
| TOTAL XYLENES | | 1.16 | UJ | R | 1.14 | U | | 1.15 | U | | 1.17 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.279 | UJ | R | 0.274 | U | | 0.277 | U | | 0.28 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.256 | UJ | R | 0.251 | U | | 0.254 | U | | 0.257 | U | |
| TRICHLOROETHENE | | 0.348 | UJ | CR | 0.343 | UJ | C | 0.346 | UJ | C | 0.35 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.407 | UJ | R | 0.4 | U | | 0.404 | U | | 0.408 | U | |
| VINYL ACETATE | | 5.81 | UJ | CR | 5.71 | UJ | C | 5.77 | UJ | C | 5.83 | UJ | C |
| VINYL CHLORIDE | | 0.279 | UJ | CR | 0.274 | UJ | C | 0.277 | UJ | C | 0.28 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-05 | | | 1011013-06 | | | 1011013-07 | | | 1011013-08 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.433 | U | | 0.473 | U | | 0.455 | U | | 0.445 | U | |
| TOLUENE | | 0.308 | U | | 0.336 | U | | 0.323 | U | | 0.316 | U | |
| TOTAL XYLENES | | 1.14 | U | | 1.24 | U | | 1.2 | U | | 1.17 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.273 | U | | 0.299 | U | | 0.287 | U | | 0.281 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.251 | U | | 0.274 | U | | 0.263 | U | | 0.258 | U | |
| TRICHLOROETHENE | | 0.342 | UJ | C | 0.373 | UJ | C | 0.359 | UJ | C | 0.351 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.399 | U | | 0.435 | U | | 0.419 | U | | 0.41 | U | |
| VINYL ACETATE | | 5.69 | UJ | C | 6.22 | UJ | C | 5.98 | UJ | C | 5.85 | UJ | C |
| VINYL CHLORIDE | | 0.273 | UJ | C | 0.299 | UJ | C | 0.287 | UJ | C | 0.281 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-09 | | | 1011013-10 | | | 1011013-11 | | | 1011013-12 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.433 | U | | 0.438 | UJ | R | 0.437 | U | | 0.445 | U | |
| TOLUENE | | 0.308 | U | | 0.311 | UJ | R | 0.31 | U | | 0.317 | U | |
| TOTAL XYLENES | | 1.14 | U | | 1.15 | UJ | R | 1.15 | U | | 1.17 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.273 | U | | 0.277 | UJ | R | 0.276 | U | | 0.281 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.251 | U | | 0.254 | UJ | R | 0.253 | U | | 0.258 | U | |
| TRICHLOROETHENE | | 0.342 | UJ | C | 0.346 | UJ | CR | 0.345 | UJ | C | 0.574 | J | CP |
| TRICHLOROFLUOROMETHANE | | 0.399 | U | | 0.404 | UJ | R | 0.402 | U | | 0.41 | U | |
| VINYL ACETATE | | 5.69 | UJ | C | 5.77 | UJ | CR | 5.75 | UJ | C | 5.86 | UJ | C |
| VINYL CHLORIDE | | 0.273 | UJ | C | 0.277 | UJ | CR | 0.276 | UJ | C | 0.281 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-13 | | | 1011013-14 | | | 1011013-15 | | | 1011013-16 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.441 | U | | 0.452 | U | | 0.443 | U | | 0.432 | U | |
| TOLUENE | | 0.313 | U | | 0.321 | U | | 0.315 | U | | 0.307 | U | |
| TOTAL XYLENES | | 1.16 | U | | 1.19 | U | | 1.17 | U | | 1.14 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.278 | UJ | N | 0.285 | U | | 0.28 | U | | 0.273 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.255 | U | | 0.262 | U | | 0.257 | U | | 0.25 | U | |
| TRICHLOROETHENE | | 0.348 | U | | 0.357 | UJ | C | 0.35 | UJ | C | 0.341 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.406 | UJ | N | 0.416 | U | | 0.408 | U | | 0.398 | U | |
| VINYL ACETATE | | 5.8 | UJ | CEN | 5.95 | UJ | C | 5.83 | UJ | C | 5.69 | UJ | C |
| VINYL CHLORIDE | | 0.278 | UJ | N | 0.285 | UJ | C | 0.28 | UJ | C | 0.273 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD001-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-17 | | | 1011013-18 | | | 1011013-19 | | | 1011013-21 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | GKHMS-SO-017-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.432 | UJ | R | 0.466 | U | | 0.443 | U | | 0.473 | U | |
| TOLUENE | | 0.307 | UJ | R | 0.331 | U | | 0.315 | U | | 0.336 | U | |
| TOTAL XYLENES | | 1.14 | UJ | R | 1.23 | U | | 1.17 | U | | 1.24 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.273 | UJ | R | 0.294 | U | | 0.28 | U | | 0.299 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.25 | UJ | R | 0.27 | U | | 0.256 | U | | 0.274 | U | |
| TRICHLOROETHENE | | 0.341 | UJ | CR | 0.368 | UJ | C | 0.35 | UJ | C | 0.373 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.398 | UJ | R | 0.429 | U | | 0.408 | U | | 0.435 | UJ | D |
| VINYL ACETATE | | 5.69 | UJ | CR | 6.13 | UJ | C | 5.83 | UJ | CE | 6.22 | UJ | CDE |
| VINYL CHLORIDE | | 0.273 | UJ | CR | 0.294 | UJ | C | 0.28 | U | | 0.299 | UJ | D |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD002-1010 | | |
|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-20 | | |
| FRACTION: OV | SAMP_DATE | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | |
| | UNITS | UG/KG | | |
| | PCT_SOLIDS | | | |
| | DUP_OF | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 0.433 | U | |
| TOLUENE | | 0.308 | U | |
| TOTAL XYLENES | | 1.14 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.274 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.251 | U | |
| TRICHLOROETHENE | | 0.342 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.399 | U | |
| VINYL ACETATE | | 5.7 | UJ | CE |
| VINYL CHLORIDE | | 0.274 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-01 | | | 1011013-02 | | | 1011013-03 | | | 1011013-04 | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 1.93 | UJ | Q | 1.9 | UJ | Q | 1.93 | UJ | Q | 1.93 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.645 | U | | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| ACENAPHTHENE | | 0.645 | U | | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| ACENAPHTHYLENE | | 0.645 | U | | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| ANTHRACENE | | 0.645 | U | | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| BENZO(A)ANTHRACENE | | 1.04 | J | P | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| BENZO(A)PYRENE | | 1.07 | J | DEP | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| BENZO(B)FLUORANTHENE | | 1.31 | J | DEP | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| BENZO(G,H,I)PERYLENE | | 1.39 | J | P | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| BENZO(K)FLUORANTHENE | | 1.17 | J | CDEP | 0.635 | UJ | C | 0.642 | UJ | C | 0.647 | UJ | C |
| CHRYSENE | | 1.04 | J | P | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.645 | U | | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| FLUORANTHENE | | 1.72 | J | P | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| FLUORENE | | 0.645 | U | | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.819 | J | P | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| NAPHTHALENE | | 0.645 | U | | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| PHENANTHRENE | | 0.939 | J | P | 0.635 | U | | 0.642 | U | | 0.647 | U | |
| PYRENE | | 1.73 | J | CP | 0.635 | UJ | C | 0.642 | UJ | C | 0.647 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-05 | | | 1011013-06 | | | 1011013-07 | | | 1011013-08 | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 1.9 | UJ | Q | 2.07 | UJ | Q | 1.99 | UJ | Q | 1.95 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| ACENAPHTHENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| ACENAPHTHYLENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| ANTHRACENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| BENZO(A)ANTHRACENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| BENZO(A)PYRENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| BENZO(B)FLUORANTHENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| BENZO(G,H,I)PERYLENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| BENZO(K)FLUORANTHENE | | 0.633 | UJ | C | 0.69 | UJ | C | 0.665 | UJ | C | 0.651 | UJ | C |
| CHRYSENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| FLUORANTHENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| FLUORENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| NAPHTHALENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| PHENANTHRENE | | 0.633 | U | | 0.69 | U | | 0.665 | U | | 0.651 | U | |
| PYRENE | | 0.633 | UJ | C | 0.69 | UJ | C | 0.665 | UJ | C | 0.651 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-09 | | | 1011013-10 | | | 1011013-11 | | | 1011013-12 | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 1.9 | UJ | Q | 1.92 | UJ | Q | 3.94 | J | Q | 1.95 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.632 | U | | 0.641 | U | | 4.24 | J | R | 0.651 | U | |
| ACENAPHTHENE | | 0.632 | U | | 0.641 | U | | 6.14 | J | R | 0.651 | U | |
| ACENAPHTHYLENE | | 0.632 | U | | 0.641 | U | | 1.15 | J | PR | 0.651 | U | |
| ANTHRACENE | | 0.632 | U | | 0.641 | U | | 0.638 | U | | 0.651 | U | |
| BENZO(A)ANTHRACENE | | 0.632 | U | | 0.641 | U | | 0.714 | J | PR | 0.651 | U | |
| BENZO(A)PYRENE | | 0.632 | U | | 0.641 | U | | 0.638 | U | | 0.651 | U | |
| BENZO(B)FLUORANTHENE | | 0.632 | U | | 0.641 | U | | 0.638 | U | | 0.651 | U | |
| BENZO(G,H,I)PERYLENE | | 0.997 | J | PR | 0.641 | U | | 1.72 | J | PR | 1.25 | J | PR |
| BENZO(K)FLUORANTHENE | | 0.632 | UJ | C | 0.641 | UJ | C | 0.638 | UJ | C | 0.651 | UJ | C |
| CHRYSENE | | 1.23 | J | PR | 0.641 | U | | 1.98 | J | R | 0.651 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.632 | U | | 0.641 | U | | 0.638 | U | | 0.651 | U | |
| FLUORANTHENE | | 0.671 | J | PR | 0.641 | U | | 1.47 | J | PR | 0.651 | U | |
| FLUORENE | | 0.632 | U | | 0.641 | U | | 1.95 | J | R | 0.651 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.632 | U | | 0.641 | U | | 0.638 | U | | 0.651 | U | |
| NAPHTHALENE | | 0.632 | U | | 0.641 | U | | 0.638 | U | | 0.651 | U | |
| PHENANTHRENE | | 1.45 | J | PR | 0.641 | U | | 9.14 | J | R | 0.651 | U | |
| PYRENE | | 1.4 | J | CPR | 0.641 | UJ | C | 3.47 | J | CR | 0.651 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-13 | | | 1011013-14 | | | 1011013-15 | | | 1011013-16 | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 1.93 | UJ | Q | 1.98 | UJ | Q | 1.93 | UJ | Q | 1.9 | UJ | Q |
| 2-METHYLNAPHTHALENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| ACENAPHTHENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| ACENAPHTHYLENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| ANTHRACENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| BENZO(A)ANTHRACENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| BENZO(A)PYRENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| BENZO(B)FLUORANTHENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| BENZO(G,H,I)PERYLENE | | 1.44 | J | PR | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| BENZO(K)FLUORANTHENE | | 0.645 | UJ | C | 0.661 | UJ | C | 0.648 | UJ | C | 0.632 | UJ | C |
| CHRYSENE | | 1.52 | J | PR | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| FLUORANTHENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| FLUORENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| NAPHTHALENE | | 0.645 | U | | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| PHENANTHRENE | | 1.24 | J | PR | 0.661 | U | | 0.648 | U | | 0.632 | U | |
| PYRENE | | 1.74 | J | CPR | 0.661 | UJ | C | 0.648 | UJ | C | 0.632 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD001-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-17 | | | 1011013-18 | | | 1011013-19 | | | 1011013-21 | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 1.9 | UJ | Q | 2.04 | UJ | Q | 1.94 | UJ | Q | 25.2 | J | Q |
| 2-METHYLNAPHTHALENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| ACENAPHTHENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| ACENAPHTHYLENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| ANTHRACENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| BENZO(A)ANTHRACENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| BENZO(A)PYRENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| BENZO(B)FLUORANTHENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| BENZO(G,H,I)PERYLENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| BENZO(K)FLUORANTHENE | | 0.633 | UJ | C | 0.681 | UJ | C | 0.647 | UJ | C | | | |
| CHRYSENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| DIBENZO(A,H)ANTHRACENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| FLUORANTHENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| FLUORENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| INDENO(1,2,3-CD)PYRENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| NAPHTHALENE | | 1.87 | J | PR | 1.89 | J | PR | 0.647 | U | | | | |
| PHENANTHRENE | | 0.633 | U | | 0.681 | U | | 0.647 | U | | | | |
| PYRENE | | 0.633 | UJ | C | 0.681 | UJ | C | 0.647 | UJ | C | | | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD001-1010 | | | GKHMS-SO-FD002-1010 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-21 | | | 1011013-20 | | | | | |
| FRACTION: PAH | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | | | |
| | UNITS | UG/KG | | | UG/KG | | | | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | GKHMS-SO-017-1010 | | | | | | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | | | | 1.9 | UJ | Q | | | |
| 2-METHYLNAPHTHALENE | | 26.1 | J | ER | | | | 0.634 | U | |
| ACENAPHTHENE | | 5.02 | J | R | | | | 0.634 | U | |
| ACENAPHTHYLENE | | 2.98 | J | R | | | | 0.634 | U | |
| ANTHRACENE | | 0.692 | U | | | | | 0.634 | U | |
| BENZO(A)ANTHRACENE | | 0.692 | U | | | | | 0.634 | U | |
| BENZO(A)PYRENE | | 0.692 | U | | | | | 0.634 | U | |
| BENZO(B)FLUORANTHENE | | 0.692 | U | | | | | 0.634 | U | |
| BENZO(G,H,I)PERYLENE | | 0.692 | U | | | | | 0.634 | U | |
| BENZO(K)FLUORANTHENE | | 0.692 | UJ | C | | | | 0.634 | UJ | C |
| CHRYSENE | | 1.96 | J | PR | | | | 0.634 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.692 | U | | | | | 0.634 | U | |
| FLUORANTHENE | | 1.45 | J | PR | | | | 0.634 | U | |
| FLUORENE | | 8.56 | J | R | | | | 0.634 | U | |
| INDENO(1,2,3-CD)PYRENE | | 0.692 | U | | | | | 0.634 | U | |
| NAPHTHALENE | | 3.05 | J | R | | | | 0.634 | U | |
| PHENANTHRENE | | 21.9 | J | R | | | | 0.634 | U | |
| PYRENE | | 3.3 | J | CR | | | | 0.634 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-01 | | | 1011013-02 | | | 1011013-03 | | | 1011013-04 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.067 | U | | 0.066 | U | | 0.067 | U | | 0.068 | U | |
| 4,4'-DDE | | 0.174 | U | | 0.171 | U | | 0.173 | U | | 0.175 | U | |
| 4,4'-DDT | | 0.128 | UJ | C | 0.126 | UJ | C | 0.127 | UJ | C | 0.128 | UJ | C |
| ALDRIN | | 0.056 | U | | 0.055 | U | | 0.055 | U | | 0.056 | U | |
| ALPHA-BHC | | 0.087 | U | | 0.086 | U | | 0.087 | U | | 0.087 | U | |
| ALPHA-CHLORDANE | | 0.113 | U | | 0.111 | U | | 0.112 | U | | 0.113 | U | |
| AROCLOR-1016 | | 5.81 | UJ | R | 5.71 | U | | 5.77 | U | | 5.82 | U | |
| AROCLOR-1221 | | 10.1 | UJ | R | 9.93 | U | | 10 | U | | 10.1 | U | |
| AROCLOR-1232 | | 6.62 | UJ | R | 6.51 | U | | 6.58 | U | | 6.64 | U | |
| AROCLOR-1242 | | 10.7 | J | DPR | 8.1 | U | | 8.19 | U | | 8.27 | U | |
| AROCLOR-1248 | | 17.5 | J | PRU | 3.54 | U | | 3.58 | U | | 3.61 | U | |
| AROCLOR-1254 | | 15.3 | J | PR | 7.88 | U | | 7.96 | U | | 8.04 | U | |
| AROCLOR-1260 | | 5.35 | J | PR | 3.2 | U | | 3.23 | U | | 3.26 | U | |
| BETA-BHC | | 0.096 | U | | 0.095 | U | | 0.096 | U | | 0.097 | U | |
| CHLORDANE | | 6.27 | U | | 6.16 | U | | 6.23 | U | | 6.29 | U | |
| DELTA-BHC | | 0.128 | U | | 0.126 | U | | 0.127 | U | | 0.128 | U | |
| DIELDRIN | | 0.163 | U | | 0.16 | U | | 0.162 | U | | 0.163 | U | |
| ENDOSULFAN I | | 0.102 | U | | 0.1 | U | | 0.102 | U | | 0.102 | U | |
| ENDOSULFAN II | | 0.108 | U | | 0.106 | U | | 0.107 | U | | 0.108 | U | |
| ENDOSULFAN SULFATE | | 0.174 | U | | 0.171 | U | | 0.173 | U | | 0.175 | U | |
| ENDRIN | | 0.128 | U | | 0.126 | U | | 0.127 | U | | 0.128 | U | |
| ENDRIN ALDEHYDE | | 0.186 | UJ | C | 0.183 | UJ | C | 0.185 | UJ | C | 0.186 | UJ | C |
| ENDRIN KETONE | | 0.116 | U | | 0.114 | U | | 0.115 | U | | 0.116 | U | |
| GAMMA-BHC (LINDANE) | | 0.094 | U | | 0.092 | U | | 0.093 | U | | 0.094 | U | |
| GAMMA-CHLORDANE | | 1.62 | J | DPRU | 1.7 | J | P | 6.08 | J | R | 4.69 | J | R |
| HEPTACHLOR | | 0.082 | U | | 0.081 | U | | 0.082 | U | | 0.083 | U | |
| HEPTACHLOR EPOXIDE | | 0.1 | U | | 0.098 | U | | 0.099 | U | | 0.1 | U | |
| KEPONE | | 0.645 | U | | 0.634 | U | | 0.641 | U | | 0.647 | U | |
| METHOXYCHLOR | | 0.093 | UJ | C | 0.091 | UJ | C | 0.092 | UJ | C | 0.093 | UJ | C |
| MIREX | | 0.645 | U | | 0.634 | U | | 0.641 | U | | 0.647 | U | |
| TOXAPHENE | | 11.6 | U | | 11.4 | U | | 11.5 | U | | 11.6 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-05 | | | 1011013-06 | | | 1011013-07 | | | 1011013-08 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.066 | UJ | C | 0.072 | UJ | C | 1.97 | J | CP | 0.068 | UJ | C |
| 4,4'-DDE | | 0.171 | U | | 0.187 | U | | 12.3 | J | C | 0.176 | U | |
| 4,4'-DDT | | 0.125 | UJ | C | 2.09 | J | CRU | 9.99 | J | C | 0.129 | UJ | C |
| ALDRIN | | 0.055 | U | | 0.06 | U | | 0.057 | U | | 0.056 | U | |
| ALPHA-BHC | | 0.085 | U | | 0.093 | U | | 0.09 | U | | 0.088 | U | |
| ALPHA-CHLORDANE | | 0.11 | U | | 0.121 | U | | 0.116 | U | | 0.114 | U | |
| AROCLOR-1016 | | 5.69 | U | | 6.22 | U | | 5.97 | U | | 5.86 | U | |
| AROCLOR-1221 | | 9.9 | U | | 10.8 | U | | 10.4 | U | | 10.2 | U | |
| AROCLOR-1232 | | 6.49 | U | | 7.09 | U | | 6.81 | U | | 6.68 | U | |
| AROCLOR-1242 | | 8.08 | U | | 8.83 | U | | 8.48 | U | | 8.32 | U | |
| AROCLOR-1248 | | 3.53 | U | | 3.86 | U | | 3.7 | U | | 3.63 | U | |
| AROCLOR-1254 | | 7.85 | U | | 8.58 | U | | 8.25 | U | | 8.08 | U | |
| AROCLOR-1260 | | 3.19 | U | | 3.48 | U | | 3.35 | U | | 3.28 | U | |
| BETA-BHC | | 0.094 | U | | 0.103 | U | | 0.099 | U | | 0.097 | U | |
| CHLORDANE | | 6.14 | U | | 53.7 | J | RU | 7.06 | J | PU | 6.33 | U | |
| DELTA-BHC | | 0.125 | U | | 0.137 | U | | 0.131 | U | | 0.129 | U | |
| DIELDRIN | | 0.159 | U | | 0.174 | U | | 0.167 | U | | 0.164 | U | |
| ENDOSULFAN I | | 0.1 | U | | 0.109 | U | | 0.105 | U | | 0.103 | U | |
| ENDOSULFAN II | | 0.106 | U | | 0.116 | U | | 0.111 | U | | 0.109 | U | |
| ENDOSULFAN SULFATE | | 0.171 | U | | 0.187 | U | | 0.179 | U | | 0.176 | U | |
| ENDRIN | | 0.125 | U | | 0.137 | U | | 0.131 | U | | 0.129 | U | |
| ENDRIN ALDEHYDE | | 0.182 | UJ | C | 62 | J | CLR | 1.79 | J | CP | 0.187 | UJ | C |
| ENDRIN KETONE | | 0.114 | U | | 0.124 | U | | 0.119 | U | | 0.117 | U | |
| GAMMA-BHC (LINDANE) | | 0.092 | U | | 0.101 | U | | 0.097 | U | | 0.095 | U | |
| GAMMA-CHLORDANE | | 1.48 | J | PR | 0.124 | U | | 0.119 | U | | 3.12 | | |
| HEPTACHLOR | | 0.081 | U | | 0.088 | U | | 0.085 | U | | 0.083 | U | |
| HEPTACHLOR EPOXIDE | | 0.098 | U | | 0.107 | U | | 0.103 | U | | 0.101 | U | |
| KEPONE | | 0.632 | U | | 0.691 | U | | 0.664 | U | | 0.651 | U | |
| METHOXYCHLOR | | 0.091 | UJ | C | 0.1 | UJ | C | 0.096 | UJ | C | 0.094 | UJ | C |
| MIREX | | 0.632 | U | | 0.691 | U | | 0.664 | U | | 0.651 | U | |
| TOXAPHENE | | 11.4 | U | | 12.4 | U | | 11.9 | U | | 11.7 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-09 | | | 1011013-10 | | | 1011013-11 | | | 1011013-12 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.066 | UJ | C | 0.067 | UJ | C | 0.067 | UJ | C | 0.068 | UJ | C |
| 4,4'-DDE | | 0.171 | U | | 0.173 | U | | 0.172 | U | | 0.176 | U | |
| 4,4'-DDT | | 1.49 | J | CPR | 0.127 | UJ | C | 3.71 | J | C | 0.129 | UJ | C |
| ALDRIN | | 0.055 | U | | 0.055 | U | | 0.055 | U | | 0.056 | U | |
| ALPHA-BHC | | 0.085 | U | | 0.086 | U | | 0.086 | U | | 0.088 | U | |
| ALPHA-CHLORDANE | | 0.11 | U | | 0.112 | U | | 0.111 | U | | 0.114 | U | |
| AROCLOR-1016 | | 13 | J | CPU | 5.77 | U | | 5.75 | U | | 5.86 | U | |
| AROCLOR-1221 | | 9.89 | U | | 10 | U | | 10 | U | | 10.2 | U | |
| AROCLOR-1232 | | 20.7 | J | CP | 6.57 | U | | 6.55 | U | | 6.68 | U | |
| AROCLOR-1242 | | 8.07 | U | | 8.19 | U | | 8.16 | U | | 8.32 | U | |
| AROCLOR-1248 | | 90.1 | J | CU | 3.57 | U | | 3.56 | U | | 3.63 | U | |
| AROCLOR-1254 | | 35.8 | J | CP | 7.96 | U | | 7.93 | U | | 8.08 | U | |
| AROCLOR-1260 | | 6.17 | J | CP | 3.23 | U | | 3.22 | U | | 3.28 | U | |
| BETA-BHC | | 0.094 | U | | 0.096 | U | | 0.095 | U | | 0.097 | U | |
| CHLORDANE | | 6.14 | U | | 6.23 | U | | 6.62 | J | P | 6.32 | U | |
| DELTA-BHC | | 0.125 | U | | 0.127 | U | | 0.126 | U | | 0.129 | U | |
| DIELDRIN | | 0.159 | U | | 0.161 | U | | 0.161 | U | | 0.164 | U | |
| ENDOSULFAN I | | 0.1 | U | | 0.101 | U | | 0.101 | U | | 0.103 | U | |
| ENDOSULFAN II | | 0.106 | U | | 0.107 | U | | 0.107 | U | | 0.109 | U | |
| ENDOSULFAN SULFATE | | 0.171 | U | | 0.173 | U | | 0.172 | U | | 0.176 | U | |
| ENDRIN | | 0.125 | U | | 0.127 | U | | 0.126 | U | | 0.129 | U | |
| ENDRIN ALDEHYDE | | 0.182 | UJ | C | 0.184 | UJ | C | 0.184 | UJ | C | 0.187 | UJ | C |
| ENDRIN KETONE | | 0.114 | U | | 0.115 | U | | 0.115 | U | | 0.117 | U | |
| GAMMA-BHC (LINDANE) | | 0.092 | U | | 0.093 | U | | 0.093 | U | | 0.095 | U | |
| GAMMA-CHLORDANE | | 0.114 | U | | 2.51 | J | R | 0.115 | U | | 0.117 | U | |
| HEPTACHLOR | | 0.081 | U | | 0.082 | U | | 0.082 | U | | 0.083 | U | |
| HEPTACHLOR EPOXIDE | | 0.098 | U | | 0.099 | U | | 0.099 | U | | 0.101 | U | |
| KEPONE | | 0.632 | U | | 0.641 | U | | 0.639 | U | | 0.651 | U | |
| METHOXYCHLOR | | 0.091 | UJ | C | 0.092 | UJ | C | 0.092 | UJ | C | 0.094 | UJ | C |
| MIREX | | 0.632 | U | | 0.641 | U | | 0.639 | U | | 0.651 | U | |
| TOXAPHENE | | 11.4 | U | | 11.5 | U | | 25.5 | J | P | 11.7 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-13 | | | 1011013-14 | | | 1011013-15 | | | 1011013-16 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.067 | UJ | C | 0.069 | UJ | C | 0.068 | UJ | C | 0.066 | UJ | C |
| 4,4'-DDE | | 0.174 | U | | 0.178 | U | | 0.175 | U | | 0.17 | U | |
| 4,4'-DDT | | 0.128 | UJ | C | 0.13 | UJ | C | 0.128 | UJ | C | 0.125 | UJ | C |
| ALDRIN | | 0.056 | U | | 0.057 | U | | 0.056 | U | | 0.055 | U | |
| ALPHA-BHC | | 0.087 | U | | 0.089 | U | | 0.088 | U | | 0.085 | U | |
| ALPHA-CHLORDANE | | 0.112 | U | | 0.115 | U | | 0.113 | U | | 0.11 | U | |
| AROCLOR-1016 | | 5.8 | U | | 5.93 | UJ | R | 5.83 | U | | 5.68 | U | |
| AROCLOR-1221 | | 10.1 | U | | 10.3 | UJ | R | 10.2 | U | | 9.88 | U | |
| AROCLOR-1232 | | 6.61 | U | | 6.76 | UJ | R | 6.65 | U | | 6.48 | U | |
| AROCLOR-1242 | | 8.23 | U | | 8.42 | UJ | R | 8.28 | U | | 8.07 | U | |
| AROCLOR-1248 | | 3.6 | U | | 3.68 | UJ | R | 3.62 | U | | 3.52 | U | |
| AROCLOR-1254 | | 8 | U | | 8.18 | UJ | R | 8.05 | U | | 7.84 | U | |
| AROCLOR-1260 | | 3.25 | U | | 3.32 | UJ | R | 3.27 | U | | 3.18 | U | |
| BETA-BHC | | 0.096 | U | | 0.098 | U | | 0.097 | U | | 0.094 | U | |
| CHLORDANE | | 6.26 | U | | 6.4 | U | | 6.3 | U | | 6.14 | U | |
| DELTA-BHC | | 0.128 | U | | 0.13 | U | | 0.128 | U | | 0.125 | U | |
| DIELDRIN | | 0.162 | U | | 0.166 | U | | 0.163 | U | | 0.159 | U | |
| ENDOSULFAN I | | 0.102 | U | | 0.104 | U | | 0.103 | U | | 0.1 | U | |
| ENDOSULFAN II | | 0.108 | U | | 0.11 | U | | 0.109 | U | | 0.106 | U | |
| ENDOSULFAN SULFATE | | 0.174 | U | | 0.178 | U | | 0.175 | U | | 0.17 | U | |
| ENDRIN | | 0.128 | U | | 0.13 | U | | 0.128 | U | | 0.125 | U | |
| ENDRIN ALDEHYDE | | 0.186 | UJ | C | 0.19 | UJ | C | 0.187 | UJ | C | 0.182 | UJ | C |
| ENDRIN KETONE | | 0.116 | U | | 0.119 | U | | 0.117 | U | | 0.114 | U | |
| GAMMA-BHC (LINDANE) | | 0.094 | U | | 0.096 | U | | 0.095 | U | | 0.092 | U | |
| GAMMA-CHLORDANE | | 0.116 | U | | 0.119 | U | | 1.75 | J | P | 0.114 | U | |
| HEPTACHLOR | | 0.082 | U | | 0.084 | U | | 0.083 | U | | 0.081 | U | |
| HEPTACHLOR EPOXIDE | | 0.1 | U | | 0.102 | U | | 0.1 | U | | 0.098 | U | |
| KEPONE | | 0.644 | U | | 0.659 | U | | 0.648 | U | | 0.631 | U | |
| METHOXYCHLOR | | 0.093 | UJ | C | 0.095 | UJ | C | 0.093 | UJ | C | 0.091 | UJ | C |
| MIREX | | 0.644 | U | | 0.659 | U | | 0.648 | U | | 0.631 | U | |
| TOXAPHENE | | 11.6 | U | | 11.9 | U | | 11.7 | U | | 11.4 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD001-1010-111210 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-17 | | | 1011013-18 | | | 1011013-19 | | | 1011013-21 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.066 | UJ | C | 0.071 | UJ | C | 0.068 | UJ | C | 0.072 | UJ | C |
| 4,4'-DDE | | 0.171 | U | | 0.184 | U | | 0.175 | U | | 0.186 | U | |
| 4,4'-DDT | | 0.125 | UJ | C | 0.135 | UJ | C | 0.128 | UJ | C | 0.137 | UJ | C |
| ALDRIN | | 0.055 | U | | 0.059 | U | | 0.056 | U | | 0.06 | U | |
| ALPHA-BHC | | 0.085 | U | | 0.092 | U | | 0.087 | U | | 0.093 | U | |
| ALPHA-CHLORDANE | | 0.11 | U | | 0.119 | U | | 0.113 | U | | 0.12 | U | |
| AROCLOR-1016 | | 5.68 | U | | 6.13 | U | | 5.82 | U | | 6.21 | U | |
| AROCLOR-1221 | | 9.89 | U | | 10.7 | U | | 10.1 | U | | 10.8 | U | |
| AROCLOR-1232 | | 6.48 | U | | 6.99 | U | | 6.63 | U | | 7.08 | U | |
| AROCLOR-1242 | | 8.07 | U | | 8.71 | U | | 8.26 | U | | 8.82 | U | |
| AROCLOR-1248 | | 3.52 | U | | 3.8 | U | | 3.61 | U | | 3.85 | U | |
| AROCLOR-1254 | | 7.84 | U | | 8.46 | U | | 8.03 | U | | 8.57 | U | |
| AROCLOR-1260 | | 3.18 | U | | 3.43 | U | | 3.26 | U | | 3.48 | U | |
| BETA-BHC | | 0.094 | U | | 0.102 | U | | 0.097 | U | | 0.103 | U | |
| CHLORDANE | | 6.14 | U | | 6.62 | U | | 6.29 | U | | 6.71 | U | |
| DELTA-BHC | | 0.125 | U | | 0.135 | U | | 0.128 | U | | 0.137 | U | |
| DIELDRIN | | 0.159 | U | | 0.172 | U | | 0.163 | U | | 0.174 | U | |
| ENDOSULFAN I | | 0.1 | U | | 0.108 | U | | 0.102 | U | | 0.109 | U | |
| ENDOSULFAN II | | 0.106 | U | | 0.114 | U | | 0.108 | U | | 0.116 | U | |
| ENDOSULFAN SULFATE | | 0.171 | U | | 0.184 | U | | 0.175 | U | | 0.186 | U | |
| ENDRIN | | 0.125 | U | | 0.135 | U | | 0.128 | U | | 0.137 | U | |
| ENDRIN ALDEHYDE | | 0.182 | UJ | C | 0.196 | UJ | C | 0.186 | UJ | C | 0.199 | UJ | C |
| ENDRIN KETONE | | 0.114 | U | | 0.123 | U | | 0.116 | U | | 0.124 | U | |
| GAMMA-BHC (LINDANE) | | 0.092 | U | | 0.099 | U | | 0.094 | U | | 0.101 | U | |
| GAMMA-CHLORDANE | | 1.1 | J | PR | 0.123 | U | | 1.11 | J | PR | 0.124 | U | |
| HEPTACHLOR | | 0.081 | U | | 0.087 | U | | 0.083 | U | | 0.088 | U | |
| HEPTACHLOR EPOXIDE | | 0.098 | U | | 0.105 | U | | 0.1 | U | | 0.107 | U | |
| KEPONE | | 0.632 | U | | 0.681 | U | | 0.647 | U | | 0.69 | U | |
| METHOXYCHLOR | | 0.091 | UJ | C | 0.098 | UJ | C | 0.093 | UJ | C | 0.099 | UJ | C |
| MIREX | | 0.632 | U | | 0.681 | U | | 0.647 | U | | 0.69 | U | |
| TOXAPHENE | | 11.4 | U | | 12.3 | U | | 11.6 | U | | 12.4 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD002-1010-111210 |
|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-20 |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 |
| MEDIA: SOIL | QC_TYPE | NM |
| | UNITS | UG/KG |
| | PCT_SOLIDS | |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 4,4'-DDD | 0.066 | UJ | C |
| 4,4'-DDE | 0.171 | U | |
| 4,4'-DDT | 0.125 | UJ | C |
| ALDRIN | 0.055 | U | |
| ALPHA-BHC | 0.086 | U | |
| ALPHA-CHLORDANE | 0.111 | U | |
| AROCLOR-1016 | 5.7 | U | |
| AROCLOR-1221 | 9.92 | U | |
| AROCLOR-1232 | 6.5 | U | |
| AROCLOR-1242 | 8.1 | U | |
| AROCLOR-1248 | 3.53 | U | |
| AROCLOR-1254 | 7.87 | U | |
| AROCLOR-1260 | 3.19 | U | |
| BETA-BHC | 0.095 | U | |
| CHLORDANE | 6.16 | U | |
| DELTA-BHC | 0.125 | U | |
| DIELDRIN | 0.16 | U | |
| ENDOSULFAN I | 0.1 | U | |
| ENDOSULFAN II | 0.106 | U | |
| ENDOSULFAN SULFATE | 0.171 | U | |
| ENDRIN | 0.125 | U | |
| ENDRIN ALDEHYDE | 0.182 | UJ | C |
| ENDRIN KETONE | 0.114 | U | |
| GAMMA-BHC (LINDANE) | 0.092 | U | |
| GAMMA-CHLORDANE | 1.73 | J | PR |
| HEPTACHLOR | 0.081 | U | |
| HEPTACHLOR EPOXIDE | 0.098 | U | |
| KEPONE | 0.634 | U | |
| METHOXYCHLOR | 0.091 | UJ | C |
| MIREX | 0.634 | U | |
| TOXAPHENE | 11.4 | U | |

## Appendix B

Results as Reported by the Laboratory

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 15:13

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.249 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.311 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.410 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.224 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.348 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.423 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.609 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.448 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.597 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.535 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.734 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.373 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.634 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.236 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.560 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.547 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.286 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.535 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 2-Butanone | 78-93-3 | BQL | U | 0.435 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.473 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.386 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.498 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.286 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Acetone | 67-64-1 | BQL | U | 0.995 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Acetonitrile | 75-05-8 | BQL | U | 6.22 | 62.2 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Acrylonitrile | 107-13-1 | BQL | U | 6.22 | 31.1 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Benzene | 71-43-2 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Bromobenzene | 108-86-1 | BQL | U | 0.386 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.236 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Bromoform | 75-25-2 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Bromomethane | 74-83-9 | BQL | U | 0.485 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 15:13

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.361 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.299 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chloroethane | 75-00-3 | BQL | U | 0.286 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chloroform | 67-66-3 | BQL | U | 0.224 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chloromethane | 74-87-3 | BQL | U | 0.983 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.249 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Cyclohexane | 110-82-7 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Dibromomethane | 74-95-3 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.522 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.348 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Freon 113 | 76-13-1 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.721 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Iodomethane | 74-88-4 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Isopropylbenzene | 98-82-8 | 0.659 | J | 0.460 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| m,p-Xylenes | | BQL | U | 0.833 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methacrylonitrile | 126-98-7 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methyl Acetate | 76-20-9 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.311 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methylcyclohexane | 108-87-2 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.211 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methylmethacrylate | 80-62-6 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Naphthalene | 91-20-3 | 28.6 | | 0.672 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| n-Butylbenzene | 104-51-8 | 2.26 | J | 0.672 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| n-Propylbenzene | 103-65-1 | 1.23 | J | 0.547 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| o-Xylene | 95-47-6 | BQL | U | 0.361 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.684 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Propionitrile | 107-12-0 | BQL | U | 6.22 | 62.2 | 1 | ug/Kg dry | 11/15/10 15:13 |
| sec-Butylbenzene | 135-98-8 | 1.70 | J | 0.622 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Styrene | 100-42-5 | BQL | U | 0.448 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.522 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.473 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 15:13

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.336 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.274 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Trichloroethene | 79-01-6 | BQL | U | 0.373 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.435 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Vinyl acetate | 108-05-4 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.299 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.24 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100 % | 70-120 | 1 | 11/15/10 15:13 |
| 4-Bromofluorobenzene | 460-00-4 | 101 % | 85-120 | 1 | 11/15/10 15:13 |
| Dibromofluoromethane | 1868-53-7 | 92 % | 85-115 | 1 | 11/15/10 15:13 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-115 | 1 | 11/15/10 15:13 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-20
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 14:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.228 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.285 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.376 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.274 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.205 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.319 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.388 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.559 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.410 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.547 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.490 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.673 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.239 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.342 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.582 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.217 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.513 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.502 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.262 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.490 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.239 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 2-Butanone | 78-93-3 | BQL | U | 0.399 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.433 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.353 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.456 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Acetone | 67-64-1 | BQL | U | 0.912 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Acetonitrile | 75-05-8 | BQL | U | 5.70 | 57.0 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.70 | 28.5 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Benzene | 71-43-2 | BQL | U | 0.239 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Bromobenzene | 108-86-1 | BQL | U | 0.353 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.274 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.217 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Bromoform | 75-25-2 | BQL | U | 0.274 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Bromomethane | 74-83-9 | BQL | U | 0.445 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-20
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 14:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.331 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.296 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.274 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.296 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Chloroethane | 75-00-3 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Chloroform | 67-66-3 | BQL | U | 0.205 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Chloromethane | 74-87-3 | BQL | U | 0.901 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.228 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.239 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Cyclohexane | 110-82-7 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Dibromomethane | 74-95-3 | BQL | U | 0.296 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.479 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.319 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Freon 113 | 76-13-1 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.661 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Iodomethane | 74-88-4 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.422 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| m,p-Xylenes | | BQL | U | 0.764 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.285 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.194 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Naphthalene | 91-20-3 | BQL | U | 0.616 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.616 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.502 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| o-Xylene | 95-47-6 | BQL | U | 0.331 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.627 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Propionitrile | 107-12-0 | BQL | U | 5.70 | 57.0 | 1 | ug/Kg dry | 11/15/10 14:47 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.570 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Styrene | 100-42-5 | BQL | U | 0.410 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.479 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.433 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-20
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 14:47

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.308 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.274 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.251 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Trichloroethene | 79-01-6 | BQL | U | 0.342 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.399 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.70 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.274 | 11.4 | 1 | ug/Kg dry | 11/15/10 14:47 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.14 | 5.70 | 1 | ug/Kg dry | 11/15/10 14:47 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 105 % | 70-120 | 1 | 11/15/10 14:47 |
| 4-Bromofluorobenzene | 460-00-4 | 95 % | 85-120 | 1 | 11/15/10 14:47 |
| Dibromofluoromethane | 1868-53-7 | 104 % | 85-115 | 1 | 11/15/10 14:47 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-115 | 1 | 11/15/10 14:47 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-034-1010
Sample Date/Time: 11/02/10 13:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-19
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 14:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.233 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.291 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.385 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.210 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.326 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.396 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.571 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.420 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.559 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.501 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.688 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.350 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.594 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.221 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.524 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.513 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.268 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.501 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 2-Butanone | 78-93-3 | BQL | U | 0.408 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.443 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.361 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.466 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.268 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Acetone | 67-64-1 | BQL | U | 0.932 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Acetonitrile | 75-05-8 | BQL | U | 5.83 | 58.3 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.83 | 29.1 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Benzene | 71-43-2 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Bromobenzene | 108-86-1 | BQL | U | 0.361 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.221 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Bromoform | 75-25-2 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Bromomethane | 74-83-9 | BQL | U | 0.455 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-034-1010
Sample Date/Time: 11/02/10 13:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-19
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 14:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.338 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.280 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Chloroethane | 75-00-3 | BQL | U | 0.268 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Chloroform | 67-66-3 | BQL | U | 0.210 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Chloromethane | 74-87-3 | BQL | U | 0.921 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.233 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Cyclohexane | 110-82-7 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Dibromomethane | 74-95-3 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.490 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.326 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Freon 113 | 76-13-1 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.676 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Iodomethane | 74-88-4 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.431 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| m,p-Xylenes | | BQL | U | 0.781 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.291 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.198 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Naphthalene | 91-20-3 | BQL | U | 0.629 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.629 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.513 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| o-Xylene | 95-47-6 | BQL | U | 0.338 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.641 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Propionitrile | 107-12-0 | BQL | U | 5.83 | 58.3 | 1 | ug/Kg dry | 11/15/10 14:20 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.583 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Styrene | 100-42-5 | BQL | U | 0.420 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.490 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.443 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-034-1010
Sample Date/Time: 11/02/10 13:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-19
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 14:20

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.315 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.256 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Trichloroethene | 79-01-6 | BQL | U | 0.350 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.408 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.280 | 11.7 | 1 | ug/Kg dry | 11/15/10 14:20 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.17 | 5.83 | 1 | ug/Kg dry | 11/15/10 14:20 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 103 % | 70-120 | 1 | 11/15/10 14:20 |
| 4-Bromofluorobenzene | 460-00-4 | 96 % | 85-120 | 1 | 11/15/10 14:20 |
| Dibromofluoromethane | 1868-53-7 | 101 % | 85-115 | 1 | 11/15/10 14:20 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-115 | 1 | 11/15/10 14:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-032-1010
Sample Date/Time: 11/02/10 12:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-18
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 06:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.245 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.307 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.405 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.294 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.221 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.344 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.417 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.601 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.442 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.589 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.528 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.724 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.258 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.368 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.626 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.233 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.552 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.540 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.282 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.528 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.258 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 2-Butanone | 78-93-3 | BQL | U | 0.429 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.466 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.380 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.491 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.282 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Acetone | 67-64-1 | BQL | U | 0.982 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Acetonitrile | 75-05-8 | BQL | U | 6.13 | 61.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Acrolein | 107-02-8 | BQL | U | 6.13 | 30.7 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Acrylonitrile | 107-13-1 | BQL | U | 6.13 | 30.7 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Benzene | 71-43-2 | BQL | U | 0.258 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Bromobenzene | 108-86-1 | BQL | U | 0.380 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.294 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.233 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Bromoform | 75-25-2 | BQL | U | 0.294 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-032-1010
Sample Date/Time: 11/02/10 12:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-18
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 06:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.479 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.356 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.319 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.294 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.319 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Chloroethane | 75-00-3 | BQL | U | 0.282 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Chloroform | 67-66-3 | BQL | U | 0.221 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Chloromethane | 74-87-3 | BQL | U | 0.969 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.245 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.258 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Cyclohexane | 110-82-7 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Dibromomethane | 74-95-3 | BQL | U | 0.319 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.515 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.344 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Freon 113 | 76-13-1 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.712 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Iodomethane | 74-88-4 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.454 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| m,p-Xylenes | | BQL | U | 0.822 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Methacrylonitrile | 126-98-7 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Methyl Acetate | 76-20-9 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.307 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Methylcyclohexane | 108-87-2 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.209 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Methylmethacrylate | 80-62-6 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Naphthalene | 91-20-3 | BQL | U | 0.663 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.663 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.540 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| o-Xylene | 95-47-6 | BQL | U | 0.356 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.675 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Propionitrile | 107-12-0 | BQL | U | 6.13 | 61.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.613 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Styrene | 100-42-5 | BQL | U | 0.442 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.515 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-032-1010
Sample Date/Time: 11/02/10 12:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-18
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 06:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.466 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Toluene | 108-88-3 | BQL | U | 0.331 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.294 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.270 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Trichloroethene | 79-01-6 | BQL | U | 0.368 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.429 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Vinyl acetate | 108-05-4 | BQL | U | 6.13 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.294 | 12.3 | 1 | ug/Kg dry | 11/13/10 6:15 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.23 | 6.13 | 1 | ug/Kg dry | 11/13/10 6:15 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 107 % | 70-120 | 1 | 11/13/10 6:15 |
| 4-Bromofluorobenzene | 460-00-4 | 88 % | 85-120 | 1 | 11/13/10 6:15 |
| Dibromofluoromethane | 1868-53-7 | 100 % | 85-115 | 1 | 11/13/10 6:15 |
| Toluene-d8 | 2037-26-5 | 94 % | 85-115 | 1 | 11/13/10 6:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-031-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-17
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 05:48

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.284 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.375 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.387 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.557 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.546 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.489 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.671 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.341 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.580 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.512 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.262 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.489 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 2-Butanone | 78-93-3 | BQL | U | 0.398 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.432 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.353 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.455 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Acetone | 67-64-1 | BQL | U | 0.910 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Acetonitrile | 75-05-8 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Acrolein | 107-02-8 | BQL | U | 5.69 | 28.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.69 | 28.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Benzene | 71-43-2 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Bromobenzene | 108-86-1 | BQL | U | 0.353 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Bromoform | 75-25-2 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-031-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-17
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 05:48

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.444 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Chloroethane | 75-00-3 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Chloroform | 67-66-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Chloromethane | 74-87-3 | BQL | U | 0.899 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Cyclohexane | 110-82-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Dibromomethane | 74-95-3 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.478 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Freon 113 | 76-13-1 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.660 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Iodomethane | 74-88-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.421 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| m,p-Xylenes | | BQL | U | 0.762 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.284 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.193 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Naphthalene | 91-20-3 | BQL | U | 0.614 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.614 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| o-Xylene | 95-47-6 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.626 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Propionitrile | 107-12-0 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 5:48 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.569 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Styrene | 100-42-5 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.478 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-031-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-17
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 05:48

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.432 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Toluene | 108-88-3 | BQL | U | 0.307 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.250 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Trichloroethene | 79-01-6 | BQL | U | 0.341 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.398 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:48 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.14 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:48 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99 % | 70-120 | 1 | 11/13/10 5:48 |
| 4-Bromofluorobenzene | 460-00-4 | 53 % | 85-120 | 1 | 11/13/10 5:48 |
| Dibromofluoromethane | 1868-53-7 | 72 % | 85-115 | 1 | 11/13/10 5:48 |
| Toluene-d8 | 2037-26-5 | 96 % | 85-115 | 1 | 11/13/10 5:48 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-030-1010
Sample Date/Time: 11/02/10 12:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-16
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 05:22

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.284 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.375 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.387 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.557 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.546 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.489 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.671 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.341 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.580 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.512 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.262 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.489 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 2-Butanone | 78-93-3 | BQL | U | 0.398 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.432 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.353 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.455 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Acetone | 67-64-1 | BQL | U | 0.910 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Acetonitrile | 75-05-8 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Acrolein | 107-02-8 | BQL | U | 5.69 | 28.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.69 | 28.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Benzene | 71-43-2 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Bromobenzene | 108-86-1 | BQL | U | 0.353 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Bromoform | 75-25-2 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-030-1010
Sample Date/Time: 11/02/10 12:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-16
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 05:22

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.444 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Chloroethane | 75-00-3 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Chloroform | 67-66-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Chloromethane | 74-87-3 | BQL | U | 0.899 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Cyclohexane | 110-82-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Dibromomethane | 74-95-3 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.478 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Freon 113 | 76-13-1 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.660 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Iodomethane | 74-88-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.421 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| m,p-Xylenes | | BQL | U | 0.762 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.284 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.193 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Naphthalene | 91-20-3 | BQL | U | 0.614 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.614 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| o-Xylene | 95-47-6 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.626 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Propionitrile | 107-12-0 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 5:22 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.569 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Styrene | 100-42-5 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.478 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-030-1010
Sample Date/Time: 11/02/10 12:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-16
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 05:22

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.432 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Toluene | 108-88-3 | BQL | U | 0.307 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.250 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Trichloroethene | 79-01-6 | BQL | U | 0.341 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.398 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 5:22 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.14 | 5.69 | 1 | ug/Kg dry | 11/13/10 5:22 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 104 % | 70-120 | 1 | 11/13/10 5:22 |
| 4-Bromofluorobenzene | 460-00-4 | 39 % | 85-120 | 1 | 11/13/10 5:22 |
| Dibromofluoromethane | 1868-53-7 | 90 % | 85-115 | 1 | 11/13/10 5:22 |
| Toluene-d8 | 2037-26-5 | 92 % | 85-115 | 1 | 11/13/10 5:22 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-028-1010
Sample Date/Time: 11/02/10 13:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-15
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 04:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.233 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.292 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.385 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.210 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.327 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.397 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.572 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.420 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.560 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.502 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.688 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.350 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.595 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.222 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.525 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.513 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.268 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.502 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 2-Butanone | 78-93-3 | BQL | U | 0.408 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.443 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.362 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.467 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.268 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Acetone | 67-64-1 | BQL | U | 0.933 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Acetonitrile | 75-05-8 | BQL | U | 5.83 | 58.3 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Acrolein | 107-02-8 | BQL | U | 5.83 | 29.2 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.83 | 29.2 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Benzene | 71-43-2 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Bromobenzene | 108-86-1 | BQL | U | 0.362 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.222 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Bromoform | 75-25-2 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-028-1010
Sample Date/Time: 11/02/10 13:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-15
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 04:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.455 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.338 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.280 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Chloroethane | 75-00-3 | BQL | U | 0.268 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Chloroform | 67-66-3 | BQL | U | 0.210 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Chloromethane | 74-87-3 | BQL | U | 0.922 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.233 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Cyclohexane | 110-82-7 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Dibromomethane | 74-95-3 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.490 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.327 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Freon 113 | 76-13-1 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.677 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Iodomethane | 74-88-4 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.432 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| m,p-Xylenes | | BQL | U | 0.782 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.292 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.198 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Naphthalene | 91-20-3 | BQL | U | 0.630 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.630 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.513 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| o-Xylene | 95-47-6 | BQL | U | 0.338 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.642 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Propionitrile | 107-12-0 | BQL | U | 5.83 | 58.3 | 1 | ug/Kg dry | 11/13/10 4:55 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.583 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Styrene | 100-42-5 | BQL | U | 0.420 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.490 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-028-1010
Sample Date/Time: 11/02/10 13:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-15
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 04:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.443 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Toluene | 108-88-3 | BQL | U | 0.315 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.257 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Trichloroethene | 79-01-6 | BQL | U | 0.350 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.408 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.280 | 11.7 | 1 | ug/Kg dry | 11/13/10 4:55 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.17 | 5.83 | 1 | ug/Kg dry | 11/13/10 4:55 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 110 % | 70-120 | 1 | 11/13/10 4:55 |
| 4-Bromofluorobenzene | 460-00-4 | 92 % | 85-120 | 1 | 11/13/10 4:55 |
| Dibromofluoromethane | 1868-53-7 | 104 % | 85-115 | 1 | 11/13/10 4:55 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-115 | 1 | 11/13/10 4:55 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-025-1010
Sample Date/Time: 11/02/10 11:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-14
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 04:29

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.238 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.297 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.392 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.285 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.214 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.333 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.404 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.583 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.428 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.571 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.511 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.702 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.250 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.357 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.606 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.226 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.535 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.523 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.273 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.511 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.250 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 2-Butanone | 78-93-3 | BQL | U | 0.416 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.452 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.369 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.476 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.273 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Acetone | 67-64-1 | BQL | U | 0.951 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Acetonitrile | 75-05-8 | BQL | U | 5.95 | 59.5 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Acrolein | 107-02-8 | BQL | U | 5.95 | 29.7 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.95 | 29.7 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Benzene | 71-43-2 | BQL | U | 0.250 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Bromobenzene | 108-86-1 | BQL | U | 0.369 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.285 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.226 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Bromoform | 75-25-2 | BQL | U | 0.285 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-025-1010
Sample Date/Time: 11/02/10 11:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-14
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 04:29

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.464 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.345 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.309 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.285 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.309 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Chloroethane | 75-00-3 | BQL | U | 0.273 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Chloroform | 67-66-3 | BQL | U | 0.214 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Chloromethane | 74-87-3 | BQL | U | 0.939 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.238 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.250 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Cyclohexane | 110-82-7 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Dibromomethane | 74-95-3 | BQL | U | 0.309 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.499 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.333 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Freon 113 | 76-13-1 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.690 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Iodomethane | 74-88-4 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.440 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| m,p-Xylenes | | BQL | U | 0.797 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.297 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.202 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Naphthalene | 91-20-3 | BQL | U | 0.642 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.642 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.523 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| o-Xylene | 95-47-6 | BQL | U | 0.345 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.654 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Propionitrile | 107-12-0 | BQL | U | 5.95 | 59.5 | 1 | ug/Kg dry | 11/13/10 4:29 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.595 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Styrene | 100-42-5 | BQL | U | 0.428 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.499 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-025-1010
Sample Date/Time: 11/02/10 11:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-14
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 04:29

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.452 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Toluene | 108-88-3 | BQL | U | 0.321 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.285 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.262 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Trichloroethene | 79-01-6 | BQL | U | 0.357 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.416 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.95 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.285 | 11.9 | 1 | ug/Kg dry | 11/13/10 4:29 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.19 | 5.95 | 1 | ug/Kg dry | 11/13/10 4:29 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 106 % | 70-120 | 1 | 11/13/10 4:29 |
| 4-Bromofluorobenzene | 460-00-4 | 88 % | 85-120 | 1 | 11/13/10 4:29 |
| Dibromofluoromethane | 1868-53-7 | 87 % | 85-115 | 1 | 11/13/10 4:29 |
| Toluene-d8 | 2037-26-5 | 94 % | 85-115 | 1 | 11/13/10 4:29 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-023-1010
Sample Date/Time: 11/02/10 13:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-13
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 13:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.232 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.290 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.383 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.278 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.209 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.325 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.394 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.568 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.418 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.557 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.499 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.684 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.244 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.348 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.592 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.220 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.522 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.510 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.267 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.499 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.244 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 2-Butanone | 78-93-3 | BQL | U | 0.406 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.441 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.360 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.464 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.267 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Acetone | 67-64-1 | BQL | U | 0.928 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Acetonitrile | 75-05-8 | BQL | U | 5.80 | 58.0 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.80 | 29.0 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Benzene | 71-43-2 | BQL | U | 0.244 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Bromobenzene | 108-86-1 | BQL | U | 0.360 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.278 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.220 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Bromoform | 75-25-2 | BQL | U | 0.278 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Bromomethane | 74-83-9 | BQL | U | 0.452 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-023-1010
Sample Date/Time: 11/02/10 13:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-13
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 13:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.336 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.302 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.278 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.302 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Chloroethane | 75-00-3 | BQL | U | 0.267 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Chloroform | 67-66-3 | BQL | U | 0.209 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Chloromethane | 74-87-3 | BQL | U | 0.916 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.232 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.244 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Cyclohexane | 110-82-7 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Dibromomethane | 74-95-3 | BQL | U | 0.302 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.487 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.325 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Freon 113 | 76-13-1 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.673 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Iodomethane | 74-88-4 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.429 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| m,p-Xylenes | | BQL | U | 0.777 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.290 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.197 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Naphthalene | 91-20-3 | BQL | U | 0.626 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.626 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.510 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| o-Xylene | 95-47-6 | BQL | U | 0.336 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.638 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Propionitrile | 107-12-0 | BQL | U | 5.80 | 58.0 | 1 | ug/Kg dry | 11/15/10 13:53 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.580 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Styrene | 100-42-5 | BQL | U | 0.418 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.487 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.441 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-023-1010
Sample Date/Time: 11/02/10 13:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-13
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 13:53

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.313 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.278 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.255 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Trichloroethene | 79-01-6 | BQL | U | 0.348 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.406 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.80 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.278 | 11.6 | 1 | ug/Kg dry | 11/15/10 13:53 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.16 | 5.80 | 1 | ug/Kg dry | 11/15/10 13:53 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 137 % | 70-120 | 1 | 11/15/10 13:53 |
| 4-Bromofluorobenzene | 460-00-4 | 99 % | 85-120 | 1 | 11/15/10 13:53 |
| Dibromofluoromethane | 1868-53-7 | 118 % | 85-115 | 1 | 11/15/10 13:53 |
| Toluene-d8 | 2037-26-5 | 101 % | 85-115 | 1 | 11/15/10 13:53 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.234 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.293 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.387 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.281 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.211 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.328 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.399 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.574 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.422 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.563 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.504 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.692 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.246 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.352 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.598 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.223 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.528 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.516 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.270 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.504 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.246 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 2-Butanone | 78-93-3 | BQL | U | 0.410 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.445 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.363 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.469 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.270 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Acetone | 67-64-1 | BQL | U | 0.938 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Acetonitrile | 75-05-8 | BQL | U | 5.86 | 58.6 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Acrolein | 107-02-8 | BQL | U | 5.86 | 29.3 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.86 | 29.3 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Benzene | 71-43-2 | BQL | U | 0.246 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Bromobenzene | 108-86-1 | BQL | U | 0.363 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.281 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.223 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Bromoform | 75-25-2 | BQL | U | 0.281 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.457 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.340 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.305 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.281 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.305 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Chloroethane | 75-00-3 | BQL | U | 0.270 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Chloroform | 67-66-3 | BQL | U | 0.211 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Chloromethane | 74-87-3 | BQL | U | 0.926 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.234 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.246 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Cyclohexane | 110-82-7 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Dibromomethane | 74-95-3 | BQL | U | 0.305 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.492 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.328 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Freon 113 | 76-13-1 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.680 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Iodomethane | 74-88-4 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.434 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| m,p-Xylenes | | BQL | U | 0.785 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.293 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.199 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Naphthalene | 91-20-3 | BQL | U | 0.633 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.633 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.516 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| o-Xylene | 95-47-6 | BQL | U | 0.340 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.645 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Propionitrile | 107-12-0 | BQL | U | 5.86 | 58.6 | 1 | ug/Kg dry | 11/13/10 3:35 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.586 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Styrene | 100-42-5 | BQL | U | 0.422 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.492 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.445 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Toluene | 108-88-3 | BQL | U | 0.317 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.281 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.258 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Trichloroethene | 79-01-6 | 0.574 | J | 0.352 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.410 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.281 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.17 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 108 % | 70-120 | 1 | 11/13/10 3:35 |
| 4-Bromofluorobenzene | 460-00-4 | 92 % | 85-120 | 1 | 11/13/10 3:35 |
| Dibromofluoromethane | 1868-53-7 | 107 % | 85-115 | 1 | 11/13/10 3:35 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-115 | 1 | 11/13/10 3:35 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:09

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.230 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.287 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.379 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.276 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.207 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.322 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1-Dichloropropene | 563-58-6 | 1.21 | J | 0.391 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.563 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.414 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.552 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.494 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.678 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.241 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.345 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.586 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.218 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.517 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.506 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.264 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.494 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.241 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2-Butanone | 78-93-3 | BQL | U | 0.402 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.437 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.356 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.460 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.264 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acetone | 67-64-1 | BQL | U | 0.920 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acetonitrile | 75-05-8 | BQL | U | 5.75 | 57.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acrolein | 107-02-8 | BQL | U | 5.75 | 28.7 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.75 | 28.7 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Benzene | 71-43-2 | BQL | U | 0.241 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromobenzene | 108-86-1 | BQL | U | 0.356 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.276 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.218 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromoform | 75-25-2 | BQL | U | 0.276 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:09

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.448 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.333 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.299 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.276 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.299 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Chloroethane | 75-00-3 | BQL | U | 0.264 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Chloroform | 67-66-3 | BQL | U | 0.207 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Chloromethane | 74-87-3 | BQL | U | 0.908 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.230 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.241 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Cyclohexane | 110-82-7 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Dibromomethane | 74-95-3 | BQL | U | 0.299 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.483 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.322 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Freon 113 | 76-13-1 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.667 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Iodomethane | 74-88-4 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.425 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| m,p-Xylenes | | BQL | U | 0.770 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.287 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.195 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Naphthalene | 91-20-3 | BQL | U | 0.621 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.621 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.506 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| o-Xylene | 95-47-6 | BQL | U | 0.333 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.632 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Propionitrile | 107-12-0 | BQL | U | 5.75 | 57.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.575 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Styrene | 100-42-5 | BQL | U | 0.414 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.483 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:09

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.437 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Toluene | 108-88-3 | BQL | U | 0.310 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.276 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.253 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Trichloroethene | 79-01-6 | BQL | U | 0.345 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.402 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.75 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.276 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.15 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 108 % | 70-120 | 1 | 11/13/10 3:09 |
| 4-Bromofluorobenzene | 460-00-4 | 94 % | 85-120 | 1 | 11/13/10 3:09 |
| Dibromofluoromethane | 1868-53-7 | 104 % | 85-115 | 1 | 11/13/10 3:09 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-115 | 1 | 11/13/10 3:09 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:09

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.230 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.287 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.379 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.276 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.207 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.322 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,1-Dichloropropene | 563-58-6 | 1.21 | * BQL U | 0.391 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.563 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.414 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.552 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.494 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.678 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.241 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.345 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.586 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.218 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.517 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.506 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.264 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.494 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.241 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2-Butanone | 78-93-3 | BQL | U | 0.402 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.437 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.356 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.460 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.264 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acetone | 67-64-1 | BQL | U | 0.920 | 11.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acetonitrile | 75-05-8 | BQL | U | 5.75 | 57.5 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acrolein | 107-02-8 | BQL | U | 5.75 | 28.7 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.75 | 28.7 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Benzene | 71-43-2 | BQL | U | 0.241 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromobenzene | 108-86-1 | BQL | U | 0.356 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.276 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.218 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |
| Bromoform | 75-25-2 | BQL | U | 0.276 | 5.75 | 1 | ug/Kg dry | 11/13/10 3:09 |



* 1,1-dichloropropene result corrected 2/3/11 EMG

CENTAURI LABS™

# ANALYSIS DATA SHEET

## GKHMS-SO-021-1010

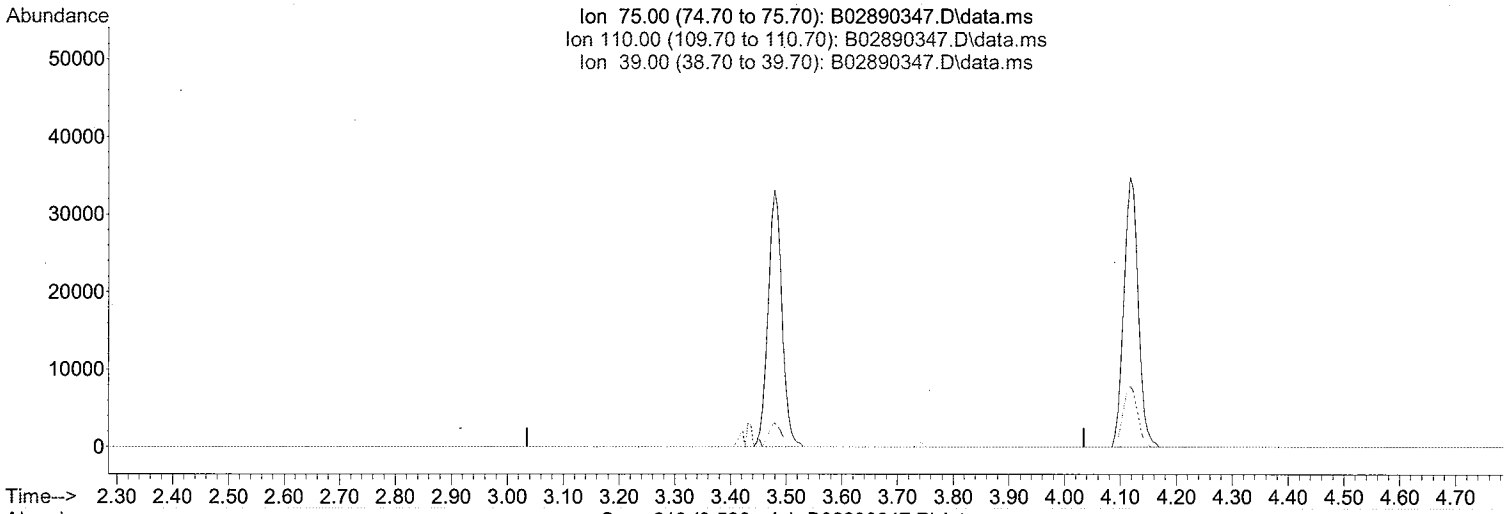
| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-11 | File ID: | B02890347.D |
| Sampled: | 11/02/10 10:40 | Prepared: | 11/13/10 03:09 | Analyzed: | 11/13/10 03:09 |
| Solids: | 87.00 | Preparation: | EPA 5035 | Dilution: | 1 |
| Batch: | B047059 | Sequence: | S047036 | Calibration: | 0111803 |
| Instrument: | GCMS-B | | | | |

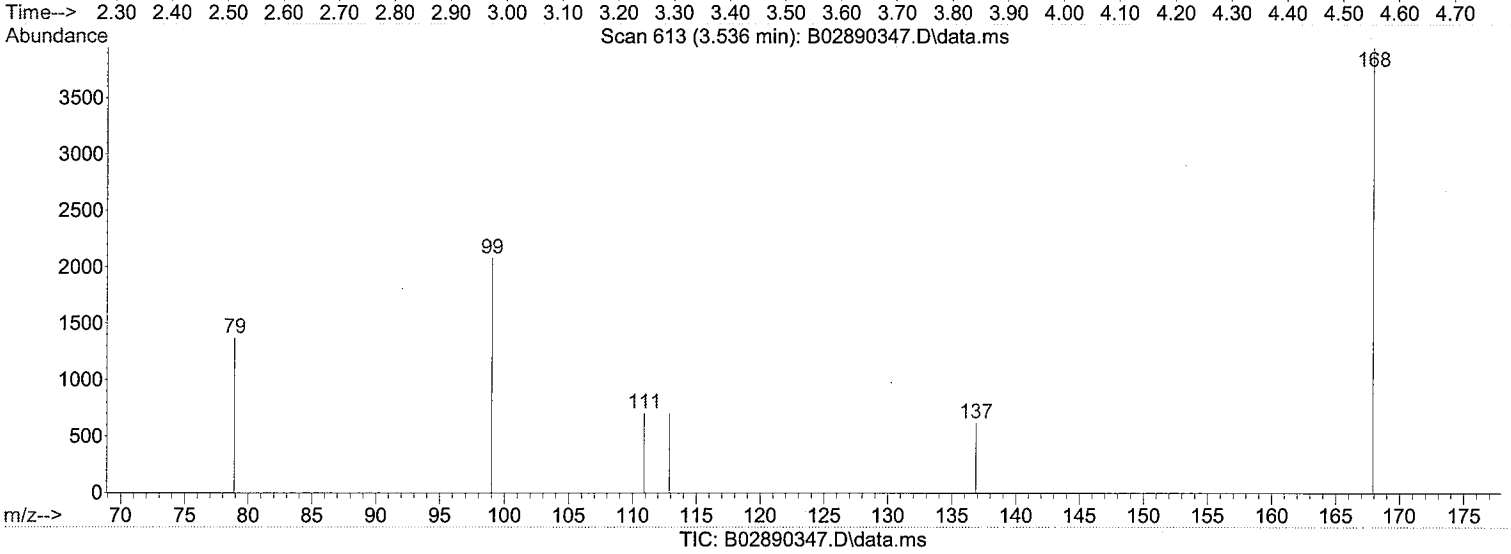
| CAS NO. | COMPOUND | CONC. (ug/Kg dry) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.75 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.75 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.75 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.75 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.75 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.75 | U |
| 563-58-6 | 1,1-Dichloropropene | ~~1.21~~ | U corrected 2/3/11 EMG |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.75 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.75 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.75 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.75 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 5.75 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.75 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.75 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.75 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.75 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.75 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.75 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.75 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.75 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.75 | U |
| 78-93-3 | 2-Butanone | 11.5 | U |
| 95-49-8 | 2-Chlorotoluene | 5.75 | U |
| 591-78-6 | 2-Hexanone | 11.5 | U |
| 106-43-4 | 4-Chlorotoluene | 5.75 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 11.5 | U |

Quantitation Report (Qedit)

Data Path : H:\VOL1\GCMSDATA\B\Sequence\111210\
Data File : B02890347.D
Acq On : 13 Nov 2010 3:09 am
Operator : MP
Sample : 1011013-11
Misc : TETRA TECH, SOIL
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jan 28 16:26:19 2011
Quant Method : H:\VOL1\GCMSDATA\B\METHODS\8260_111110.M
Quant Title :
QLast Update : Wed Nov 17 19:05:39 2010
Response via : Initial Calibration




(38) 1.1-Dichloropropene (T)

3.534min 0.00 PPB d

response 0

| Ion | Exp% | Act% |
|---|---|---|
| 75.00 | 100 | 0.00 |
| 110.00 | 30.00 | 0.00 |
| 39.00 | 50.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-019-1010
Sample Date/Time: 11/02/10 10:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-10
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 02:42

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.231 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.288 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.381 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.208 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.323 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.392 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.565 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.415 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.554 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.496 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.681 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.346 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.588 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.219 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.519 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.507 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.265 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.496 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 2-Butanone | 78-93-3 | BQL | U | 0.404 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.438 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.358 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.461 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.265 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Acetone | 67-64-1 | BQL | U | 0.923 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Acetonitrile | 75-05-8 | BQL | U | 5.77 | 57.7 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Acrolein | 107-02-8 | BQL | U | 5.77 | 28.8 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.77 | 28.8 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Benzene | 71-43-2 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Bromobenzene | 108-86-1 | BQL | U | 0.358 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.219 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Bromoform | 75-25-2 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-019-1010
Sample Date/Time: 11/02/10 10:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-10
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 02:42

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.450 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.334 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.300 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.277 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.300 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Chloroethane | 75-00-3 | BQL | U | 0.265 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Chloroform | 67-66-3 | BQL | U | 0.208 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Chloromethane | 74-87-3 | BQL | U | 0.911 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.231 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Cyclohexane | 110-82-7 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Dibromomethane | 74-95-3 | BQL | U | 0.300 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.484 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.323 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Freon 113 | 76-13-1 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.669 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Iodomethane | 74-88-4 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.427 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| m,p-Xylenes | | BQL | U | 0.773 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.288 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.196 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Naphthalene | 91-20-3 | BQL | U | 0.623 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.623 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.507 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| o-Xylene | 95-47-6 | BQL | U | 0.334 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.634 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Propionitrile | 107-12-0 | BQL | U | 5.77 | 57.7 | 1 | ug/Kg dry | 11/13/10 2:42 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.577 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Styrene | 100-42-5 | BQL | U | 0.415 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.484 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-019-1010
Sample Date/Time: 11/02/10 10:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-10
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 02:42

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.438 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Toluene | 108-88-3 | BQL | U | 0.311 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.254 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Trichloroethene | 79-01-6 | BQL | U | 0.346 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.404 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.277 | 11.5 | 1 | ug/Kg dry | 11/13/10 2:42 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.15 | 5.77 | 1 | ug/Kg dry | 11/13/10 2:42 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 138 % | 70-120 | 1 | 11/13/10 2:42 |
| 4-Bromofluorobenzene | 460-00-4 | 81 % | 85-120 | 1 | 11/13/10 2:42 |
| Dibromofluoromethane | 1868-53-7 | 117 % | 85-115 | 1 | 11/13/10 2:42 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-115 | 1 | 11/13/10 2:42 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-017-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-09
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 02:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.285 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.376 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.387 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.558 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.547 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.490 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.672 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.342 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.581 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.513 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.262 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.490 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 2-Butanone | 78-93-3 | BQL | U | 0.399 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.433 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.353 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.456 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Acetone | 67-64-1 | BQL | U | 0.911 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Acetonitrile | 75-05-8 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Acrolein | 107-02-8 | BQL | U | 5.69 | 28.5 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.69 | 28.5 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Benzene | 71-43-2 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Bromobenzene | 108-86-1 | BQL | U | 0.353 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Bromoform | 75-25-2 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-017-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-09
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 02:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.444 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Chloroethane | 75-00-3 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Chloroform | 67-66-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Chloromethane | 74-87-3 | BQL | U | 0.900 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Cyclohexane | 110-82-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Dibromomethane | 74-95-3 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.478 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Freon 113 | 76-13-1 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.661 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Iodomethane | 74-88-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.421 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| m,p-Xylenes | | BQL | U | 0.763 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.285 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.194 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Naphthalene | 91-20-3 | BQL | U | 0.615 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.615 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| o-Xylene | 95-47-6 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.626 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Propionitrile | 107-12-0 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 2:15 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.569 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Styrene | 100-42-5 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.478 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-017-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-09
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 02:15

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.433 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Toluene | 108-88-3 | BQL | U | 0.308 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.251 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Trichloroethene | 79-01-6 | BQL | U | 0.342 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.399 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 2:15 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.14 | 5.69 | 1 | ug/Kg dry | 11/13/10 2:15 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 110 % | 70-120 | 1 | 11/13/10 2:15 |
| 4-Bromofluorobenzene | 460-00-4 | 92 % | 85-120 | 1 | 11/13/10 2:15 |
| Dibromofluoromethane | 1868-53-7 | 106 % | 85-115 | 1 | 11/13/10 2:15 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-115 | 1 | 11/13/10 2:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-014-1010
Sample Date/Time: 11/02/10 14:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-08
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 01:49

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.234 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.293 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.386 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.281 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.211 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.328 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.398 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.574 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.422 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.562 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.504 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.691 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.246 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.351 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.597 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.222 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.527 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.515 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.269 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.504 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.246 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 2-Butanone | 78-93-3 | BQL | U | 0.410 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.445 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.363 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.468 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.269 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Acetone | 67-64-1 | BQL | U | 0.937 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Acetonitrile | 75-05-8 | BQL | U | 5.85 | 58.5 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Acrolein | 107-02-8 | BQL | U | 5.85 | 29.3 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.85 | 29.3 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Benzene | 71-43-2 | BQL | U | 0.246 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Bromobenzene | 108-86-1 | BQL | U | 0.363 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.281 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.222 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Bromoform | 75-25-2 | BQL | U | 0.281 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-014-1010
Sample Date/Time: 11/02/10 14:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-08
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 01:49

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.457 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.340 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.304 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.281 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.304 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Chloroethane | 75-00-3 | BQL | U | 0.269 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Chloroform | 67-66-3 | BQL | U | 0.211 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Chloromethane | 74-87-3 | BQL | U | 0.925 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.234 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.246 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Cyclohexane | 110-82-7 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Dibromomethane | 74-95-3 | BQL | U | 0.304 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.492 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.328 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Freon 113 | 76-13-1 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.679 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Iodomethane | 74-88-4 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.433 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| m,p-Xylenes | | BQL | U | 0.785 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.293 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.199 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Naphthalene | 91-20-3 | BQL | U | 0.632 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.632 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.515 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| o-Xylene | 95-47-6 | BQL | U | 0.340 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.644 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Propionitrile | 107-12-0 | BQL | U | 5.85 | 58.5 | 1 | ug/Kg dry | 11/13/10 1:49 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.585 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Styrene | 100-42-5 | BQL | U | 0.422 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.492 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-014-1010
Sample Date/Time: 11/02/10 14:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-08
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 01:49

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.445 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Toluene | 108-88-3 | BQL | U | 0.316 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.281 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.258 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Trichloroethene | 79-01-6 | BQL | U | 0.351 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.410 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.85 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.281 | 11.7 | 1 | ug/Kg dry | 11/13/10 1:49 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.17 | 5.85 | 1 | ug/Kg dry | 11/13/10 1:49 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 106 % | 70-120 | 1 | 11/13/10 1:49 |
| 4-Bromofluorobenzene | 460-00-4 | 93 % | 85-120 | 1 | 11/13/10 1:49 |
| Dibromofluoromethane | 1868-53-7 | 103 % | 85-115 | 1 | 11/13/10 1:49 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-115 | 1 | 11/13/10 1:49 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-012-1010
Sample Date/Time: 11/02/10 12:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-07
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 01:22

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.239 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.299 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.395 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.287 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.215 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.335 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.407 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.586 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.431 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.574 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.514 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.706 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.251 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.359 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.610 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.227 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.538 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.526 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.275 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.514 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.251 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 2-Butanone | 78-93-3 | BQL | U | 0.419 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.455 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.371 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.478 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.275 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Acetone | 67-64-1 | BQL | U | 0.957 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Acetonitrile | 75-05-8 | BQL | U | 5.98 | 59.8 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Acrolein | 107-02-8 | BQL | U | 5.98 | 29.9 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.98 | 29.9 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Benzene | 71-43-2 | BQL | U | 0.251 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Bromobenzene | 108-86-1 | BQL | U | 0.371 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.287 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.227 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Bromoform | 75-25-2 | BQL | U | 0.287 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-012-1010
Sample Date/Time: 11/02/10 12:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-07
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 01:22

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.467 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.347 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.311 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.287 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.311 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Chloroethane | 75-00-3 | BQL | U | 0.275 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Chloroform | 67-66-3 | BQL | U | 0.215 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Chloromethane | 74-87-3 | BQL | U | 0.945 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.239 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.251 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Cyclohexane | 110-82-7 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Dibromomethane | 74-95-3 | BQL | U | 0.311 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.502 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.335 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Freon 113 | 76-13-1 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.694 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Iodomethane | 74-88-4 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.443 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| m,p-Xylenes | | BQL | U | 0.801 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.299 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.203 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Naphthalene | 91-20-3 | BQL | U | 0.646 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.646 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.526 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| o-Xylene | 95-47-6 | BQL | U | 0.347 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.658 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Propionitrile | 107-12-0 | BQL | U | 5.98 | 59.8 | 1 | ug/Kg dry | 11/13/10 1:22 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.598 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Styrene | 100-42-5 | BQL | U | 0.431 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.502 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-012-1010
Sample Date/Time: 11/02/10 12:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-07
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 01:22

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.455 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Toluene | 108-88-3 | BQL | U | 0.323 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.287 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.263 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Trichloroethene | 79-01-6 | BQL | U | 0.359 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.419 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.98 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.287 | 12.0 | 1 | ug/Kg dry | 11/13/10 1:22 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.20 | 5.98 | 1 | ug/Kg dry | 11/13/10 1:22 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 106 % | 70-120 | 1 | 11/13/10 1:22 |
| 4-Bromofluorobenzene | 460-00-4 | 93 % | 85-120 | 1 | 11/13/10 1:22 |
| Dibromofluoromethane | 1868-53-7 | 103 % | 85-115 | 1 | 11/13/10 1:22 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-115 | 1 | 11/13/10 1:22 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-011-1010
Sample Date/Time: 11/02/10 09:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-06
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:56

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.249 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.311 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.410 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.224 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.348 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.423 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.609 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.448 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.597 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.535 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.734 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.373 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.634 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.236 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.560 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.547 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.286 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.535 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 2-Butanone | 78-93-3 | BQL | U | 0.435 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.473 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.386 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.498 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.286 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Acetone | 67-64-1 | BQL | U | 0.995 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Acetonitrile | 75-05-8 | BQL | U | 6.22 | 62.2 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Acrolein | 107-02-8 | BQL | U | 6.22 | 31.1 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Acrylonitrile | 107-13-1 | BQL | U | 6.22 | 31.1 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Benzene | 71-43-2 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Bromobenzene | 108-86-1 | BQL | U | 0.386 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.236 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Bromoform | 75-25-2 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-011-1010
Sample Date/Time: 11/02/10 09:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-06
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:56

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.485 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.361 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.299 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Chloroethane | 75-00-3 | BQL | U | 0.286 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Chloroform | 67-66-3 | BQL | U | 0.224 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Chloromethane | 74-87-3 | BQL | U | 0.983 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.249 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Cyclohexane | 110-82-7 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Dibromomethane | 74-95-3 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.522 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.348 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Freon 113 | 76-13-1 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.721 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Iodomethane | 74-88-4 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.460 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| m,p-Xylenes | | BQL | U | 0.833 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Methacrylonitrile | 126-98-7 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Methyl Acetate | 76-20-9 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.311 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Methylcyclohexane | 108-87-2 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.211 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Methylmethacrylate | 80-62-6 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Naphthalene | 91-20-3 | BQL | U | 0.672 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.672 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.547 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| o-Xylene | 95-47-6 | BQL | U | 0.361 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.684 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Propionitrile | 107-12-0 | BQL | U | 6.22 | 62.2 | 1 | ug/Kg dry | 11/13/10 0:56 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.622 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Styrene | 100-42-5 | BQL | U | 0.448 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.522 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-011-1010
Sample Date/Time: 11/02/10 09:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-06
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:56

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.473 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Toluene | 108-88-3 | BQL | U | 0.336 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.299 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.274 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Trichloroethene | 79-01-6 | BQL | U | 0.373 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.435 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Vinyl acetate | 108-05-4 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.299 | 12.4 | 1 | ug/Kg dry | 11/13/10 0:56 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.24 | 6.22 | 1 | ug/Kg dry | 11/13/10 0:56 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 106 % | 70-120 | 1 | 11/13/10 0:56 |
| 4-Bromofluorobenzene | 460-00-4 | 92 % | 85-120 | 1 | 11/13/10 0:56 |
| Dibromofluoromethane | 1868-53-7 | 102 % | 85-115 | 1 | 11/13/10 0:56 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-115 | 1 | 11/13/10 0:56 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-007-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-05
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:29

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.285 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.376 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.387 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.558 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.547 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.490 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.672 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.342 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.581 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.513 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.262 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.490 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 2-Butanone | 78-93-3 | BQL | U | 0.399 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.433 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.353 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.456 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Acetone | 67-64-1 | BQL | U | 0.911 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Acetonitrile | 75-05-8 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Acrolein | 107-02-8 | BQL | U | 5.69 | 28.5 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.69 | 28.5 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Benzene | 71-43-2 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Bromobenzene | 108-86-1 | BQL | U | 0.353 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.216 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Bromoform | 75-25-2 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-007-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-05
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:29

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.444 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Chloroethane | 75-00-3 | BQL | U | 0.262 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Chloroform | 67-66-3 | BQL | U | 0.205 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Chloromethane | 74-87-3 | BQL | U | 0.900 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.228 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.239 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Cyclohexane | 110-82-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Dibromomethane | 74-95-3 | BQL | U | 0.296 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.478 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.319 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Freon 113 | 76-13-1 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.661 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Iodomethane | 74-88-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.421 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| m,p-Xylenes | | BQL | U | 0.763 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.285 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.194 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Naphthalene | 91-20-3 | BQL | U | 0.615 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.615 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.501 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| o-Xylene | 95-47-6 | BQL | U | 0.330 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.626 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Propionitrile | 107-12-0 | BQL | U | 5.69 | 56.9 | 1 | ug/Kg dry | 11/13/10 0:29 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.569 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Styrene | 100-42-5 | BQL | U | 0.410 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.478 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-007-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-05
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:29

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.433 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Toluene | 108-88-3 | BQL | U | 0.308 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.273 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.251 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Trichloroethene | 79-01-6 | BQL | U | 0.342 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.399 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.69 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.273 | 11.4 | 1 | ug/Kg dry | 11/13/10 0:29 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.14 | 5.69 | 1 | ug/Kg dry | 11/13/10 0:29 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 109 % | 70-120 | 1 | 11/13/10 0:29 |
| 4-Bromofluorobenzene | 460-00-4 | 94 % | 85-120 | 1 | 11/13/10 0:29 |
| Dibromofluoromethane | 1868-53-7 | 101 % | 85-115 | 1 | 11/13/10 0:29 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-115 | 1 | 11/13/10 0:29 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-005-1010
Sample Date/Time: 11/02/10 09:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-04
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:02

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.233 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.292 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.385 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.210 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.327 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.397 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.572 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.420 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.560 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.502 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.688 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.350 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.595 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.222 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.525 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.513 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.268 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.502 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 2-Butanone | 78-93-3 | BQL | U | 0.408 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.443 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.362 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.467 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.268 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Acetone | 67-64-1 | BQL | U | 0.933 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Acetonitrile | 75-05-8 | BQL | U | 5.83 | 58.3 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Acrolein | 107-02-8 | BQL | U | 5.83 | 29.2 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.83 | 29.2 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Benzene | 71-43-2 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Bromobenzene | 108-86-1 | BQL | U | 0.362 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.222 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Bromoform | 75-25-2 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-005-1010
Sample Date/Time: 11/02/10 09:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-04
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:02

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.455 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.338 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.280 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Chloroethane | 75-00-3 | BQL | U | 0.268 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Chloroform | 67-66-3 | BQL | U | 0.210 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Chloromethane | 74-87-3 | BQL | U | 0.922 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.233 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.245 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Cyclohexane | 110-82-7 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Dibromomethane | 74-95-3 | BQL | U | 0.303 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.490 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.327 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Freon 113 | 76-13-1 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.677 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Iodomethane | 74-88-4 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.432 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| m,p-Xylenes | | BQL | U | 0.782 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.292 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.198 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Naphthalene | 91-20-3 | BQL | U | 0.630 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.630 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.513 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| o-Xylene | 95-47-6 | BQL | U | 0.338 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.642 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Propionitrile | 107-12-0 | BQL | U | 5.83 | 58.3 | 1 | ug/Kg dry | 11/13/10 0:02 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.583 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Styrene | 100-42-5 | BQL | U | 0.420 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.490 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-005-1010
Sample Date/Time: 11/02/10 09:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-04
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 00:02

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.443 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Toluene | 108-88-3 | BQL | U | 0.315 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.280 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.257 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Trichloroethene | 79-01-6 | BQL | U | 0.350 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.408 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.83 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.280 | 11.7 | 1 | ug/Kg dry | 11/13/10 0:02 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.17 | 5.83 | 1 | ug/Kg dry | 11/13/10 0:02 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 107 % | 70-120 | 1 | 11/13/10 0:02 |
| 4-Bromofluorobenzene | 460-00-4 | 95 % | 85-120 | 1 | 11/13/10 0:02 |
| Dibromofluoromethane | 1868-53-7 | 101 % | 85-115 | 1 | 11/13/10 0:02 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-115 | 1 | 11/13/10 0:02 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-003-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-03
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 23:36

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.231 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.289 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.381 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.208 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.323 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.393 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.566 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.416 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.554 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.497 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.681 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.346 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.589 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.219 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.520 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.508 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.266 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.497 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 2-Butanone | 78-93-3 | BQL | U | 0.404 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.439 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.358 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.462 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.266 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Acetone | 67-64-1 | BQL | U | 0.924 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Acetonitrile | 75-05-8 | BQL | U | 5.77 | 57.7 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Acrolein | 107-02-8 | BQL | U | 5.77 | 28.9 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.77 | 28.9 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Benzene | 71-43-2 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Bromobenzene | 108-86-1 | BQL | U | 0.358 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.219 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Bromoform | 75-25-2 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-003-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-03
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 23:36

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.450 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.335 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.300 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.277 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.300 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Chloroethane | 75-00-3 | BQL | U | 0.266 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Chloroform | 67-66-3 | BQL | U | 0.208 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Chloromethane | 74-87-3 | BQL | U | 0.912 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.231 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.242 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Cyclohexane | 110-82-7 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Dibromomethane | 74-95-3 | BQL | U | 0.300 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.485 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.323 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Freon 113 | 76-13-1 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.670 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Iodomethane | 74-88-4 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.427 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| m,p-Xylenes | | BQL | U | 0.774 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.289 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.196 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Naphthalene | 91-20-3 | BQL | U | 0.624 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.624 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.508 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| o-Xylene | 95-47-6 | BQL | U | 0.335 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.635 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Propionitrile | 107-12-0 | BQL | U | 5.77 | 57.7 | 1 | ug/Kg dry | 11/12/10 23:36 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.577 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Styrene | 100-42-5 | BQL | U | 0.416 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.485 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-003-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-03
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 23:36

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.439 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Toluene | 108-88-3 | BQL | U | 0.312 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.277 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.254 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Trichloroethene | 79-01-6 | BQL | U | 0.346 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.404 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.77 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.277 | 11.5 | 1 | ug/Kg dry | 11/12/10 23:36 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.15 | 5.77 | 1 | ug/Kg dry | 11/12/10 23:36 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 102 % | 70-120 | 1 | 11/12/10 23:36 |
| 4-Bromofluorobenzene | 460-00-4 | 91 % | 85-120 | 1 | 11/12/10 23:36 |
| Dibromofluoromethane | 1868-53-7 | 91 % | 85-115 | 1 | 11/12/10 23:36 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-115 | 1 | 11/12/10 23:36 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-002-1010
Sample Date/Time: 11/02/10 08:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-02
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 23:09

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.229 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.286 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.377 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.274 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.206 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.320 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.389 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.560 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.411 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.549 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.491 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.674 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.240 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.343 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.583 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.217 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.514 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.503 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.263 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.491 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.240 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 2-Butanone | 78-93-3 | BQL | U | 0.400 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.434 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.354 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.457 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.263 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Acetone | 67-64-1 | BQL | U | 0.914 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Acetonitrile | 75-05-8 | BQL | U | 5.71 | 57.1 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Acrolein | 107-02-8 | BQL | U | 5.71 | 28.6 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.71 | 28.6 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Benzene | 71-43-2 | BQL | U | 0.240 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Bromobenzene | 108-86-1 | BQL | U | 0.354 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.274 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.217 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Bromoform | 75-25-2 | BQL | U | 0.274 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-002-1010
Sample Date/Time: 11/02/10 08:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-02
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 23:09

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.446 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.331 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.297 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.274 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.297 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Chloroethane | 75-00-3 | BQL | U | 0.263 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Chloroform | 67-66-3 | BQL | U | 0.206 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Chloromethane | 74-87-3 | BQL | U | 0.903 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.229 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.240 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Cyclohexane | 110-82-7 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Dibromomethane | 74-95-3 | BQL | U | 0.297 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.480 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.320 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Freon 113 | 76-13-1 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.663 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Iodomethane | 74-88-4 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.423 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| m,p-Xylenes | | BQL | U | 0.766 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.286 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.194 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Naphthalene | 91-20-3 | BQL | U | 0.617 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.617 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.503 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| o-Xylene | 95-47-6 | BQL | U | 0.331 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.629 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Propionitrile | 107-12-0 | BQL | U | 5.71 | 57.1 | 1 | ug/Kg dry | 11/12/10 23:09 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.571 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Styrene | 100-42-5 | BQL | U | 0.411 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.480 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-002-1010
Sample Date/Time: 11/02/10 08:20
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-02
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 23:09

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.434 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Toluene | 108-88-3 | BQL | U | 0.309 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.274 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.251 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Trichloroethene | 79-01-6 | BQL | U | 0.343 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.400 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.71 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.274 | 11.4 | 1 | ug/Kg dry | 11/12/10 23:09 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.14 | 5.71 | 1 | ug/Kg dry | 11/12/10 23:09 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 105 % | 70-120 | 1 | 11/12/10 23:09 |
| 4-Bromofluorobenzene | 460-00-4 | 93 % | 85-120 | 1 | 11/12/10 23:09 |
| Dibromofluoromethane | 1868-53-7 | 99 % | 85-115 | 1 | 11/12/10 23:09 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-115 | 1 | 11/12/10 23:09 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-001-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-01
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 22:42

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.232 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.290 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.383 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.279 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.209 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.325 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.395 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.569 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.418 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.557 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.499 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.685 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.244 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.348 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.592 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.221 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.523 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.511 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.267 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.499 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.244 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 2-Butanone | 78-93-3 | BQL | U | 0.407 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.441 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.360 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.465 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.267 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Acetone | 67-64-1 | BQL | U | 0.929 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Acetonitrile | 75-05-8 | BQL | U | 5.81 | 58.1 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Acrolein | 107-02-8 | BQL | U | 5.81 | 29.0 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.81 | 29.0 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Benzene | 71-43-2 | BQL | U | 0.244 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Bromobenzene | 108-86-1 | BQL | U | 0.360 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.279 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.221 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Bromoform | 75-25-2 | BQL | U | 0.279 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-001-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-01
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 22:42

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Bromomethane | 74-83-9 | BQL | U | 0.453 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Carbon disulfide | 75-15-0 | BQL | U | 0.337 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.302 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.279 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.302 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Chloroethane | 75-00-3 | BQL | U | 0.267 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Chloroform | 67-66-3 | BQL | U | 0.209 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Chloromethane | 74-87-3 | BQL | U | 0.918 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.232 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.244 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Cyclohexane | 110-82-7 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Dibromomethane | 74-95-3 | BQL | U | 0.302 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.488 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.325 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Freon 113 | 76-13-1 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.674 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Iodomethane | 74-88-4 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.430 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| m,p-Xylenes | | BQL | U | 0.778 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.290 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.197 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Naphthalene | 91-20-3 | BQL | U | 0.627 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.627 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.511 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| o-Xylene | 95-47-6 | BQL | U | 0.337 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.639 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Propionitrile | 107-12-0 | BQL | U | 5.81 | 58.1 | 1 | ug/Kg dry | 11/12/10 22:42 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.581 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Styrene | 100-42-5 | BQL | U | 0.418 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.488 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-001-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-01
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/12/10 22:42

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.441 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Toluene | 108-88-3 | BQL | U | 0.314 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.279 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.256 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Trichloroethene | 79-01-6 | BQL | U | 0.348 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.407 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.81 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.279 | 11.6 | 1 | ug/Kg dry | 11/12/10 22:42 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.16 | 5.81 | 1 | ug/Kg dry | 11/12/10 22:42 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101 % | 70-120 | 1 | 11/12/10 22:42 |
| 4-Bromofluorobenzene | 460-00-4 | 39 % | 85-120 | 1 | 11/12/10 22:42 |
| Dibromofluoromethane | 1868-53-7 | 92 % | 85-115 | 1 | 11/12/10 22:42 |
| Toluene-d8 | 2037-26-5 | 95 % | 85-115 | 1 | 11/12/10 22:42 |

ADDENDUM VOLATILES PACKAGE

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/13/10 03:35

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.445 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Toluene | 108-88-3 | BQL | U | 0.317 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.281 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.258 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Trichloroethene | 79-01-6 | ~~0.574~~ 0.574J * | | 0.352 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.410 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.86 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.281 | 11.7 | 1 | ug/Kg dry | 11/13/10 3:35 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.17 | 5.86 | 1 | ug/Kg dry | 11/13/10 3:35 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 108 % | 70-120 | 1 | 11/13/10 3:35 |
| 4-Bromofluorobenzene | 460-00-4 | 92 % | 85-120 | 1 | 11/13/10 3:35 |
| Dibromofluoromethane | 1868-53-7 | 107 % | 85-115 | 1 | 11/13/10 3:35 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-115 | 1 | 11/13/10 3:35 |

* Trichloroethene result corrected 2/3/11 EMG

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# ANALYSIS DATA SHEET

## GKHMS-SO-022-1010

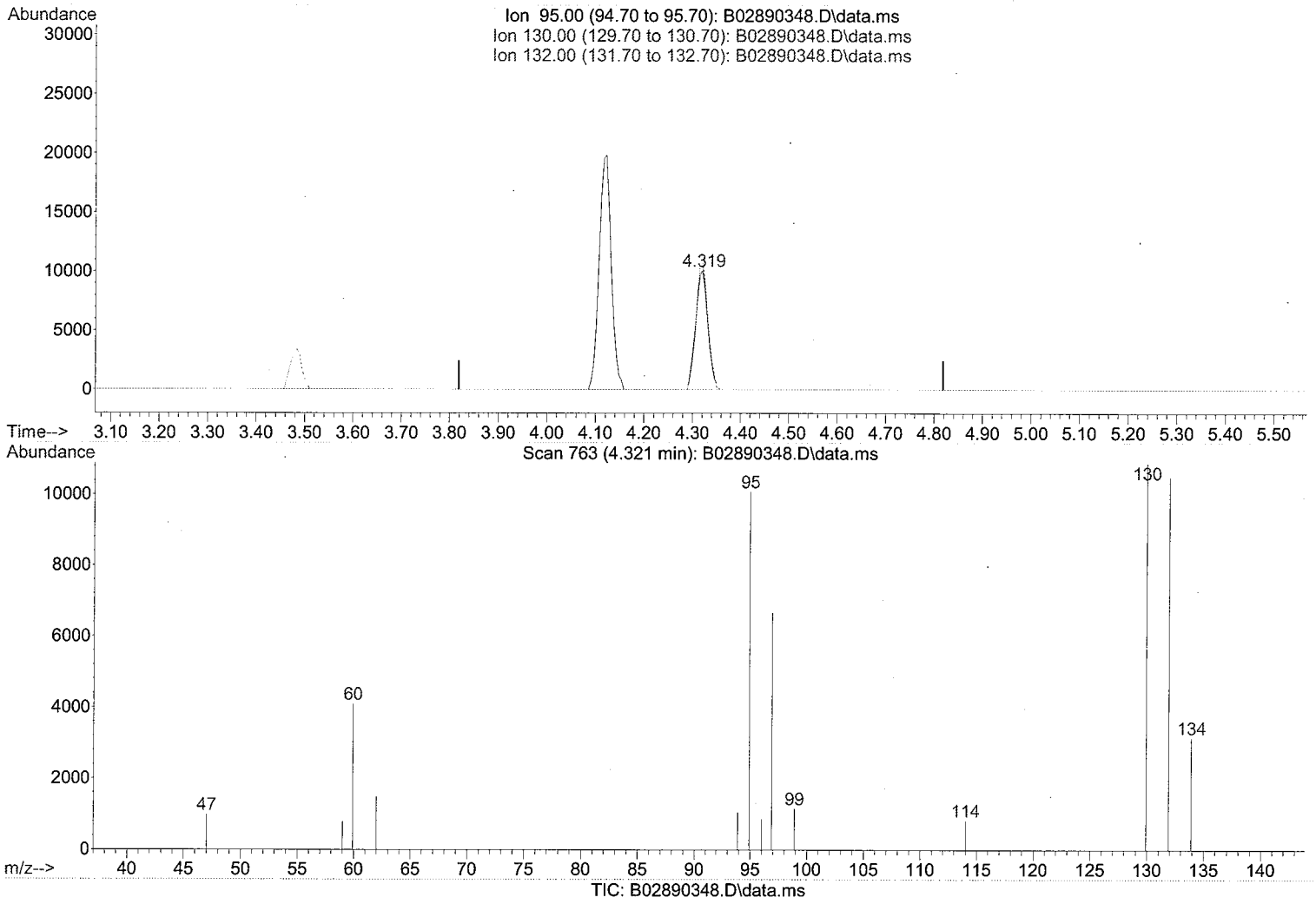
| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-12 | File ID: | B02890348.D |
| Sampled: | 11/02/10 11:00 | Prepared: | 11/13/10 03:35 | Analyzed: | 11/13/10 03:35 |
| Solids: | 85.30 | Preparation: | EPA 5035 | Dilution: | 1 |
| Batch: | B047059 | Sequence: | S047036 | Calibration: | 0111803 |
| Instrument: | GCMS-B | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg dry) | Q |
|---|---|---|---|
| 74-88-4 | Iodomethane | 5.86 | U |
| 98-82-8 | Isopropylbenzene | 5.86 | U |
| | m,p-Xylenes | 5.86 | U |
| 126-98-7 | Methacrylonitrile | 5.86 | U |
| 76-20-9 | Methyl Acetate | 5.86 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 5.86 | U |
| 108-87-2 | Methylcyclohexane | 5.86 | U |
| 75-09-2 | Methylene Chloride | 5.86 | U |
| 80-62-6 | Methylmethacrylate | 5.86 | U |
| 91-20-3 | Naphthalene | 5.86 | U |
| 104-51-8 | n-Butylbenzene | 5.86 | U |
| 103-65-1 | n-Propylbenzene | 5.86 | U |
| 95-47-6 | o-Xylene | 5.86 | U |
| 99-87-6 | p-Isopropyltoluene | 5.86 | U |
| 107-12-0 | Propionitrile | 58.6 | U |
| 135-98-8 | sec-Butylbenzene | 5.86 | U |
| 100-42-5 | Styrene | 5.86 | U |
| 98-06-6 | tert-Butylbenzene | 5.86 | U |
| 127-18-4 | Tetrachloroethene | 5.86 | U |
| 108-88-3 | Toluene | 5.86 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.86 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.86 | U |
| 79-01-6 | Trichloroethene | ~~0.574~~ | 0.574 J corrected 2/3/11 EMG |
| 75-69-4 | Trichlorofluoromethane | 11.7 | U |
| 108-05-4 | Vinyl acetate | 5.86 | U |
| 75-01-4 | Vinyl chloride | 11.7 | U |

Quantitation Report (Qedit)

Data Path : H:\VOL1\GCMSDATA\B\Sequence\111210\
Data File : B02890348.D
Acq On : 13 Nov 2010 3:35 am
Operator : MP
Sample : 1011013-12
Misc : TETRA TECH, SOIL
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jan 28 16:27:28 2011
Quant Method : H:\VOL1\GCMSDATA\B\METHODS\8260_111110.M
Quant Title :
QLast Update : Wed Nov 17 19:05:39 2010
Response via : Initial Calibration




(41) Trichloroethene (T)

4.321min (+0.002) 0.49 PPB m

response 182395

| Ion | Exp% | Act% |
|---|---|---|
| 95.00 | 100 | 100 |
| 130.00 | 102.00 | 0.00# |
| 132.00 | 104.00 | 0.00# |
| 0.00 | 0.00 | 0.00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 15:13

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.361 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.299 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chloroethane | 75-00-3 | BQL | U | 0.286 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chloroform | 67-66-3 | BQL | U | 0.224 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Chloromethane | 74-87-3 | BQL | U | 0.983 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.249 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.261 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Cyclohexane | 110-82-7 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Dibromomethane | 74-95-3 | BQL | U | 0.323 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.522 | 12.4 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.348 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Freon 113 | 76-13-1 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.721 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Iodomethane | 74-88-4 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Isopropylbenzene | 98-82-8 | 0.659 | J | 0.460 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| m,p-Xylenes | | BQL | U | 0.833 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methacrylonitrile | 126-98-7 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methyl Acetate | 76-20-9 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.311 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methylcyclohexane | 108-87-2 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.211 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Methylmethacrylate | 80-62-6 | BQL | U | 6.22 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Naphthalene | 91-20-3 | ~~28.6~~ | 28.6 * | 0.672 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| n-Butylbenzene | 104-51-8 | 2.26 | J | 0.672 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| n-Propylbenzene | 103-65-1 | 1.23 | J | 0.547 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| o-Xylene | 95-47-6 | BQL | U | 0.361 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.684 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Propionitrile | 107-12-0 | BQL | U | 6.22 | 62.2 | 1 | ug/Kg dry | 11/15/10 15:13 |
| sec-Butylbenzene | 135-98-8 | 1.70 | J | 0.622 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Styrene | 100-42-5 | BQL | U | 0.448 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.522 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.473 | 6.22 | 1 | ug/Kg dry | 11/15/10 15:13 |



* Napthalene result corrected 2/3/11 EMG

CENTAURI LABS™

# ANALYSIS DATA SHEET

## GKHMS-SO-FD001-1010

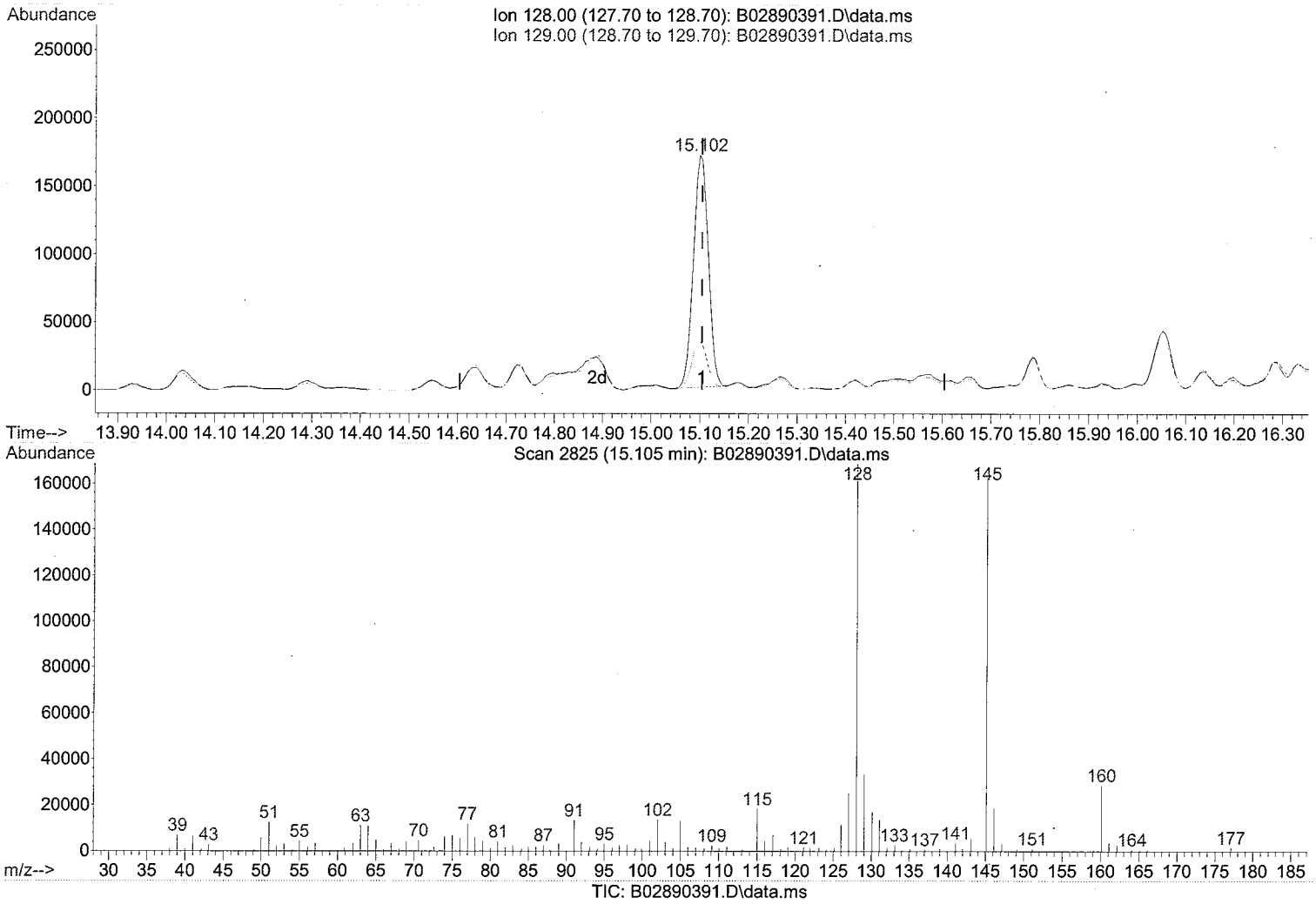
| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-21 | File ID: | B02890391.D |
| Sampled: | 11/02/10 00:00 | Prepared: | 11/15/10 15:13 | Analyzed: | 11/15/10 15:13 |
| Solids: | 80.40 | Preparation: | EPA 5035 | Dilution: | 1 |
| Batch: | B048008 | Sequence: | S048008 | Calibration: | 0111803 |
| Instrument: | GCMS-B | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg dry) | Q |
|---|---|---|---|
| 98-82-8 | Isopropylbenzene | 0.659 | J |
| | m,p-Xylenes | 6.22 | U |
| 126-98-7 | Methacrylonitrile | 6.22 | U |
| 76-20-9 | Methyl Acetate | 6.22 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 6.22 | U |
| 108-87-2 | Methylcyclohexane | 6.22 | U |
| 75-09-2 | Methylene Chloride | 6.22 | U |
| 80-62-6 | Methylmethacrylate | 6.22 | U |
| 91-20-3 | Naphthalene | ~~28.6~~ | 28.6 corrected 2/3/11 EMG |
| 104-51-8 | n-Butylbenzene | 2.26 | J |
| 103-65-1 | n-Propylbenzene | 1.23 | J |
| 95-47-6 | o-Xylene | 6.22 | U |
| 99-87-6 | p-Isopropyltoluene | 6.22 | U |
| 107-12-0 | Propionitrile | 62.2 | U |
| 135-98-8 | sec-Butylbenzene | 1.70 | J |
| 100-42-5 | Styrene | 6.22 | U |
| 98-06-6 | tert-Butylbenzene | 6.22 | U |
| 127-18-4 | Tetrachloroethene | 6.22 | U |
| 108-88-3 | Toluene | 6.22 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 6.22 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 6.22 | U |
| 79-01-6 | Trichloroethene | 6.22 | U |
| 75-69-4 | Trichlorofluoromethane | 12.4 | U |
| 108-05-4 | Vinyl acetate | 6.22 | U |
| 75-01-4 | Vinyl chloride | 12.4 | U |
| 1330-20-7 | Xylene (Total) | 6.22 | U |

Quantitation Report (Qedit)

Data Path : H:\VOL1\GCMSDATA\B\Sequence\111510\
Data File : B02890391.D
Acq On : 15 Nov 2010 3:13 pm
Operator : MP
Sample : 1011013-21
Misc : 5.0 GM. TETRA TECH, SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jan 28 11:26:28 2011
Quant Method : H:\VOL1\GCMSDATA\B\METHODS\8260_111110.M
Quant Title :
QLast Update : Wed Nov 17 19:05:39 2010
Response via : Initial Calibration




(86) Naphthalene (T)

15.104min (-0.000) 22.97 PPB

response 3619880

| Ion | Exp% | Act% |
|---|---|---|
| 128.00 | 100 | 100 |
| 129.00 | 10.00 | 20.53# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-001-1010

Sample Date/Time: 11/02/10 08:00

File ID: B02890337.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-01

Percent solids: 86.10

Preparation Method: EPA 5030B

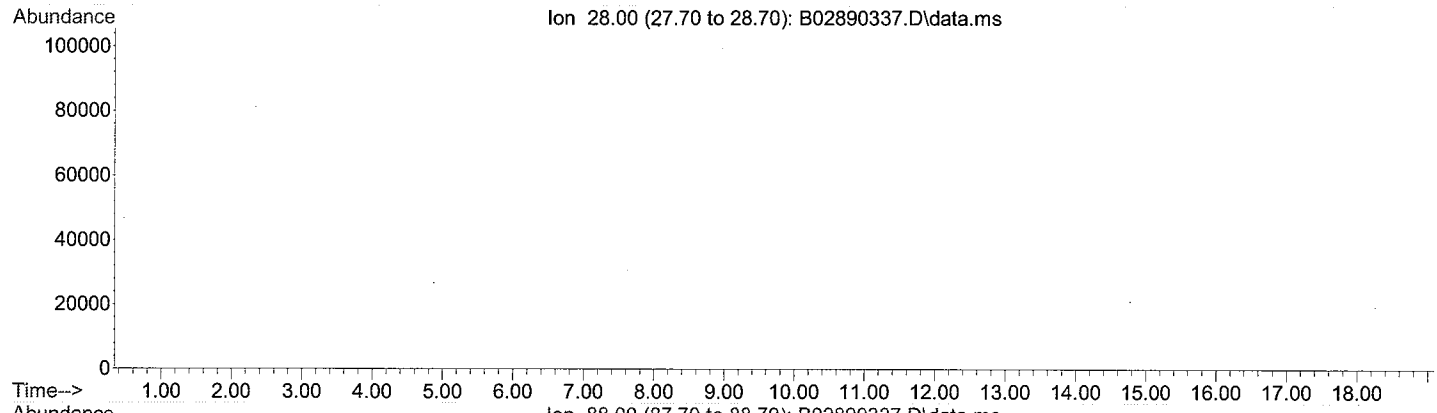
Prepared Date/Time: 11/12/10 22:42

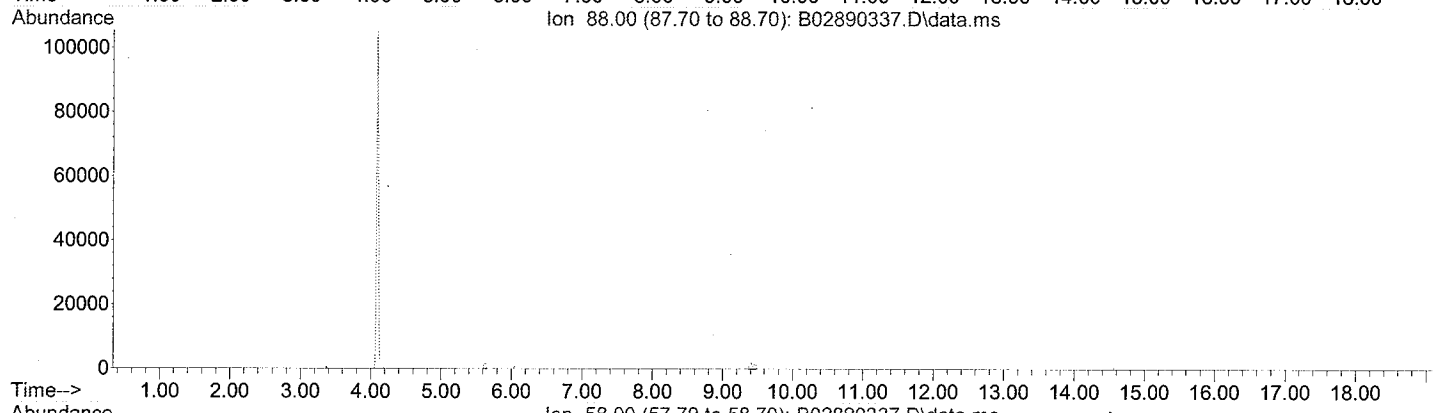
Analyzed Date/Time: 11/12/10 22:42

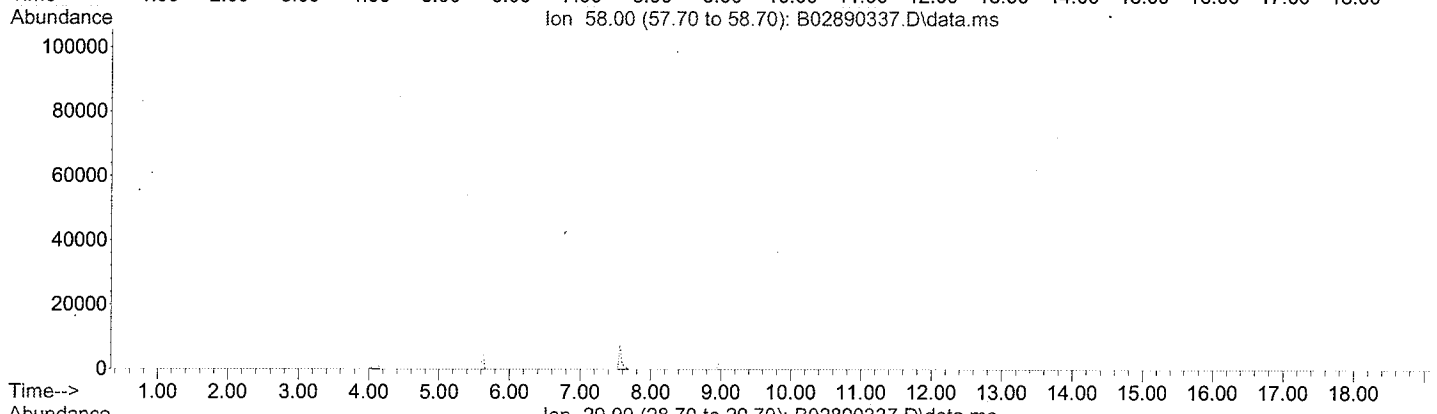
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 58.1 | 1 | ug/L |

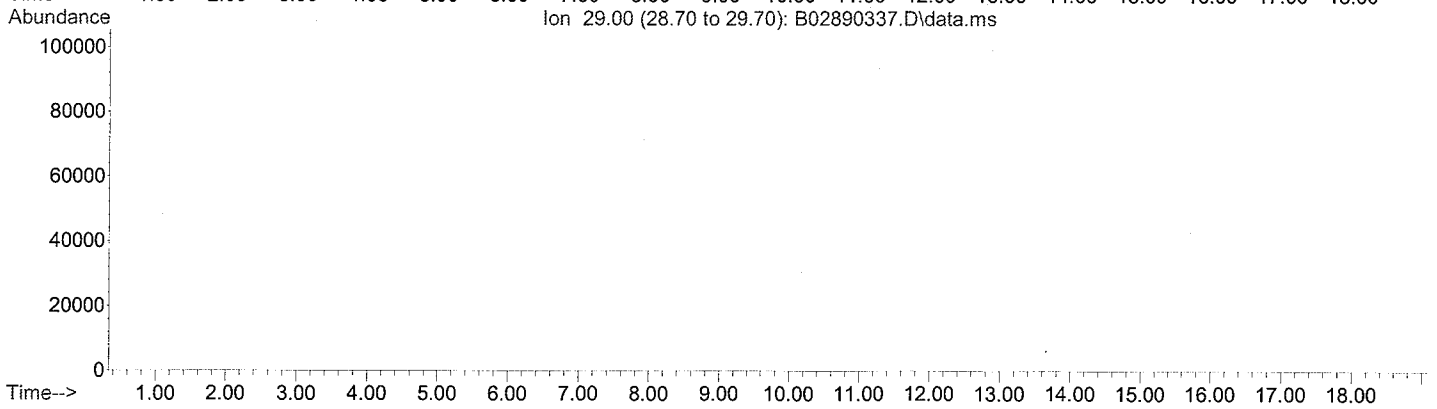
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890337.D
Operator : MP
Acquired : 12 Nov 2010 10:42 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-01
Misc Info : TETRA TECH, SOIL
Vial Number: 9



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-002-1010

Sample Date/Time: 11/02/10 08:20

File ID: B02890338.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-02

Percent solids: 87.50

Preparation Method: EPA 5030B

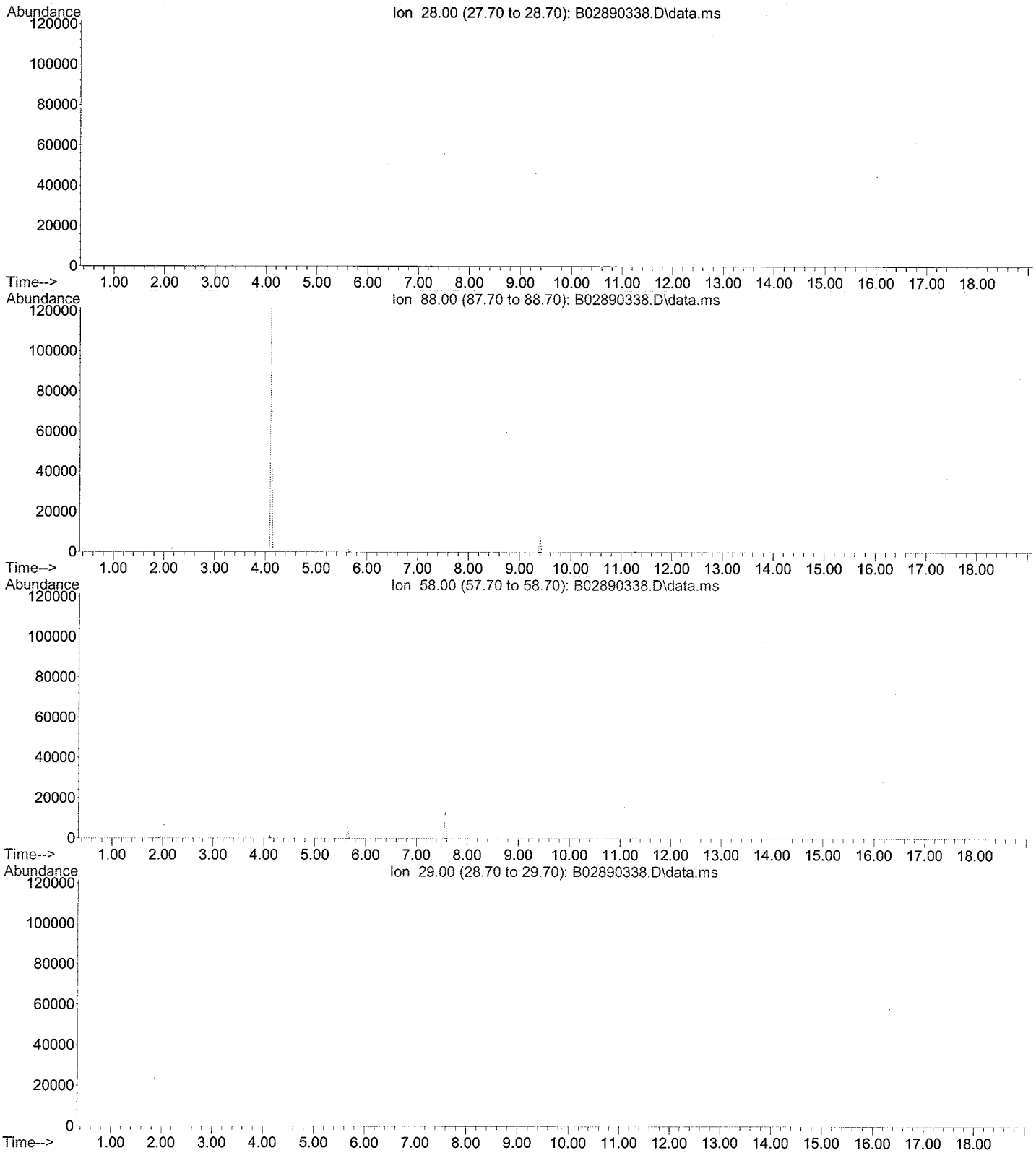
Prepared Date/Time: 11/12/10 23:09

Analyzed Date/Time: 11/12/10 23:09

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 57.1 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890338.D
Operator : MP
Acquired : 12 Nov 2010 11:09 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-02
Misc Info : TETRA TECH, SOIL
Vial Number: 10



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-003-1010

Sample Date/Time: 11/02/10 08:40

File ID: B02890339.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-03

Percent solids: 86.60

Preparation Method: EPA 5030B

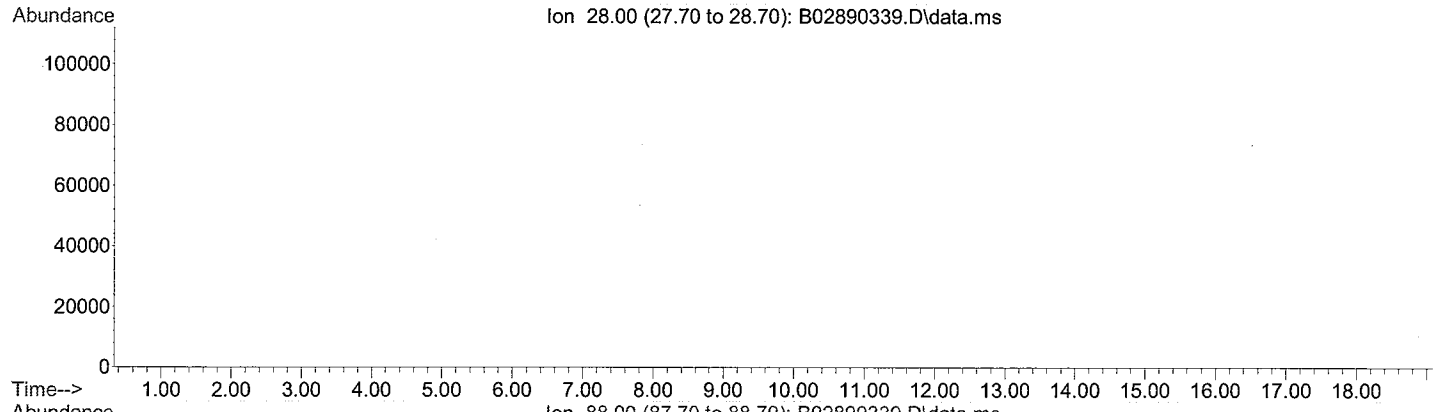
Prepared Date/Time: 11/12/10 23:36

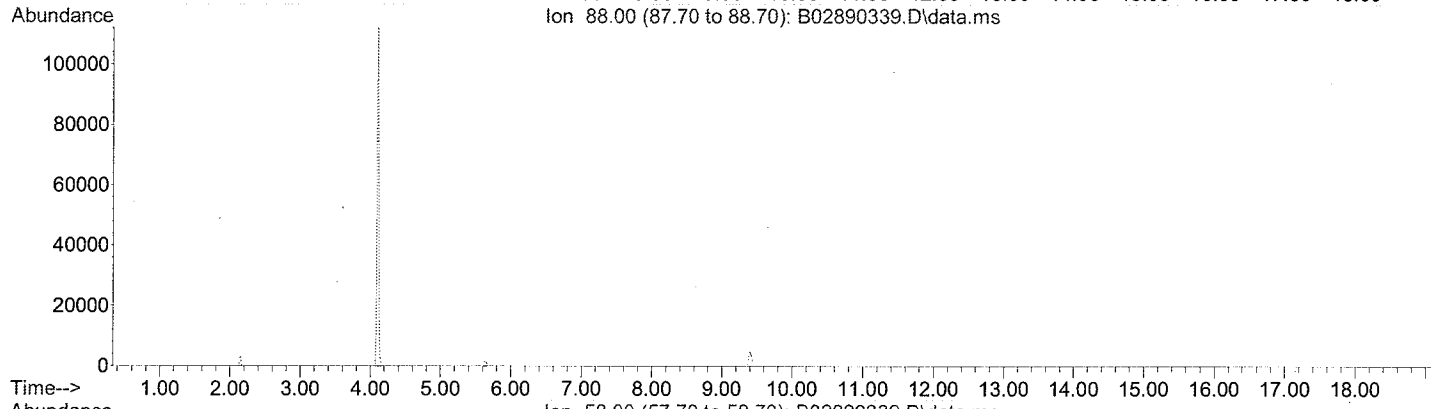
Analyzed Date/Time: 11/12/10 23:36

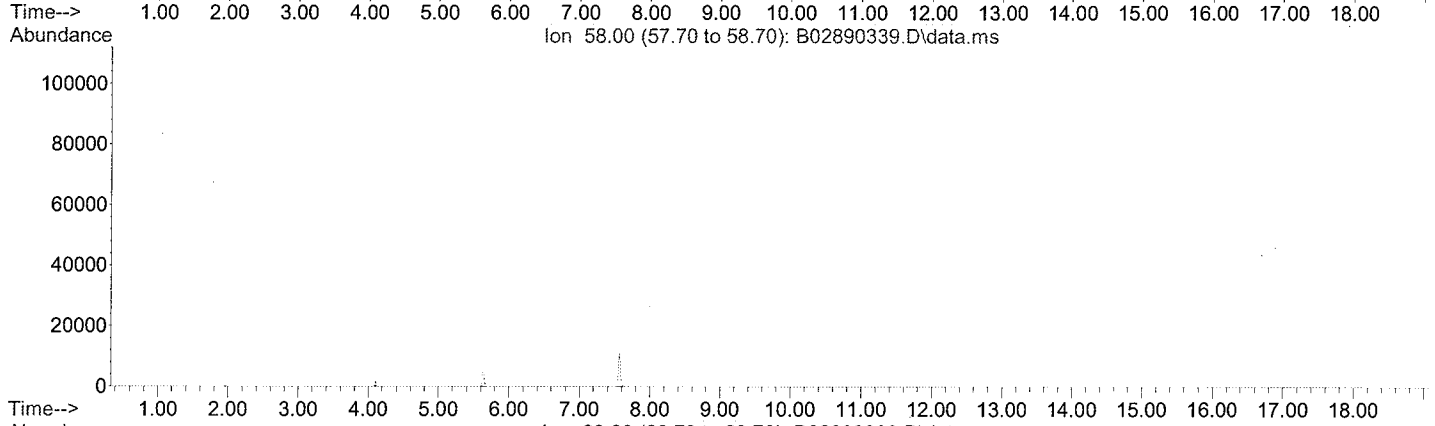
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 57.7 | 1 | ug/L |

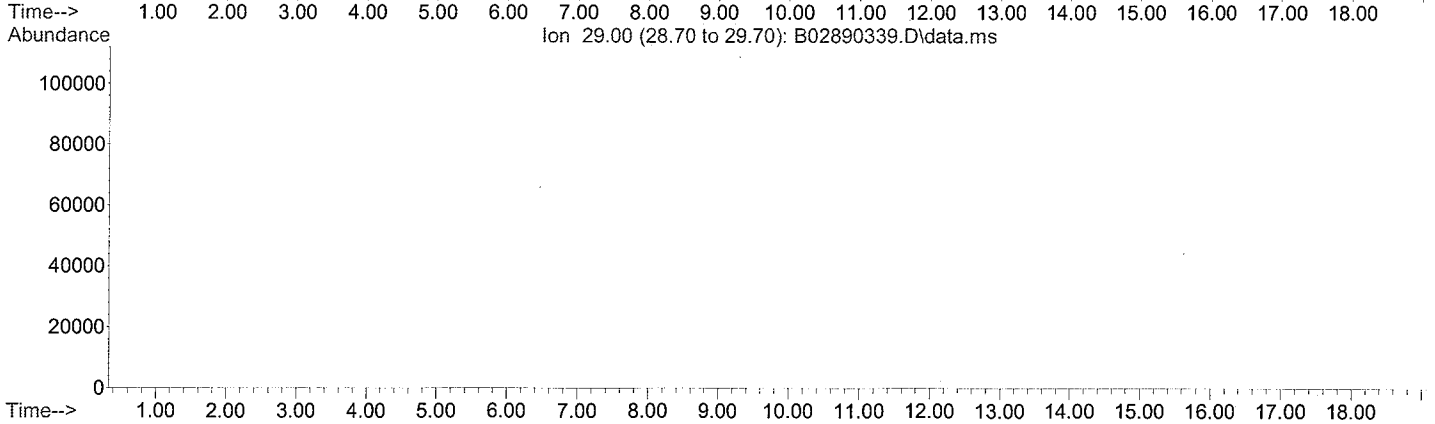
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890339.D
Operator : MP
Acquired : 12 Nov 2010 11:36 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-03
Misc Info : TETRA TECH, SOIL
Vial Number: 11



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-005-1010

Sample Date/Time: 11/02/10 09:00

File ID: B02890340.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-04

Percent solids: 85.70

Preparation Method: EPA 5030B

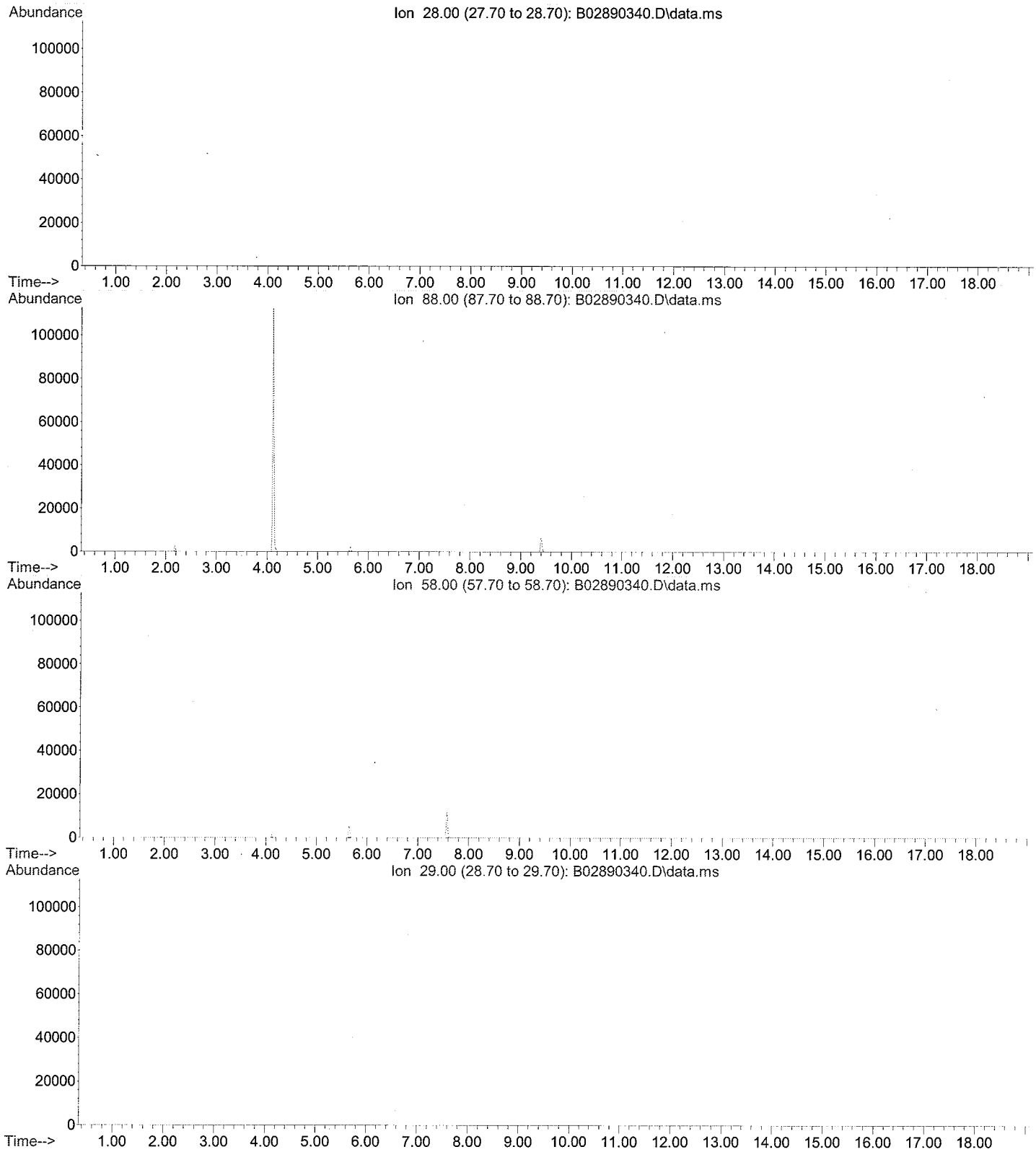
Prepared Date/Time: 11/13/10 00:02

Analyzed Date/Time: 11/13/10 00:02

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 58.3 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890340.D
Operator : MP
Acquired : 13 Nov 2010 12:02 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-04
Misc Info : TETRA TECH, SOIL
Vial Number: 12



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-007-1010

Sample Date/Time: 11/02/10 09:20

File ID: B02890341.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-05

Percent solids: 87.80

Preparation Method: EPA 5030B

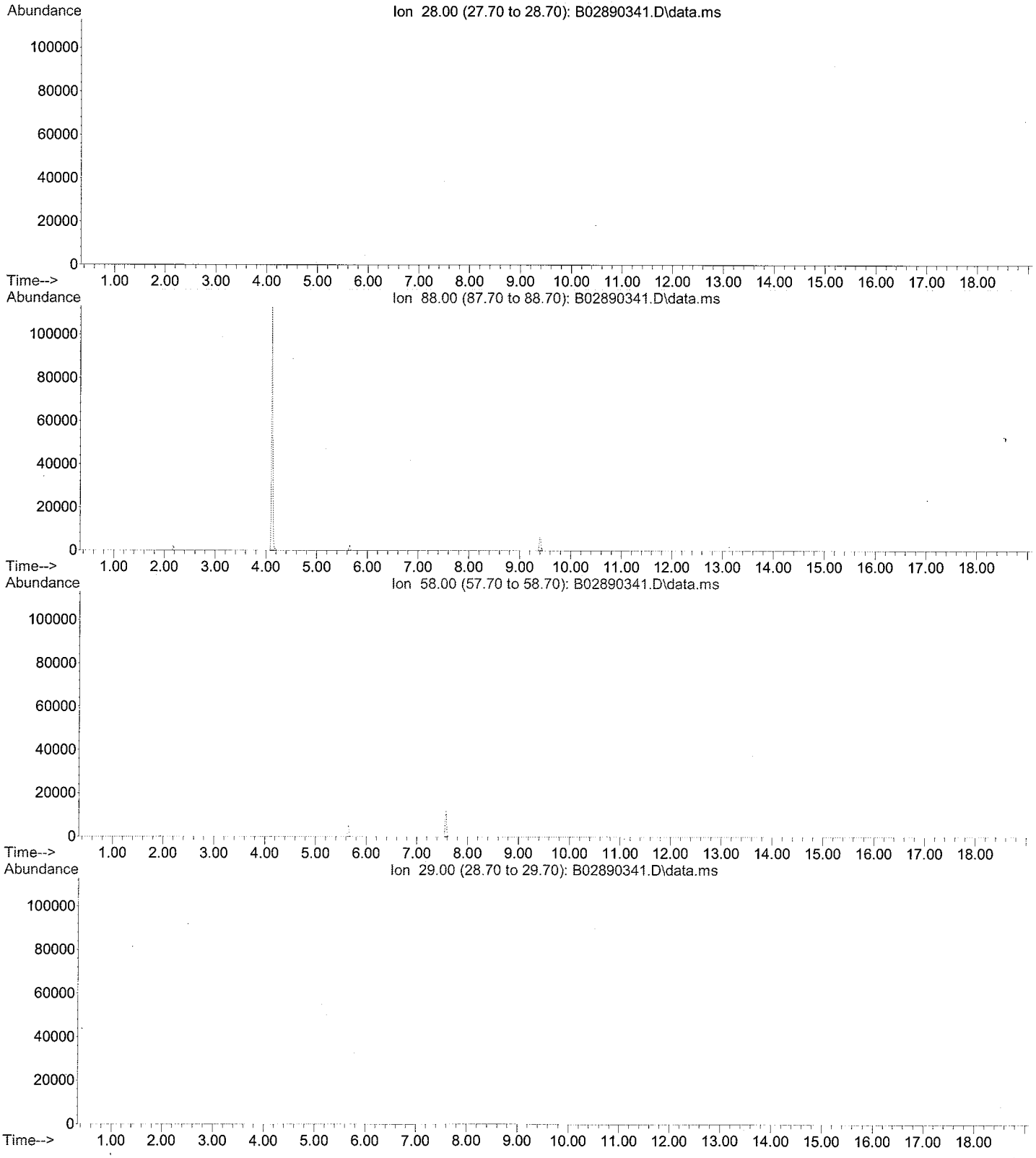
Prepared Date/Time: 11/13/10 00:29

Analyzed Date/Time: 11/13/10 00:29

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 56.9 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890341.D
Operator : MP
Acquired : 13 Nov 2010 12:29 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-05
Misc Info : TETRA TECH, SOIL
Vial Number: 13



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-011-1010

Sample Date/Time: 11/02/10 09:40

File ID: B02890342.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-06

Percent solids: 80.40

Preparation Method: EPA 5030B

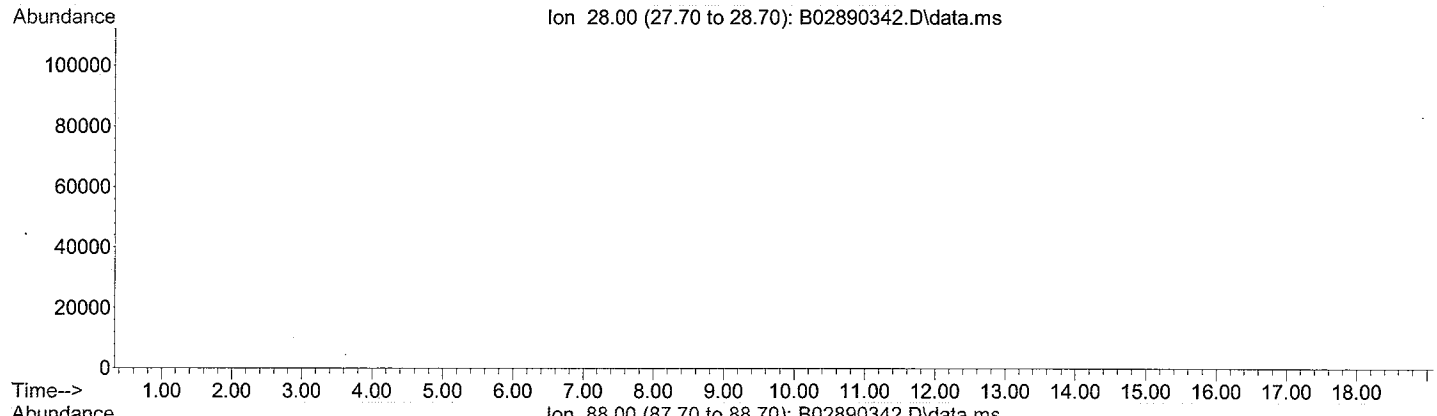
Prepared Date/Time: 11/13/10 00:56

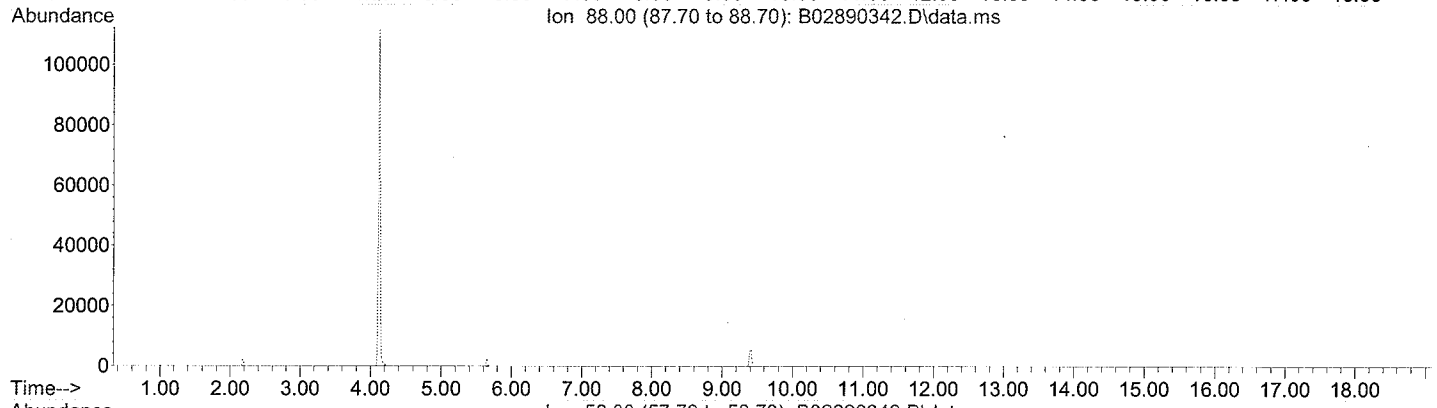
Analyzed Date/Time: 11/13/10 00:56

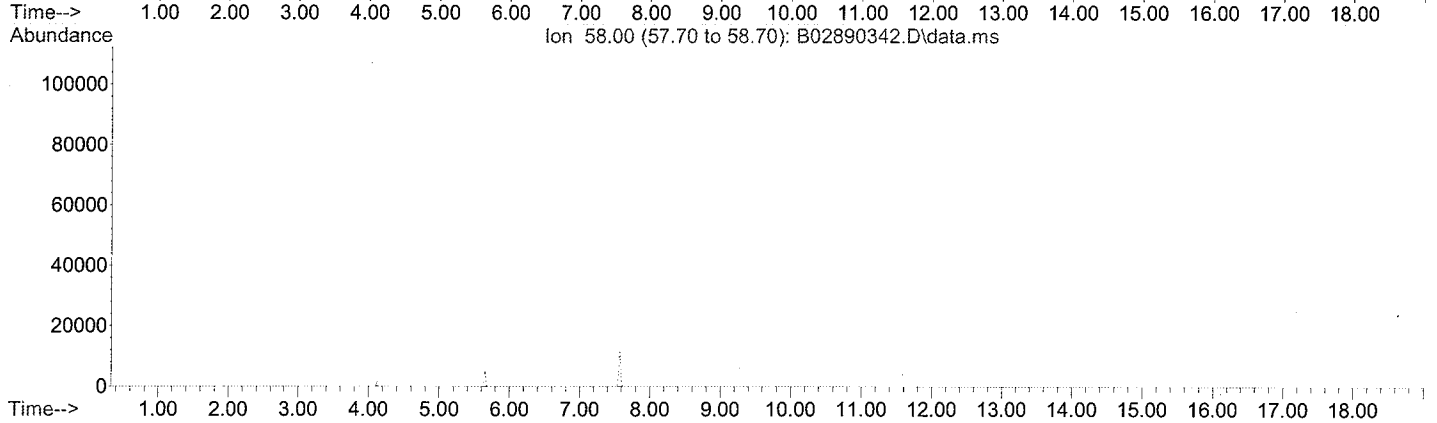
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 62.2 | 1 | ug/L |

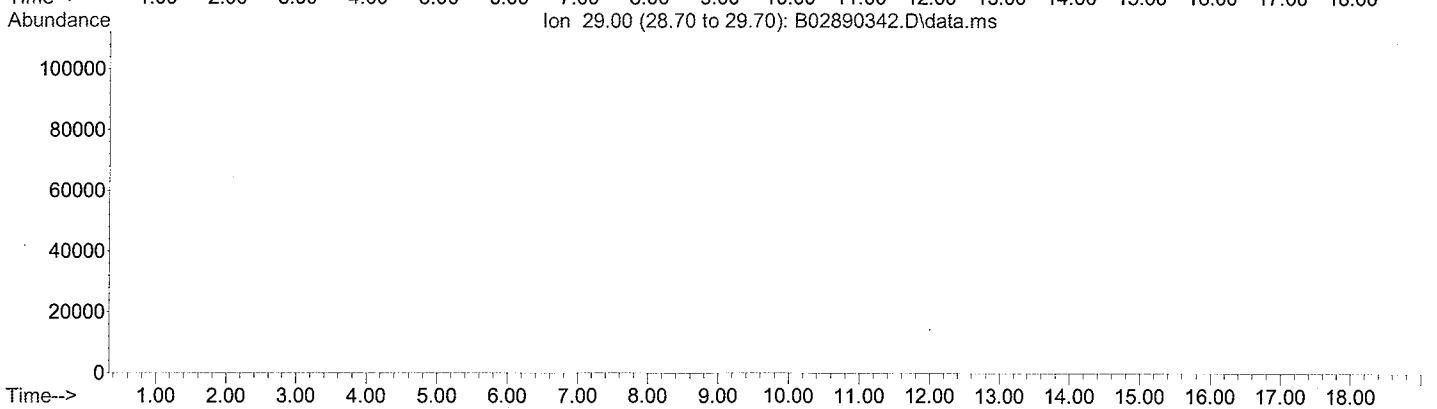
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890342.D
Operator : MP
Acquired : 13 Nov 2010 12:56 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-06
Misc Info : TETRA TECH, SOIL
Vial Number: 14



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-012-1010

Sample Date/Time: 11/02/10 12:00

File ID: B02890343.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-07

Percent solids: 83.60

Preparation Method: EPA 5030B

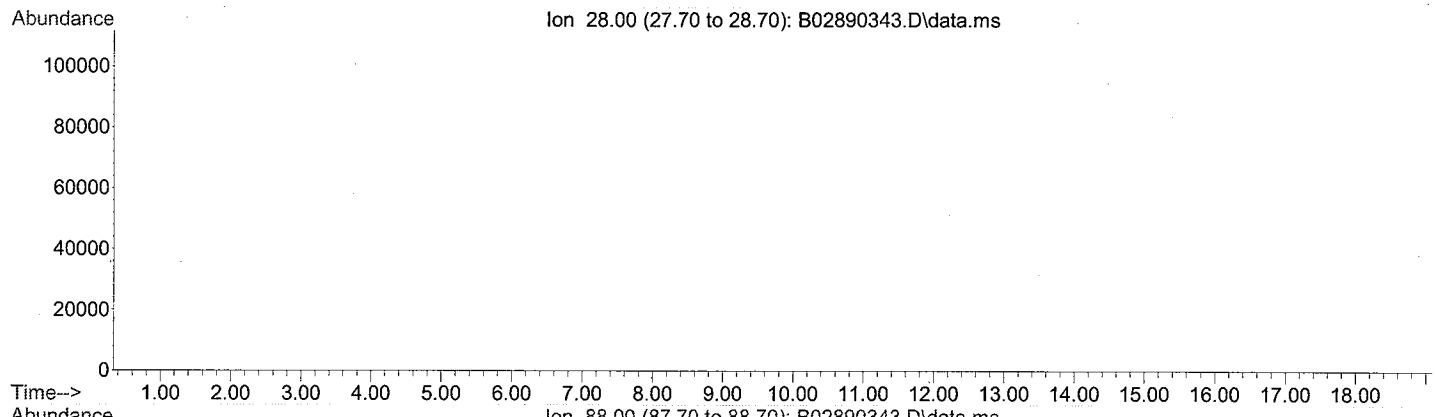
Prepared Date/Time: 11/13/10 01:22

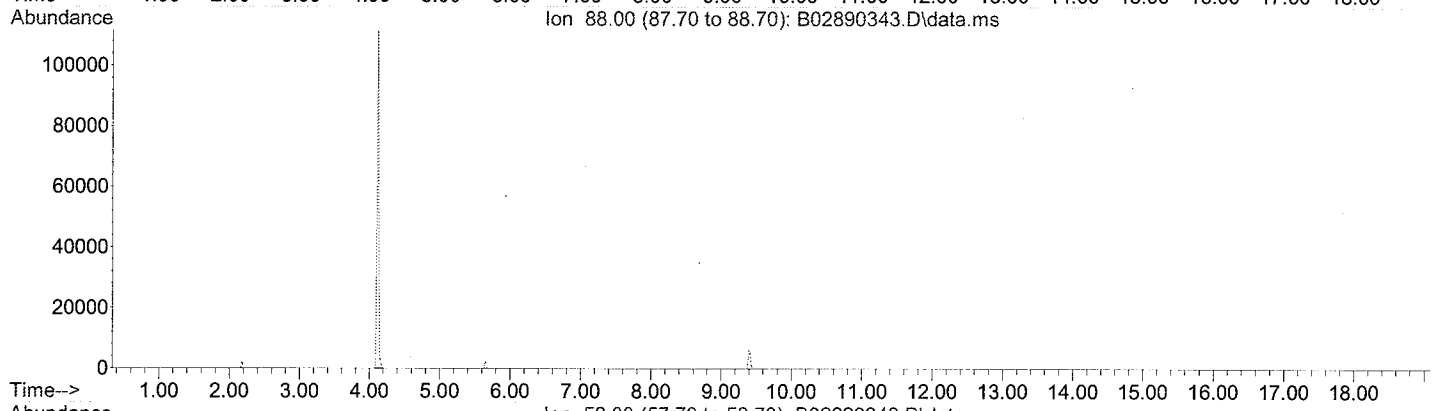
Analyzed Date/Time: 11/13/10 01:22

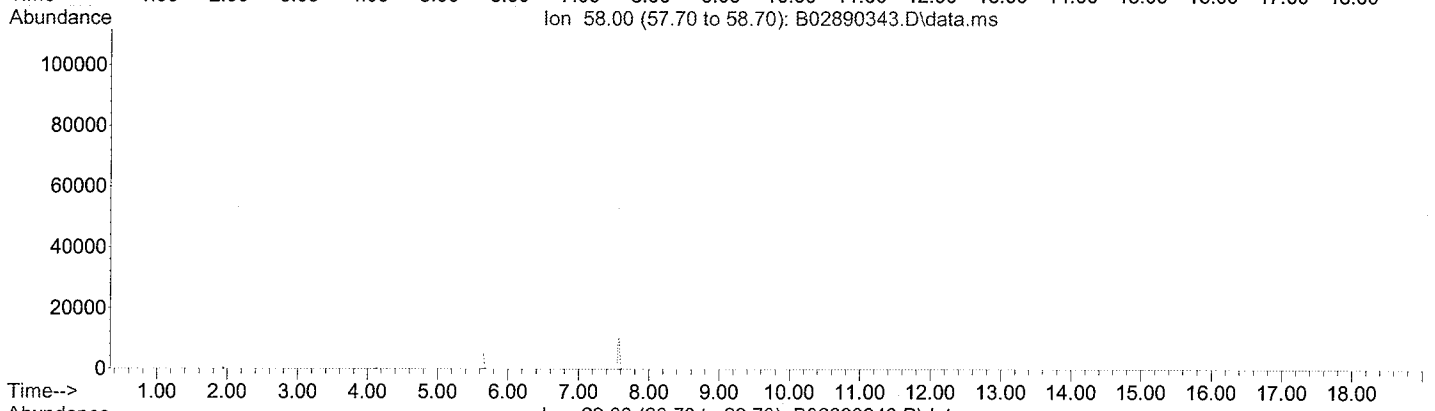
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 59.8 | 1 | ug/L |

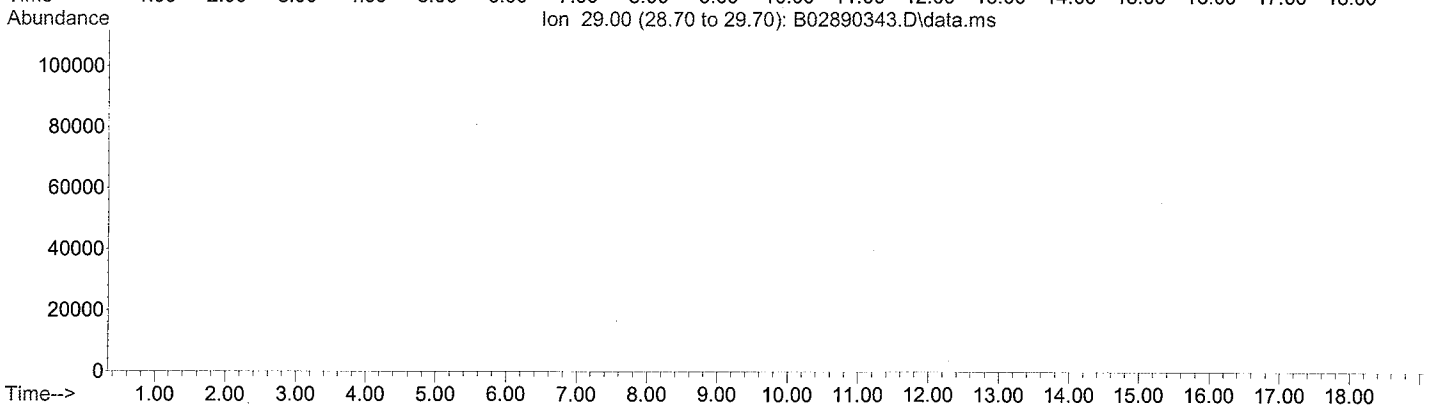
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890343.D
Operator : MP
Acquired : 13 Nov 2010 1:22 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-07
Misc Info : TETRA TECH, SOIL
Vial Number: 15



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-014-1010

Sample Date/Time: 11/02/10 14:00

File ID: B02890344.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-08

Percent solids: 85.40

Preparation Method: EPA 5030B

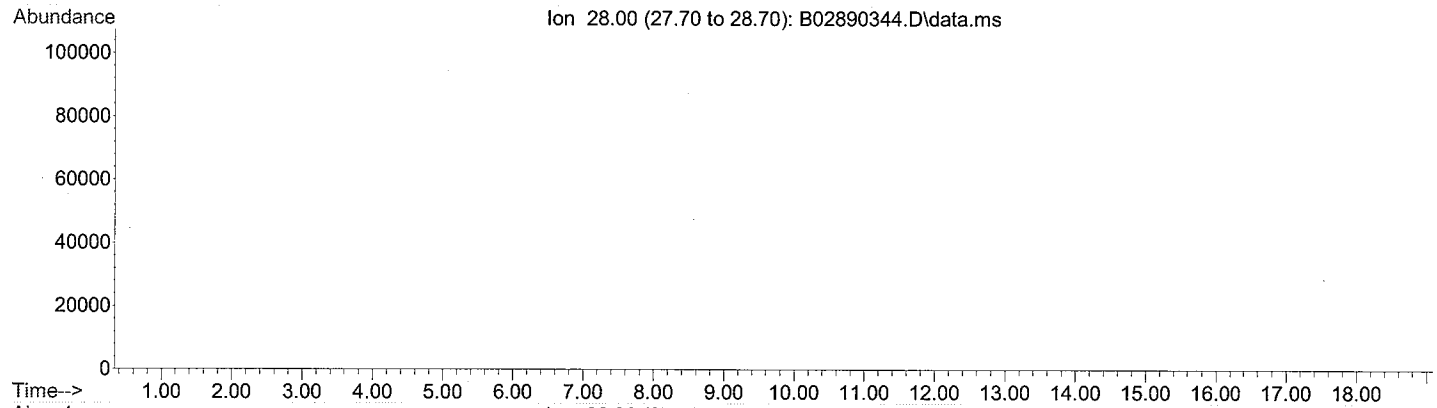
Prepared Date/Time: 11/13/10 01:49

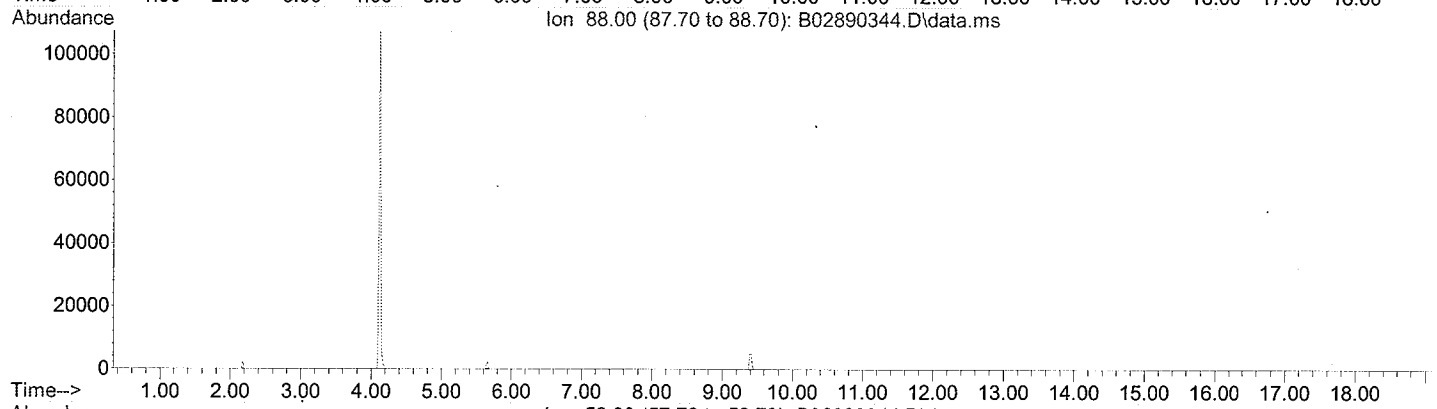
Analyzed Date/Time: 11/13/10 01:49

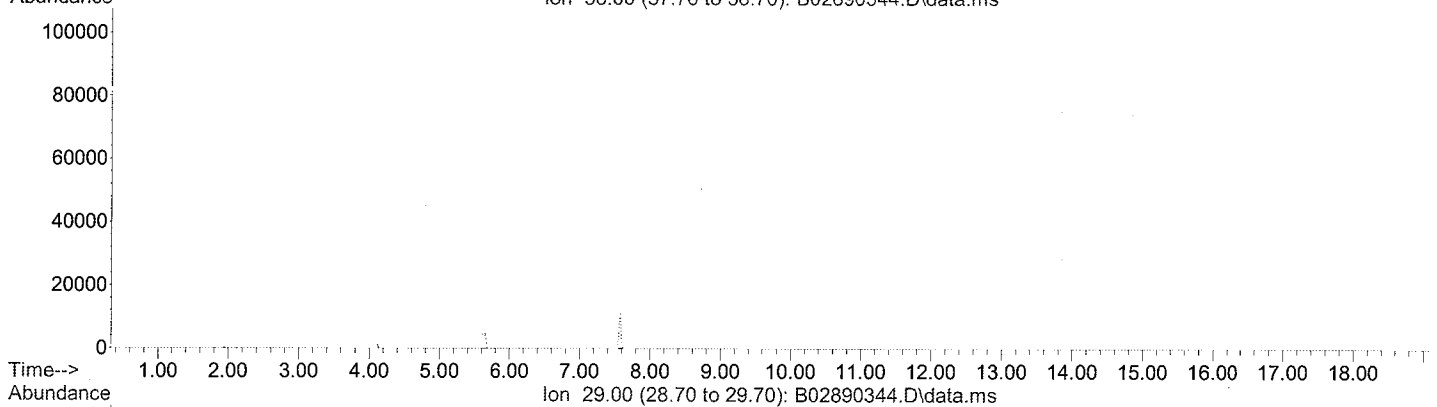
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 58.5 | 1 | ug/L |

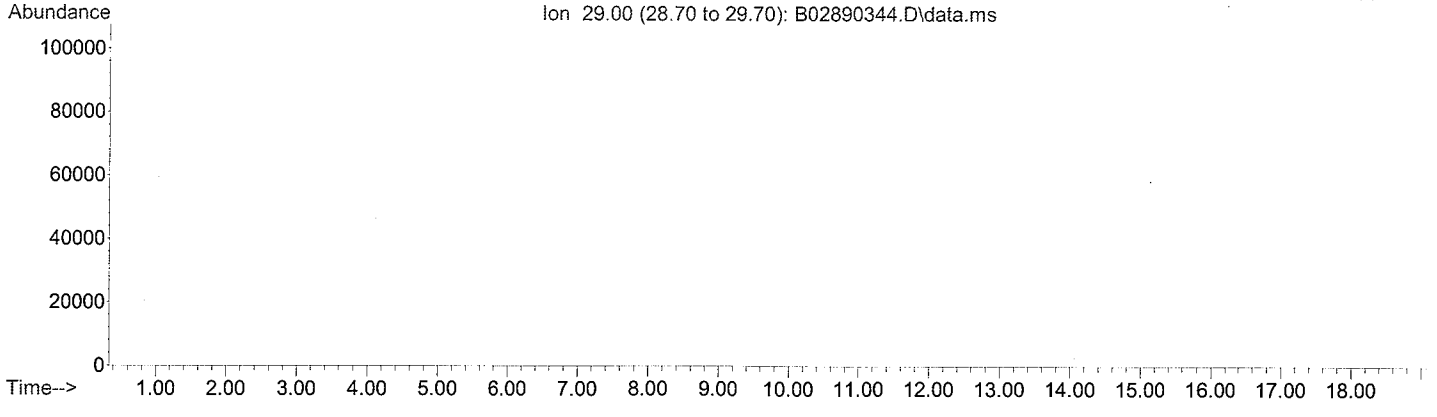
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890344.D
Operator : MP
Acquired : 13 Nov 2010 1:49 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-08
Misc Info : TETRA TECH, SOIL
Vial Number: 16



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-017-1010

Sample Date/Time: 11/02/10 10:00

File ID: B02890345.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-09

Percent solids: 87.80

Preparation Method: EPA 5030B

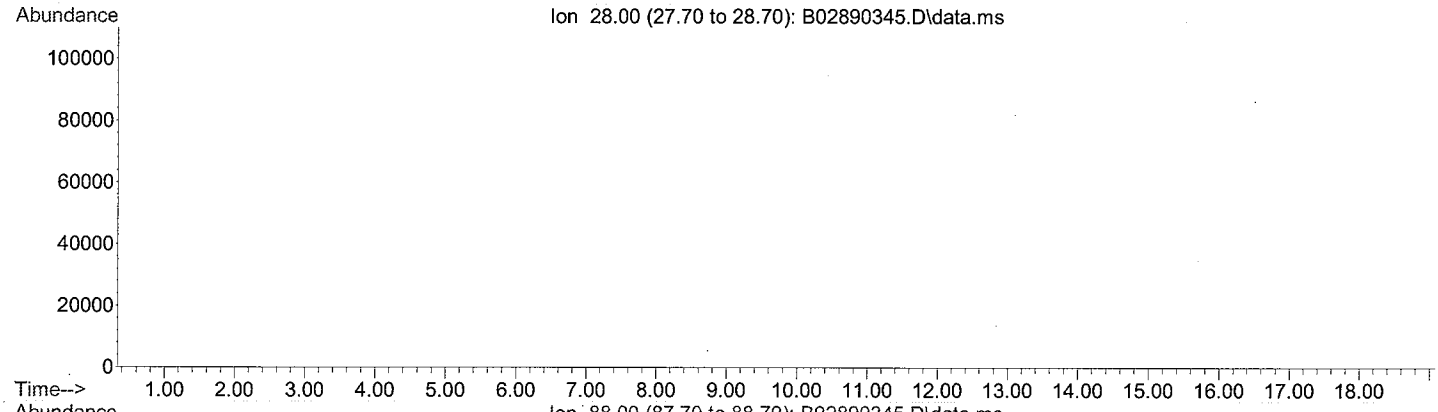
Prepared Date/Time: 11/13/10 02:15

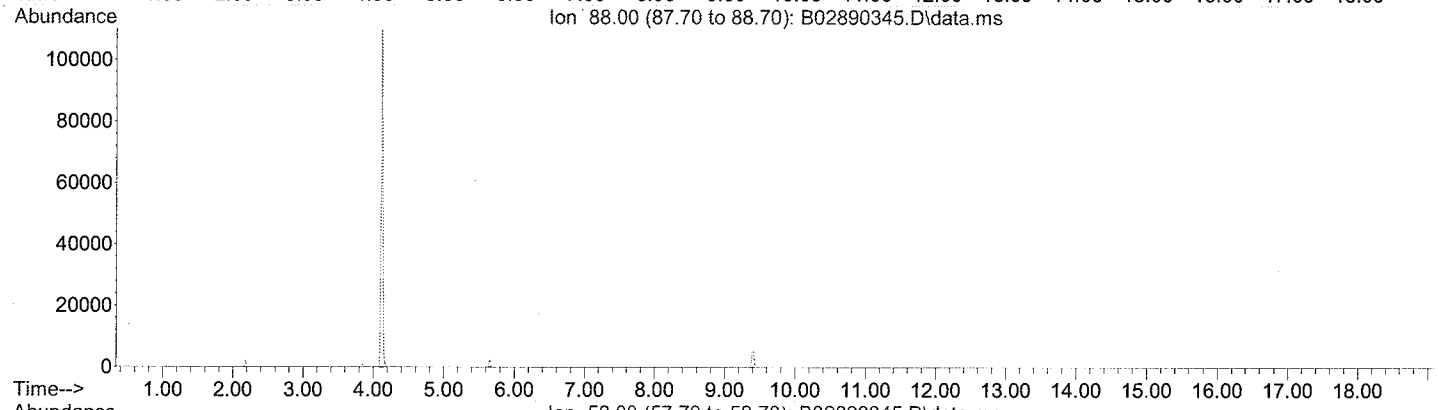
Analyzed Date/Time: 11/13/10 02:15

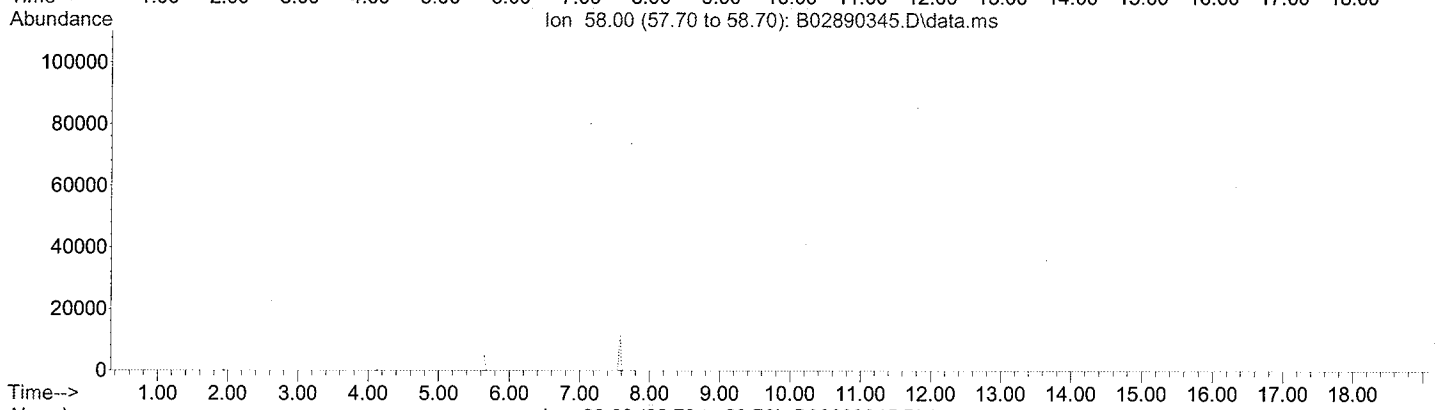
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 56.9 | 1 | ug/L |

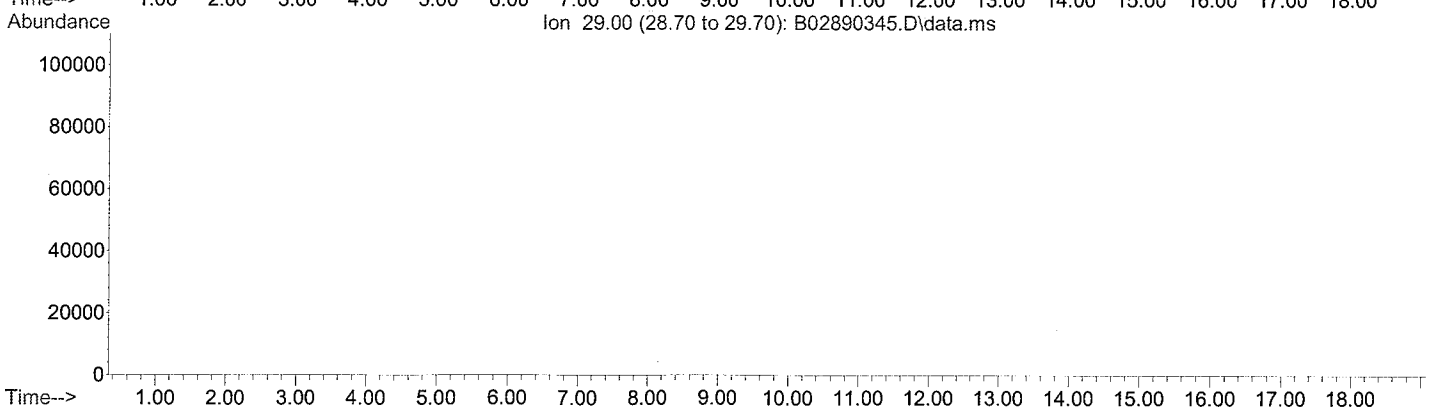
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890345.D
Operator : MP
Acquired : 13 Nov 2010 2:15 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-09
Misc Info : TETRA TECH, SOIL
Vial Number: 17



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-019-1010

Sample Date/Time: 11/02/10 10:20

File ID: B02890346.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-10

Percent solids: 86.70

Preparation Method: EPA 5030B

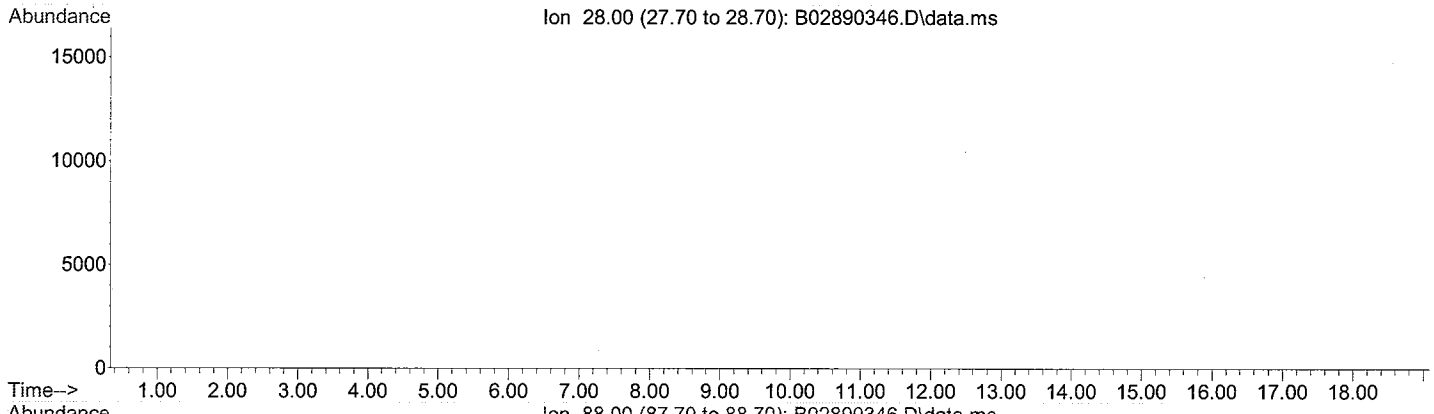
Prepared Date/Time: 11/13/10 02:42

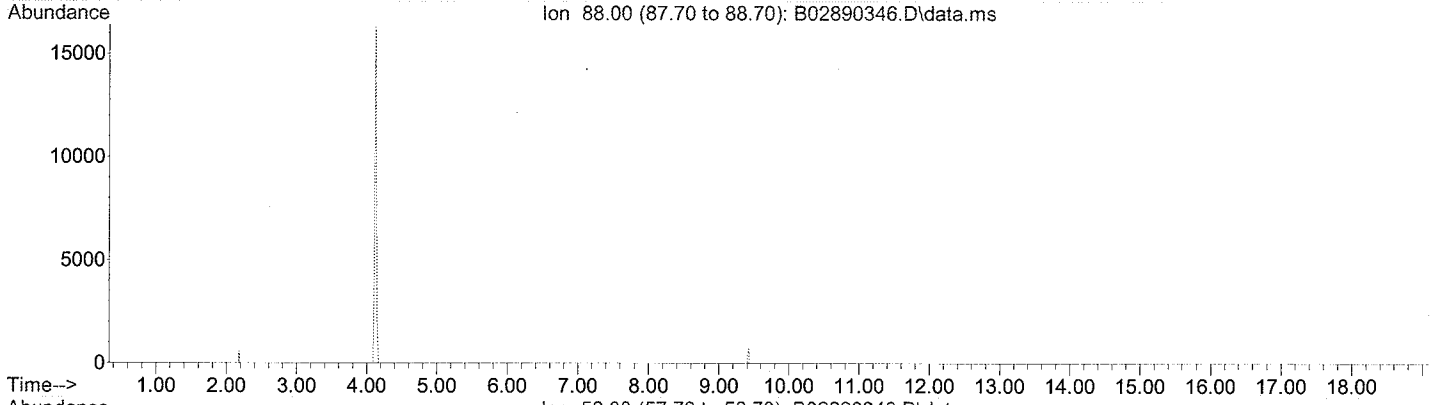
Analyzed Date/Time: 11/13/10 02:42

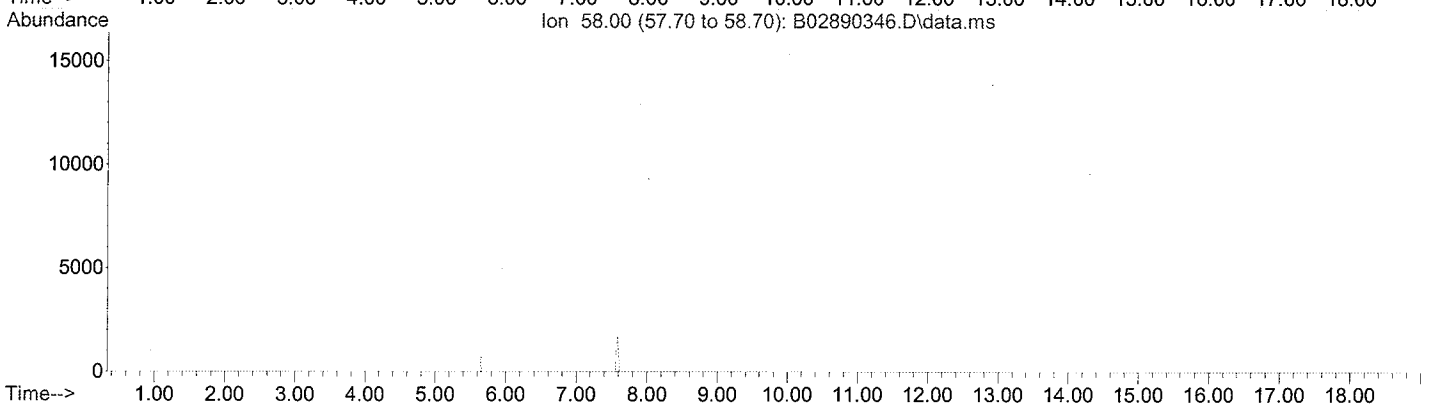
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 57.7 | 1 | ug/L |

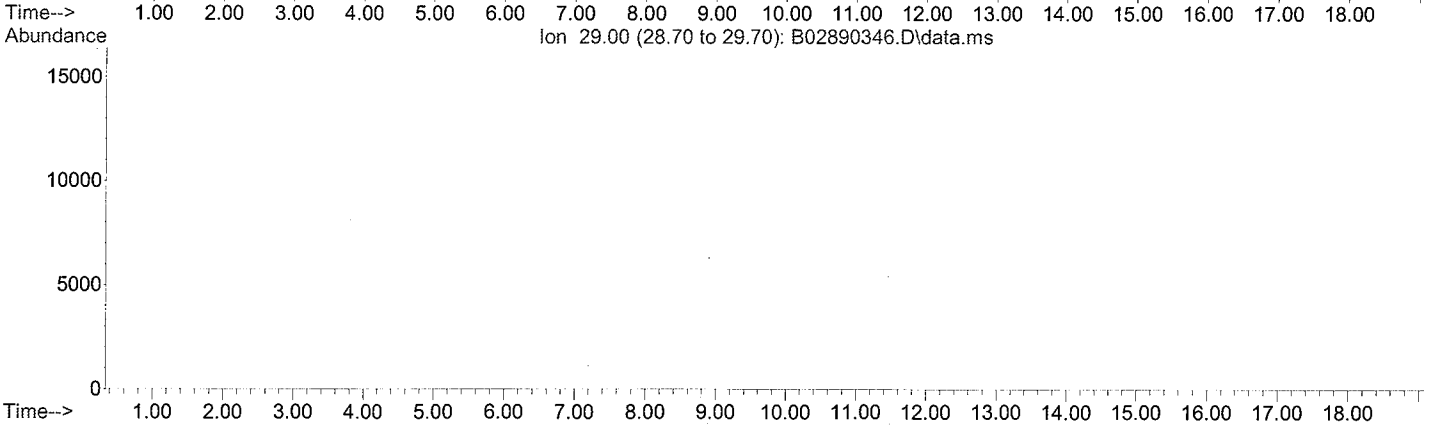
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890346.D
Operator : MP
Acquired : 13 Nov 2010 2:42 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-10
Misc Info : TETRA TECH, SOIL
Vial Number: 18



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-021-1010

Sample Date/Time: 11/02/10 10:40

File ID: B02890347.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-11

Percent solids: 87.00

Preparation Method: EPA 5030B

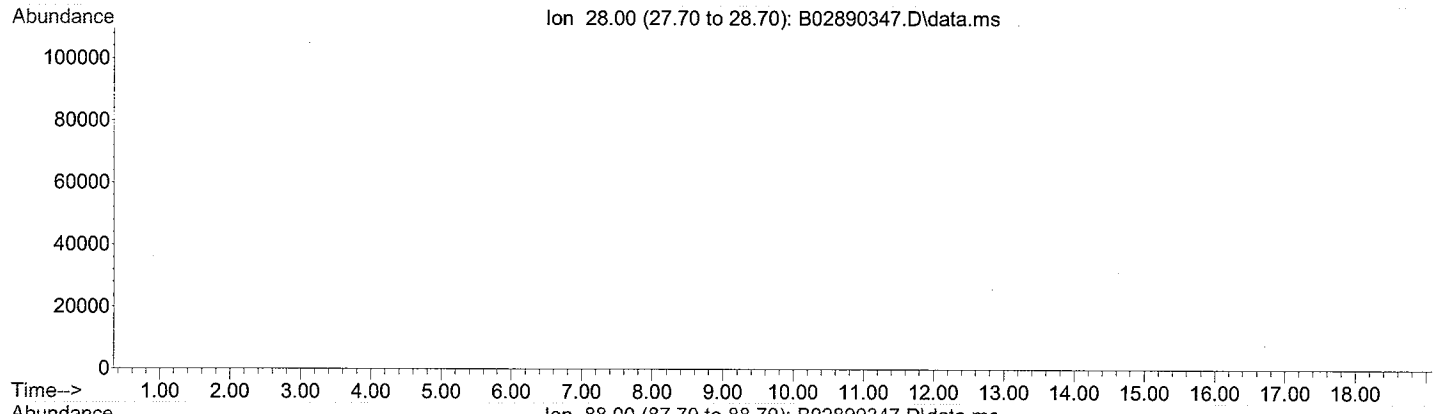
Prepared Date/Time: 11/13/10 03:09

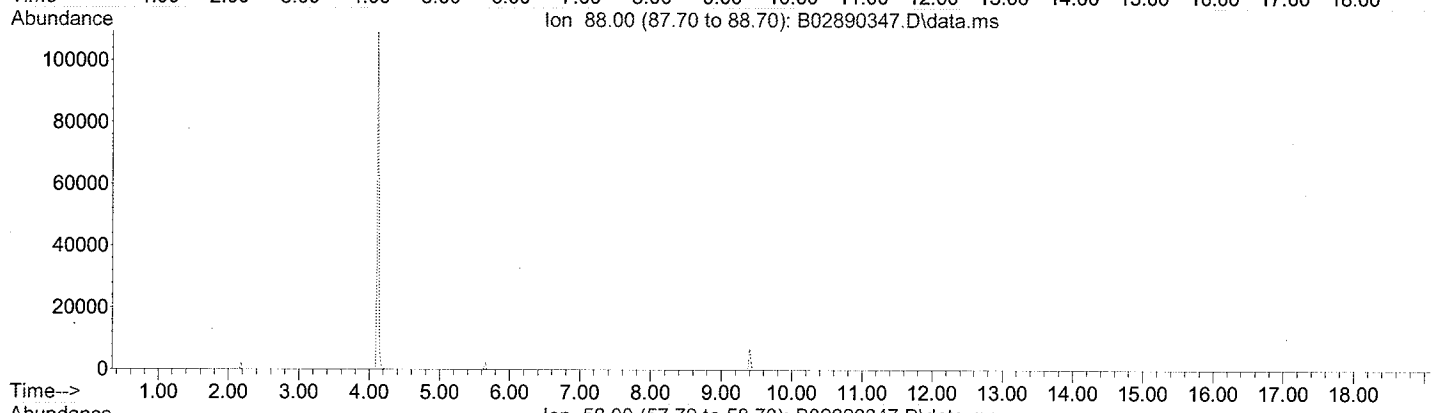
Analyzed Date/Time: 11/13/10 03:09

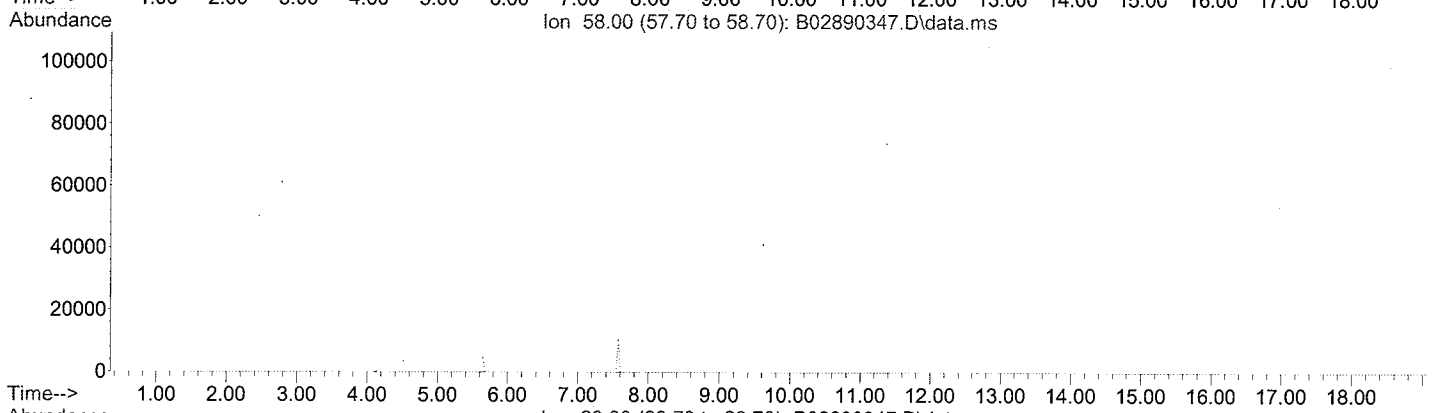
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 57.5 | 1 | ug/L |

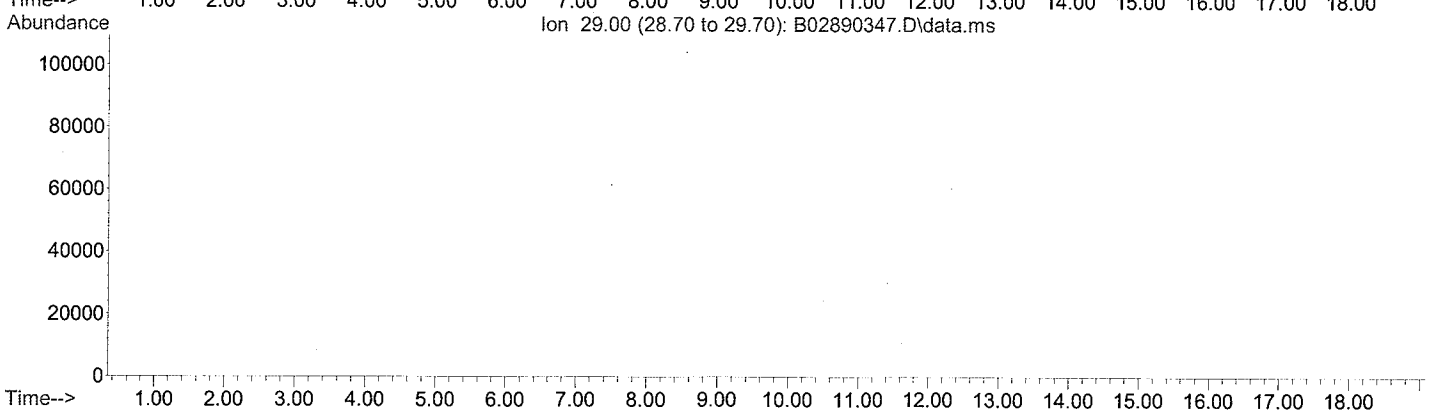
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890347.D
Operator : MP
Acquired : 13 Nov 2010 3:09 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-11
Misc Info : TETRA TECH, SOIL
Vial Number: 19



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-022-1010

Sample Date/Time: 11/02/10 11:00

File ID: B02890348.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-12

Percent solids: 85.30

Preparation Method: EPA 5030B

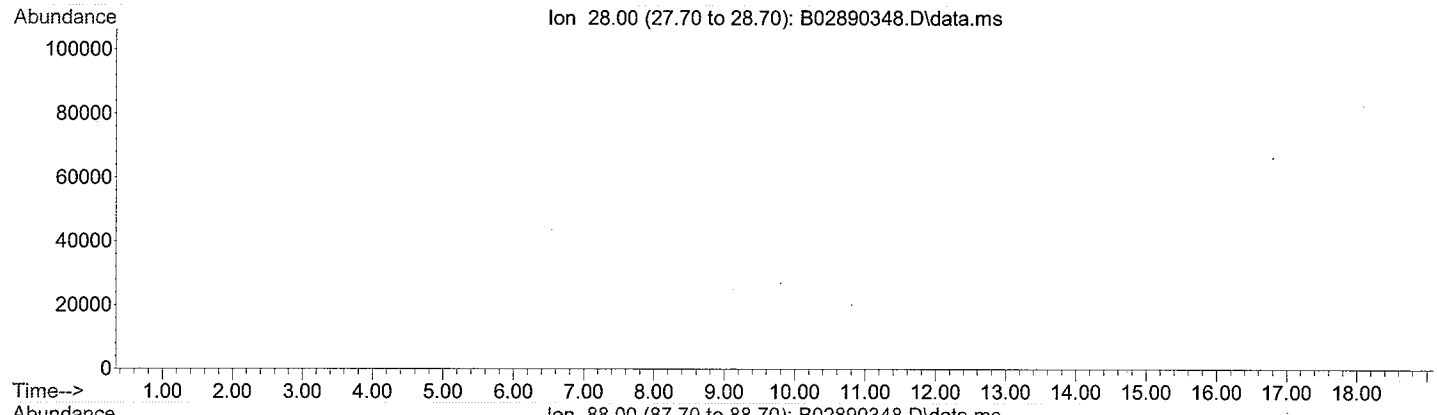
Prepared Date/Time: 11/13/10 03:35

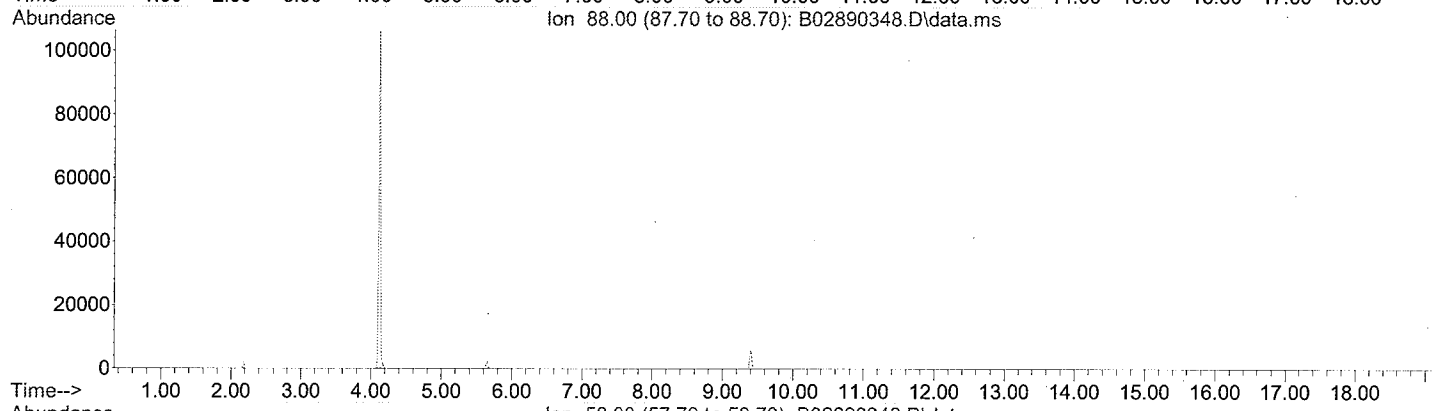
Analyzed Date/Time: 11/13/10 03:35

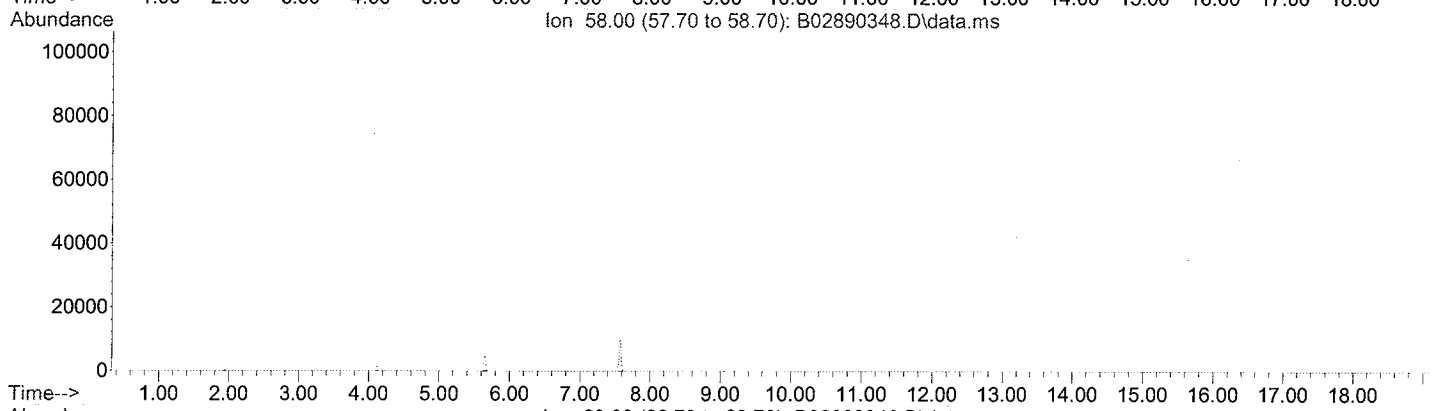
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 58.6 | 1 | ug/L |

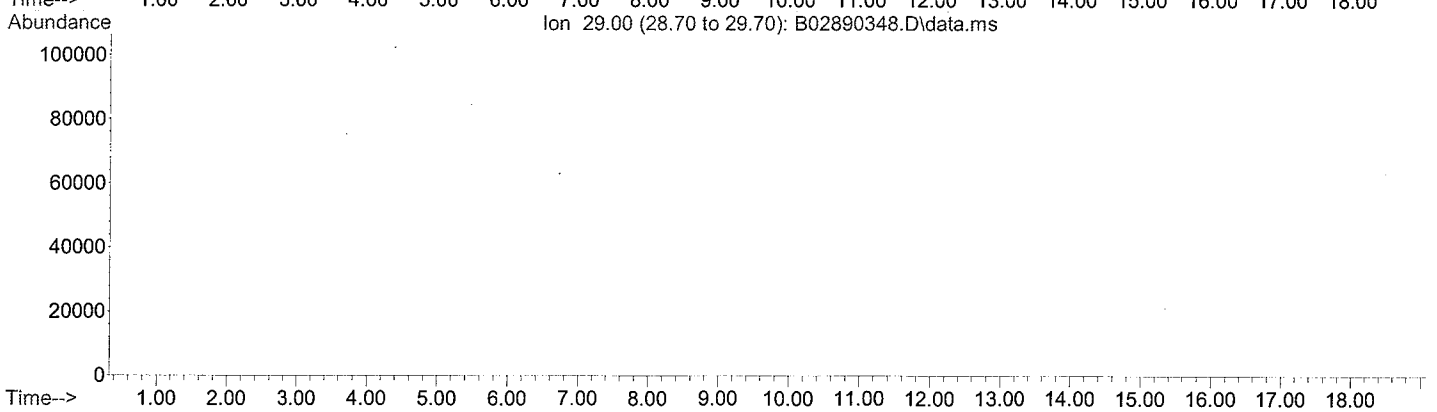
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890348.D
Operator : MP
Acquired : 13 Nov 2010 3:35 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-12
Misc Info : TETRA TECH, SOIL
Vial Number: 20



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-023-1010

Sample Date/Time: 11/02/10 13:40

File ID: B02890388.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-13

Percent solids: 86.20

Preparation Method: EPA 5030B

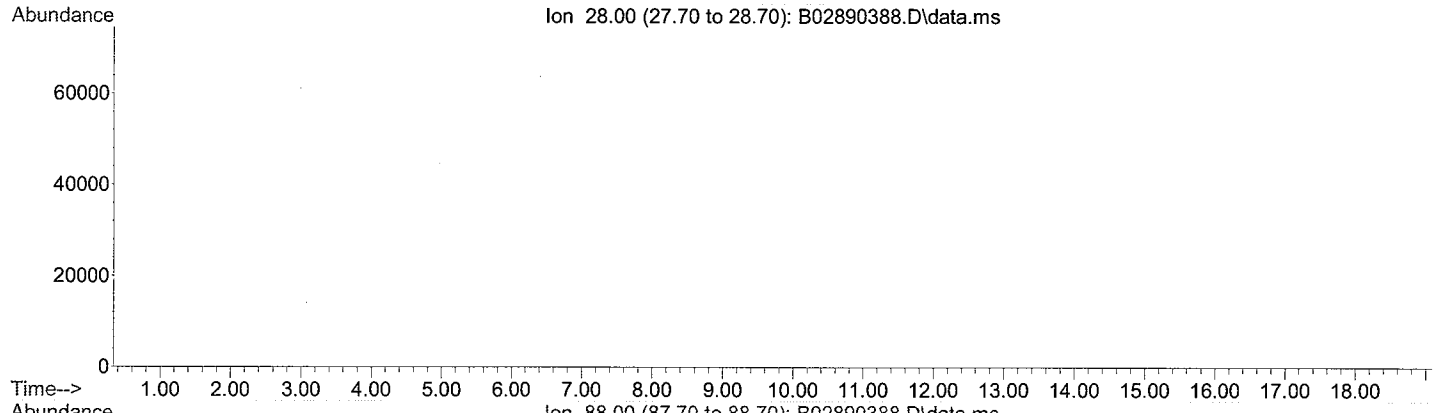
Prepared Date/Time: 11/15/10 13:53

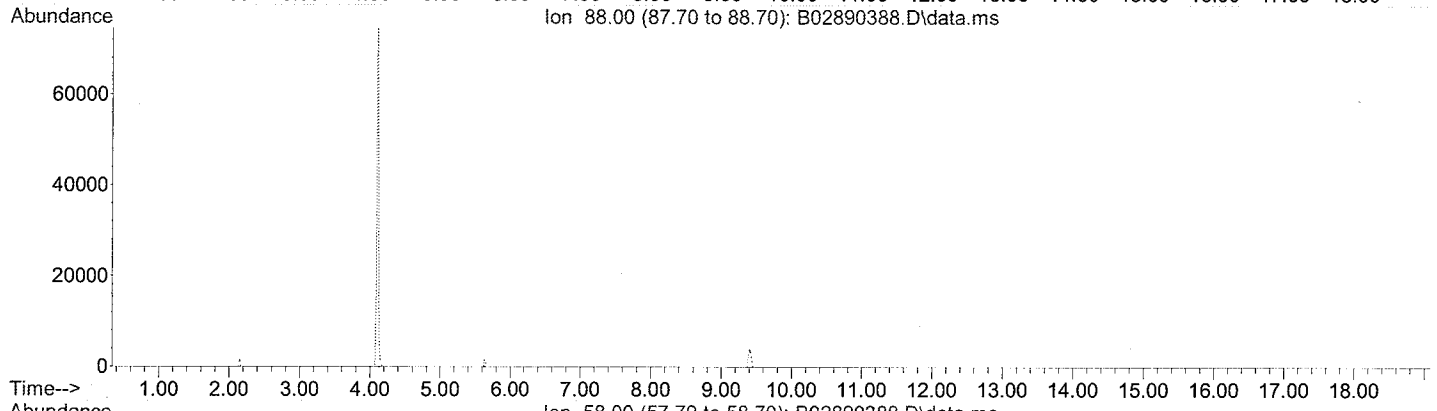
Analyzed Date/Time: 11/15/10 13:53

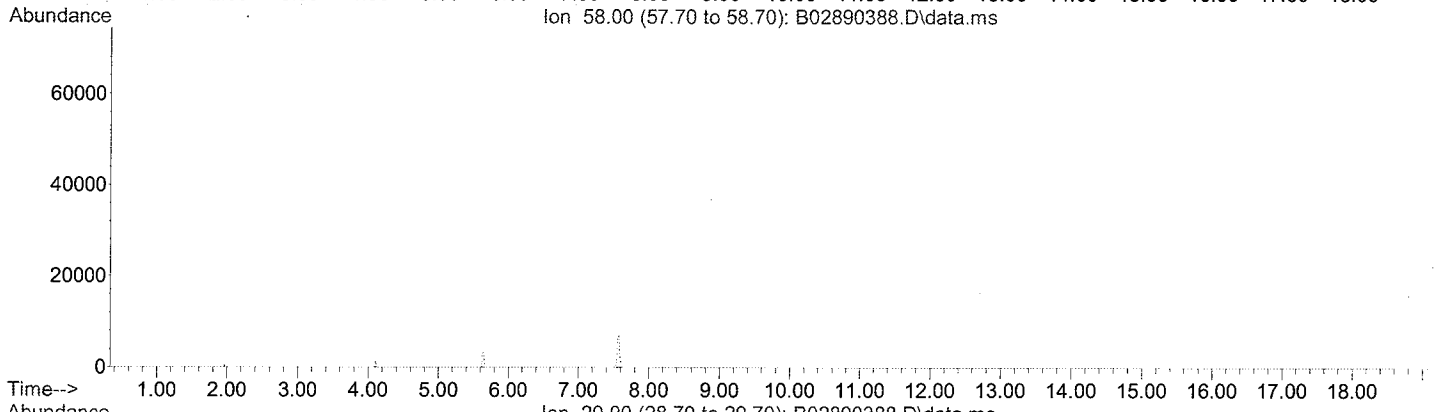
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 58.0 | 1 | ug/L |

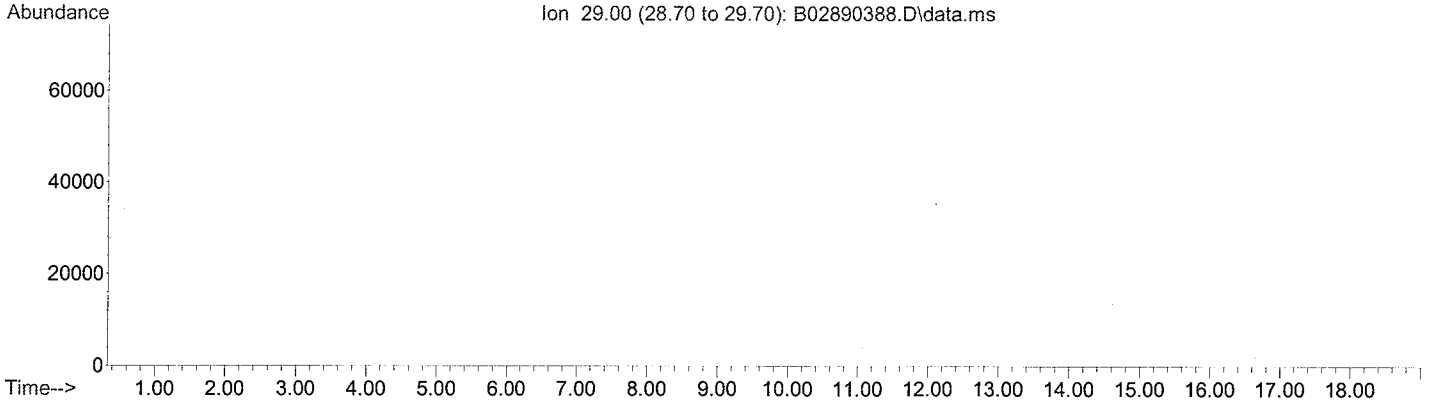
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111510\B02890388.D
Operator : MP
Acquired : 15 Nov 2010 1:53 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-13
Misc Info : 5.0 GM. TETRA TECH, SOIL
Vial Number: 10



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-025-1010

Sample Date/Time: 11/02/10 11:20

File ID: B02890350.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-14

Percent solids: 84.10

Preparation Method: EPA 5030B

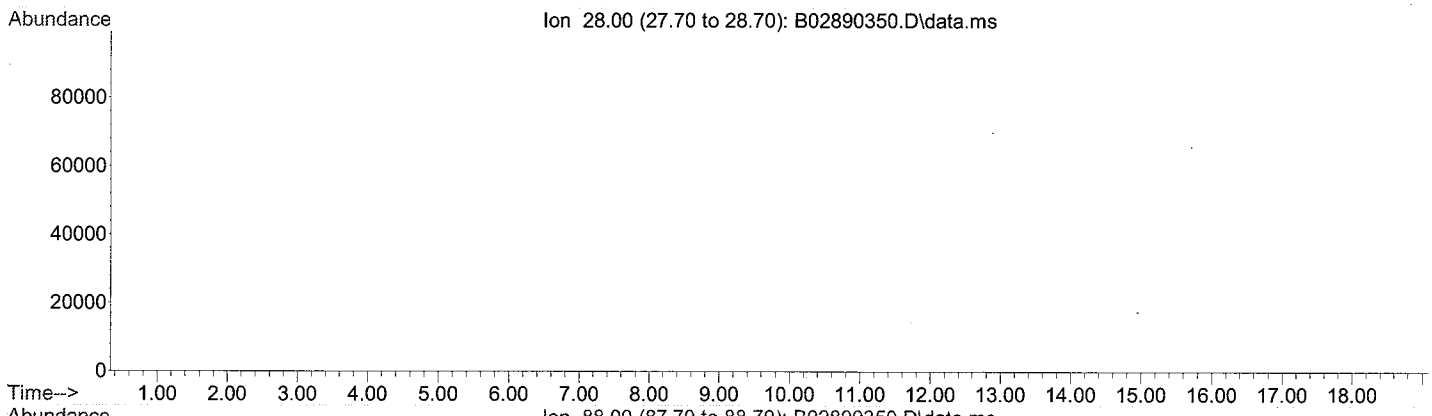
Prepared Date/Time: 11/13/10 04:29

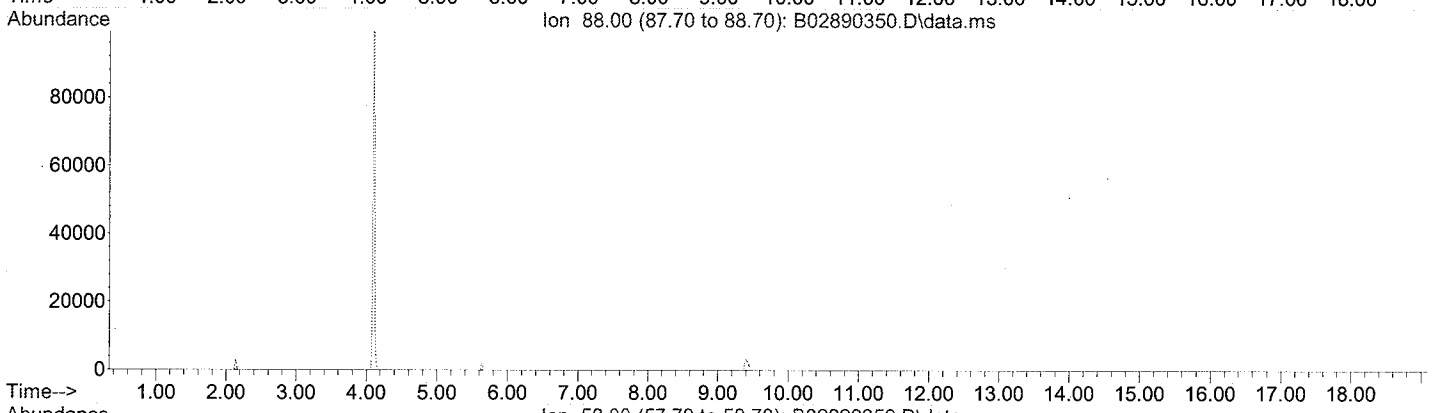
Analyzed Date/Time: 11/13/10 04:29

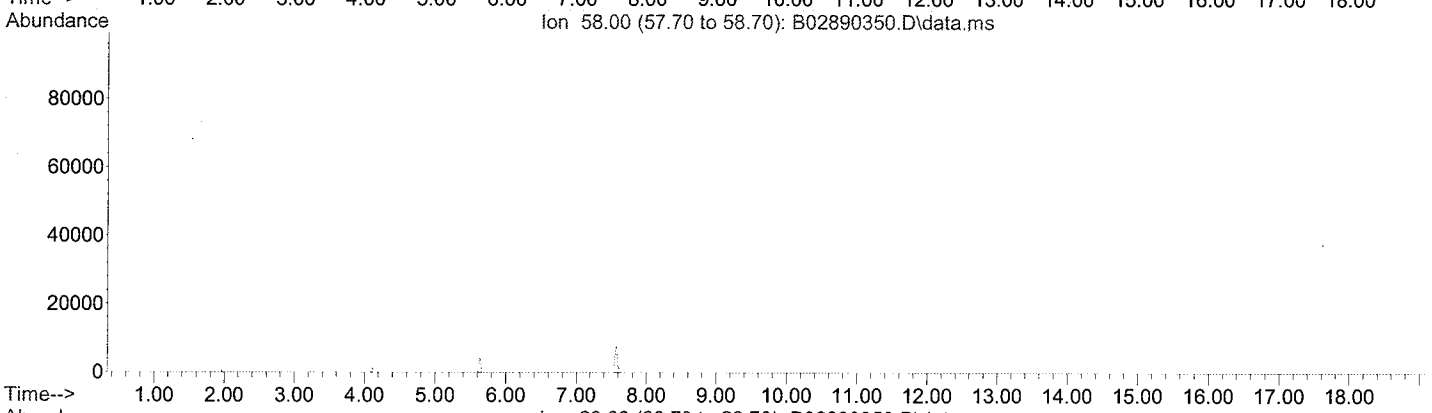
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 59.5 | 1 | ug/L |

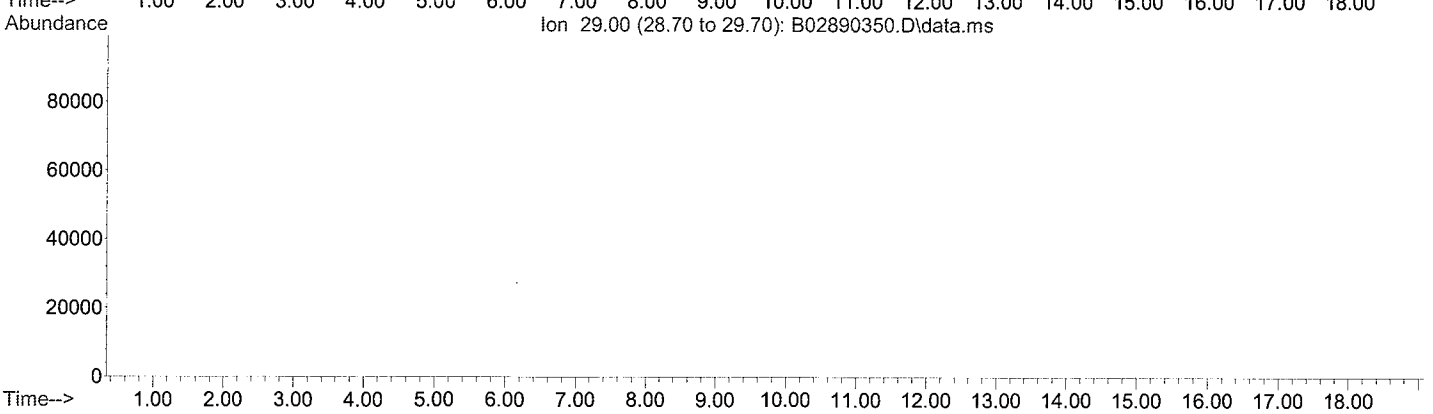
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890350.D
Operator : MP
Acquired : 13 Nov 2010 4:29 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-14
Misc Info : TETRA TECH, SOIL
Vial Number: 22



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-028-1010

Sample Date/Time: 11/02/10 13:20

File ID: B02890351.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-15

Percent solids: 85.70

Preparation Method: EPA 5030B

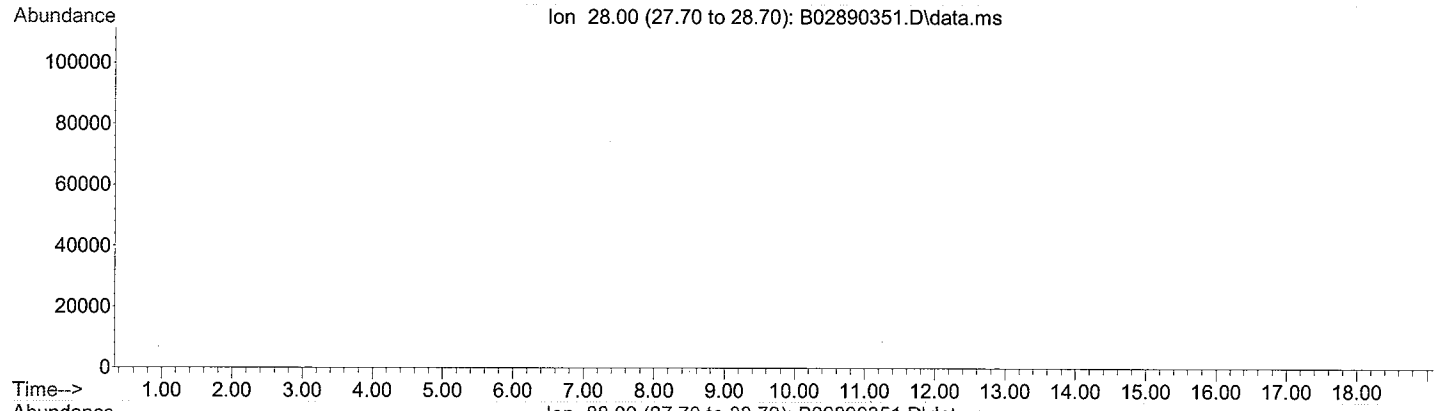
Prepared Date/Time: 11/13/10 04:55

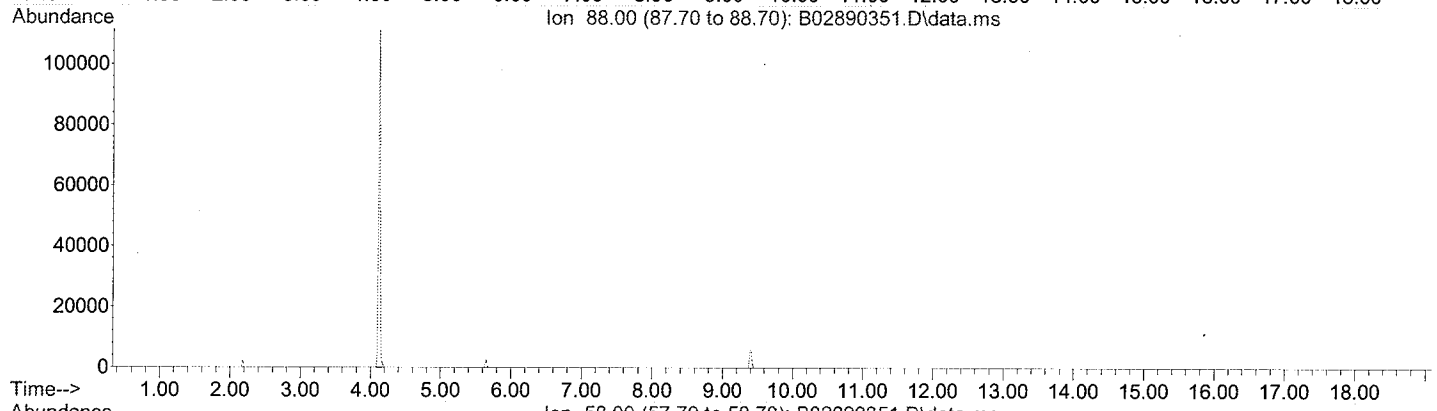
Analyzed Date/Time: 11/13/10 04:55

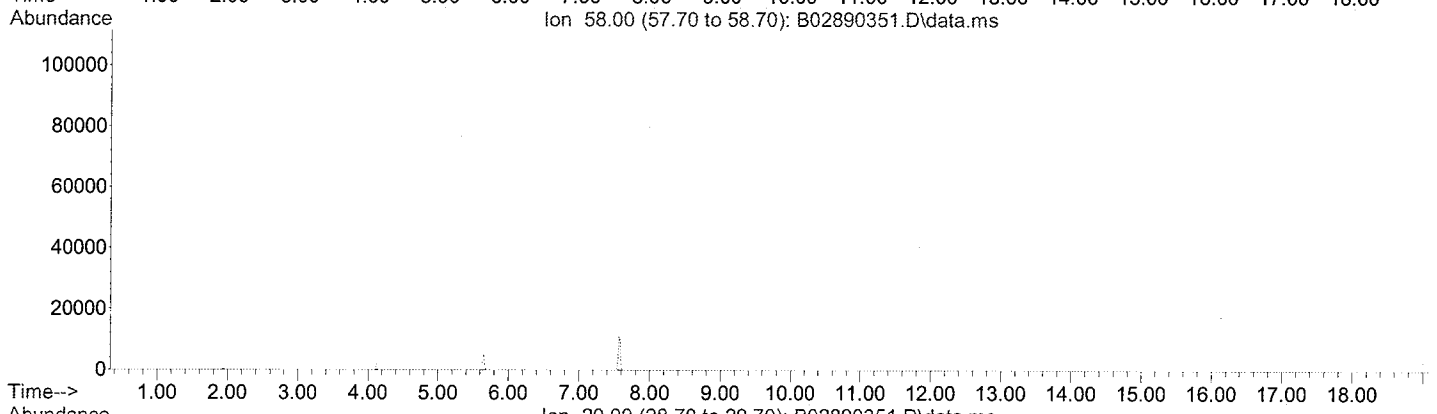
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 58.3 | 1 | ug/L |

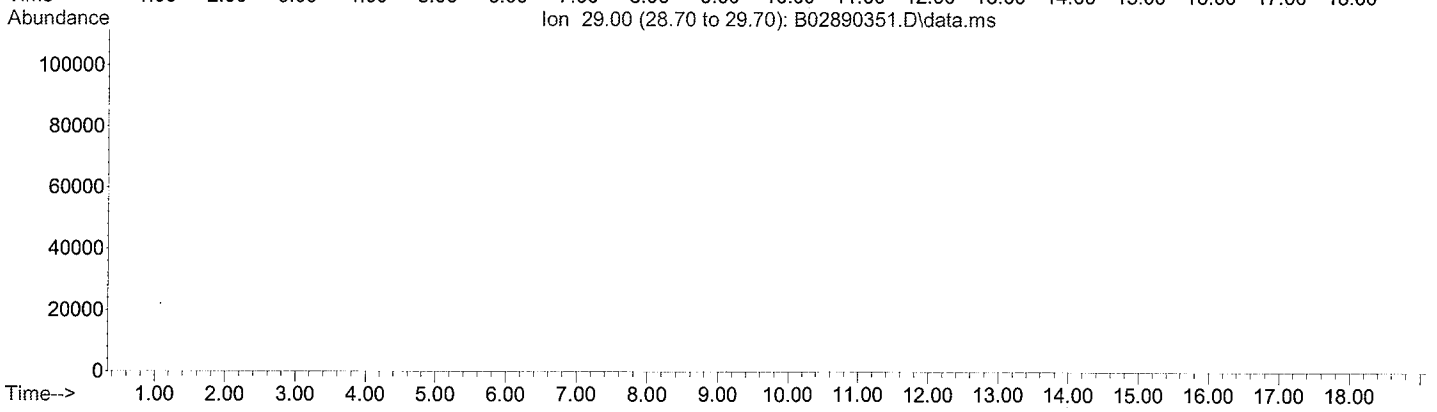
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890351.D
Operator : MP
Acquired : 13 Nov 2010 4:55 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-15
Misc Info : TETRA TECH, SOIL
Vial Number: 23



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-030-1010

Sample Date/Time: 11/02/10 12:40

File ID: B02890352.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-16

Percent solids: 87.90

Preparation Method: EPA 5030B

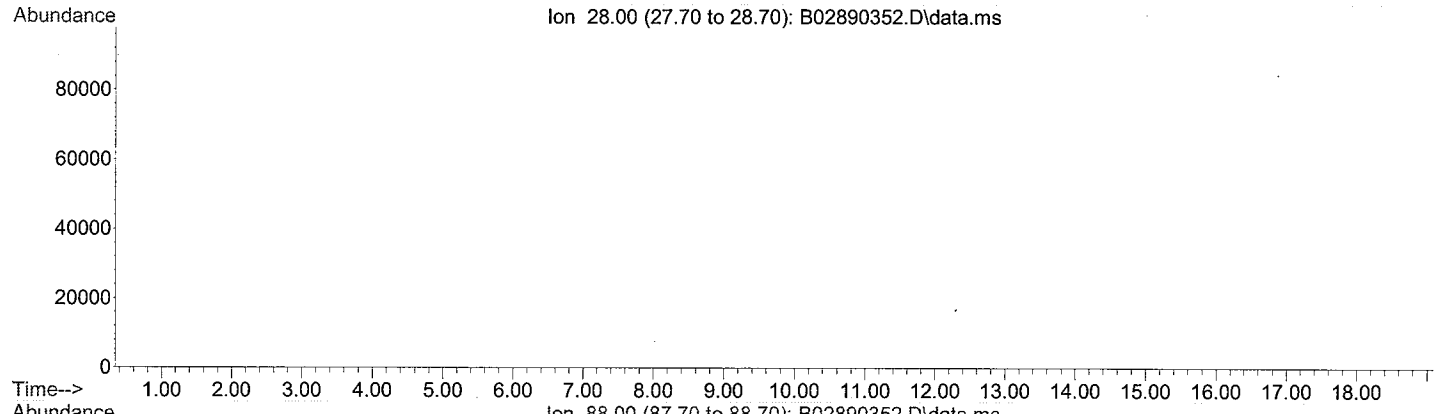
Prepared Date/Time: 11/13/10 05:22

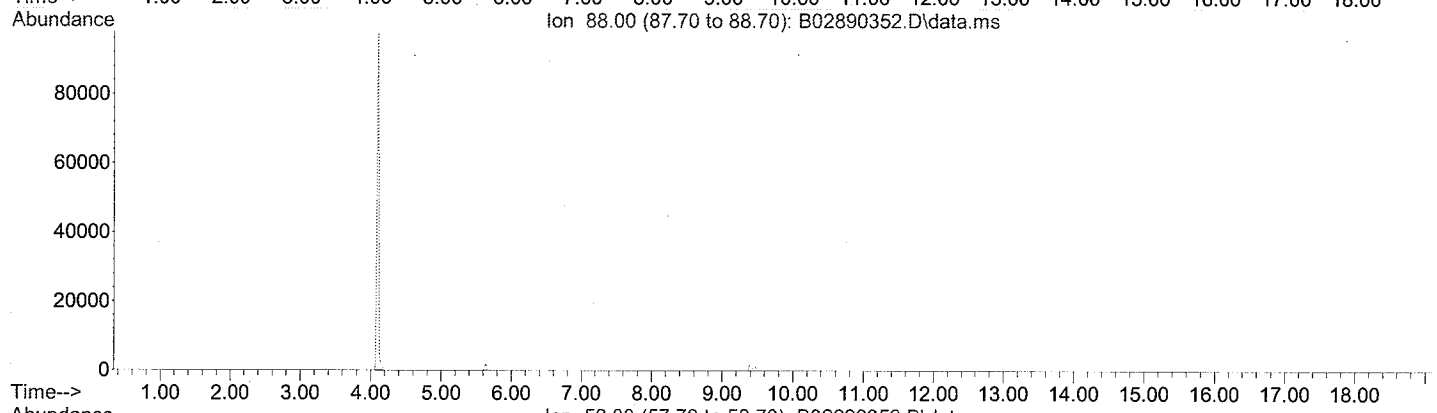
Analyzed Date/Time: 11/13/10 05:22

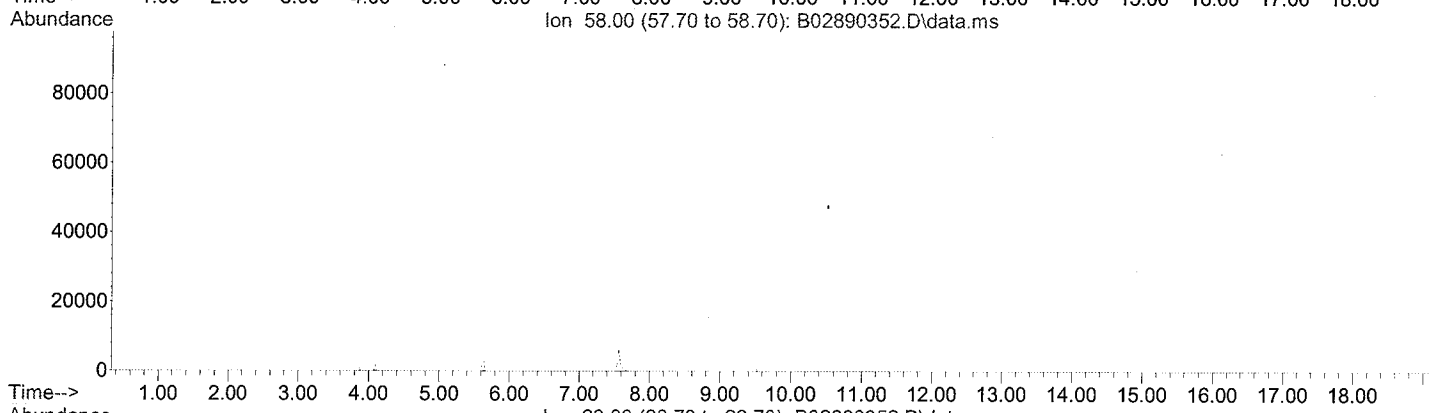
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 56.9 | 1 | ug/L |

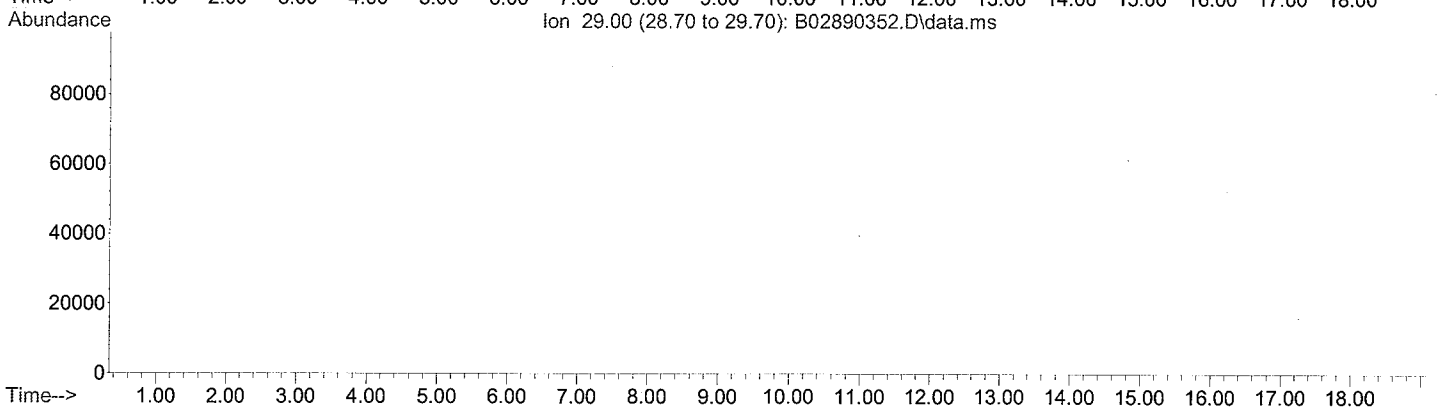
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890352.D
Operator : MP
Acquired : 13 Nov 2010 5:22 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-16
Misc Info : TETRA TECH, SOIL
Vial Number: 24



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-031-1010

Sample Date/Time: 11/02/10 11:40

File ID: B02890353.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-17

Percent solids: 87.90

Preparation Method: EPA 5030B

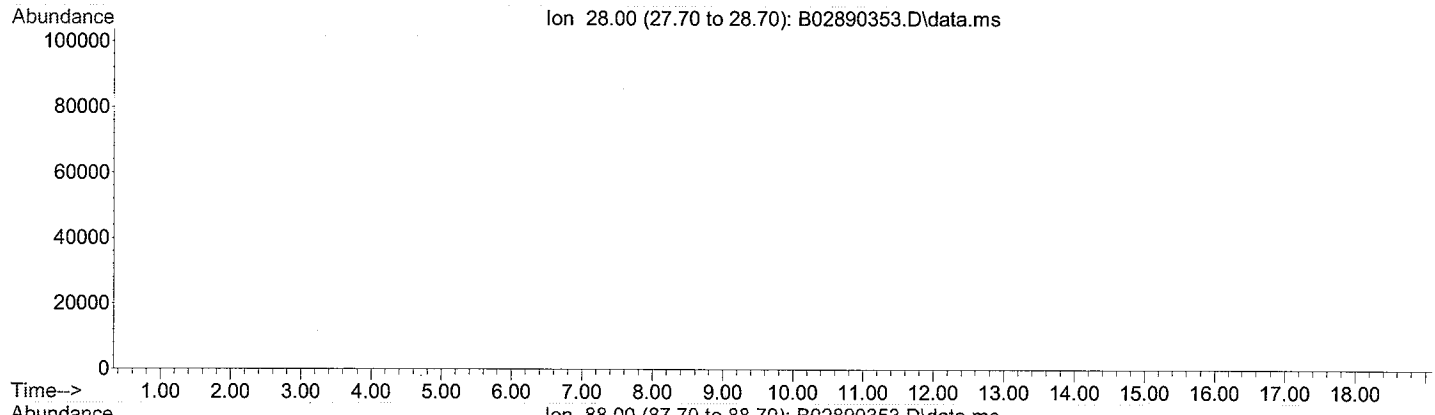
Prepared Date/Time: 11/13/10 05:48

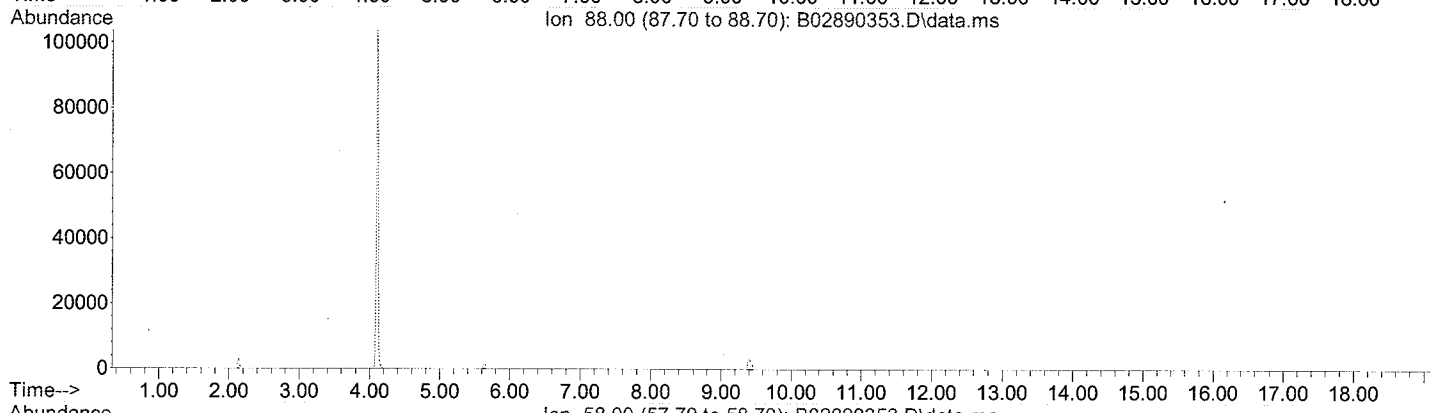
Analyzed Date/Time: 11/13/10 05:48

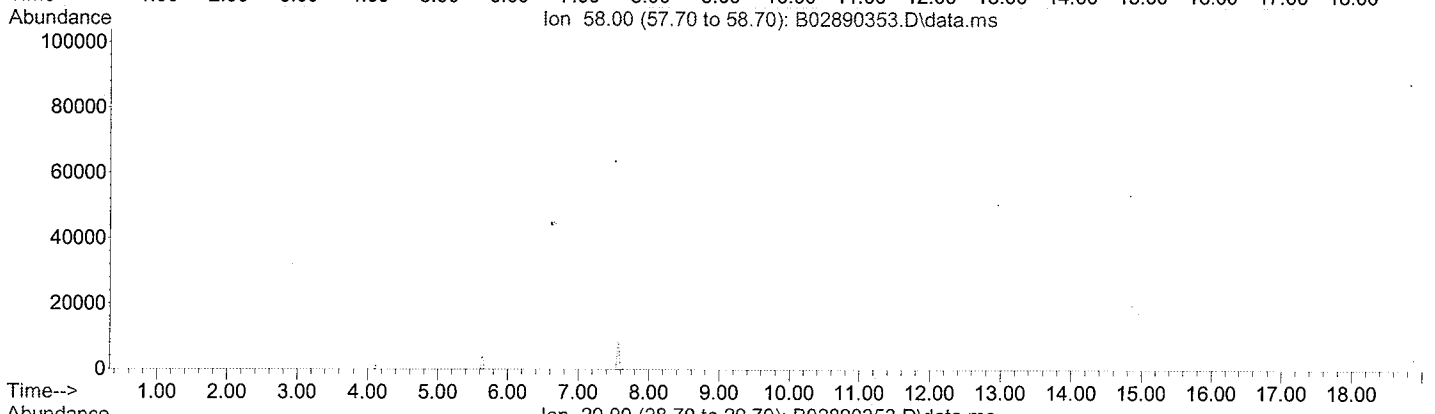
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 56.9 | 1 | ug/L |

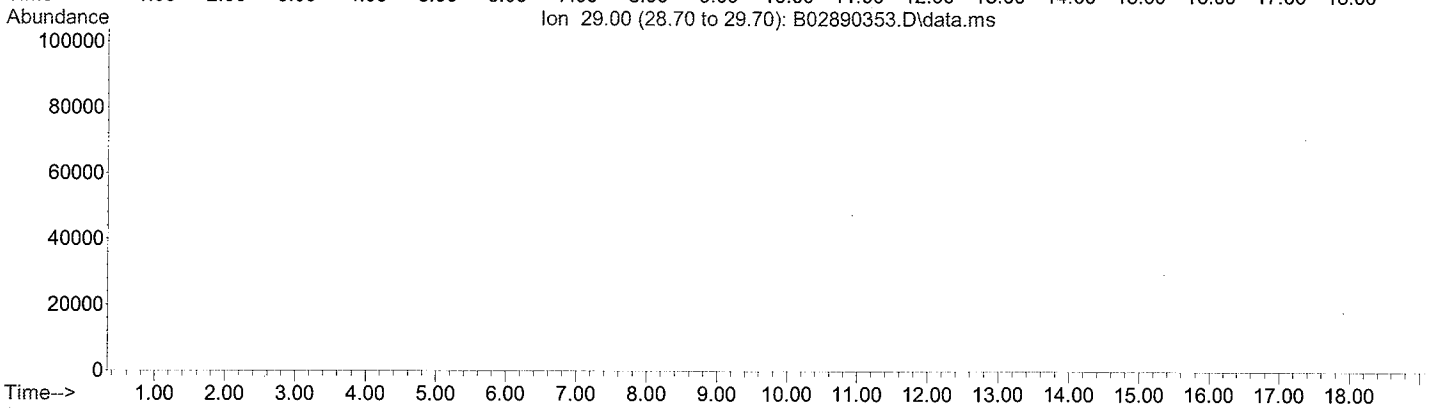
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890353.D
Operator : MP
Acquired : 13 Nov 2010 5:48 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-17
Misc Info : TETRA TECH, SOIL
Vial Number: 25



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-032-1010

Sample Date/Time: 11/02/10 12:20

File ID: B02890354.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-18

Percent solids: 81.50

Preparation Method: EPA 5030B

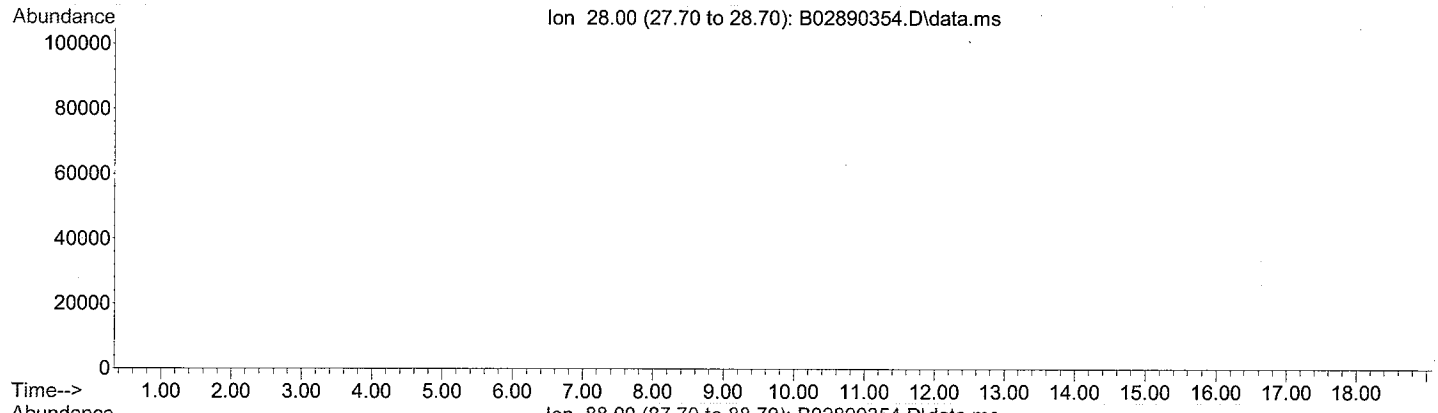
Prepared Date/Time: 11/13/10 06:15

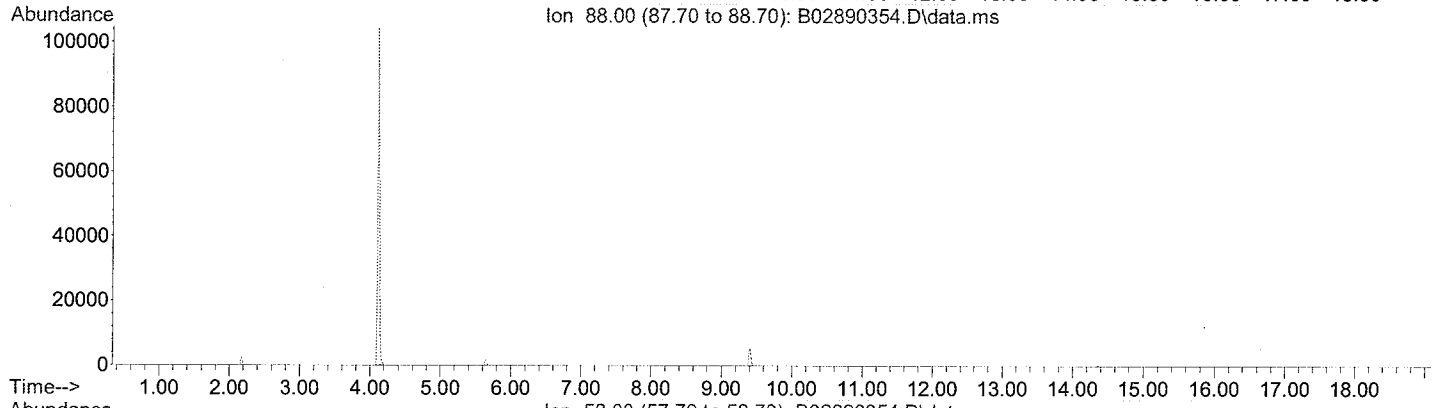
Analyzed Date/Time: 11/13/10 06:15

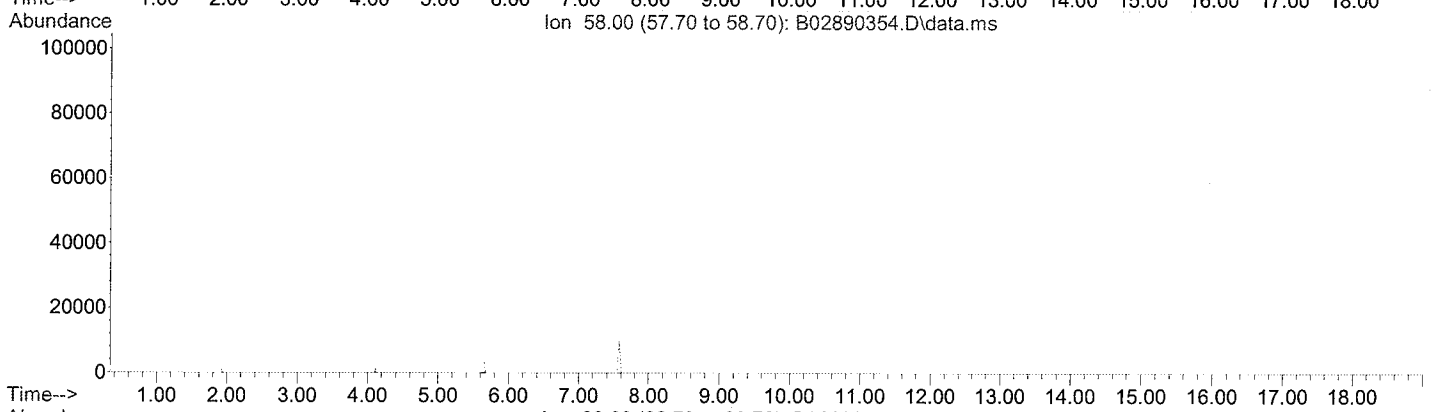
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 61.3 | 1 | ug/L |

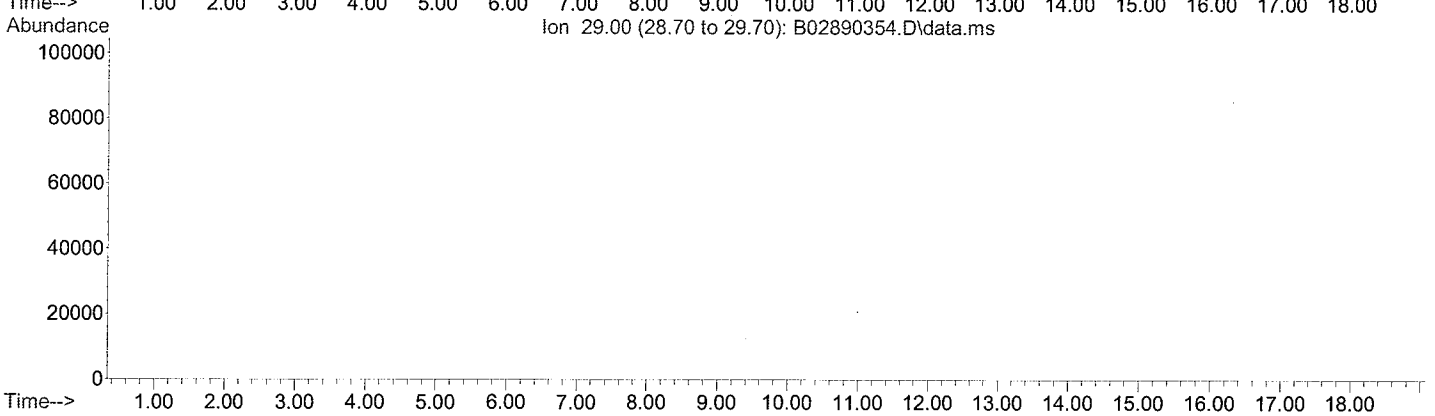
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111210\B02890354.D
Operator : MP
Acquired : 13 Nov 2010 6:15 am using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-18
Misc Info : TETRA TECH, SOIL
Vial Number: 26



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-034-1010

Sample Date/Time: 11/02/10 13:00

File ID: B02890389.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-19

Percent solids: 85.80

Preparation Method: EPA 5030B

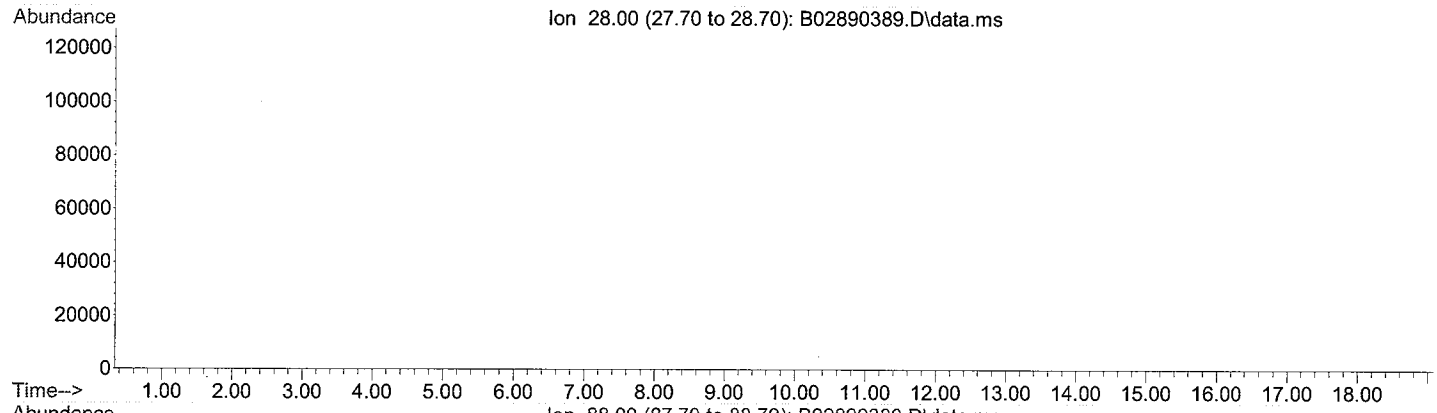
Prepared Date/Time: 11/15/10 14:20

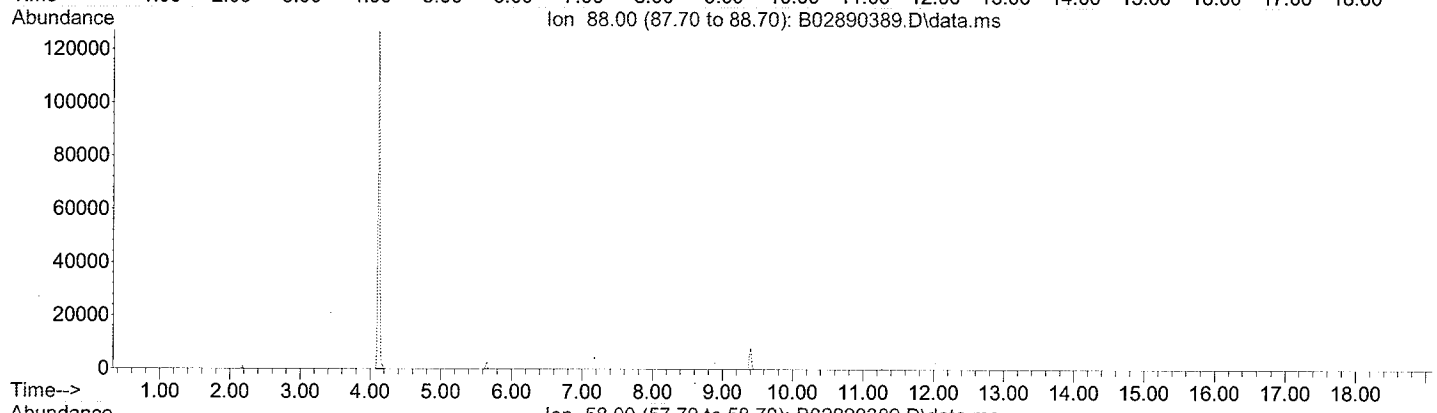
Analyzed Date/Time: 11/15/10 14:20

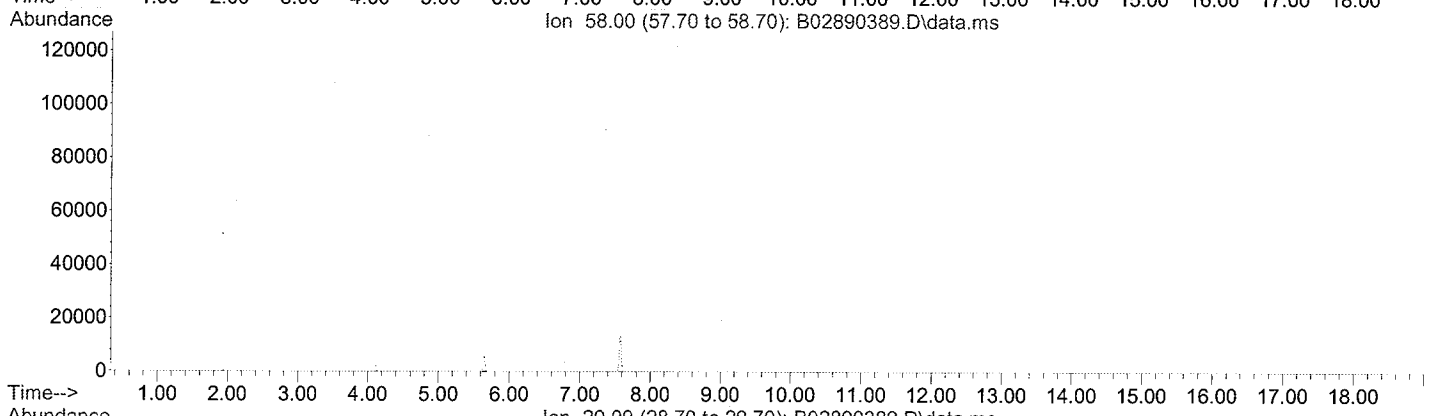
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 58.3 | 1 | ug/L |

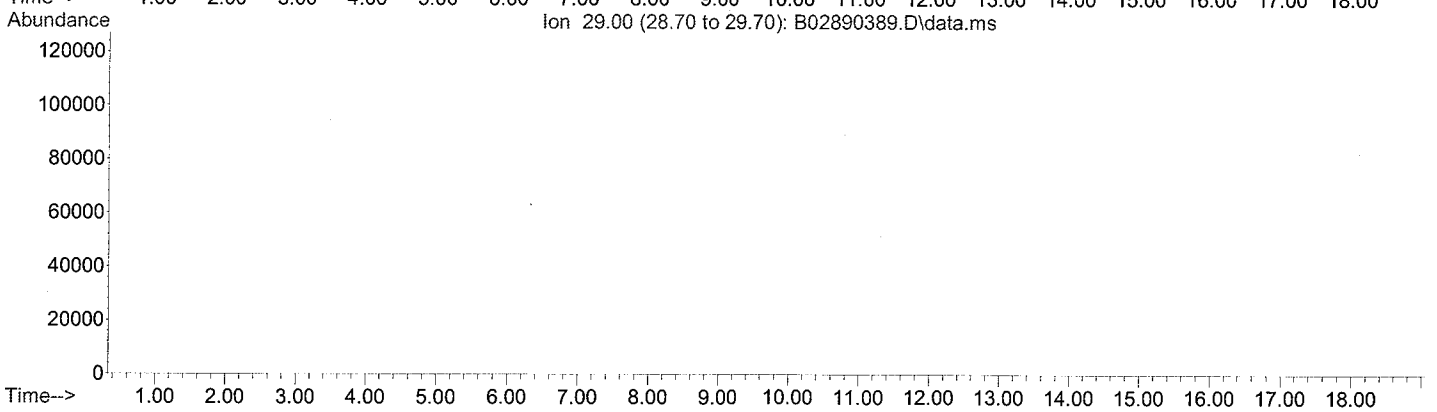
The analysis was performed by Centauri Labs.

File : H:\VOL1\GCMSDATA\B\Sequence\111510\B02890389.D
Operator : MP
Acquired : 15 Nov 2010 2:20 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-19
Misc Info : 5.0 GM. TETRA TECH, SOIL
Vial Number: 11



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-FD002-1010

Sample Date/Time: 11/02/10 00:00

File ID: B02890390.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-20

Percent solids: 87.70

Preparation Method: EPA 5030B

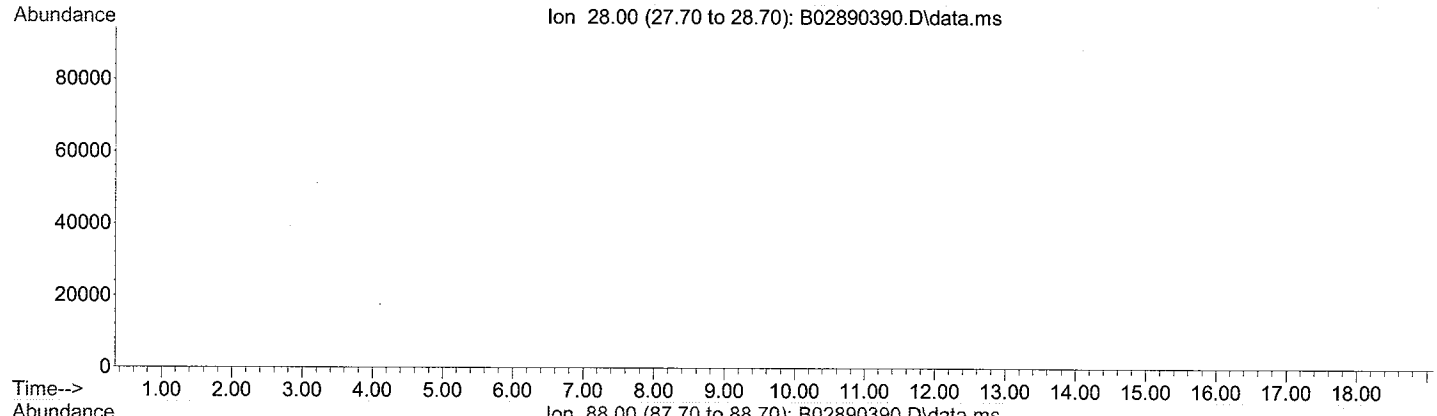
Prepared Date/Time: 11/15/10 14:47

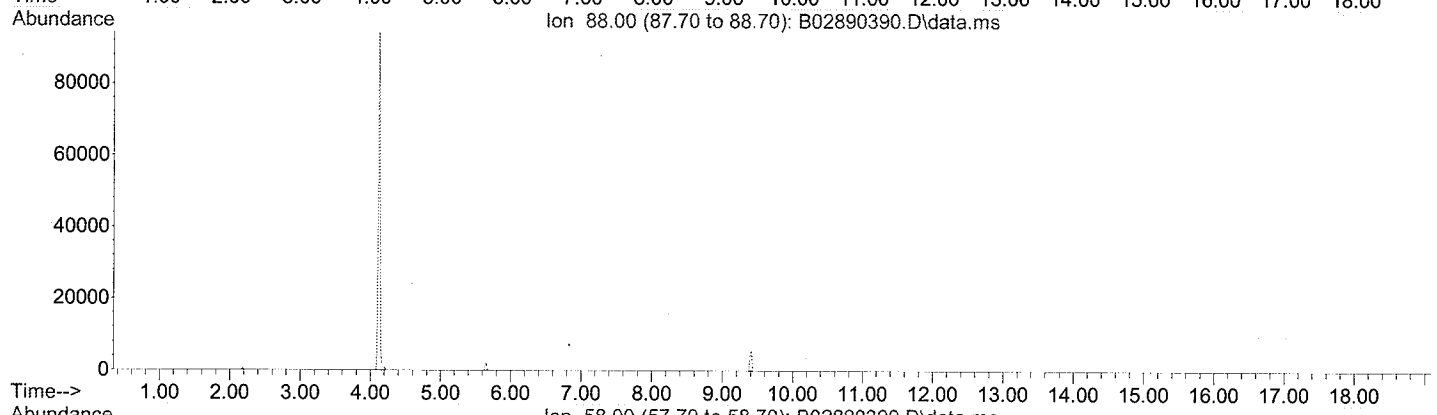
Analyzed Date/Time: 11/15/10 14:47

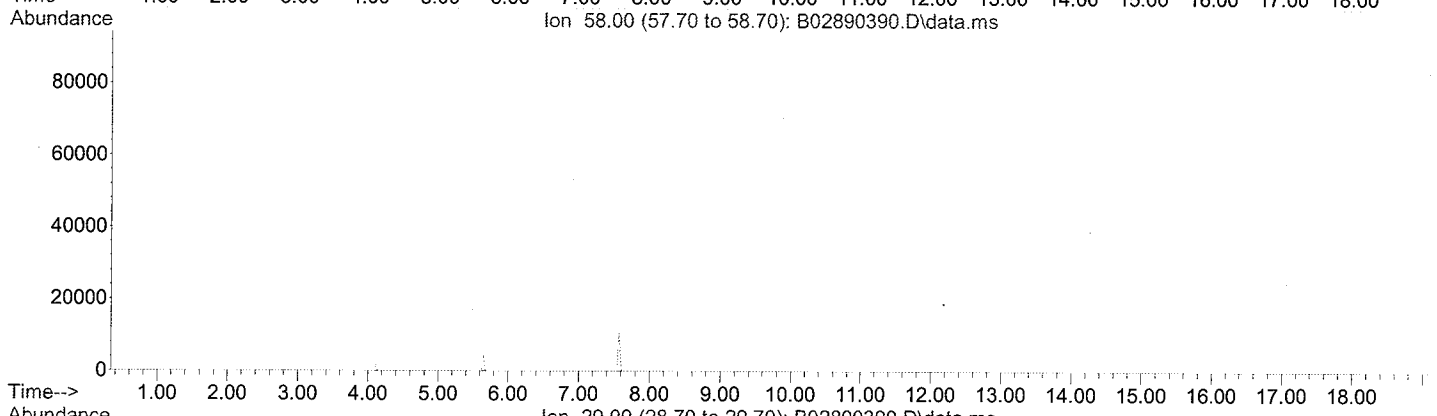
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 57.0 | 1 | ug/L |

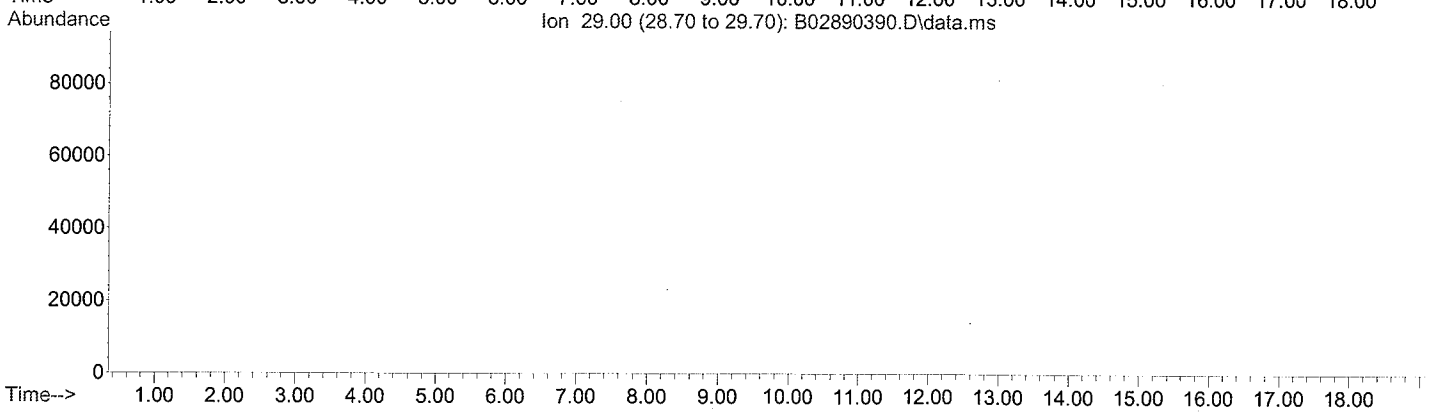
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111510\B02890390.D
Operator : MP
Acquired : 15 Nov 2010 2:47 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-20
Misc Info : 5.0 GM. TETRA TECH, SOIL
Vial Number: 12



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-FD001-1010

Sample Date/Time: 11/02/10 00:00

File ID: B02890391.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011013-21

Percent solids: 80.40

Preparation Method: EPA 5030B

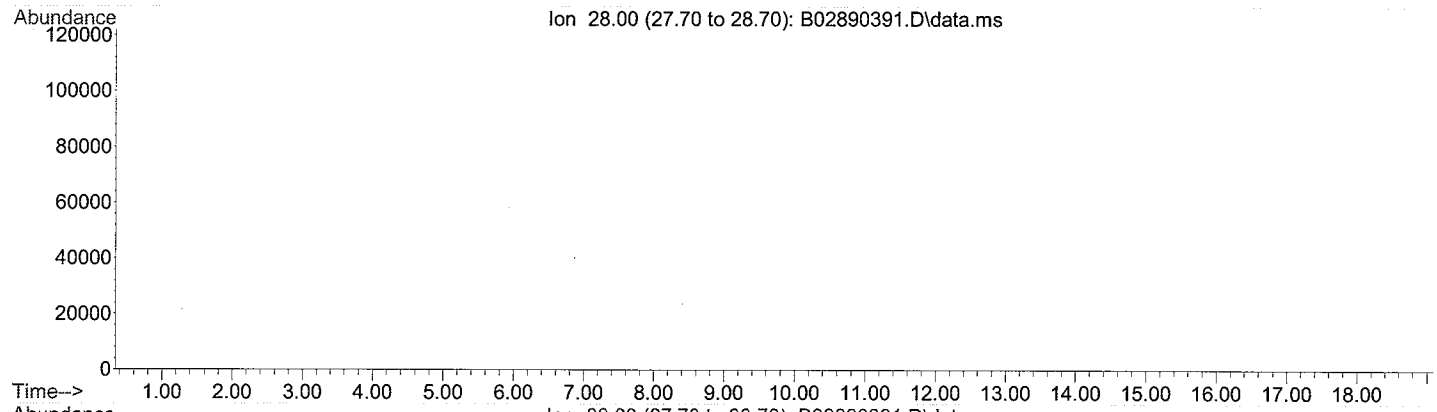
Prepared Date/Time: 11/15/10 15:13

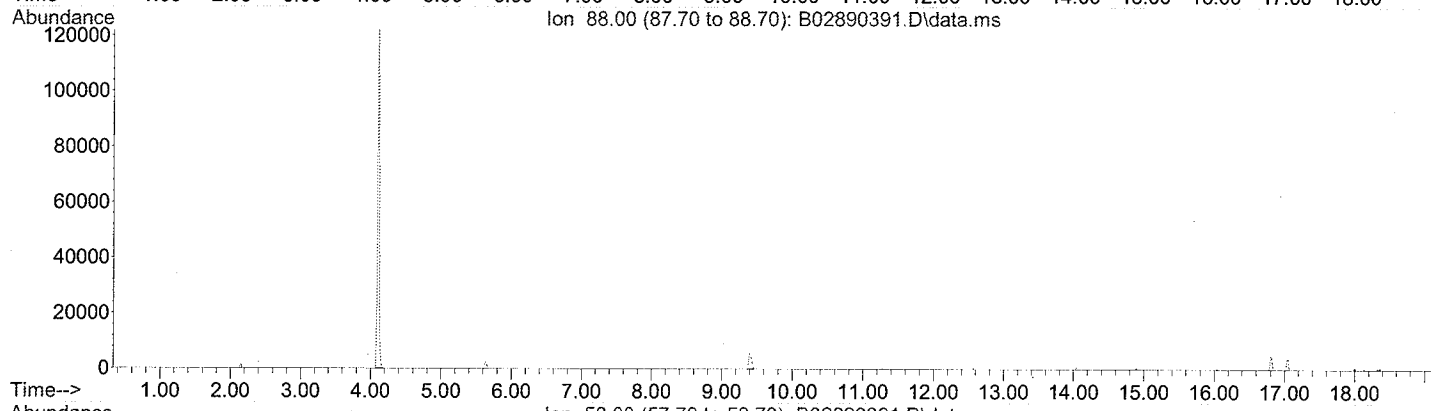
Analyzed Date/Time: 11/15/10 15:13

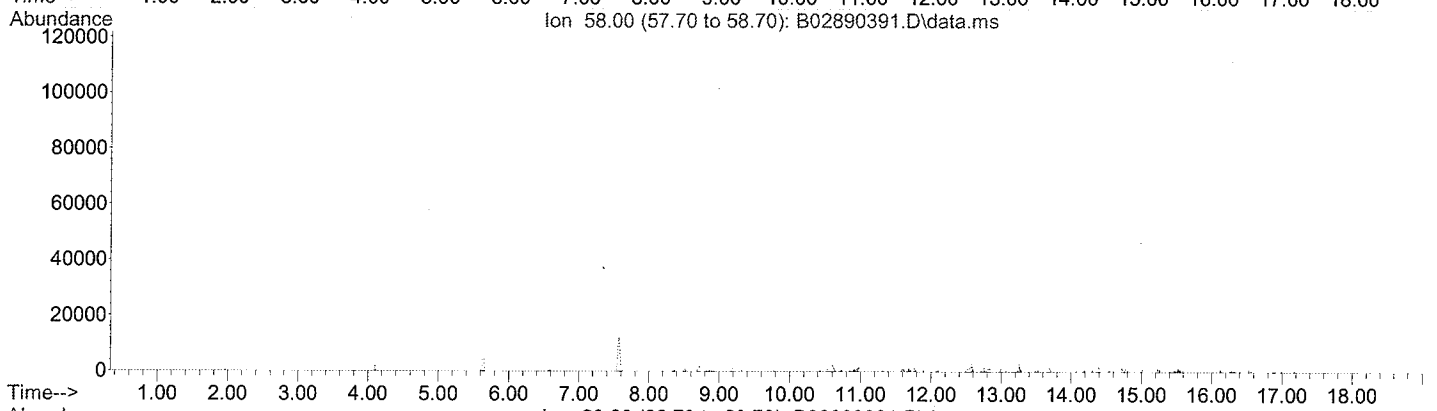
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 62.2 | 1 | ug/L |

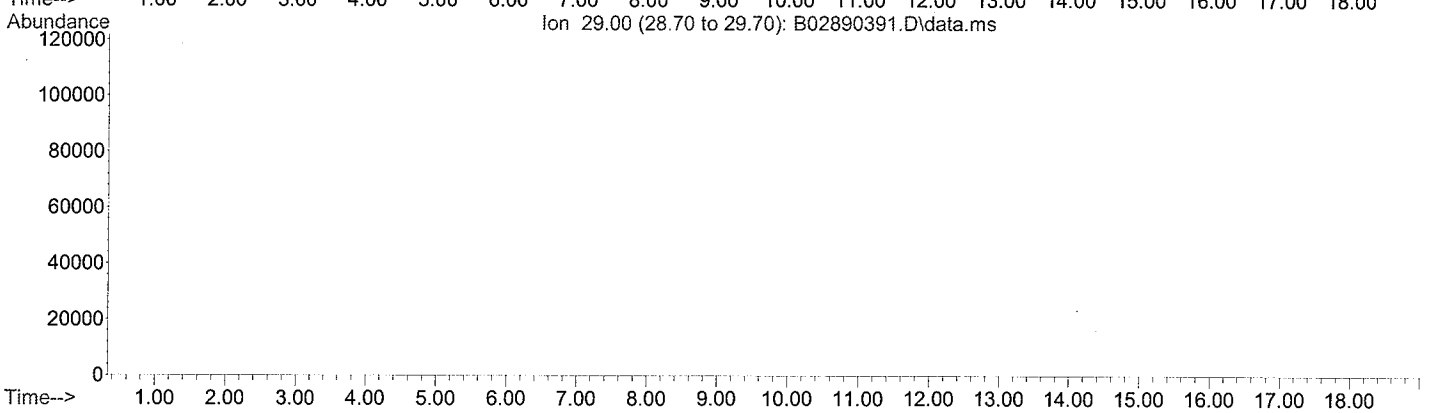
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111510\B02890391.D
Operator : MP
Acquired : 15 Nov 2010 3:13 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011013-21
Misc Info : 5.0 GM. TETRA TECH, SOIL
Vial Number: 13



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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 26.1 | | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Acenaphthene | 83-32-9 | 5.02 | | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Acenaphthylene | 208-96-8 | 2.98 | | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Anthracene | 120-12-7 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Chrysene | 218-01-9 | 1.96 | J | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Fluoranthene | 206-44-0 | 1.45 | J | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Fluorene | 86-73-7 | 8.56 | | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Naphthalene | 91-20-3 | 3.05 | | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Phenanthrene | 85-01-8 | 21.9 | | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |
| Pyrene | 129-00-0 | 3.30 | | 0.692 | 2.07 | 1 | ug/Kg dry | 11/16/10 0:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 97 % | 45-105 | 1 | 11/16/10 0:32 |
| Nitrobenzene-d5 | 4165-60-0 | 103 % | 35-100 | 1 | 11/16/10 0:32 |
| Terphenyl-d14 | 1718-51-0 | 141 % | 30-125 | 1 | 11/16/10 0:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-20
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Acenaphthene | 83-32-9 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Anthracene | 120-12-7 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Chrysene | 218-01-9 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Fluoranthene | 206-44-0 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Fluorene | 86-73-7 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Naphthalene | 91-20-3 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Phenanthrene | 85-01-8 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |
| Pyrene | 129-00-0 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/16/10 20:29 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 45-105 | 1 | 11/16/10 20:29 |
| Nitrobenzene-d5 | 4165-60-0 | 82 % | 35-100 | 1 | 11/16/10 20:29 |
| Terphenyl-d14 | 1718-51-0 | 153 % | 30-125 | 1 | 11/16/10 20:29 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-034-1010
Sample Date/Time: 11/02/10 13:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-19
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Acenaphthene | 83-32-9 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Anthracene | 120-12-7 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Chrysene | 218-01-9 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Fluoranthene | 206-44-0 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Fluorene | 86-73-7 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Naphthalene | 91-20-3 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Phenanthrene | 85-01-8 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |
| Pyrene | 129-00-0 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 20:05 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 90 % | 45-105 | 1 | 11/16/10 20:05 |
| Nitrobenzene-d5 | 4165-60-0 | 86 % | 35-100 | 1 | 11/16/10 20:05 |
| Terphenyl-d14 | 1718-51-0 | 151 % | 30-125 | 1 | 11/16/10 20:05 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-032-1010
Sample Date/Time: 11/02/10 12:20
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-18
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Acenaphthene | 83-32-9 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Anthracene | 120-12-7 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Chrysene | 218-01-9 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Fluoranthene | 206-44-0 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Fluorene | 86-73-7 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Naphthalene | 91-20-3 | 1.89 | J | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Phenanthrene | 85-01-8 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |
| Pyrene | 129-00-0 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/16/10 19:41 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 89 % | 45-105 | 1 | 11/16/10 19:41 |
| Nitrobenzene-d5 | 4165-60-0 | 86 % | 35-100 | 1 | 11/16/10 19:41 |
| Terphenyl-d14 | 1718-51-0 | 160 % | 30-125 | 1 | 11/16/10 19:41 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-031-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-17
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Acenaphthene | 83-32-9 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Anthracene | 120-12-7 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Chrysene | 218-01-9 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Fluoranthene | 206-44-0 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Fluorene | 86-73-7 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Naphthalene | 91-20-3 | 1.87 | J | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Phenanthrene | 85-01-8 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |
| Pyrene | 129-00-0 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 19:16 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 89 % | 45-105 | 1 | 11/16/10 19:16 |
| Nitrobenzene-d5 | 4165-60-0 | 88 % | 35-100 | 1 | 11/16/10 19:16 |
| Terphenyl-d14 | 1718-51-0 | 152 % | 30-125 | 1 | 11/16/10 19:16 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-030-1010
Sample Date/Time: 11/02/10 12:40
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-16
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Acenaphthene | 83-32-9 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Anthracene | 120-12-7 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Chrysene | 218-01-9 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Fluoranthene | 206-44-0 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Fluorene | 86-73-7 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Naphthalene | 91-20-3 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Phenanthrene | 85-01-8 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |
| Pyrene | 129-00-0 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 18:52 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 85 % | 45-105 | 1 | 11/16/10 18:52 |
| Nitrobenzene-d5 | 4165-60-0 | 82 % | 35-100 | 1 | 11/16/10 18:52 |
| Terphenyl-d14 | 1718-51-0 | 147 % | 30-125 | 1 | 11/16/10 18:52 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-028-1010
Sample Date/Time: 11/02/10 13:20
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-15
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Acenaphthene | 83-32-9 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Anthracene | 120-12-7 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Chrysene | 218-01-9 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Fluoranthene | 206-44-0 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Fluorene | 86-73-7 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Naphthalene | 91-20-3 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Phenanthrene | 85-01-8 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |
| Pyrene | 129-00-0 | BQL | U | 0.648 | 1.94 | 1 | ug/Kg dry | 11/16/10 18:28 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 91 % | 45-105 | 1 | 11/16/10 18:28 |
| Nitrobenzene-d5 | 4165-60-0 | 85 % | 35-100 | 1 | 11/16/10 18:28 |
| Terphenyl-d14 | 1718-51-0 | 159 % | 30-125 | 1 | 11/16/10 18:28 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-025-1010
Sample Date/Time: 11/02/10 11:20
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-14
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Acenaphthene | 83-32-9 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Anthracene | 120-12-7 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Chrysene | 218-01-9 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Fluoranthene | 206-44-0 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Fluorene | 86-73-7 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Naphthalene | 91-20-3 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Phenanthrene | 85-01-8 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |
| Pyrene | 129-00-0 | BQL | U | 0.661 | 1.98 | 1 | ug/Kg dry | 11/16/10 18:03 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 83 % | 45-105 | 1 | 11/16/10 18:03 |
| Nitrobenzene-d5 | 4165-60-0 | 84 % | 35-100 | 1 | 11/16/10 18:03 |
| Terphenyl-d14 | 1718-51-0 | 146 % | 30-125 | 1 | 11/16/10 18:03 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-023-1010
Sample Date/Time: 11/02/10 13:40
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-13
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Acenaphthene | 83-32-9 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Anthracene | 120-12-7 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Benzo[g,h,i]perylene | 191-24-2 | 1.44 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Chrysene | 218-01-9 | 1.52 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Fluoranthene | 206-44-0 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Fluorene | 86-73-7 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Naphthalene | 91-20-3 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Phenanthrene | 85-01-8 | 1.24 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |
| Pyrene | 129-00-0 | 1.74 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 17:39 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 96 % | 45-105 | 1 | 11/16/10 17:39 |
| Nitrobenzene-d5 | 4165-60-0 | 101 % | 35-100 | 1 | 11/16/10 17:39 |
| Terphenyl-d14 | 1718-51-0 | 144 % | 30-125 | 1 | 11/16/10 17:39 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Acenaphthene | 83-32-9 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Anthracene | 120-12-7 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Benzo[g,h,i]perylene | 191-24-2 | 1.25 | J | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Chrysene | 218-01-9 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Fluoranthene | 206-44-0 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Fluorene | 86-73-7 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Naphthalene | 91-20-3 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Phenanthrene | 85-01-8 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |
| Pyrene | 129-00-0 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 17:15 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 94 % | 45-105 | 1 | 11/16/10 17:15 |
| Nitrobenzene-d5 | 4165-60-0 | 105 % | 35-100 | 1 | 11/16/10 17:15 |
| Terphenyl-d14 | 1718-51-0 | 136 % | 30-125 | 1 | 11/16/10 17:15 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 4.24 | | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Acenaphthene | 83-32-9 | 6.14 | | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Acenaphthylene | 208-96-8 | 1.15 | J | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Anthracene | 120-12-7 | BQL | U | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Benzo[a]anthracene | 56-55-3 | 0.714 | J | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Benzo[g,h,i]perylene | 191-24-2 | 1.72 | J | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Chrysene | 218-01-9 | 1.98 | | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Fluoranthene | 206-44-0 | 1.47 | J | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Fluorene | 86-73-7 | 1.95 | | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Naphthalene | 91-20-3 | BQL | U | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Phenanthrene | 85-01-8 | 9.14 | | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |
| Pyrene | 129-00-0 | 3.47 | | 0.638 | 1.91 | 1 | ug/Kg dry | 11/16/10 16:50 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 99 % | 45-105 | 1 | 11/16/10 16:50 |
| Nitrobenzene-d5 | 4165-60-0 | 107 % | 35-100 | 1 | 11/16/10 16:50 |
| Terphenyl-d14 | 1718-51-0 | 149 % | 30-125 | 1 | 11/16/10 16:50 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-019-1010
Sample Date/Time: 11/02/10 10:20
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-10
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Acenaphthene | 83-32-9 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Anthracene | 120-12-7 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Chrysene | 218-01-9 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Fluoranthene | 206-44-0 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Fluorene | 86-73-7 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Naphthalene | 91-20-3 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Phenanthrene | 85-01-8 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |
| Pyrene | 129-00-0 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/16/10 16:22 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 98 % | 45-105 | 1 | 11/16/10 16:22 |
| Nitrobenzene-d5 | 4165-60-0 | 99 % | 35-100 | 1 | 11/16/10 16:22 |
| Terphenyl-d14 | 1718-51-0 | 156 % | 30-125 | 1 | 11/16/10 16:22 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-017-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-09
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Acenaphthene | 83-32-9 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Anthracene | 120-12-7 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Benzo[g,h,i]perylene | 191-24-2 | 0.997 | J | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Chrysene | 218-01-9 | 1.23 | J | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Fluoranthene | 206-44-0 | 0.671 | J | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Fluorene | 86-73-7 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Naphthalene | 91-20-3 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Phenanthrene | 85-01-8 | 1.45 | J | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |
| Pyrene | 129-00-0 | 1.40 | J | 0.632 | 1.90 | 1 | ug/Kg dry | 11/16/10 15:58 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 103 % | 45-105 | 1 | 11/16/10 15:58 |
| Nitrobenzene-d5 | 4165-60-0 | 105 % | 35-100 | 1 | 11/16/10 15:58 |
| Terphenyl-d14 | 1718-51-0 | 153 % | 30-125 | 1 | 11/16/10 15:58 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-014-1010
Sample Date/Time: 11/02/10 14:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-08
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Acenaphthene | 83-32-9 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Anthracene | 120-12-7 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Chrysene | 218-01-9 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Fluoranthene | 206-44-0 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Fluorene | 86-73-7 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Naphthalene | 91-20-3 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Phenanthrene | 85-01-8 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |
| Pyrene | 129-00-0 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/16/10 15:33 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 94 % | 45-105 | 1 | 11/16/10 15:33 |
| Nitrobenzene-d5 | 4165-60-0 | 102 % | 35-100 | 1 | 11/16/10 15:33 |
| Terphenyl-d14 | 1718-51-0 | 142 % | 30-125 | 1 | 11/16/10 15:33 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-012-1010
Sample Date/Time: 11/02/10 12:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-07
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Acenaphthene | 83-32-9 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Anthracene | 120-12-7 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Chrysene | 218-01-9 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Fluoranthene | 206-44-0 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Fluorene | 86-73-7 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Naphthalene | 91-20-3 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Phenanthrene | 85-01-8 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |
| Pyrene | 129-00-0 | BQL | U | 0.665 | 1.99 | 1 | ug/Kg dry | 11/16/10 15:09 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 45-105 | 1 | 11/16/10 15:09 |
| Nitrobenzene-d5 | 4165-60-0 | 93 % | 35-100 | 1 | 11/16/10 15:09 |
| Terphenyl-d14 | 1718-51-0 | 130 % | 30-125 | 1 | 11/16/10 15:09 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-011-1010
Sample Date/Time: 11/02/10 09:40
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-06
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Acenaphthene | 83-32-9 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Anthracene | 120-12-7 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Chrysene | 218-01-9 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Fluoranthene | 206-44-0 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Fluorene | 86-73-7 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Naphthalene | 91-20-3 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Phenanthrene | 85-01-8 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |
| Pyrene | 129-00-0 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/16/10 14:44 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 97 % | 45-105 | 1 | 11/16/10 14:44 |
| Nitrobenzene-d5 | 4165-60-0 | 101 % | 35-100 | 1 | 11/16/10 14:44 |
| Terphenyl-d14 | 1718-51-0 | 141 % | 30-125 | 1 | 11/16/10 14:44 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-007-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-05
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Acenaphthene | 83-32-9 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Anthracene | 120-12-7 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Chrysene | 218-01-9 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Fluoranthene | 206-44-0 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Fluorene | 86-73-7 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Naphthalene | 91-20-3 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Phenanthrene | 85-01-8 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |
| Pyrene | 129-00-0 | BQL | U | 0.633 | 1.90 | 1 | ug/Kg dry | 11/16/10 14:20 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 92 % | 45-105 | 1 | 11/16/10 14:20 |
| Nitrobenzene-d5 | 4165-60-0 | 97 % | 35-100 | 1 | 11/16/10 14:20 |
| Terphenyl-d14 | 1718-51-0 | 139 % | 30-125 | 1 | 11/16/10 14:20 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-005-1010
Sample Date/Time: 11/02/10 09:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-04
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Acenaphthene | 83-32-9 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Anthracene | 120-12-7 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Chrysene | 218-01-9 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Fluoranthene | 206-44-0 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Fluorene | 86-73-7 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Naphthalene | 91-20-3 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Phenanthrene | 85-01-8 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |
| Pyrene | 129-00-0 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/16/10 13:55 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 87 % | 45-105 | 1 | 11/16/10 13:55 |
| Nitrobenzene-d5 | 4165-60-0 | 89 % | 35-100 | 1 | 11/16/10 13:55 |
| Terphenyl-d14 | 1718-51-0 | 139 % | 30-125 | 1 | 11/16/10 13:55 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-003-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-03
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Acenaphthene | 83-32-9 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Anthracene | 120-12-7 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Chrysene | 218-01-9 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Fluoranthene | 206-44-0 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Fluorene | 86-73-7 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Naphthalene | 91-20-3 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Phenanthrene | 85-01-8 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |
| Pyrene | 129-00-0 | BQL | U | 0.642 | 1.92 | 1 | ug/Kg dry | 11/16/10 13:31 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 88 % | 45-105 | 1 | 11/16/10 13:31 |
| Nitrobenzene-d5 | 4165-60-0 | 95 % | 35-100 | 1 | 11/16/10 13:31 |
| Terphenyl-d14 | 1718-51-0 | 116 % | 30-125 | 1 | 11/16/10 13:31 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-002-1010
Sample Date/Time: 11/02/10 08:20
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-02
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Acenaphthene | 83-32-9 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Anthracene | 120-12-7 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Chrysene | 218-01-9 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Fluoranthene | 206-44-0 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Fluorene | 86-73-7 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Naphthalene | 91-20-3 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Phenanthrene | 85-01-8 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |
| Pyrene | 129-00-0 | BQL | U | 0.635 | 1.90 | 1 | ug/Kg dry | 11/16/10 13:07 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 90 % | 45-105 | 1 | 11/16/10 13:07 |
| Nitrobenzene-d5 | 4165-60-0 | 83 % | 35-100 | 1 | 11/16/10 13:07 |
| Terphenyl-d14 | 1718-51-0 | 142 % | 30-125 | 1 | 11/16/10 13:07 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-001-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011013-01
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 08:10

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Acenaphthene | 83-32-9 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Anthracene | 120-12-7 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Benzo[a]anthracene | 56-55-3 | 1.04 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Benzo[a]pyrene | 50-32-8 | 1.07 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Benzo[b]fluoranthene | 205-99-2 | 1.31 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Benzo[g,h,i]perylene | 191-24-2 | 1.39 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Benzo[k]fluoranthene | 207-08-9 | 1.17 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Chrysene | 218-01-9 | 1.04 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Fluoranthene | 206-44-0 | 1.72 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Fluorene | 86-73-7 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | 0.819 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Naphthalene | 91-20-3 | BQL | U | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Phenanthrene | 85-01-8 | 0.939 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |
| Pyrene | 129-00-0 | 1.73 | J | 0.645 | 1.93 | 1 | ug/Kg dry | 11/16/10 12:43 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 81 % | 45-105 | 1 | 11/16/10 12:43 |
| Nitrobenzene-d5 | 4165-60-0 | 86 % | 35-100 | 1 | 11/16/10 12:43 |
| Terphenyl-d14 | 1718-51-0 | 125 % | 30-125 | 1 | 11/16/10 12:43 |

ADDENDUM PAH PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-001-1010

Sample Date/Time: 11/2/10 08:00

File ID: D46271.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-01

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 12:43

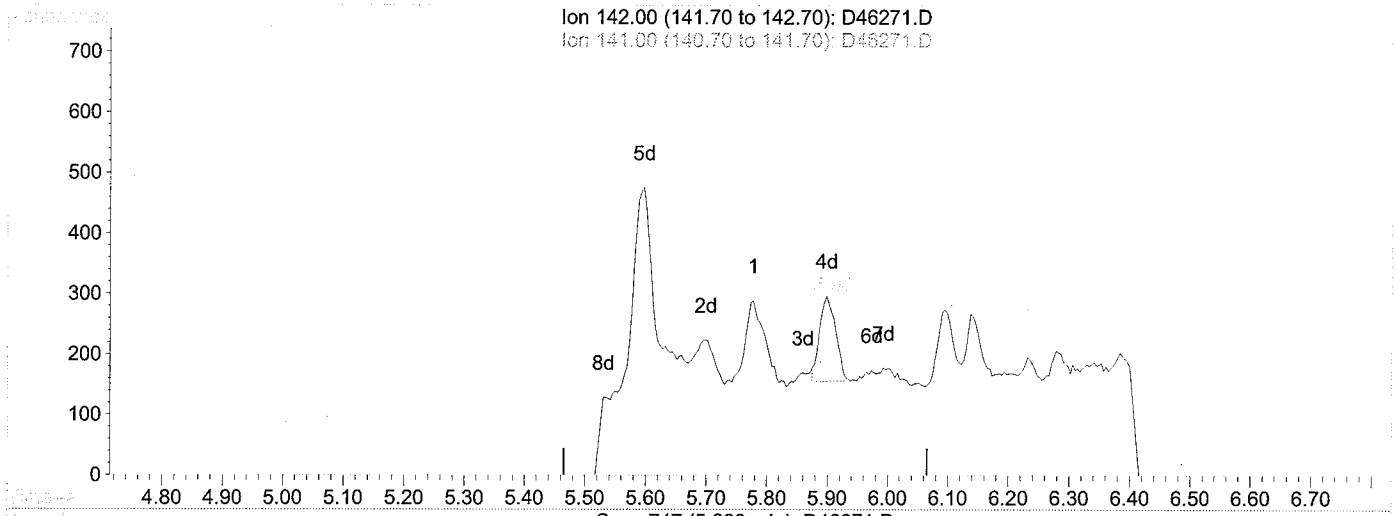
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.93 | 1 | ug/Kg |

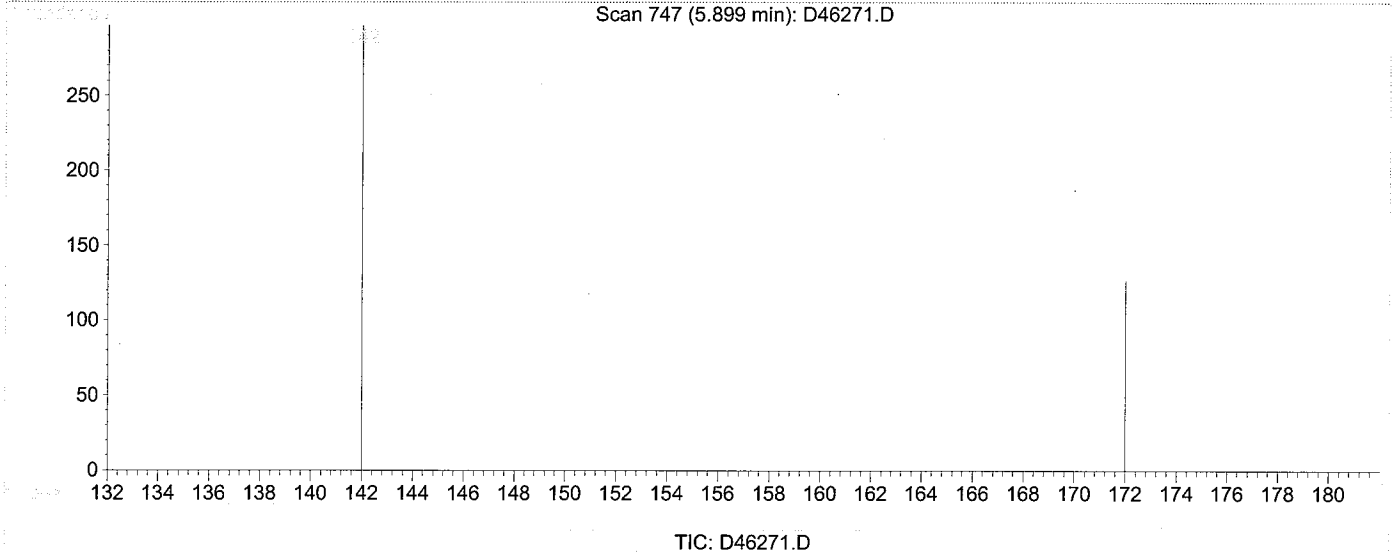
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46271.D Vial: 7
Acq On : 16 Nov 2010 12:43 Operator: JI
Sample : 1011013-01 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:53 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46271.D

(5) 2-Methylnaphthalene (T)

5.90min 2.04ug/L m

response 258

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-002-1010

Sample Date/Time: 11/2/10 08:20

File ID: D46272.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-02

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 13:07

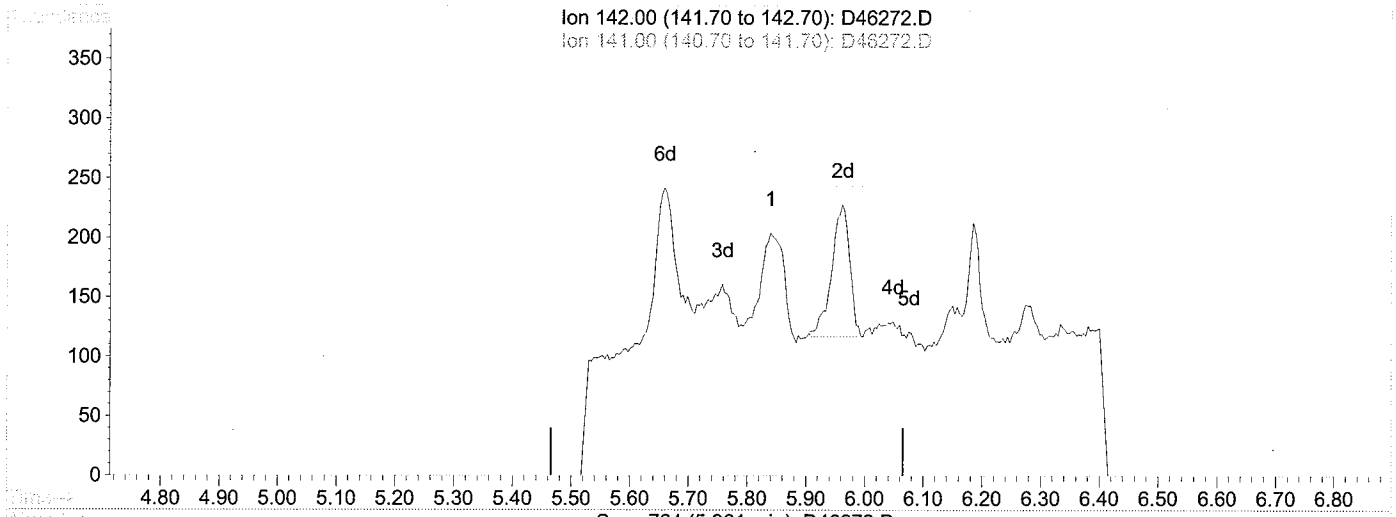
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.90 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46272.D Vial: 8
Acq On : 16 Nov 2010 13:07 Operator: JI
Sample : 1011013-02 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:54 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46272.D

(5) 2-Methylnaphthalene (T)

5.96min 2.03ug/L m

response 236

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-003-1010

Sample Date/Time: 11/2/10 08:40

File ID: D46273.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-03

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 13:31

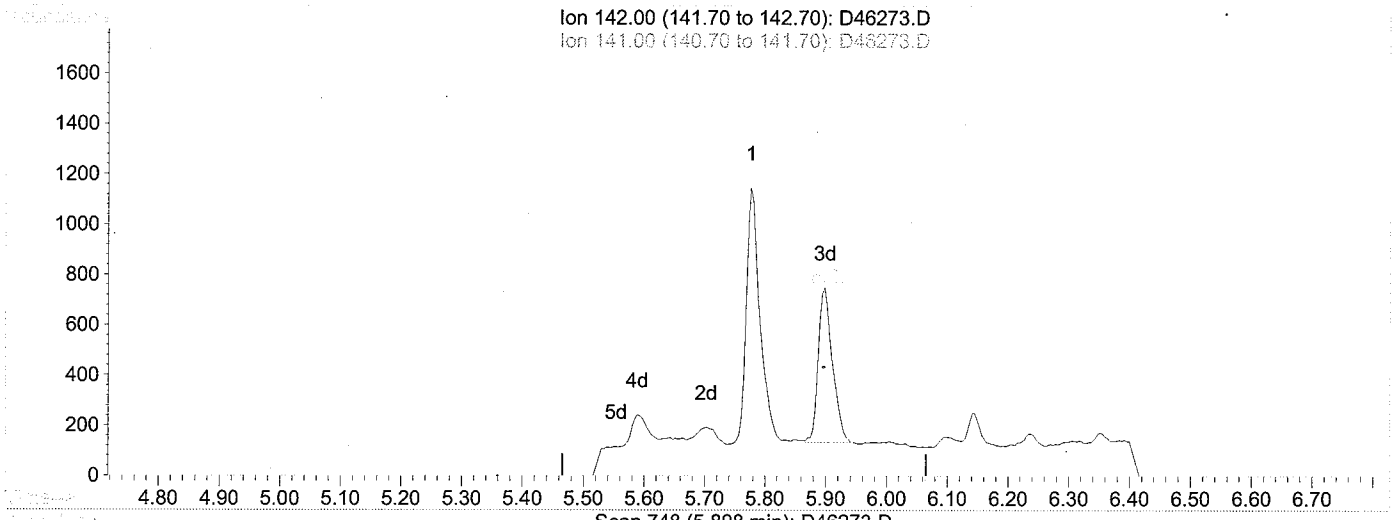
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.93 | 1 | ug/Kg |

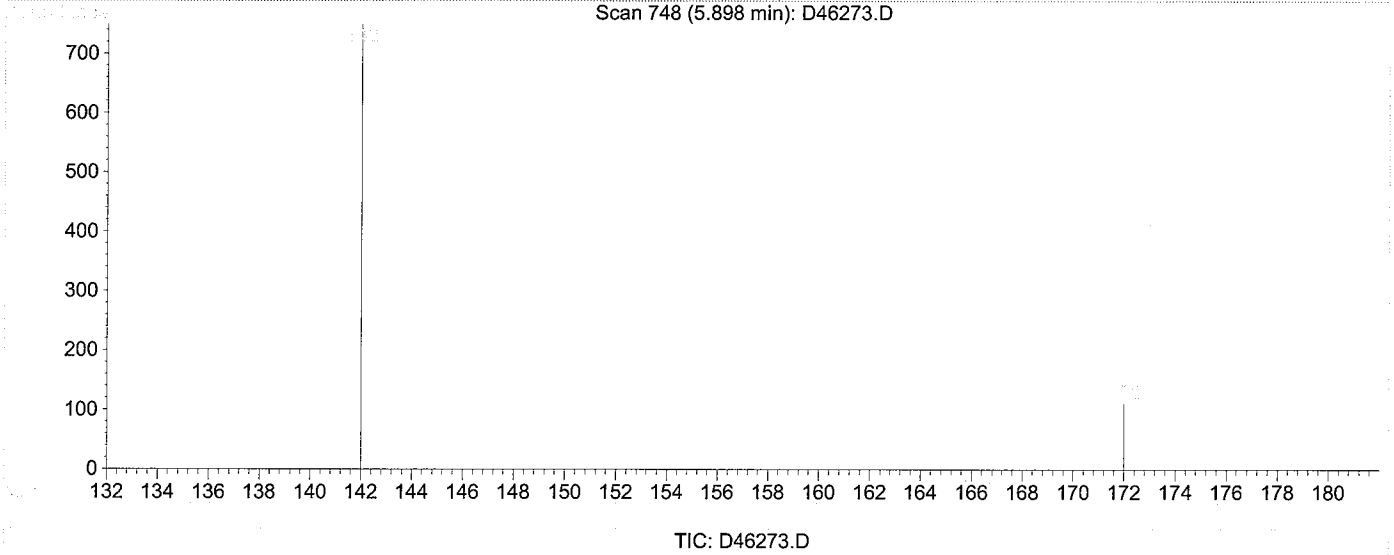
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46273.D Vial: 9
Acq On : 16 Nov 2010 13:31 Operator: JI
Sample : 1011013-03 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:54 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46273.D

(5) 2-Methylnaphthalene (T)

5.90min 6.26ug/L m

response 998

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-005-1010

Sample Date/Time: 11/2/10 09:00

File ID: D46274.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-04

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 13:55

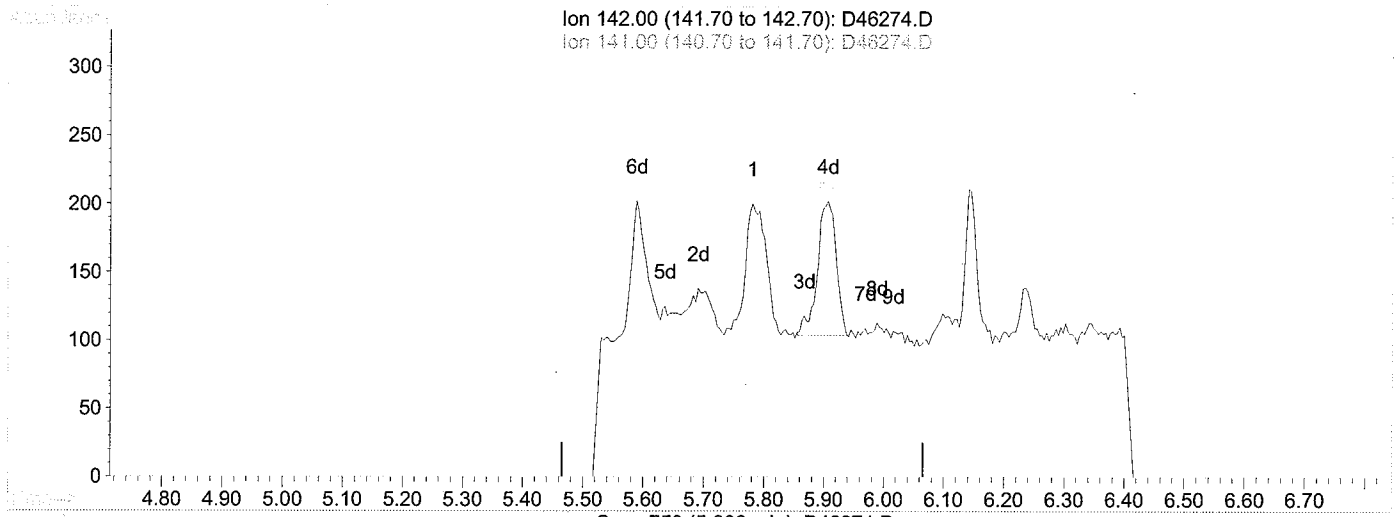
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.93 | 1 | ug/Kg |

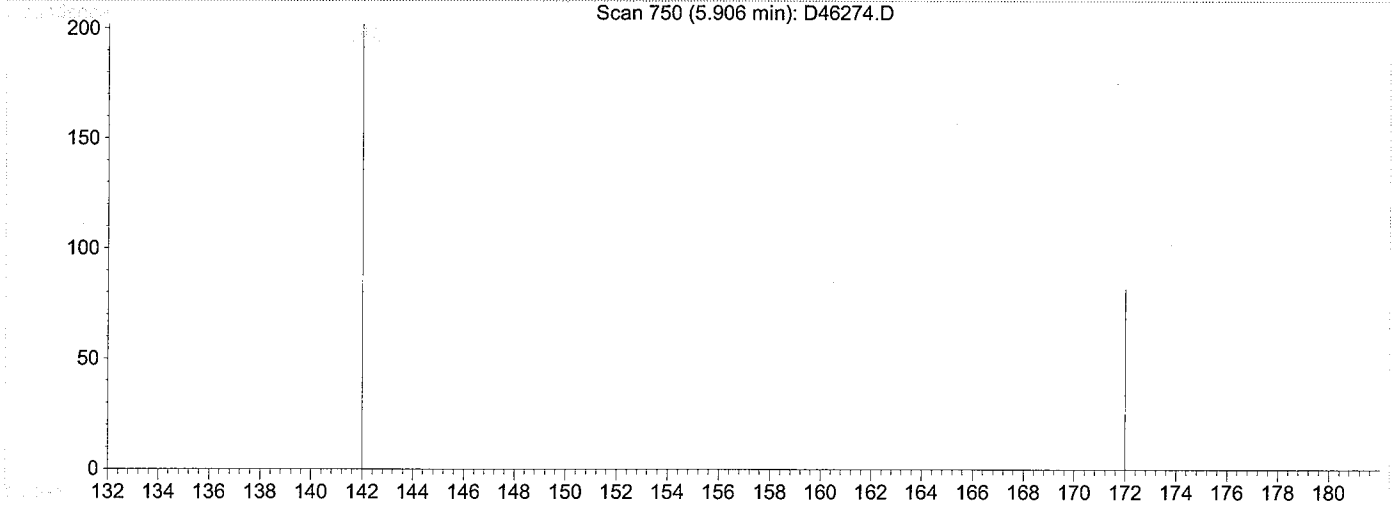
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46274.D Vial: 10
Acq On : 16 Nov 2010 13:55 Operator: JI
Sample : 1011013-04 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:54 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46274.D

(5) 2-Methylnaphthalene (T)

5.91min 1.57ug/L m

response 214

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-007-1010

Sample Date/Time: 11/2/10 09:20

File ID: D46275.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-05

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 14:20

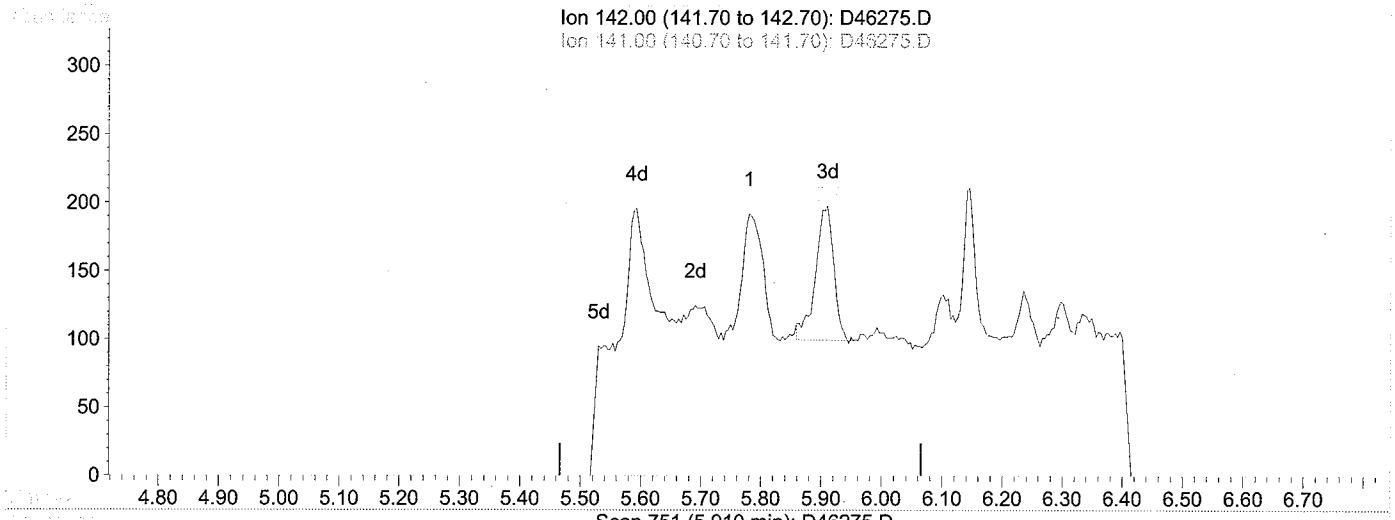
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.90 | 1 | ug/Kg |

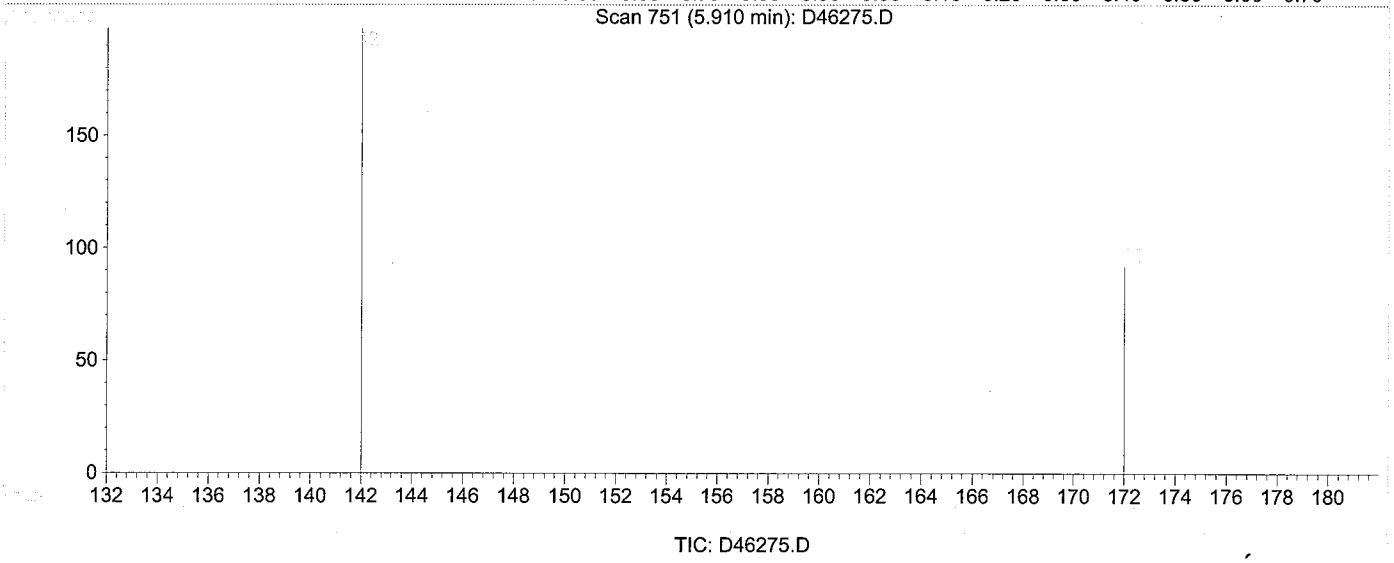
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46275.D Vial: 11
Acq On : 16 Nov 2010 14:20 Operator: JI
Sample : 1011013-05 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:54 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46275.D

(5) 2-Methylnaphthalene (T)

5.91min 1.66ug/L m

response 209

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-011-1010

Sample Date/Time: 11/2/10 09:40

File ID: D46276.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-06

Percent solids: 80%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 14:44

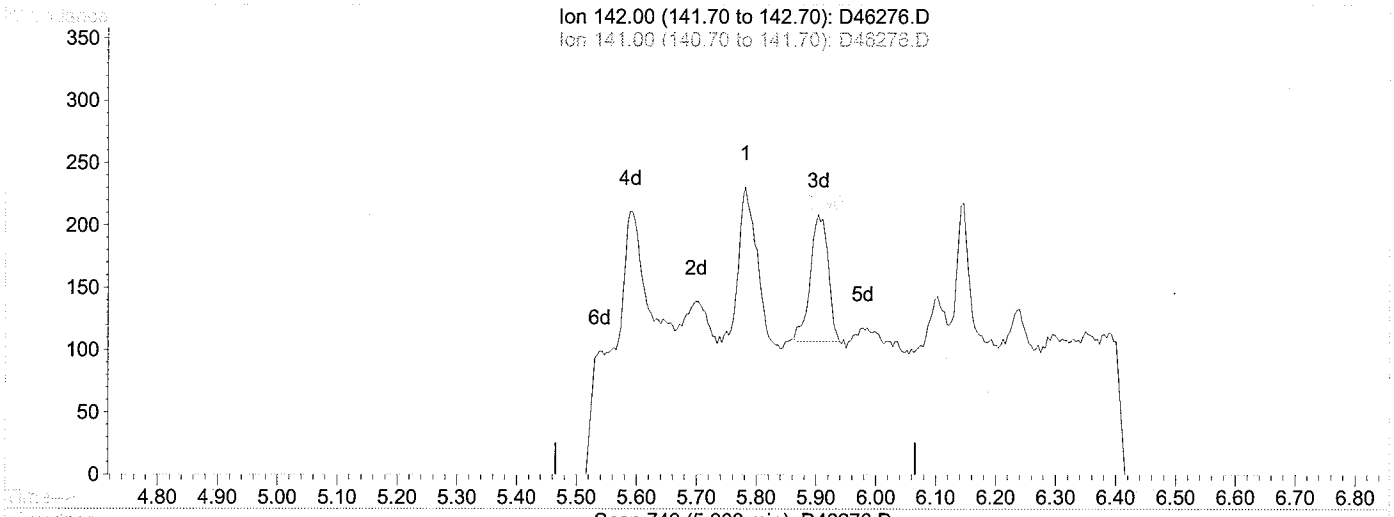
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 2.07 | 1 | ug/Kg |

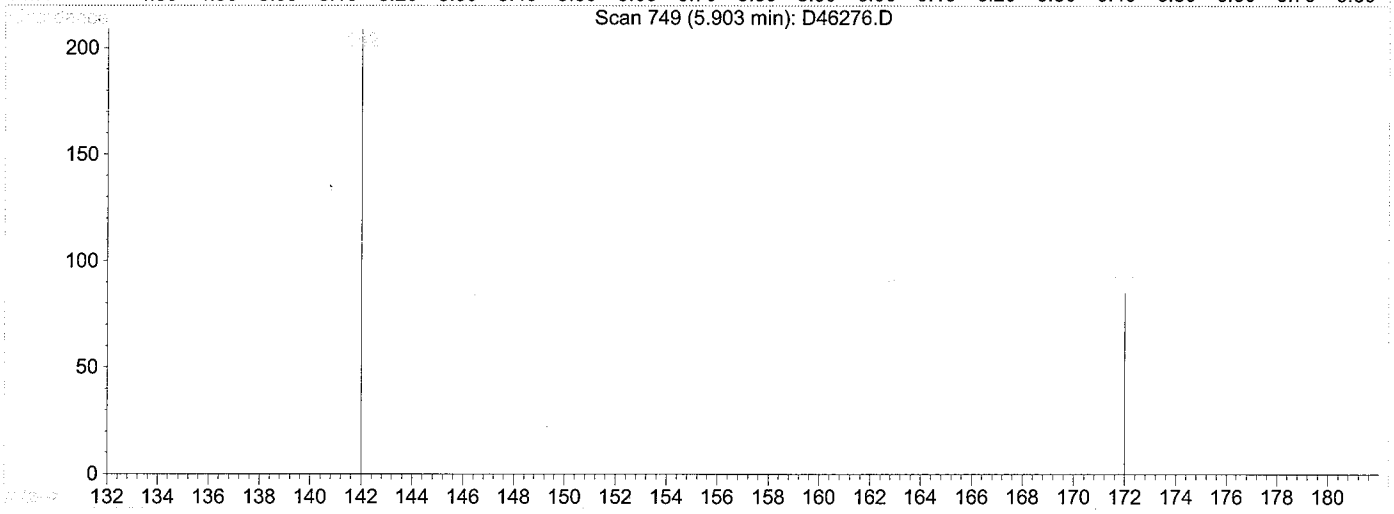
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46276.D Vial: 12
Acq On : 16 Nov 2010 14:44 Operator: JI
Sample : 1011013-06 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:54 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46276.D

(5) 2-Methylnaphthalene (T)

5.90min 1.89ug/L m

response 211

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-012-1010

Sample Date/Time: 11/2/10 12:00

File ID: D46277.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-07

Percent solids: 84%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 15:09

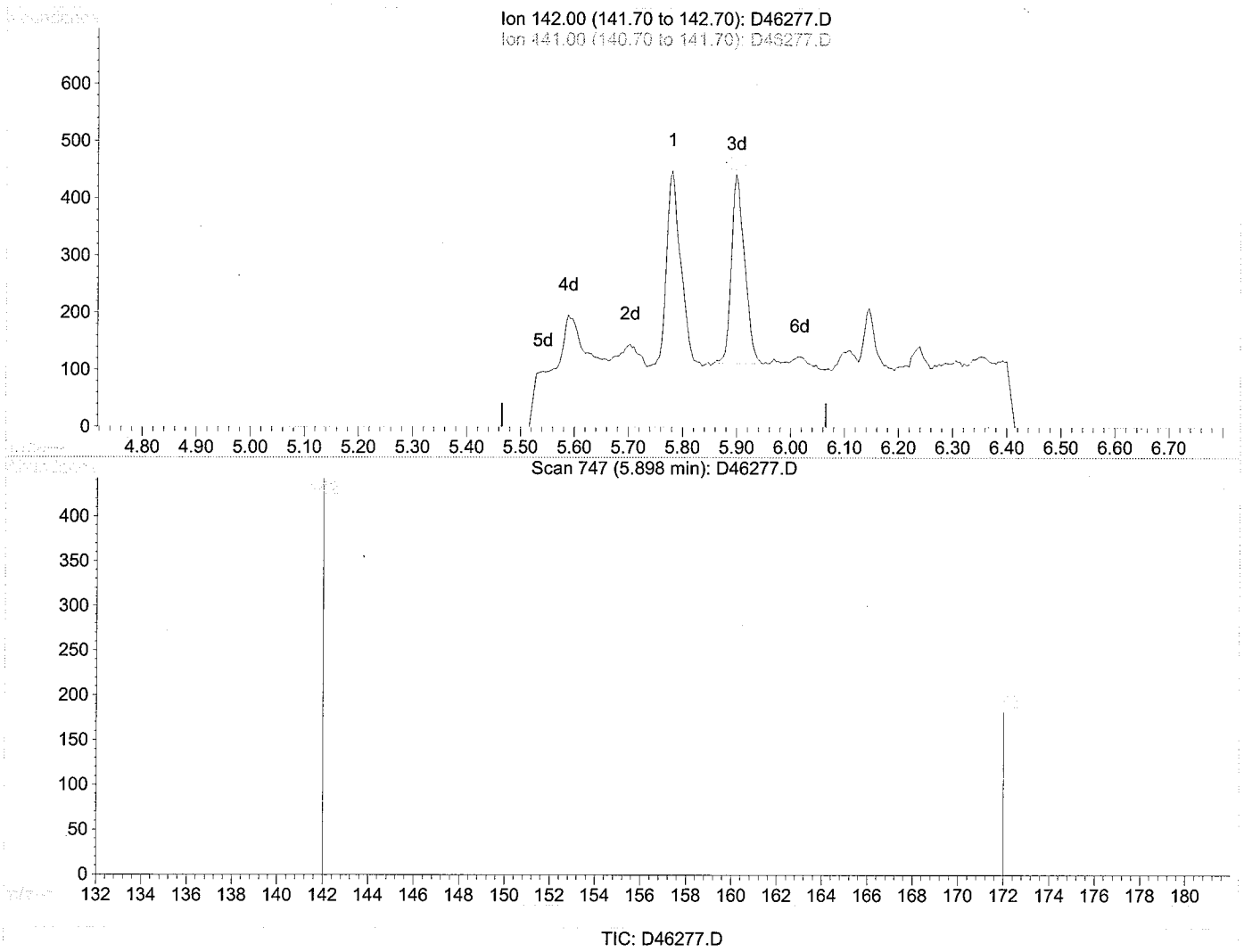
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.99 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46277.D Vial: 13
Acq On : 16 Nov 2010 15:09 Operator: JI
Sample : 1011013-07 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:54 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




(5) 2-Methylnaphthalene (T)

5.90min 4.37ug/L m

response 556

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-014-1010

Sample Date/Time: 11/2/10 14:00

File ID: D46278.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-08

Percent solids: 85%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 15:33

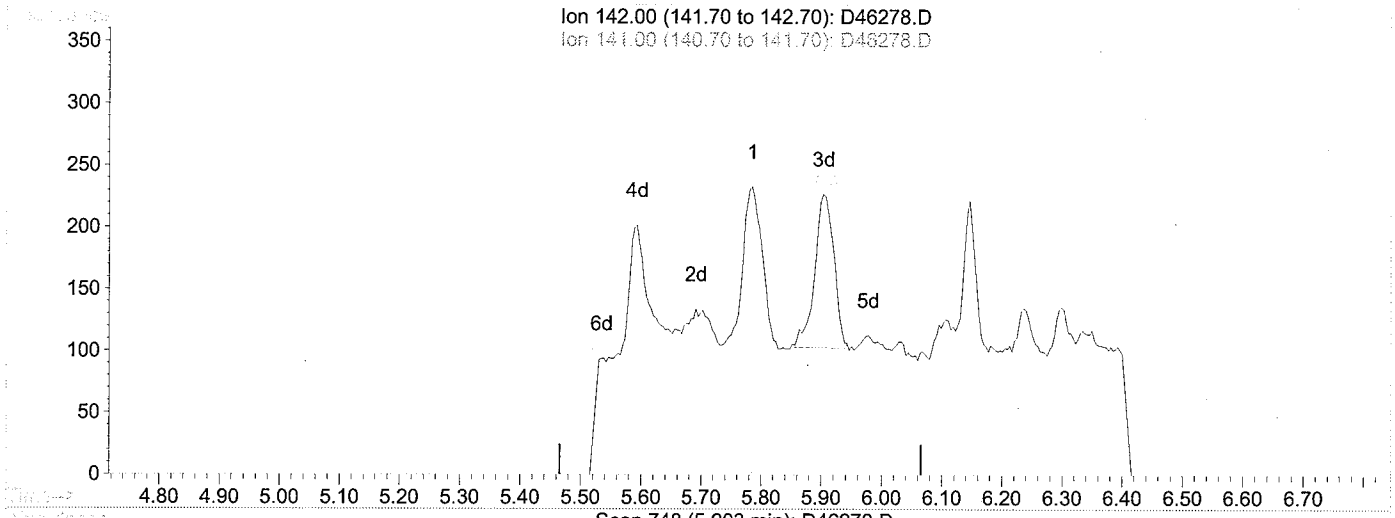
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.95 | 1 | ug/Kg |

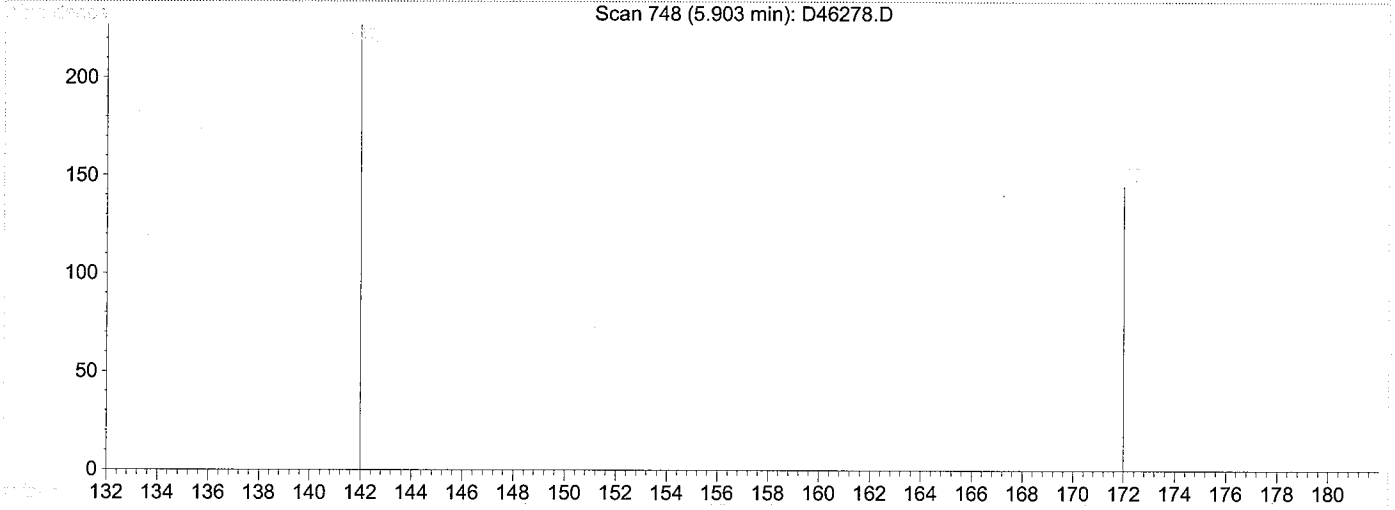
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46278.D Vial: 14
Acq On : 16 Nov 2010 15:33 Operator: JI
Sample : 1011013-08 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:55 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46278.D

(5) 2-Methylnaphthalene (T)

5.90min 1.96ug/L m

response 273

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-017-1010

Sample Date/Time: 11/2/10 10:00

File ID: D46279.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-09

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 15:58

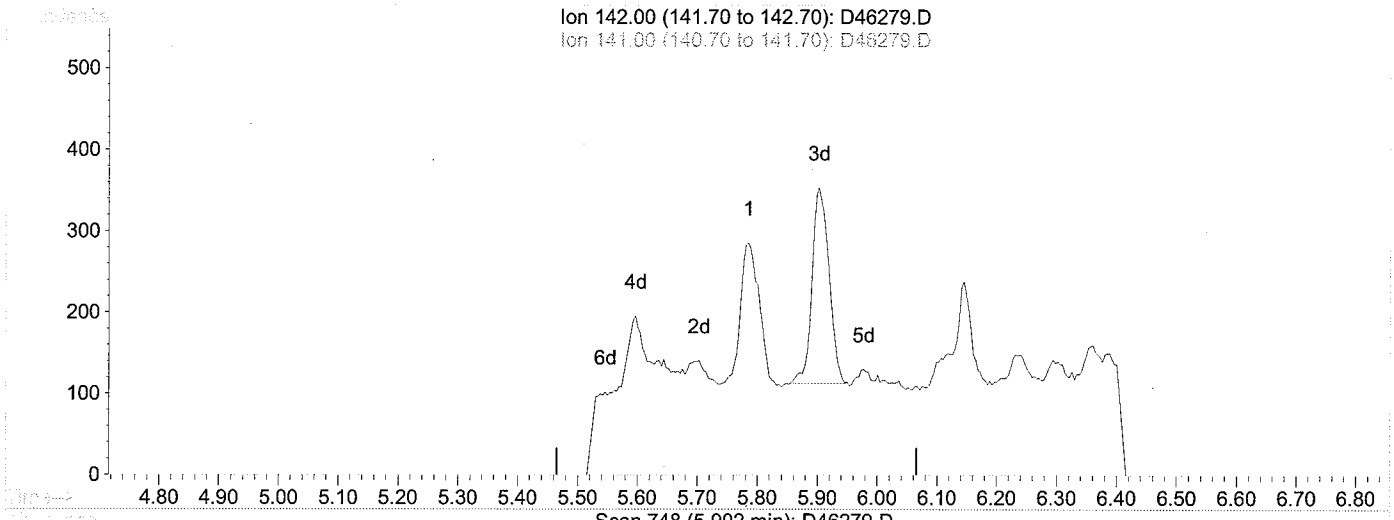
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.90 | 1 | ug/Kg |

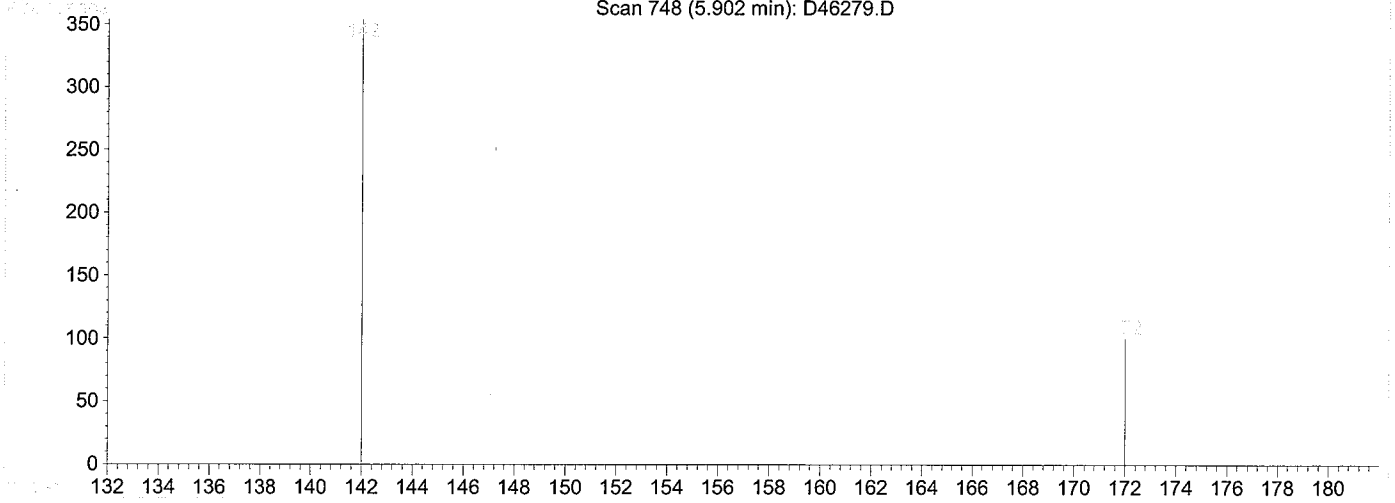
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46279.D Vial: 15
Acq On : 16 Nov 2010 15:58 Operator: JI
Sample : 1011013-09 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:55 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46279.D

(5) 2-Methylnaphthalene (T)

5.90min 3.62ug/L m

response 472

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-019-1010

Sample Date/Time: 11/2/10 10:20

File ID: D46280.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-10

Percent solids: 87%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 16:22

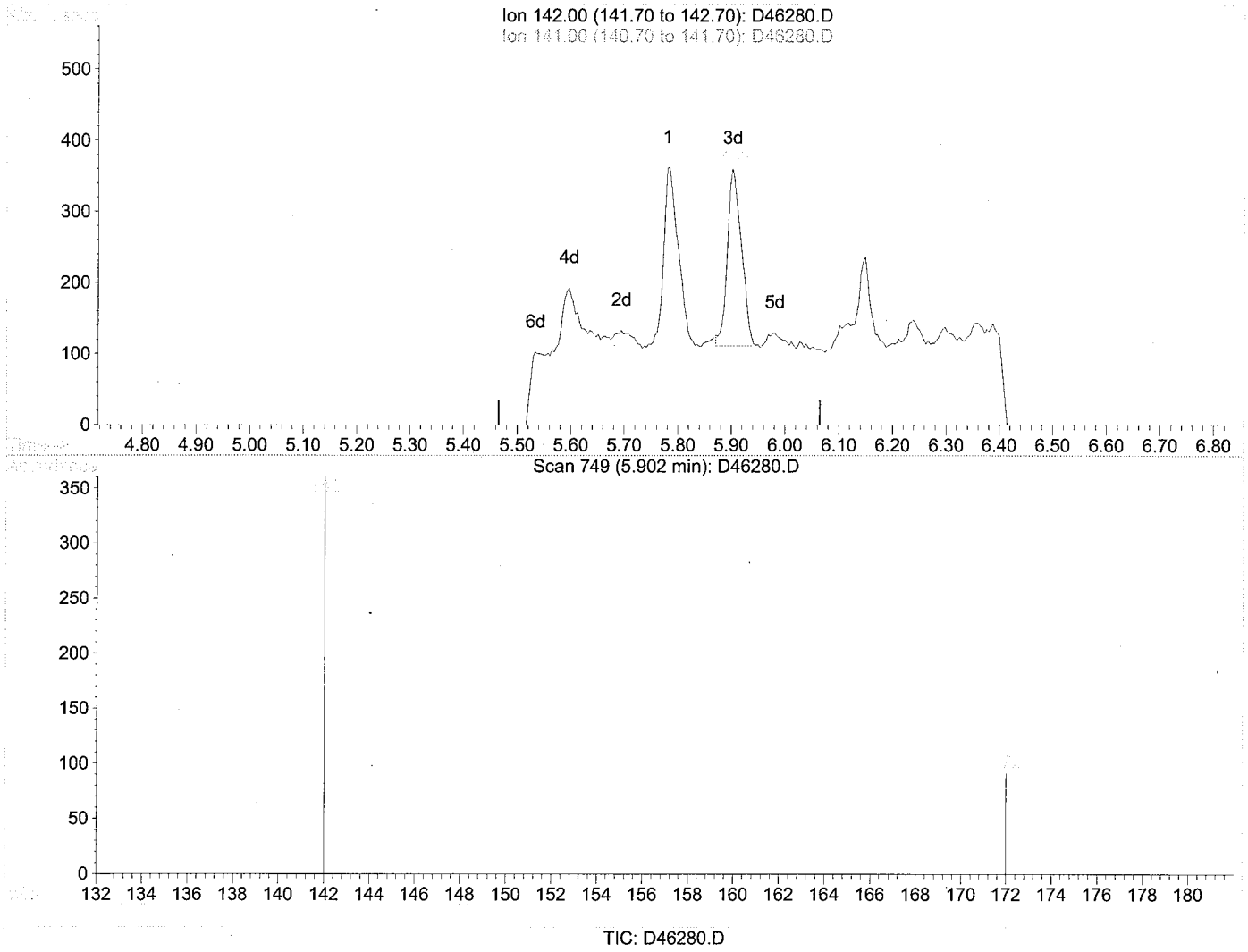
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.92 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46280.D Vial: 16
Acq On : 16 Nov 2010 16:22 Operator: JI
Sample : 1011013-10 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:55 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




(5) 2-Methylnaphthalene (T)

5.90min 3.38ug/L m

response 453

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-021-1010

Sample Date/Time: 11/2/10 10:40

File ID: D46281.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-11

Percent solids: 87%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 16:50

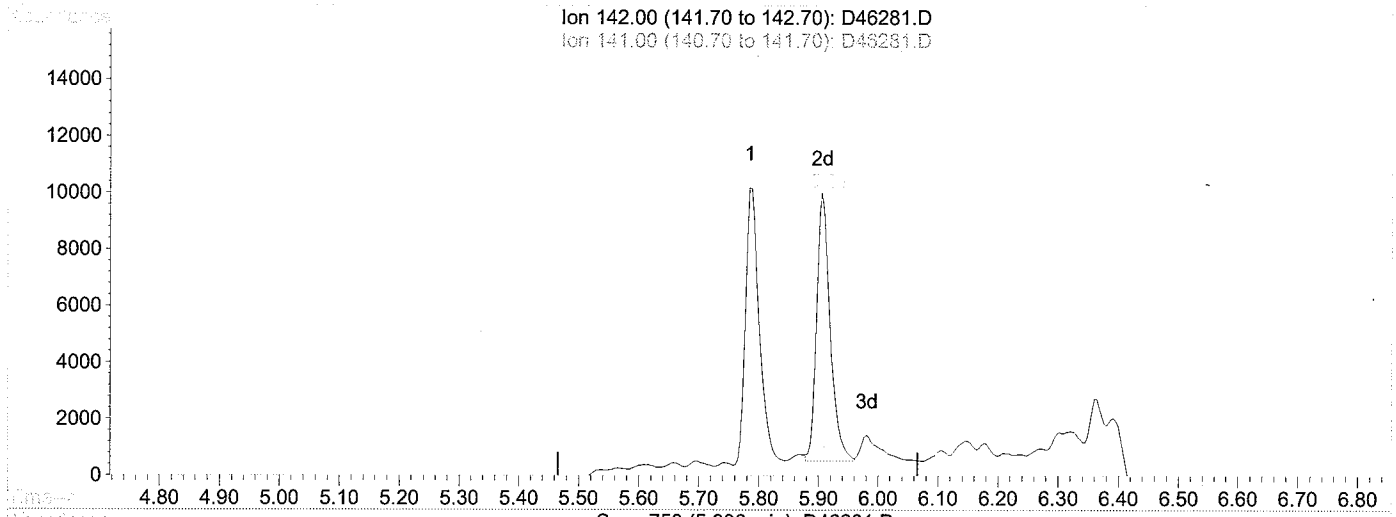
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 3.94 | J | 1.91 | 1 | ug/Kg |

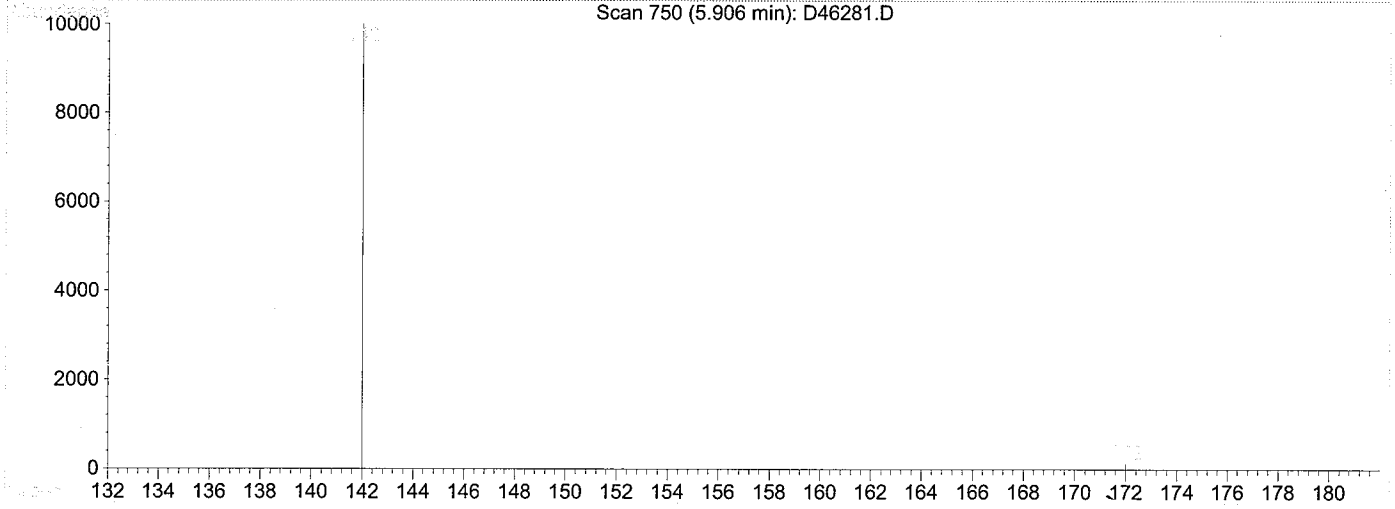
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46281.D Vial: 17
Acq On : 16 Nov 2010 16:50 Operator: JI
Sample : 1011013-11 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:55 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46281.D

(5) 2-Methylnaphthalene (T)

5.91min 103.06ug/L m

response 14923

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Verify Calc

$$\frac{14923 \times 40000\ \mu g/l \times 1\ l}{0.6958 \times 832408 \times 0.87 \times 30.03} \approx$$

3.94 µg/kg

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-022-1010

Sample Date/Time: 11/2/10 11:00

File ID: D46282.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-12

Percent solids: 85%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 17:15

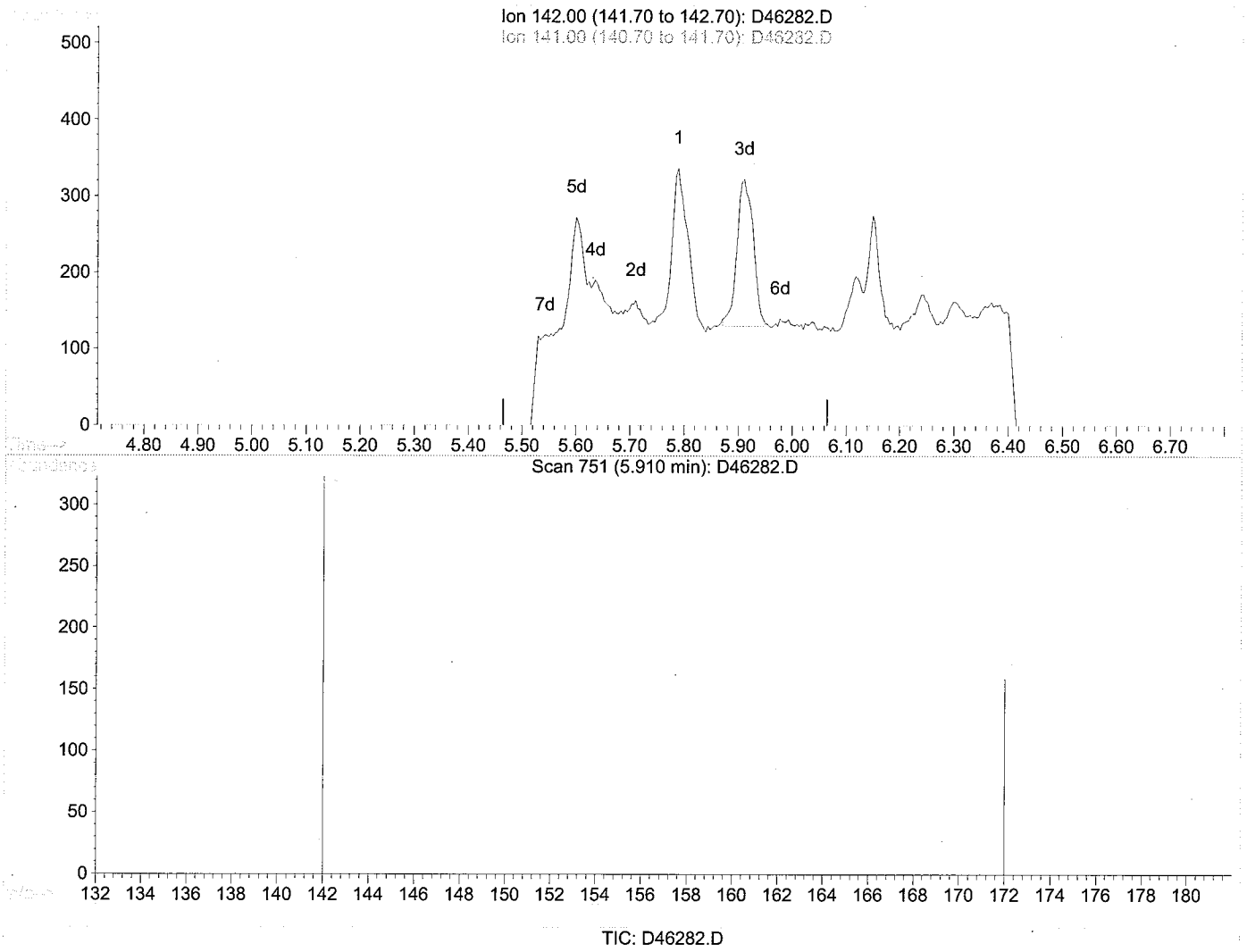
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.95 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46282.D Vial: 18
Acq On : 16 Nov 2010 17:15 Operator: JI
Sample : 1011013-12 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:55 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46282.D

(5) 2-Methylnaphthalene (T)

5.91min 3.03ug/L m

response 402

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-023-1010

Sample Date/Time: 11/2/10 13:40

File ID: D46283.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-13

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 17:39

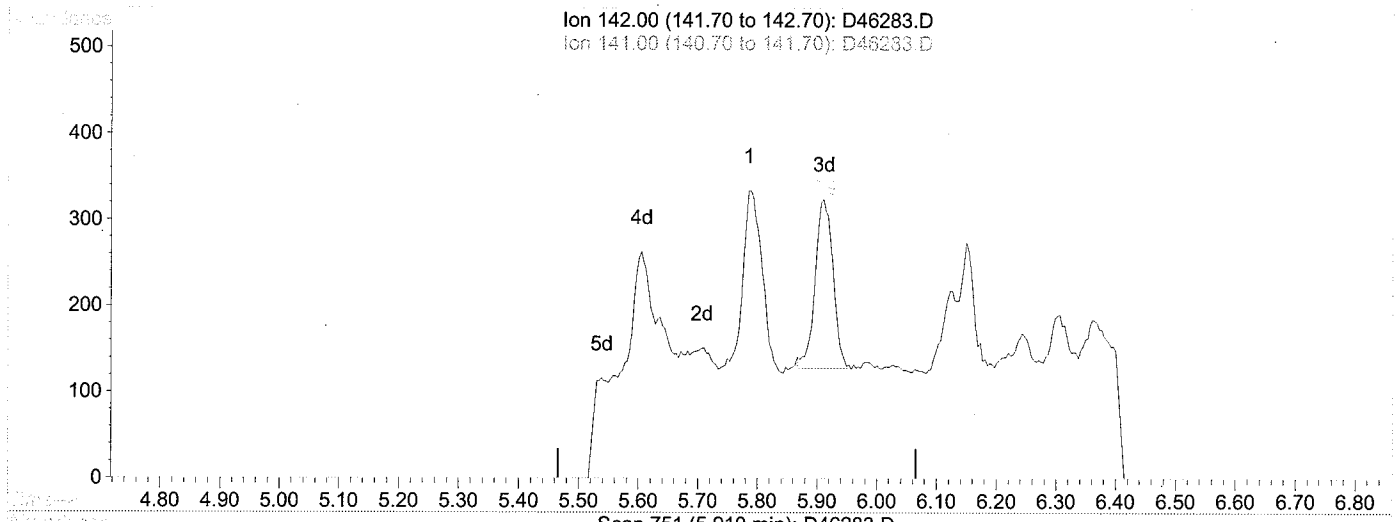
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.93 | 1 | ug/Kg |

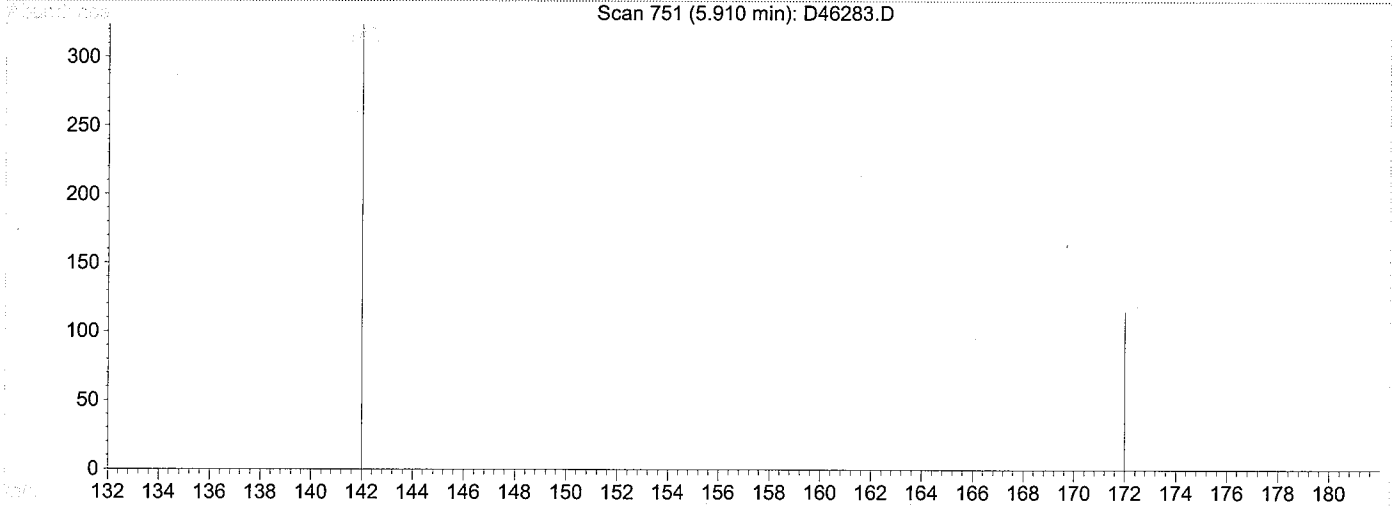
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46283.D Vial: 19
Acq On : 16 Nov 2010 17:39 Operator: JI
Sample : 1011013-13 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:55 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46283.D

(5) 2-Methylnaphthalene (T)

5.91min 2.93ug/L m

response 408

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-025-1010

Sample Date/Time: 11/2/10 11:20

File ID: D46284.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-14

Percent solids: 84%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 18:03

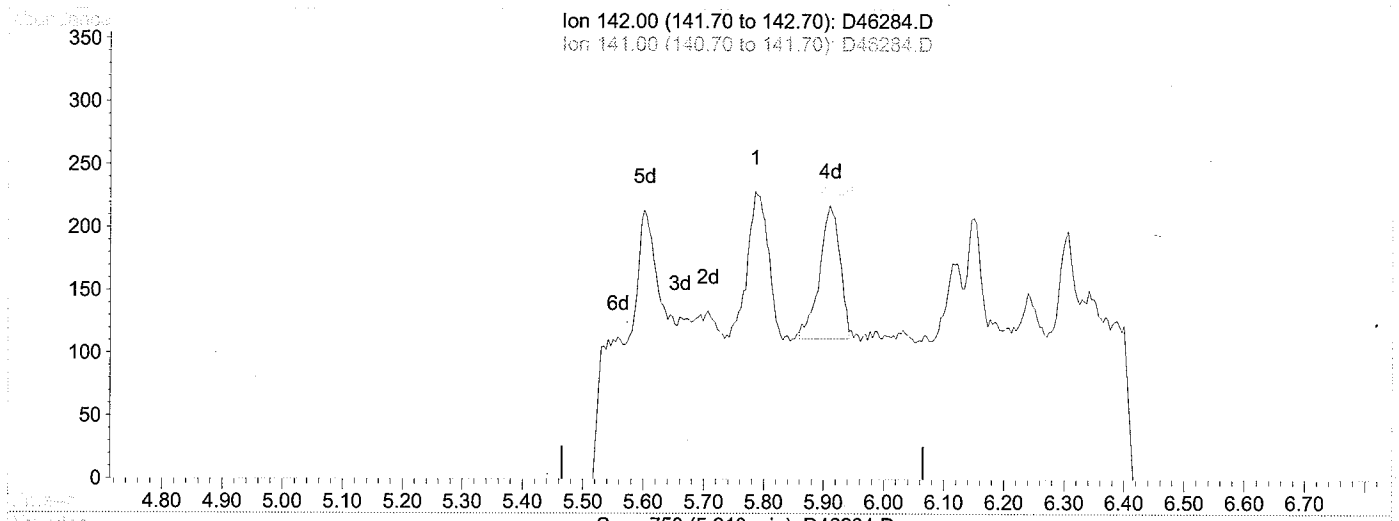
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.98 | 1 | ug/Kg |

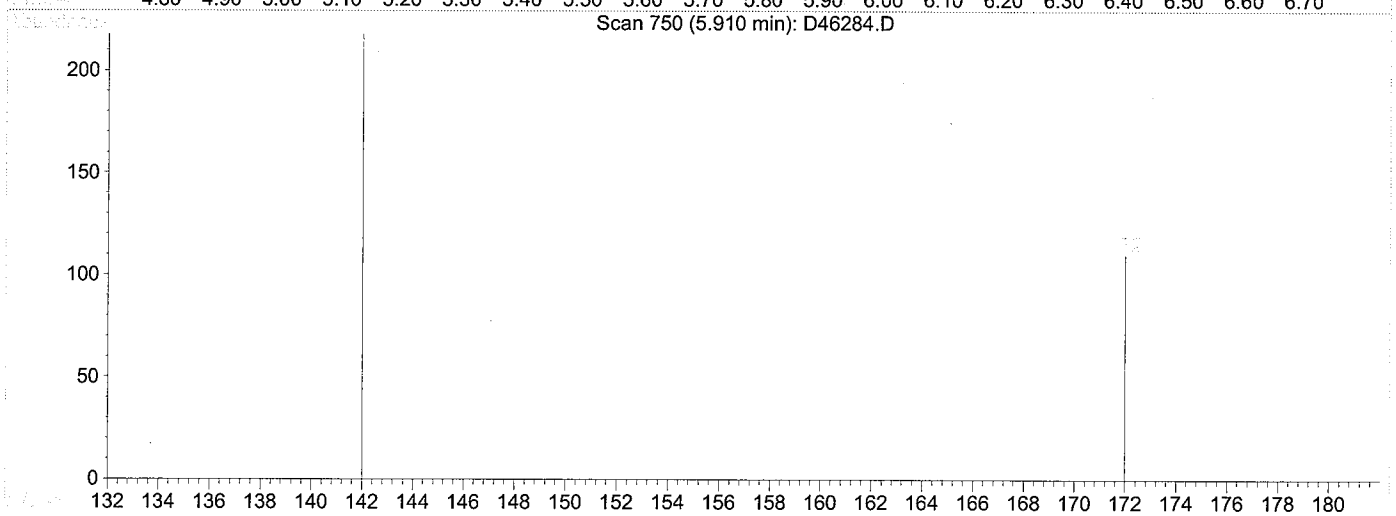
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46284.D Vial: 20
Acq On : 16 Nov 2010 18:03 Operator: JI
Sample : 1011013-14 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:56 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46284.D

(5) 2-Methylnaphthalene (T)

5.91min 2.31ug/L m

response 249

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-028-1010

Sample Date/Time: 11/2/10 13:20

File ID: D46285.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-15

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 18:28

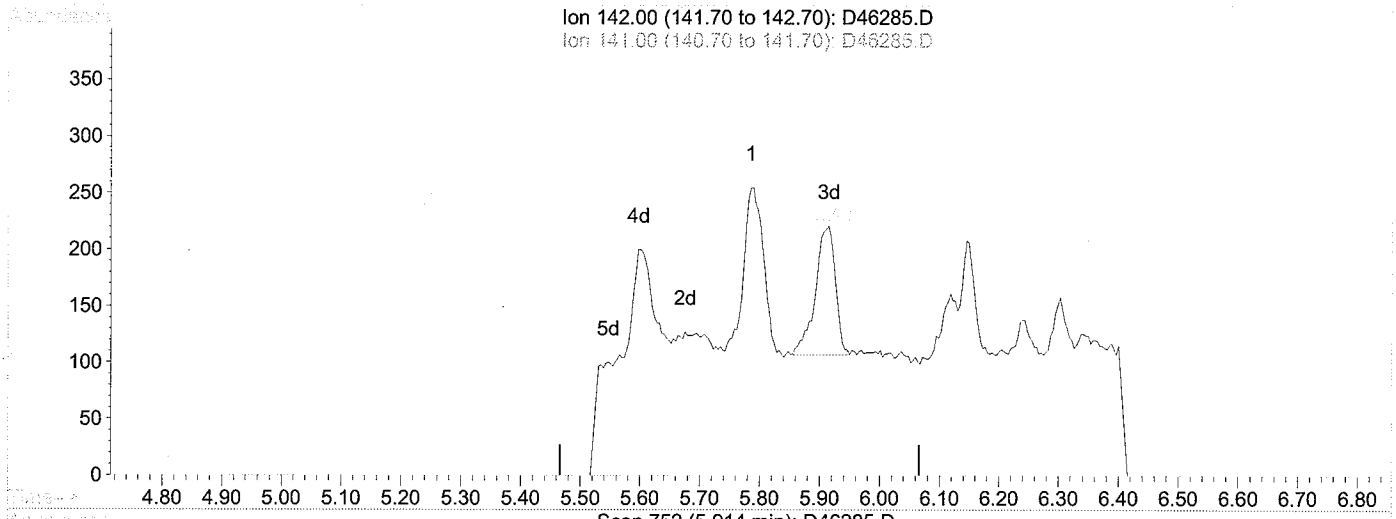
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.93 | 1 | ug/Kg |

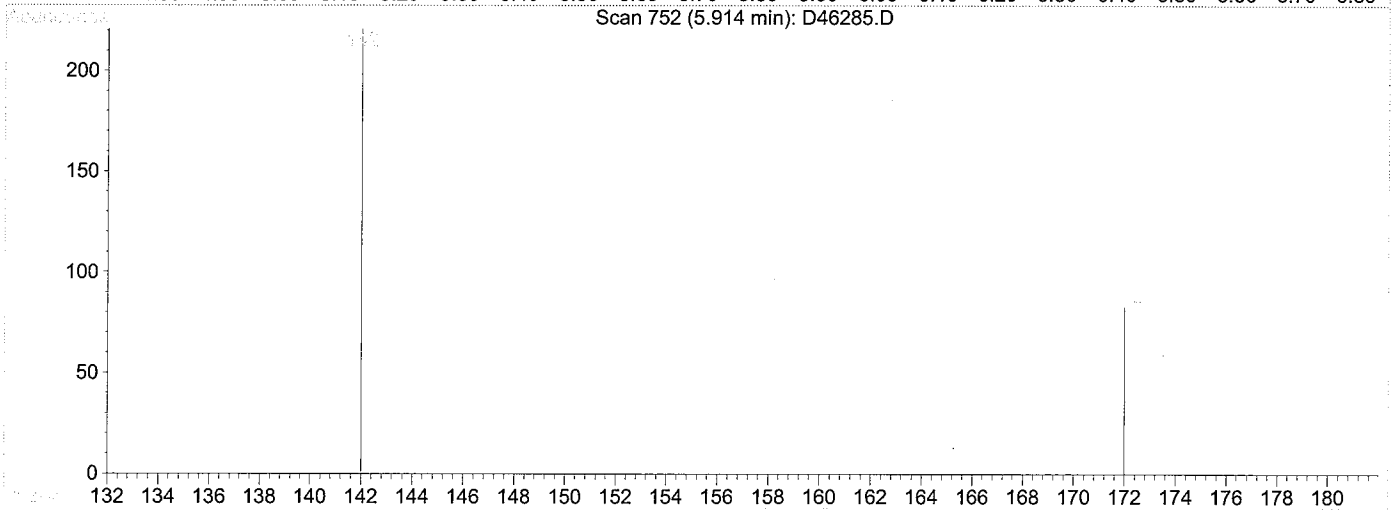
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46285.D Vial: 21
Acq On : 16 Nov 2010 18:28 Operator: JI
Sample : 1011013-15 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:56 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46285.D

(5) 2-Methylnaphthalene (T)

5.91min 2.36ug/L m

response 262

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-030-1010

Sample Date/Time: 11/2/10 12:40

File ID: D46286.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-16

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 18:52

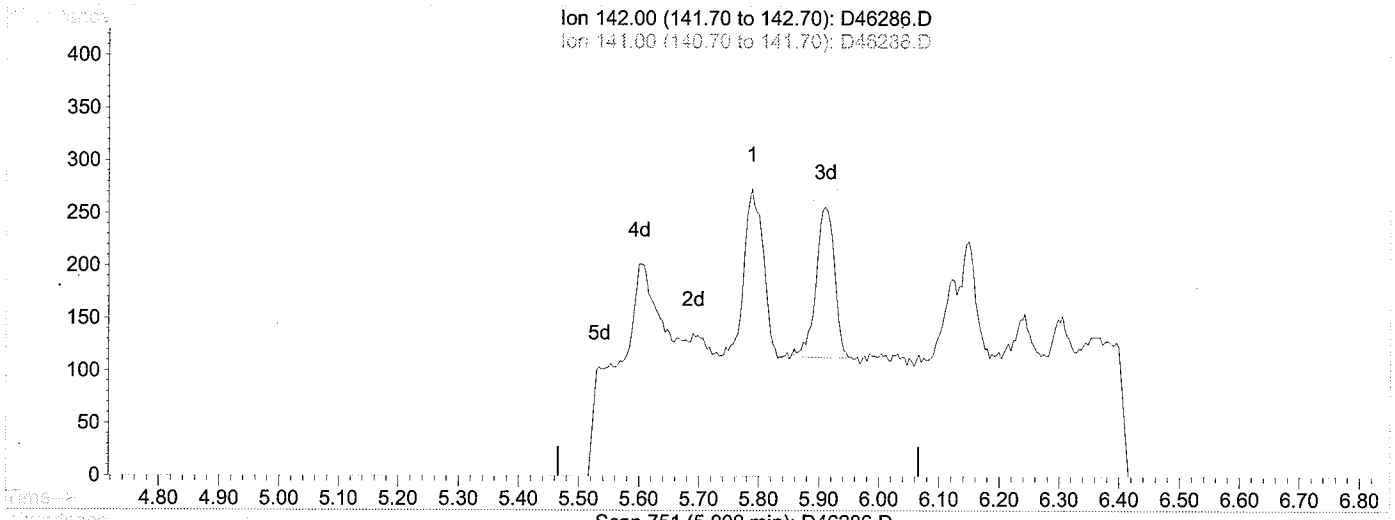
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.90 | 1 | ug/Kg |

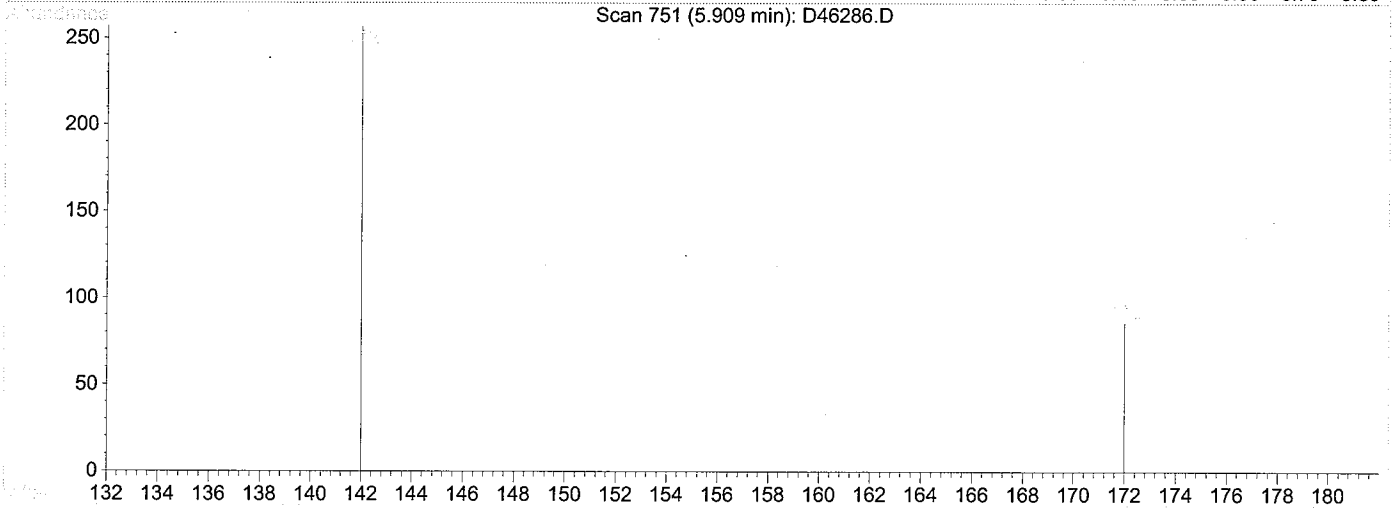
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46286.D Vial: 22
Acq On : 16 Nov 2010 18:52 Operator: JI
Sample : 1011013-16 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:56 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46286.D

(5) 2-Methylnaphthalene (T)

5.91min 2.55ug/L m

response 309

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-031-1010

Sample Date/Time: 11/2/10 11:40

File ID: D46287.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-17

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 12:43

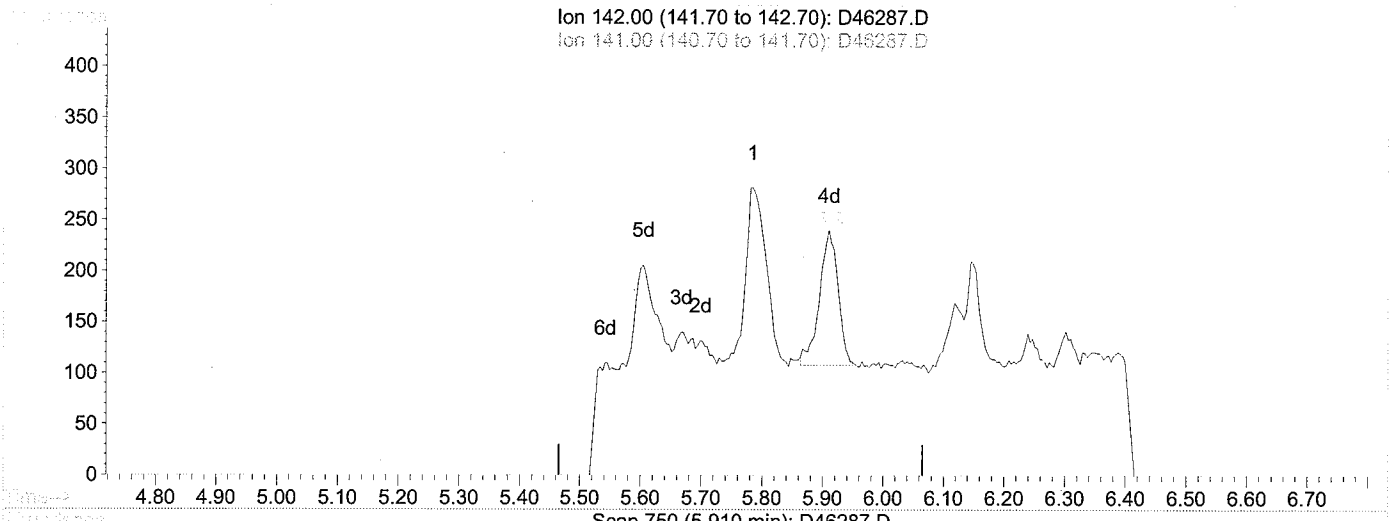
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.90 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46287.D Vial: 23
Acq On : 16 Nov 2010 19:16 Operator: JI
Sample : 1011013-17 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:56 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46287.D

(5) 2-Methylnaphthalene (T)

5.91min 2.66ug/L m

response 281

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-032-1010

Sample Date/Time: 11/2/10 12:20

File ID: D46288.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-18

Percent solids: 82%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 19:41

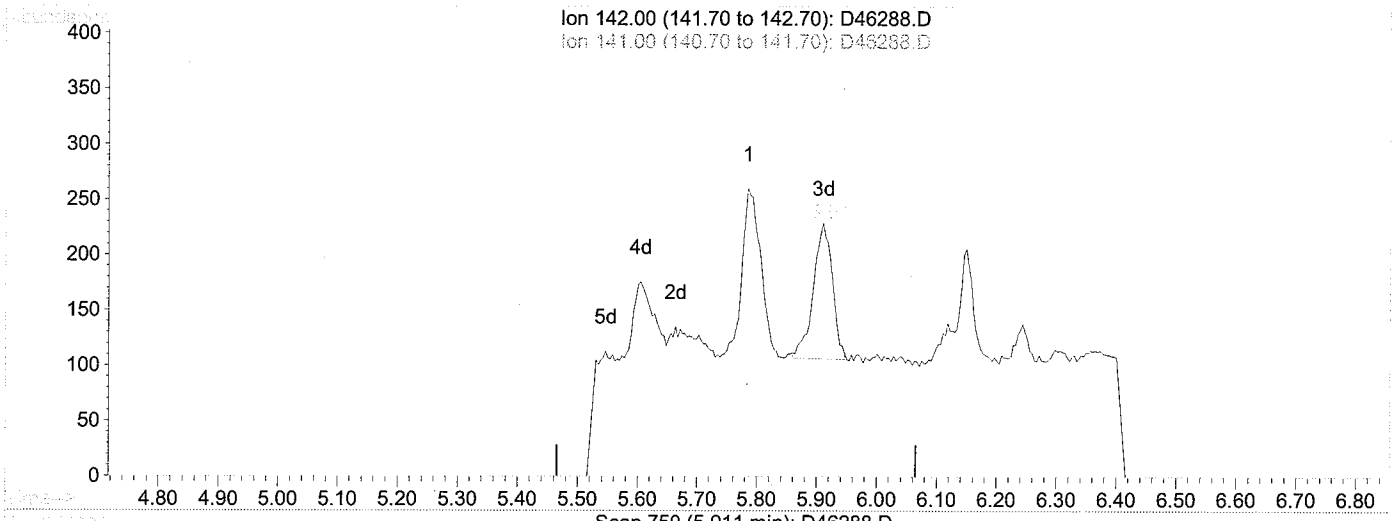
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 2.04 | 1 | ug/Kg |

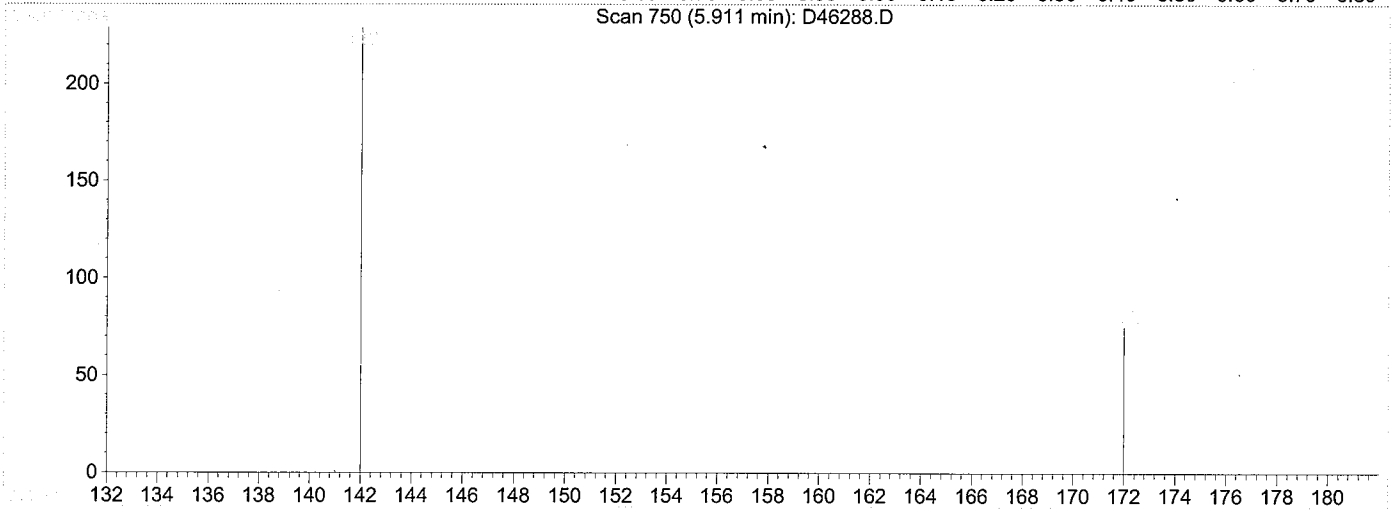
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46288.D Vial: 24
Acq On : 16 Nov 2010 19:41 Operator: JI
Sample : 1011013-18 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:56 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46288.D

(5) 2-Methylnaphthalene (T)

5.91min 2.42ug/L m

response 271

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-034-1010

Sample Date/Time: 11/2/10 13:00

File ID: D46289.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-19

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 20:05

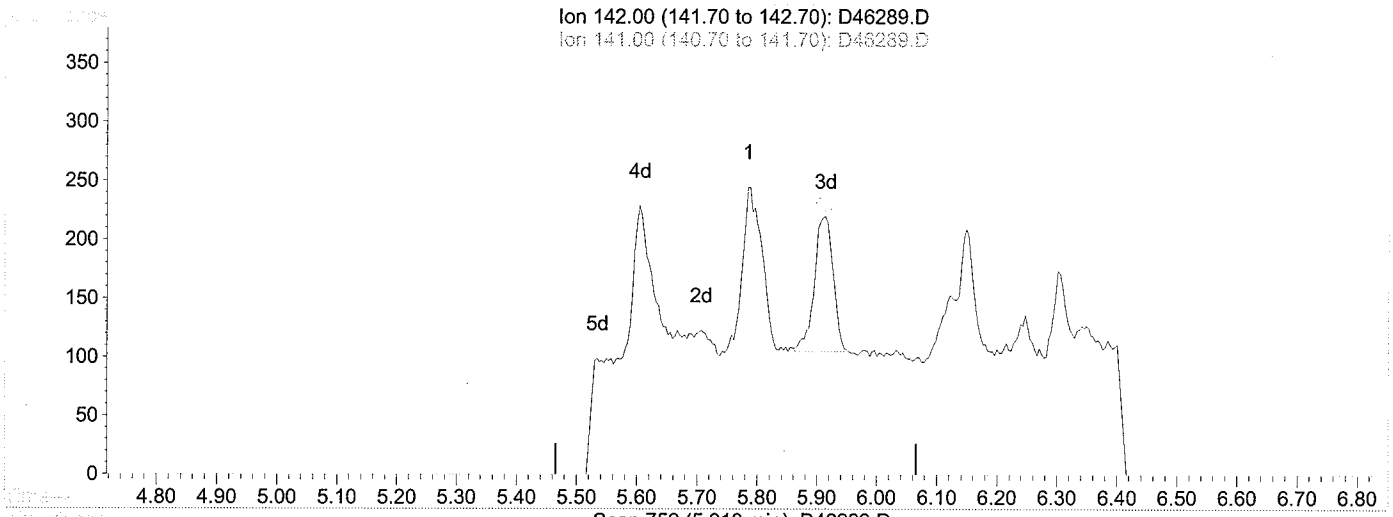
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.94 | 1 | ug/Kg |

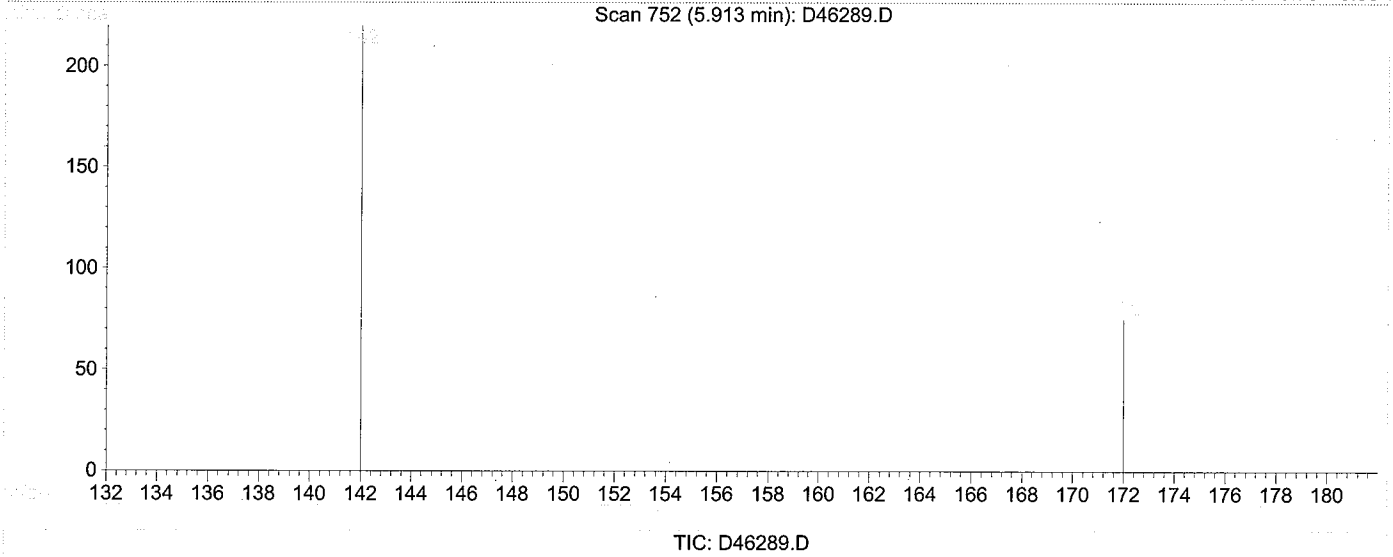
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46289.D Vial: 25
Acq On : 16 Nov 2010 20:05 Operator: JI
Sample : 1011013-19 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:56 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46289.D

(5) 2-Methylnaphthalene (T)

5.91min 2.16ug/L m

response 253

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-FD001-1010

Sample Date/Time: 11/2/10 00:00

File ID: D46263.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-21

Percent solids: 80%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 11:55

Analyzed Date/Time: 11/16/10 00:32

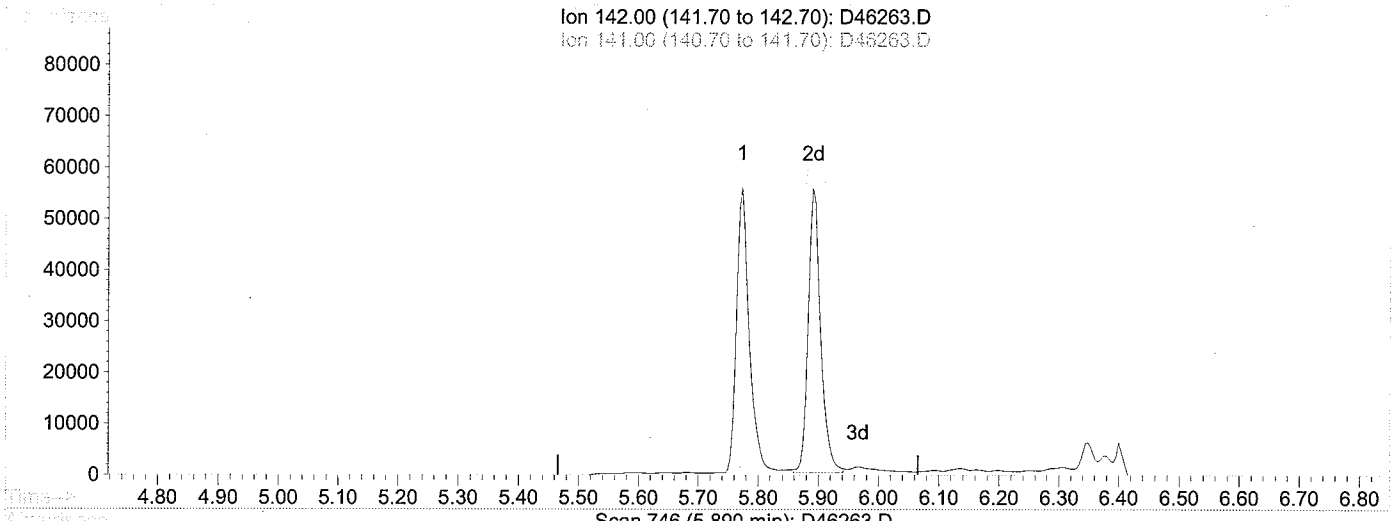
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 25.2 | J | 2.07 | 1 | ug/Kg |

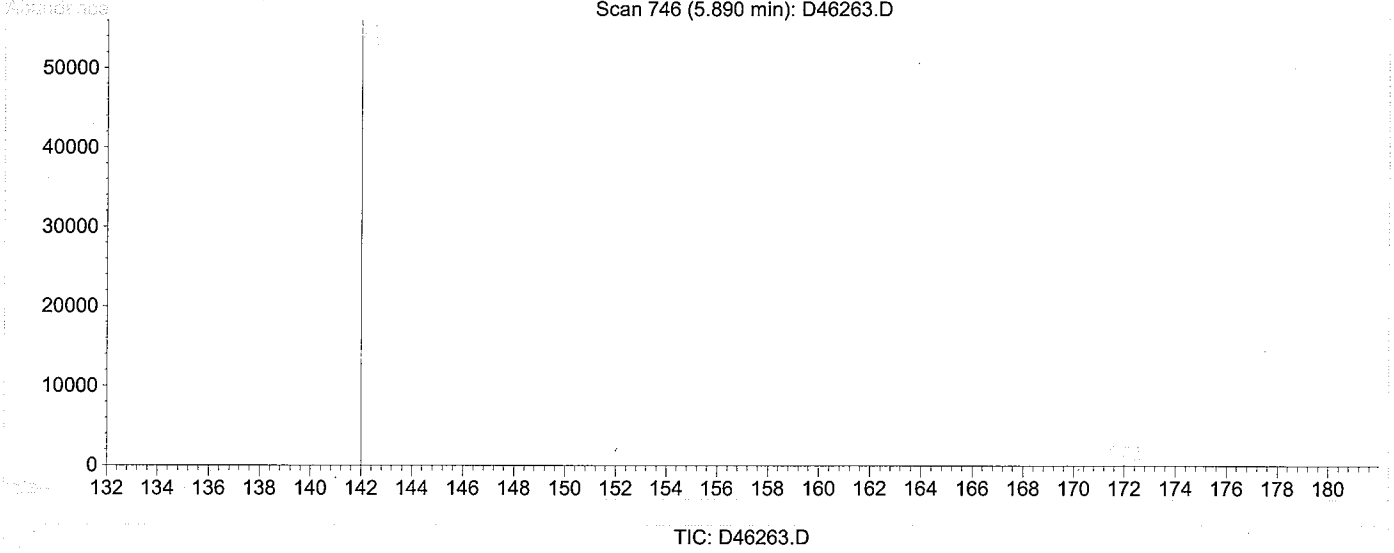
The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46263.D Vial: 23
Acq On : 16 Nov 2010 00:32 Operator: JI
Sample : 1011013-21 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:53 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46263.D

(5) 2-Methylnaphthalene (T)

5.89min 604.99ug/L m

response 79537

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-FD002-1010

Sample Date/Time: 11/2/10 00:00

File ID: D46290.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011013-20

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 08:10

Analyzed Date/Time: 11/16/10 20:29

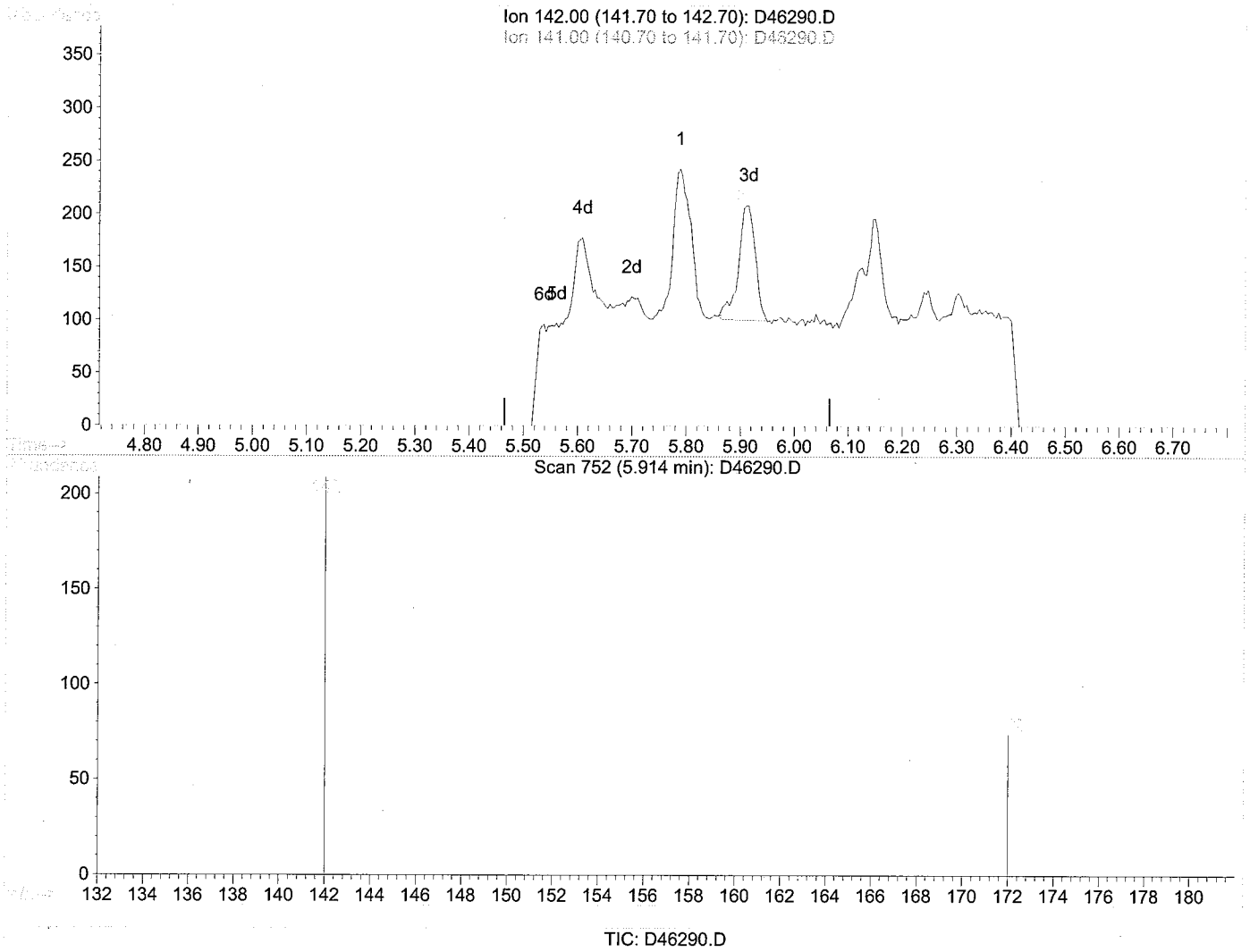
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.90 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111610\D46290.D Vial: 26
Acq On : 16 Nov 2010 20:29 Operator: JI
Sample : 1011013-20 Inst : GCMS-D
Misc : TETRATECH, SOIL HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:57 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46290.D

(5) 2-Methylnaphthalene (T)

5.91min 2.22ug/L m

response 238

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 15:46

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.072 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.186 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.137 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Aldrin | 309-00-2 | BQL | U | 0.060 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| alpha-BHC | 319-84-6 | BQL | U | 0.093 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.120 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| beta-BHC | 319-85-7 | BQL | U | 0.103 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Chlordane | 57-74-9 | BQL | U | 6.71 | 41.0 | 1 | ug/Kg dry | 11/19/10 8:33 |
| delta-BHC | 319-86-8 | BQL | U | 0.137 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Dieldrin | 60-57-1 | BQL | U | 0.174 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Endosulfan I | 959-98-8 | BQL | U | 0.109 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.116 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.186 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Endrin | 72-20-8 | BQL | U | 0.137 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.199 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.124 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| gamma-BHC | 58-89-9 | BQL | U | 0.101 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.124 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Heptachlor | 76-44-8 | BQL | U | 0.088 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.107 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Methoxychlor | 72-43-5 | BQL | U | 0.099 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Toxaphene | 8001-35-2 | BQL | U | 12.4 | 41.0 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Kepone | 143-50-0 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |
| Mirex | 2385-85-5 | BQL | U | 0.690 | 2.07 | 1 | ug/Kg dry | 11/19/10 8:33 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 143 % | 70-125 | 1 | 11/19/10 8:33 |
| DCB | 2051-24-3 | 126 % | 55-130 | 1 | 11/19/10 8:33 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-20
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.066 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| alpha-BHC | 319-84-6 | BQL | U | 0.086 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.111 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| beta-BHC | 319-85-7 | BQL | U | 0.095 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Chlordane | 57-74-9 | BQL | U | 6.16 | 37.6 | 1 | ug/Kg dry | 11/19/10 5:02 |
| delta-BHC | 319-86-8 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Dieldrin | 60-57-1 | BQL | U | 0.160 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Endosulfan I | 959-98-8 | BQL | U | 0.100 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.106 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Endrin | 72-20-8 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.182 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.114 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| gamma-BHC | 58-89-9 | BQL | U | 0.092 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| gamma-Chlordane | 5103-74-2 | 1.73 | J | 0.114 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Heptachlor | 76-44-8 | BQL | U | 0.081 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.098 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Methoxychlor | 72-43-5 | BQL | U | 0.091 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Toxaphene | 8001-35-2 | BQL | U | 11.4 | 37.6 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Kepone | 143-50-0 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |
| Mirex | 2385-85-5 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/19/10 5:02 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 146 % | 70-125 | 1 | 11/19/10 5:02 |
| DCB | 2051-24-3 | 149 % | 55-130 | 1 | 11/19/10 5:02 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-034-1010
Sample Date/Time: 11/02/10 13:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-19
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.068 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.175 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Aldrin | 309-00-2 | BQL | U | 0.056 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| alpha-BHC | 319-84-6 | BQL | U | 0.087 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.113 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| beta-BHC | 319-85-7 | BQL | U | 0.097 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Chlordane | 57-74-9 | BQL | U | 6.29 | 38.4 | 1 | ug/Kg dry | 11/19/10 4:31 |
| delta-BHC | 319-86-8 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Dieldrin | 60-57-1 | BQL | U | 0.163 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Endosulfan I | 959-98-8 | BQL | U | 0.102 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.108 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.175 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Endrin | 72-20-8 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.186 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.116 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| gamma-BHC | 58-89-9 | BQL | U | 0.094 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| gamma-Chlordane | 5103-74-2 | 1.11 | J | 0.116 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Heptachlor | 76-44-8 | BQL | U | 0.083 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.100 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Methoxychlor | 72-43-5 | BQL | U | 0.093 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Toxaphene | 8001-35-2 | BQL | U | 11.6 | 38.4 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Kepone | 143-50-0 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |
| Mirex | 2385-85-5 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/19/10 4:31 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 162 % | 70-125 | 1 | 11/19/10 4:31 |
| DCB | 2051-24-3 | 123 % | 55-130 | 1 | 11/19/10 4:31 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-032-1010
Sample Date/Time: 11/02/10 12:20
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-18
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.071 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.184 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.135 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Aldrin | 309-00-2 | BQL | U | 0.059 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| alpha-BHC | 319-84-6 | BQL | U | 0.092 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.119 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| beta-BHC | 319-85-7 | BQL | U | 0.102 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Chlordane | 57-74-9 | BQL | U | 6.62 | 40.5 | 1 | ug/Kg dry | 11/19/10 2:30 |
| delta-BHC | 319-86-8 | BQL | U | 0.135 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Dieldrin | 60-57-1 | BQL | U | 0.172 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Endosulfan I | 959-98-8 | BQL | U | 0.108 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.114 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.184 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Endrin | 72-20-8 | BQL | U | 0.135 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.196 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.123 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| gamma-BHC | 58-89-9 | BQL | U | 0.099 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.123 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Heptachlor | 76-44-8 | BQL | U | 0.087 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.105 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Methoxychlor | 72-43-5 | BQL | U | 0.098 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Toxaphene | 8001-35-2 | BQL | U | 12.3 | 40.5 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Kepone | 143-50-0 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |
| Mirex | 2385-85-5 | BQL | U | 0.681 | 2.04 | 1 | ug/Kg dry | 11/19/10 2:30 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 140 % | 70-125 | 1 | 11/19/10 2:30 |
| DCB | 2051-24-3 | 93 % | 55-130 | 1 | 11/19/10 2:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-031-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-17
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.066 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| alpha-BHC | 319-84-6 | BQL | U | 0.085 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.110 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| beta-BHC | 319-85-7 | BQL | U | 0.094 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Chlordane | 57-74-9 | BQL | U | 6.14 | 37.5 | 1 | ug/Kg dry | 11/19/10 2:00 |
| delta-BHC | 319-86-8 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Dieldrin | 60-57-1 | BQL | U | 0.159 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Endosulfan I | 959-98-8 | BQL | U | 0.100 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.106 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Endrin | 72-20-8 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.182 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.114 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| gamma-BHC | 58-89-9 | BQL | U | 0.092 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| gamma-Chlordane | 5103-74-2 | 1.10 | J | 0.114 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Heptachlor | 76-44-8 | BQL | U | 0.081 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.098 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Methoxychlor | 72-43-5 | BQL | U | 0.091 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Toxaphene | 8001-35-2 | BQL | U | 11.4 | 37.5 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Kepone | 143-50-0 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |
| Mirex | 2385-85-5 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/19/10 2:00 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 144 % | 70-125 | 1 | 11/19/10 2:00 |
| DCB | 2051-24-3 | 110 % | 55-130 | 1 | 11/19/10 2:00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-030-1010
Sample Date/Time: 11/02/10 12:40
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-16
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.066 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.170 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.125 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| alpha-BHC | 319-84-6 | BQL | U | 0.085 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.110 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| beta-BHC | 319-85-7 | BQL | U | 0.094 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Chlordane | 57-74-9 | BQL | U | 6.14 | 37.5 | 1 | ug/Kg dry | 11/19/10 8:03 |
| delta-BHC | 319-86-8 | BQL | U | 0.125 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Dieldrin | 60-57-1 | BQL | U | 0.159 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Endosulfan I | 959-98-8 | BQL | U | 0.100 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.106 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.170 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Endrin | 72-20-8 | BQL | U | 0.125 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.182 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.114 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| gamma-BHC | 58-89-9 | BQL | U | 0.092 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.114 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Heptachlor | 76-44-8 | BQL | U | 0.081 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.098 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Methoxychlor | 72-43-5 | BQL | U | 0.091 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Toxaphene | 8001-35-2 | BQL | U | 11.4 | 37.5 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Kepone | 143-50-0 | BQL | U | 0.631 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |
| Mirex | 2385-85-5 | BQL | U | 0.631 | 1.89 | 1 | ug/Kg dry | 11/19/10 8:03 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 104 % | 70-125 | 1 | 11/19/10 8:03 |
| DCB | 2051-24-3 | 104 % | 55-130 | 1 | 11/19/10 8:03 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-028-1010
Sample Date/Time: 11/02/10 13:20
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-15
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.068 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.175 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.128 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Aldrin | 309-00-2 | BQL | U | 0.056 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| alpha-BHC | 319-84-6 | BQL | U | 0.088 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.113 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| beta-BHC | 319-85-7 | BQL | U | 0.097 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Chlordane | 57-74-9 | BQL | U | 6.30 | 38.5 | 1 | ug/Kg dry | 11/19/10 1:30 |
| delta-BHC | 319-86-8 | BQL | U | 0.128 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Dieldrin | 60-57-1 | BQL | U | 0.163 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Endosulfan I | 959-98-8 | BQL | U | 0.103 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.109 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.175 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Endrin | 72-20-8 | BQL | U | 0.128 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.187 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.117 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| gamma-BHC | 58-89-9 | BQL | U | 0.095 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| gamma-Chlordane | 5103-74-2 | 1.75 | J | 0.117 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Heptachlor | 76-44-8 | BQL | U | 0.083 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.100 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Methoxychlor | 72-43-5 | BQL | U | 0.093 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Toxaphene | 8001-35-2 | BQL | U | 11.7 | 38.5 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Kepone | 143-50-0 | BQL | U | 0.648 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |
| Mirex | 2385-85-5 | BQL | U | 0.648 | 1.95 | 1 | ug/Kg dry | 11/19/10 1:30 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 116 % | 70-125 | 1 | 11/19/10 1:30 |
| DCB | 2051-24-3 | 106 % | 55-130 | 1 | 11/19/10 1:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-025-1010
Sample Date/Time: 11/02/10 11:20
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-14
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.069 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.178 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.130 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Aldrin | 309-00-2 | BQL | U | 0.057 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| alpha-BHC | 319-84-6 | BQL | U | 0.089 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.115 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| beta-BHC | 319-85-7 | BQL | U | 0.098 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Chlordane | 57-74-9 | BQL | U | 6.40 | 39.1 | 1 | ug/Kg dry | 11/19/10 1:00 |
| delta-BHC | 319-86-8 | BQL | U | 0.130 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Dieldrin | 60-57-1 | BQL | U | 0.166 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Endosulfan I | 959-98-8 | BQL | U | 0.104 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.110 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.178 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Endrin | 72-20-8 | BQL | U | 0.130 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.190 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.119 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| gamma-BHC | 58-89-9 | BQL | U | 0.096 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.119 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Heptachlor | 76-44-8 | BQL | U | 0.084 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.102 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Methoxychlor | 72-43-5 | BQL | U | 0.095 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Toxaphene | 8001-35-2 | BQL | U | 11.9 | 39.1 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Kepone | 143-50-0 | BQL | U | 0.659 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |
| Mirex | 2385-85-5 | BQL | U | 0.659 | 1.98 | 1 | ug/Kg dry | 11/19/10 1:00 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 82 % | 70-125 | 1 | 11/19/10 1:00 |
| DCB | 2051-24-3 | 67 % | 55-130 | 1 | 11/19/10 1:00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-023-1010
Sample Date/Time: 11/02/10 13:40
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-13
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.067 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.174 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.128 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Aldrin | 309-00-2 | BQL | U | 0.056 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| alpha-BHC | 319-84-6 | BQL | U | 0.087 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.112 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| beta-BHC | 319-85-7 | BQL | U | 0.096 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Chlordane | 57-74-9 | BQL | U | 6.26 | 38.3 | 1 | ug/Kg dry | 11/19/10 7:33 |
| delta-BHC | 319-86-8 | BQL | U | 0.128 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Dieldrin | 60-57-1 | BQL | U | 0.162 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Endosulfan I | 959-98-8 | BQL | U | 0.102 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.108 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.174 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Endrin | 72-20-8 | BQL | U | 0.128 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.186 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.116 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| gamma-BHC | 58-89-9 | BQL | U | 0.094 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.116 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Heptachlor | 76-44-8 | BQL | U | 0.082 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.100 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Methoxychlor | 72-43-5 | BQL | U | 0.093 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Toxaphene | 8001-35-2 | BQL | U | 11.6 | 38.3 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Kepone | 143-50-0 | BQL | U | 0.644 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |
| Mirex | 2385-85-5 | BQL | U | 0.644 | 1.93 | 1 | ug/Kg dry | 11/19/10 7:33 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 160 % | 70-125 | 1 | 11/19/10 7:33 |
| DCB | 2051-24-3 | 118 % | 55-130 | 1 | 11/19/10 7:33 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.068 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.176 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.129 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Aldrin | 309-00-2 | BQL | U | 0.056 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| alpha-BHC | 319-84-6 | BQL | U | 0.088 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.114 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| beta-BHC | 319-85-7 | BQL | U | 0.097 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Chlordane | 57-74-9 | BQL | U | 6.32 | 38.6 | 1 | ug/Kg dry | 11/19/10 7:03 |
| delta-BHC | 319-86-8 | BQL | U | 0.129 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Dieldrin | 60-57-1 | BQL | U | 0.164 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Endosulfan I | 959-98-8 | BQL | U | 0.103 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.109 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.176 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Endrin | 72-20-8 | BQL | U | 0.129 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.187 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.117 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| gamma-BHC | 58-89-9 | BQL | U | 0.095 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.117 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Heptachlor | 76-44-8 | BQL | U | 0.083 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.101 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Methoxychlor | 72-43-5 | BQL | U | 0.094 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Toxaphene | 8001-35-2 | BQL | U | 11.7 | 38.6 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Kepone | 143-50-0 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |
| Mirex | 2385-85-5 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/19/10 7:03 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 183 % | 70-125 | 1 | 11/19/10 7:03 |
| DCB | 2051-24-3 | 187 % | 55-130 | 1 | 11/19/10 7:03 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.067 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.172 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| 4,4'-DDT | 50-29-3 | 3.71 | | 0.126 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| alpha-BHC | 319-84-6 | BQL | U | 0.086 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.111 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| beta-BHC | 319-85-7 | BQL | U | 0.095 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Chlordane | 57-74-9 | 6.62 | J | 6.21 | 37.9 | 1 | ug/Kg dry | 11/19/10 6:32 |
| delta-BHC | 319-86-8 | BQL | U | 0.126 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Dieldrin | 60-57-1 | BQL | U | 0.161 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Endosulfan I | 959-98-8 | BQL | U | 0.101 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.107 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.172 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Endrin | 72-20-8 | BQL | U | 0.126 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.184 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.115 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| gamma-BHC | 58-89-9 | BQL | U | 0.093 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.115 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Heptachlor | 76-44-8 | BQL | U | 0.082 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.099 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Methoxychlor | 72-43-5 | BQL | U | 0.092 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Toxaphene | 8001-35-2 | 25.5 | J | 11.5 | 37.9 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Kepone | 143-50-0 | BQL | U | 0.639 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |
| Mirex | 2385-85-5 | BQL | U | 0.639 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 105 % | 70-125 | 1 | 11/19/10 6:32 |
| DCB | 2051-24-3 | 103 % | 55-130 | 1 | 11/19/10 6:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-019-1010
Sample Date/Time: 11/02/10 10:20
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-10
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.067 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.173 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.127 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| alpha-BHC | 319-84-6 | BQL | U | 0.086 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.112 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| beta-BHC | 319-85-7 | BQL | U | 0.096 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Chlordane | 57-74-9 | BQL | U | 6.23 | 38.0 | 1 | ug/Kg dry | 11/19/10 6:02 |
| delta-BHC | 319-86-8 | BQL | U | 0.127 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Dieldrin | 60-57-1 | BQL | U | 0.161 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Endosulfan I | 959-98-8 | BQL | U | 0.101 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.107 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.173 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Endrin | 72-20-8 | BQL | U | 0.127 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.184 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.115 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| gamma-BHC | 58-89-9 | BQL | U | 0.093 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| gamma-Chlordane | 5103-74-2 | 2.51 | | 0.115 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Heptachlor | 76-44-8 | BQL | U | 0.082 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.099 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Methoxychlor | 72-43-5 | BQL | U | 0.092 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Toxaphene | 8001-35-2 | BQL | U | 11.5 | 38.0 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Kepone | 143-50-0 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |
| Mirex | 2385-85-5 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/19/10 6:02 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 142 % | 70-125 | 1 | 11/19/10 6:02 |
| DCB | 2051-24-3 | 125 % | 55-130 | 1 | 11/19/10 6:02 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-017-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-09
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.066 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.171 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| 4,4'-DDT | 50-29-3 | 1.49 | JP | 0.125 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| alpha-BHC | 319-84-6 | BQL | U | 0.085 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.110 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| beta-BHC | 319-85-7 | BQL | U | 0.094 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Chlordane | 57-74-9 | BQL | U | 6.14 | 37.5 | 1 | ug/Kg dry | 11/19/10 5:32 |
| delta-BHC | 319-86-8 | BQL | U | 0.125 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Dieldrin | 60-57-1 | BQL | U | 0.159 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Endosulfan I | 959-98-8 | BQL | U | 0.100 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.106 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.171 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Endrin | 72-20-8 | BQL | U | 0.125 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.182 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.114 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| gamma-BHC | 58-89-9 | BQL | U | 0.092 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.114 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Heptachlor | 76-44-8 | BQL | U | 0.081 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.098 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Methoxychlor | 72-43-5 | BQL | U | 0.091 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Toxaphene | 8001-35-2 | BQL | U | 11.4 | 37.5 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Kepone | 143-50-0 | BQL | U | 0.632 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |
| Mirex | 2385-85-5 | BQL | U | 0.632 | 1.89 | 1 | ug/Kg dry | 11/19/10 5:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 146 % | 70-125 | 1 | 11/19/10 5:32 |
| DCB | 2051-24-3 | 138 % | 55-130 | 1 | 11/19/10 5:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-014-1010
Sample Date/Time: 11/02/10 14:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-08
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.068 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.176 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.129 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Aldrin | 309-00-2 | BQL | U | 0.056 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| alpha-BHC | 319-84-6 | BQL | U | 0.088 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.114 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| beta-BHC | 319-85-7 | BQL | U | 0.097 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Chlordane | 57-74-9 | BQL | U | 6.33 | 38.7 | 1 | ug/Kg dry | 11/19/10 0:30 |
| delta-BHC | 319-86-8 | BQL | U | 0.129 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Dieldrin | 60-57-1 | BQL | U | 0.164 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Endosulfan I | 959-98-8 | BQL | U | 0.103 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.109 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.176 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Endrin | 72-20-8 | BQL | U | 0.129 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.187 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.117 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| gamma-BHC | 58-89-9 | BQL | U | 0.095 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| gamma-Chlordane | 5103-74-2 | 3.12 | | 0.117 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Heptachlor | 76-44-8 | BQL | U | 0.083 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.101 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Methoxychlor | 72-43-5 | BQL | U | 0.094 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Toxaphene | 8001-35-2 | BQL | U | 11.7 | 38.7 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Kepone | 143-50-0 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |
| Mirex | 2385-85-5 | BQL | U | 0.651 | 1.95 | 1 | ug/Kg dry | 11/19/10 0:30 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 122 % | 70-125 | 1 | 11/19/10 0:30 |
| DCB | 2051-24-3 | 105 % | 55-130 | 1 | 11/19/10 0:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-012-1010
Sample Date/Time: 11/02/10 12:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-07
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | 1.97 | J | 0.069 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| 4,4'-DDE | 72-55-9 | 12.3 | P | 0.179 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| 4,4'-DDT | 50-29-3 | 9.99 | | 0.131 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Aldrin | 309-00-2 | BQL | U | 0.057 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| alpha-BHC | 319-84-6 | BQL | U | 0.090 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.116 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| beta-BHC | 319-85-7 | BQL | U | 0.099 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Chlordane | 57-74-9 | 7.06 | JP | 6.45 | 39.4 | 1 | ug/Kg dry | 11/18/10 23:59 |
| delta-BHC | 319-86-8 | BQL | U | 0.131 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Dieldrin | 60-57-1 | BQL | U | 0.167 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Endosulfan I | 959-98-8 | BQL | U | 0.105 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.111 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.179 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Endrin | 72-20-8 | BQL | U | 0.131 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Endrin Aldehyde | 7421-93-4 | 1.79 | J | 0.191 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.119 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| gamma-BHC | 58-89-9 | BQL | U | 0.097 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.119 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Heptachlor | 76-44-8 | BQL | U | 0.085 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.103 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Methoxychlor | 72-43-5 | BQL | U | 0.096 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Toxaphene | 8001-35-2 | BQL | U | 11.9 | 39.4 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Kepone | 143-50-0 | BQL | U | 0.664 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |
| Mirex | 2385-85-5 | BQL | U | 0.664 | 1.99 | 1 | ug/Kg dry | 11/18/10 23:59 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 120 % | 70-125 | 1 | 11/18/10 23:59 |
| DCB | 2051-24-3 | 125 % | 55-130 | 1 | 11/18/10 23:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-011-1010
Sample Date/Time: 11/02/10 09:40
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-06
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.072 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.187 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| 4,4'-DDT | 50-29-3 | 2.09 | P | 0.137 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Aldrin | 309-00-2 | BQL | U | 0.060 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| alpha-BHC | 319-84-6 | BQL | U | 0.093 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.121 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| beta-BHC | 319-85-7 | BQL | U | 0.103 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Chlordane | 57-74-9 | 53.7 | P | 6.72 | 41.1 | 1 | ug/Kg dry | 11/18/10 23:29 |
| delta-BHC | 319-86-8 | BQL | U | 0.137 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Dieldrin | 60-57-1 | BQL | U | 0.174 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Endosulfan I | 959-98-8 | BQL | U | 0.109 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.116 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.187 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Endrin | 72-20-8 | BQL | U | 0.137 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Endrin Aldehyde | 7421-93-4 | 62.0 | E | 0.199 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.124 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| gamma-BHC | 58-89-9 | BQL | U | 0.101 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.124 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Heptachlor | 76-44-8 | BQL | U | 0.088 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.107 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Methoxychlor | 72-43-5 | BQL | U | 0.100 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Toxaphene | 8001-35-2 | BQL | U | 12.4 | 41.1 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Kepone | 143-50-0 | BQL | U | 0.691 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |
| Mirex | 2385-85-5 | BQL | U | 0.691 | 2.07 | 1 | ug/Kg dry | 11/18/10 23:29 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 127 % | 70-125 | 1 | 11/18/10 23:29 |
| DCB | 2051-24-3 | 110 % | 55-130 | 1 | 11/18/10 23:29 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-007-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-05
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.066 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| alpha-BHC | 319-84-6 | BQL | U | 0.085 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.110 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| beta-BHC | 319-85-7 | BQL | U | 0.094 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Chlordane | 57-74-9 | BQL | U | 6.14 | 37.5 | 1 | ug/Kg dry | 11/18/10 22:59 |
| delta-BHC | 319-86-8 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Dieldrin | 60-57-1 | BQL | U | 0.159 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Endosulfan I | 959-98-8 | BQL | U | 0.100 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.106 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Endrin | 72-20-8 | BQL | U | 0.125 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.182 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.114 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| gamma-BHC | 58-89-9 | BQL | U | 0.092 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| gamma-Chlordane | 5103-74-2 | 1.48 | J | 0.114 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Heptachlor | 76-44-8 | BQL | U | 0.081 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.098 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Methoxychlor | 72-43-5 | BQL | U | 0.091 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Toxaphene | 8001-35-2 | BQL | U | 11.4 | 37.5 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Kepone | 143-50-0 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |
| Mirex | 2385-85-5 | BQL | U | 0.632 | 1.90 | 1 | ug/Kg dry | 11/18/10 22:59 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 155 % | 70-125 | 1 | 11/18/10 22:59 |
| DCB | 2051-24-3 | 138 % | 55-130 | 1 | 11/18/10 22:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-005-1010
Sample Date/Time: 11/02/10 09:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-04
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.068 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.175 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Aldrin | 309-00-2 | BQL | U | 0.056 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| alpha-BHC | 319-84-6 | BQL | U | 0.087 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.113 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| beta-BHC | 319-85-7 | BQL | U | 0.097 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Chlordane | 57-74-9 | BQL | U | 6.29 | 38.4 | 1 | ug/Kg dry | 11/18/10 21:28 |
| delta-BHC | 319-86-8 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Dieldrin | 60-57-1 | BQL | U | 0.163 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Endosulfan I | 959-98-8 | BQL | U | 0.102 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.108 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.175 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Endrin | 72-20-8 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.186 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.116 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| gamma-BHC | 58-89-9 | BQL | U | 0.094 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| gamma-Chlordane | 5103-74-2 | 4.69 | | 0.116 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Heptachlor | 76-44-8 | BQL | U | 0.083 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.100 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Methoxychlor | 72-43-5 | BQL | U | 0.093 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Toxaphene | 8001-35-2 | BQL | U | 11.6 | 38.4 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Kepone | 143-50-0 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |
| Mirex | 2385-85-5 | BQL | U | 0.647 | 1.94 | 1 | ug/Kg dry | 11/18/10 21:28 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 142 % | 70-125 | 1 | 11/18/10 21:28 |
| DCB | 2051-24-3 | 104 % | 55-130 | 1 | 11/18/10 21:28 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-003-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-03
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.067 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.173 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.127 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| alpha-BHC | 319-84-6 | BQL | U | 0.087 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.112 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| beta-BHC | 319-85-7 | BQL | U | 0.096 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Chlordane | 57-74-9 | BQL | U | 6.23 | 38.1 | 1 | ug/Kg dry | 11/18/10 20:58 |
| delta-BHC | 319-86-8 | BQL | U | 0.127 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Dieldrin | 60-57-1 | BQL | U | 0.162 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Endosulfan I | 959-98-8 | BQL | U | 0.102 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.107 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.173 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Endrin | 72-20-8 | BQL | U | 0.127 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.185 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.115 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| gamma-BHC | 58-89-9 | BQL | U | 0.093 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| gamma-Chlordane | 5103-74-2 | 6.08 | | 0.115 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Heptachlor | 76-44-8 | BQL | U | 0.082 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.099 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Methoxychlor | 72-43-5 | BQL | U | 0.092 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Toxaphene | 8001-35-2 | BQL | U | 11.5 | 38.1 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Kepone | 143-50-0 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |
| Mirex | 2385-85-5 | BQL | U | 0.641 | 1.92 | 1 | ug/Kg dry | 11/18/10 20:58 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 145 % | 70-125 | 1 | 11/18/10 20:58 |
| DCB | 2051-24-3 | 127 % | 55-130 | 1 | 11/18/10 20:58 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-002-1010
Sample Date/Time: 11/02/10 08:20
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-02
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.066 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.126 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| alpha-BHC | 319-84-6 | BQL | U | 0.086 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.111 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| beta-BHC | 319-85-7 | BQL | U | 0.095 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Chlordane | 57-74-9 | BQL | U | 6.16 | 37.7 | 1 | ug/Kg dry | 11/18/10 20:28 |
| delta-BHC | 319-86-8 | BQL | U | 0.126 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Dieldrin | 60-57-1 | BQL | U | 0.160 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Endosulfan I | 959-98-8 | BQL | U | 0.100 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.106 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.171 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Endrin | 72-20-8 | BQL | U | 0.126 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.183 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.114 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| gamma-BHC | 58-89-9 | BQL | U | 0.092 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| gamma-Chlordane | 5103-74-2 | 1.70 | J | 0.114 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Heptachlor | 76-44-8 | BQL | U | 0.081 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.098 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Methoxychlor | 72-43-5 | BQL | U | 0.091 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Toxaphene | 8001-35-2 | BQL | U | 11.4 | 37.7 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Kepone | 143-50-0 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |
| Mirex | 2385-85-5 | BQL | U | 0.634 | 1.90 | 1 | ug/Kg dry | 11/18/10 20:28 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 121 % | 70-125 | 1 | 11/18/10 20:28 |
| DCB | 2051-24-3 | 107 % | 55-130 | 1 | 11/18/10 20:28 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-001-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011013-01
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.067 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.174 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Aldrin | 309-00-2 | BQL | U | 0.056 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| alpha-BHC | 319-84-6 | BQL | U | 0.087 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.113 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| beta-BHC | 319-85-7 | BQL | U | 0.096 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Chlordane | 57-74-9 | BQL | U | 6.27 | 38.3 | 1 | ug/Kg dry | 11/18/10 19:57 |
| delta-BHC | 319-86-8 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Dieldrin | 60-57-1 | BQL | U | 0.163 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Endosulfan I | 959-98-8 | BQL | U | 0.102 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.108 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.174 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Endrin | 72-20-8 | BQL | U | 0.128 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.186 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.116 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| gamma-BHC | 58-89-9 | BQL | U | 0.094 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| gamma-Chlordane | 5103-74-2 | 1.62 | JP | 0.116 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Heptachlor | 76-44-8 | BQL | U | 0.082 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.100 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Methoxychlor | 72-43-5 | BQL | U | 0.093 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Toxaphene | 8001-35-2 | BQL | U | 11.6 | 38.3 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Kepone | 143-50-0 | BQL | U | 0.645 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |
| Mirex | 2385-85-5 | BQL | U | 0.645 | 1.94 | 1 | ug/Kg dry | 11/18/10 19:57 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 145 % | 70-125 | 1 | 11/18/10 19:57 |
| DCB | 2051-24-3 | 134 % | 55-130 | 1 | 11/18/10 19:57 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 11:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 6.21 | 41.4 | 1 | ug/Kg dry | 11/12/10 12:40 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.8 | 41.4 | 1 | ug/Kg dry | 11/12/10 12:40 |
| PCB-1232 | 11141-16-5 | BQL | U | 7.08 | 41.4 | 1 | ug/Kg dry | 11/12/10 12:40 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.82 | 41.4 | 1 | ug/Kg dry | 11/12/10 12:40 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.85 | 41.4 | 1 | ug/Kg dry | 11/12/10 12:40 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.57 | 41.4 | 1 | ug/Kg dry | 11/12/10 12:40 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.48 | 41.4 | 1 | ug/Kg dry | 11/12/10 12:40 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 71 % | 70-125 | 1 | 11/12/10 12:40 |
| DCB | 2051-24-3 | 77 % | 60-125 | 1 | 11/12/10 12:40 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-20
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.70 | 38.0 | 1 | ug/Kg dry | 11/13/10 4:43 |
| PCB-1221 | 11104-28-2 | BQL | U | 9.92 | 38.0 | 1 | ug/Kg dry | 11/13/10 4:43 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.50 | 38.0 | 1 | ug/Kg dry | 11/13/10 4:43 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.10 | 38.0 | 1 | ug/Kg dry | 11/13/10 4:43 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.53 | 38.0 | 1 | ug/Kg dry | 11/13/10 4:43 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.87 | 38.0 | 1 | ug/Kg dry | 11/13/10 4:43 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.19 | 38.0 | 1 | ug/Kg dry | 11/13/10 4:43 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 98 % | 70-125 | 1 | 11/13/10 4:43 |
| DCB | 2051-24-3 | 102 % | 60-125 | 1 | 11/13/10 4:43 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-034-1010
Sample Date/Time: 11/02/10 13:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-19
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.82 | 38.8 | 1 | ug/Kg dry | 11/15/10 13:08 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.1 | 38.8 | 1 | ug/Kg dry | 11/15/10 13:08 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.63 | 38.8 | 1 | ug/Kg dry | 11/15/10 13:08 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.26 | 38.8 | 1 | ug/Kg dry | 11/15/10 13:08 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.61 | 38.8 | 1 | ug/Kg dry | 11/15/10 13:08 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.03 | 38.8 | 1 | ug/Kg dry | 11/15/10 13:08 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.26 | 38.8 | 1 | ug/Kg dry | 11/15/10 13:08 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 126 % | 70-125 | 1 | 11/15/10 13:08 |
| DCB | 2051-24-3 | 131 % | 60-125 | 1 | 11/15/10 13:08 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-032-1010
Sample Date/Time: 11/02/10 12:20
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-18
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 6.13 | 40.9 | 1 | ug/Kg dry | 11/13/10 2:35 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.7 | 40.9 | 1 | ug/Kg dry | 11/13/10 2:35 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.99 | 40.9 | 1 | ug/Kg dry | 11/13/10 2:35 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.71 | 40.9 | 1 | ug/Kg dry | 11/13/10 2:35 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.80 | 40.9 | 1 | ug/Kg dry | 11/13/10 2:35 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.46 | 40.9 | 1 | ug/Kg dry | 11/13/10 2:35 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.43 | 40.9 | 1 | ug/Kg dry | 11/13/10 2:35 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 73 % | 70-125 | 1 | 11/13/10 2:35 |
| DCB | 2051-24-3 | 72 % | 60-125 | 1 | 11/13/10 2:35 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-031-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-17
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.68 | 37.9 | 1 | ug/Kg dry | 11/13/10 2:03 |
| PCB-1221 | 11104-28-2 | BQL | U | 9.89 | 37.9 | 1 | ug/Kg dry | 11/13/10 2:03 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.48 | 37.9 | 1 | ug/Kg dry | 11/13/10 2:03 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.07 | 37.9 | 1 | ug/Kg dry | 11/13/10 2:03 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.52 | 37.9 | 1 | ug/Kg dry | 11/13/10 2:03 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.84 | 37.9 | 1 | ug/Kg dry | 11/13/10 2:03 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.18 | 37.9 | 1 | ug/Kg dry | 11/13/10 2:03 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 67 % | 70-125 | 1 | 11/13/10 2:03 |
| DCB | 2051-24-3 | 63 % | 60-125 | 1 | 11/13/10 2:03 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-030-1010
Sample Date/Time: 11/02/10 12:40
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-16
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.68 | 37.9 | 1 | ug/Kg dry | 11/13/10 1:30 |
| PCB-1221 | 11104-28-2 | BQL | U | 9.88 | 37.9 | 1 | ug/Kg dry | 11/13/10 1:30 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.48 | 37.9 | 1 | ug/Kg dry | 11/13/10 1:30 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.07 | 37.9 | 1 | ug/Kg dry | 11/13/10 1:30 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.52 | 37.9 | 1 | ug/Kg dry | 11/13/10 1:30 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.84 | 37.9 | 1 | ug/Kg dry | 11/13/10 1:30 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.18 | 37.9 | 1 | ug/Kg dry | 11/13/10 1:30 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 80 % | 70-125 | 1 | 11/13/10 1:30 |
| DCB | 2051-24-3 | 85 % | 60-125 | 1 | 11/13/10 1:30 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-028-1010
Sample Date/Time: 11/02/10 13:20
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-15
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.83 | 38.9 | 1 | ug/Kg dry | 11/13/10 0:58 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.2 | 38.9 | 1 | ug/Kg dry | 11/13/10 0:58 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.65 | 38.9 | 1 | ug/Kg dry | 11/13/10 0:58 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.28 | 38.9 | 1 | ug/Kg dry | 11/13/10 0:58 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.62 | 38.9 | 1 | ug/Kg dry | 11/13/10 0:58 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.05 | 38.9 | 1 | ug/Kg dry | 11/13/10 0:58 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.27 | 38.9 | 1 | ug/Kg dry | 11/13/10 0:58 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 64 % | 70-125 | 1 | 11/13/10 0:58 |
| DCB | 2051-24-3 | 67 % | 60-125 | 1 | 11/13/10 0:58 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-025-1010
Sample Date/Time: 11/02/10 11:20
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-14
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.93 | 39.5 | 1 | ug/Kg dry | 11/13/10 0:26 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.3 | 39.5 | 1 | ug/Kg dry | 11/13/10 0:26 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.76 | 39.5 | 1 | ug/Kg dry | 11/13/10 0:26 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.42 | 39.5 | 1 | ug/Kg dry | 11/13/10 0:26 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.68 | 39.5 | 1 | ug/Kg dry | 11/13/10 0:26 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.18 | 39.5 | 1 | ug/Kg dry | 11/13/10 0:26 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.32 | 39.5 | 1 | ug/Kg dry | 11/13/10 0:26 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 43 % | 70-125 | 1 | 11/13/10 0:26 |
| DCB | 2051-24-3 | 40 % | 60-125 | 1 | 11/13/10 0:26 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-023-1010
Sample Date/Time: 11/02/10 13:40
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-13
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.80 | 38.7 | 1 | ug/Kg dry | 11/12/10 23:54 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.1 | 38.7 | 1 | ug/Kg dry | 11/12/10 23:54 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.61 | 38.7 | 1 | ug/Kg dry | 11/12/10 23:54 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.23 | 38.7 | 1 | ug/Kg dry | 11/12/10 23:54 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.60 | 38.7 | 1 | ug/Kg dry | 11/12/10 23:54 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.00 | 38.7 | 1 | ug/Kg dry | 11/12/10 23:54 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.25 | 38.7 | 1 | ug/Kg dry | 11/12/10 23:54 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 86 % | 70-125 | 1 | 11/12/10 23:54 |
| DCB | 2051-24-3 | 79 % | 60-125 | 1 | 11/12/10 23:54 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.86 | 39.0 | 1 | ug/Kg dry | 11/12/10 23:22 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.2 | 39.0 | 1 | ug/Kg dry | 11/12/10 23:22 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.68 | 39.0 | 1 | ug/Kg dry | 11/12/10 23:22 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.32 | 39.0 | 1 | ug/Kg dry | 11/12/10 23:22 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.63 | 39.0 | 1 | ug/Kg dry | 11/12/10 23:22 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.08 | 39.0 | 1 | ug/Kg dry | 11/12/10 23:22 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.28 | 39.0 | 1 | ug/Kg dry | 11/12/10 23:22 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 126 % | 70-125 | 1 | 11/12/10 23:22 |
| DCB | 2051-24-3 | 116 % | 60-125 | 1 | 11/12/10 23:22 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.75 | 38.3 | 1 | ug/Kg dry | 11/12/10 22:50 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.0 | 38.3 | 1 | ug/Kg dry | 11/12/10 22:50 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.55 | 38.3 | 1 | ug/Kg dry | 11/12/10 22:50 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.16 | 38.3 | 1 | ug/Kg dry | 11/12/10 22:50 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.56 | 38.3 | 1 | ug/Kg dry | 11/12/10 22:50 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.93 | 38.3 | 1 | ug/Kg dry | 11/12/10 22:50 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.22 | 38.3 | 1 | ug/Kg dry | 11/12/10 22:50 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 68 % | 70-125 | 1 | 11/12/10 22:50 |
| DCB | 2051-24-3 | 71 % | 60-125 | 1 | 11/12/10 22:50 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-019-1010
Sample Date/Time: 11/02/10 10:20
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-10
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.77 | 38.4 | 1 | ug/Kg dry | 11/12/10 22:18 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.0 | 38.4 | 1 | ug/Kg dry | 11/12/10 22:18 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.57 | 38.4 | 1 | ug/Kg dry | 11/12/10 22:18 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.19 | 38.4 | 1 | ug/Kg dry | 11/12/10 22:18 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.57 | 38.4 | 1 | ug/Kg dry | 11/12/10 22:18 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.96 | 38.4 | 1 | ug/Kg dry | 11/12/10 22:18 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.23 | 38.4 | 1 | ug/Kg dry | 11/12/10 22:18 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 78 % | 70-125 | 1 | 11/12/10 22:18 |
| DCB | 2051-24-3 | 84 % | 60-125 | 1 | 11/12/10 22:18 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-017-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-09
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | 13.0 | J | 5.68 | 37.9 | 1 | ug/Kg dry | 11/12/10 21:46 |
| PCB-1221 | 11104-28-2 | BQL | U | 9.89 | 37.9 | 1 | ug/Kg dry | 11/12/10 21:46 |
| PCB-1232 | 11141-16-5 | 20.7 | JP | 6.48 | 37.9 | 1 | ug/Kg dry | 11/12/10 21:46 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.07 | 37.9 | 1 | ug/Kg dry | 11/12/10 21:46 |
| PCB-1248 | 12672-29-6 | 90.1 | P | 3.52 | 37.9 | 1 | ug/Kg dry | 11/12/10 21:46 |
| PCB-1254 | 11097-69-1 | 35.8 | J | 7.84 | 37.9 | 1 | ug/Kg dry | 11/12/10 21:46 |
| PCB-1260 | 11096-82-5 | 6.17 | J | 3.18 | 37.9 | 1 | ug/Kg dry | 11/12/10 21:46 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 85 % | 70-125 | 1 | 11/12/10 21:46 |
| DCB | 2051-24-3 | 86 % | 60-125 | 1 | 11/12/10 21:46 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-014-1010
Sample Date/Time: 11/02/10 14:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-08
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.86 | 39.0 | 1 | ug/Kg dry | 11/12/10 20:09 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.2 | 39.0 | 1 | ug/Kg dry | 11/12/10 20:09 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.68 | 39.0 | 1 | ug/Kg dry | 11/12/10 20:09 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.32 | 39.0 | 1 | ug/Kg dry | 11/12/10 20:09 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.63 | 39.0 | 1 | ug/Kg dry | 11/12/10 20:09 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.08 | 39.0 | 1 | ug/Kg dry | 11/12/10 20:09 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.28 | 39.0 | 1 | ug/Kg dry | 11/12/10 20:09 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 77 % | 70-125 | 1 | 11/12/10 20:09 |
| DCB | 2051-24-3 | 76 % | 60-125 | 1 | 11/12/10 20:09 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-012-1010
Sample Date/Time: 11/02/10 12:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-07
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.97 | 39.8 | 1 | ug/Kg dry | 11/12/10 19:37 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.4 | 39.8 | 1 | ug/Kg dry | 11/12/10 19:37 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.81 | 39.8 | 1 | ug/Kg dry | 11/12/10 19:37 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.48 | 39.8 | 1 | ug/Kg dry | 11/12/10 19:37 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.70 | 39.8 | 1 | ug/Kg dry | 11/12/10 19:37 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.25 | 39.8 | 1 | ug/Kg dry | 11/12/10 19:37 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.35 | 39.8 | 1 | ug/Kg dry | 11/12/10 19:37 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 74 % | 70-125 | 1 | 11/12/10 19:37 |
| DCB | 2051-24-3 | 83 % | 60-125 | 1 | 11/12/10 19:37 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-011-1010
Sample Date/Time: 11/02/10 09:40
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-06
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 6.22 | 41.5 | 1 | ug/Kg dry | 11/12/10 19:05 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.8 | 41.5 | 1 | ug/Kg dry | 11/12/10 19:05 |
| PCB-1232 | 11141-16-5 | BQL | U | 7.09 | 41.5 | 1 | ug/Kg dry | 11/12/10 19:05 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.83 | 41.5 | 1 | ug/Kg dry | 11/12/10 19:05 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.86 | 41.5 | 1 | ug/Kg dry | 11/12/10 19:05 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.58 | 41.5 | 1 | ug/Kg dry | 11/12/10 19:05 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.48 | 41.5 | 1 | ug/Kg dry | 11/12/10 19:05 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 76 % | 70-125 | 1 | 11/12/10 19:05 |
| DCB | 2051-24-3 | 82 % | 60-125 | 1 | 11/12/10 19:05 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-007-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-05
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.69 | 37.9 | 1 | ug/Kg dry | 11/12/10 18:33 |
| PCB-1221 | 11104-28-2 | BQL | U | 9.90 | 37.9 | 1 | ug/Kg dry | 11/12/10 18:33 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.49 | 37.9 | 1 | ug/Kg dry | 11/12/10 18:33 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.08 | 37.9 | 1 | ug/Kg dry | 11/12/10 18:33 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.53 | 37.9 | 1 | ug/Kg dry | 11/12/10 18:33 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.85 | 37.9 | 1 | ug/Kg dry | 11/12/10 18:33 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.19 | 37.9 | 1 | ug/Kg dry | 11/12/10 18:33 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 90 % | 70-125 | 1 | 11/12/10 18:33 |
| DCB | 2051-24-3 | 94 % | 60-125 | 1 | 11/12/10 18:33 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-005-1010
Sample Date/Time: 11/02/10 09:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-04
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.82 | 38.8 | 1 | ug/Kg dry | 11/12/10 18:01 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.1 | 38.8 | 1 | ug/Kg dry | 11/12/10 18:01 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.64 | 38.8 | 1 | ug/Kg dry | 11/12/10 18:01 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.27 | 38.8 | 1 | ug/Kg dry | 11/12/10 18:01 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.61 | 38.8 | 1 | ug/Kg dry | 11/12/10 18:01 |
| PCB-1254 | 11097-69-1 | BQL | U | 8.04 | 38.8 | 1 | ug/Kg dry | 11/12/10 18:01 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.26 | 38.8 | 1 | ug/Kg dry | 11/12/10 18:01 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 74 % | 70-125 | 1 | 11/12/10 18:01 |
| DCB | 2051-24-3 | 68 % | 60-125 | 1 | 11/12/10 18:01 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-003-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-03
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.77 | 38.5 | 1 | ug/Kg dry | 11/12/10 17:29 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.0 | 38.5 | 1 | ug/Kg dry | 11/12/10 17:29 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.58 | 38.5 | 1 | ug/Kg dry | 11/12/10 17:29 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.19 | 38.5 | 1 | ug/Kg dry | 11/12/10 17:29 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.58 | 38.5 | 1 | ug/Kg dry | 11/12/10 17:29 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.96 | 38.5 | 1 | ug/Kg dry | 11/12/10 17:29 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.23 | 38.5 | 1 | ug/Kg dry | 11/12/10 17:29 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 65 % | 70-125 | 1 | 11/12/10 17:29 |
| DCB | 2051-24-3 | 69 % | 60-125 | 1 | 11/12/10 17:29 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-002-1010
Sample Date/Time: 11/02/10 08:20
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-02
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.71 | 38.0 | 1 | ug/Kg dry | 11/12/10 16:57 |
| PCB-1221 | 11104-28-2 | BQL | U | 9.93 | 38.0 | 1 | ug/Kg dry | 11/12/10 16:57 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.51 | 38.0 | 1 | ug/Kg dry | 11/12/10 16:57 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.10 | 38.0 | 1 | ug/Kg dry | 11/12/10 16:57 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.54 | 38.0 | 1 | ug/Kg dry | 11/12/10 16:57 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.88 | 38.0 | 1 | ug/Kg dry | 11/12/10 16:57 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.20 | 38.0 | 1 | ug/Kg dry | 11/12/10 16:57 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 87 % | 70-125 | 1 | 11/12/10 16:57 |
| DCB | 2051-24-3 | 91 % | 60-125 | 1 | 11/12/10 16:57 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-001-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011013-01
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 10:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.81 | 38.7 | 1 | ug/Kg dry | 11/12/10 15:20 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.1 | 38.7 | 1 | ug/Kg dry | 11/12/10 15:20 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.62 | 38.7 | 1 | ug/Kg dry | 11/12/10 15:20 |
| PCB-1242 | 53469-21-9 | 10.7 | J | 8.24 | 38.7 | 1 | ug/Kg dry | 11/12/10 15:20 |
| PCB-1248 | 12672-29-6 | 17.5 | JP | 3.60 | 38.7 | 1 | ug/Kg dry | 11/12/10 15:20 |
| PCB-1254 | 11097-69-1 | 15.3 | J | 8.01 | 38.7 | 1 | ug/Kg dry | 11/12/10 15:20 |
| PCB-1260 | 11096-82-5 | 5.35 | J | 3.25 | 38.7 | 1 | ug/Kg dry | 11/12/10 15:20 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 43 % | 70-125 | 1 | 11/12/10 15:20 |
| DCB | 2051-24-3 | 62 % | 60-125 | 1 | 11/12/10 15:20 |

ADDENDUM PCB PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-001-1010

Sample Date/Time: 11/2/10 08:00

File ID: U0324466.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-01

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 15:21

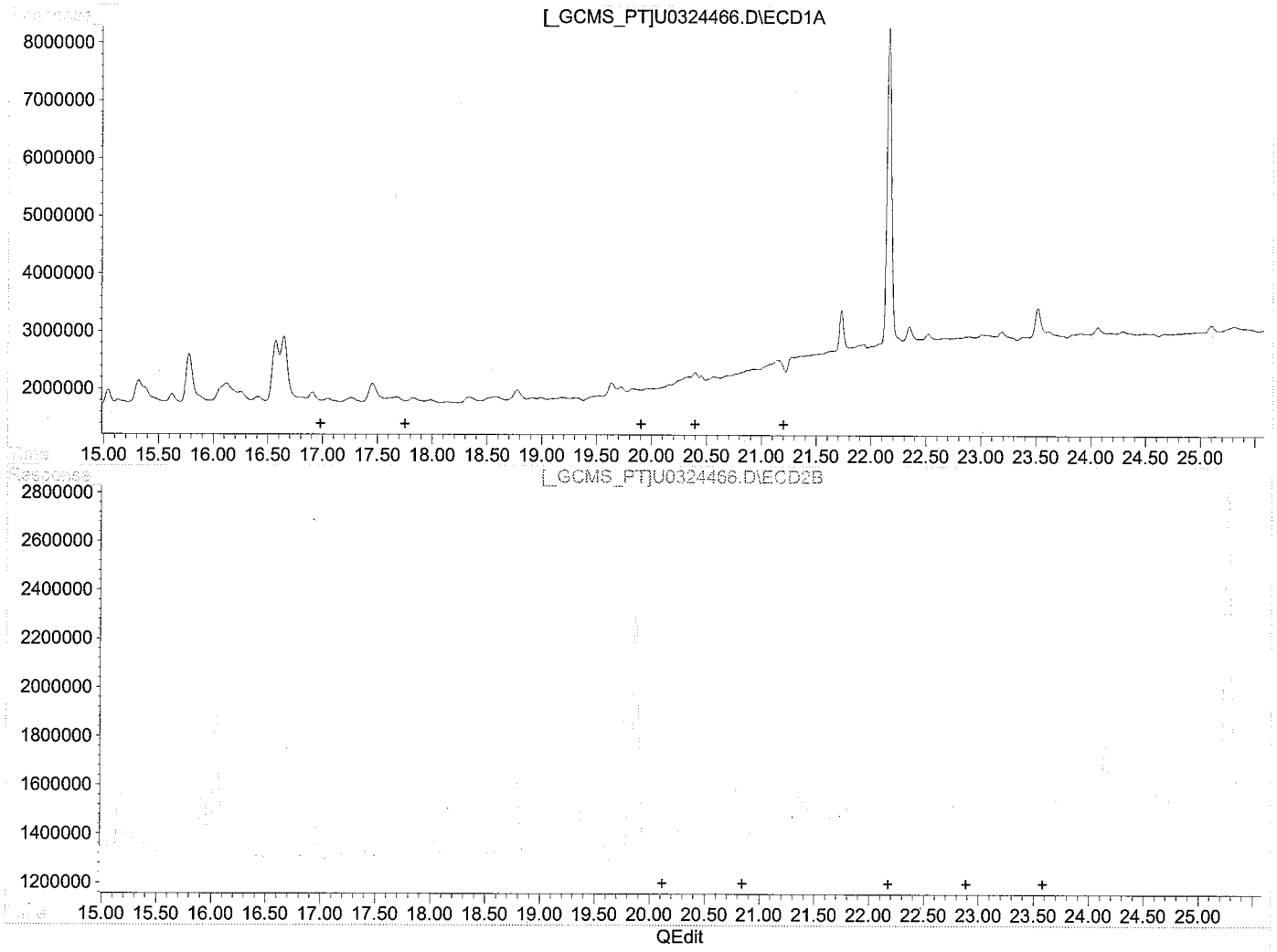
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.7 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.7 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324466.D\ECD1A.CH Vial: 13
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324466.D\ECD2B.CH
Acq On : 11-12-2010 15:20:39 Operator: RP
Sample : 1011013-01 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:04 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

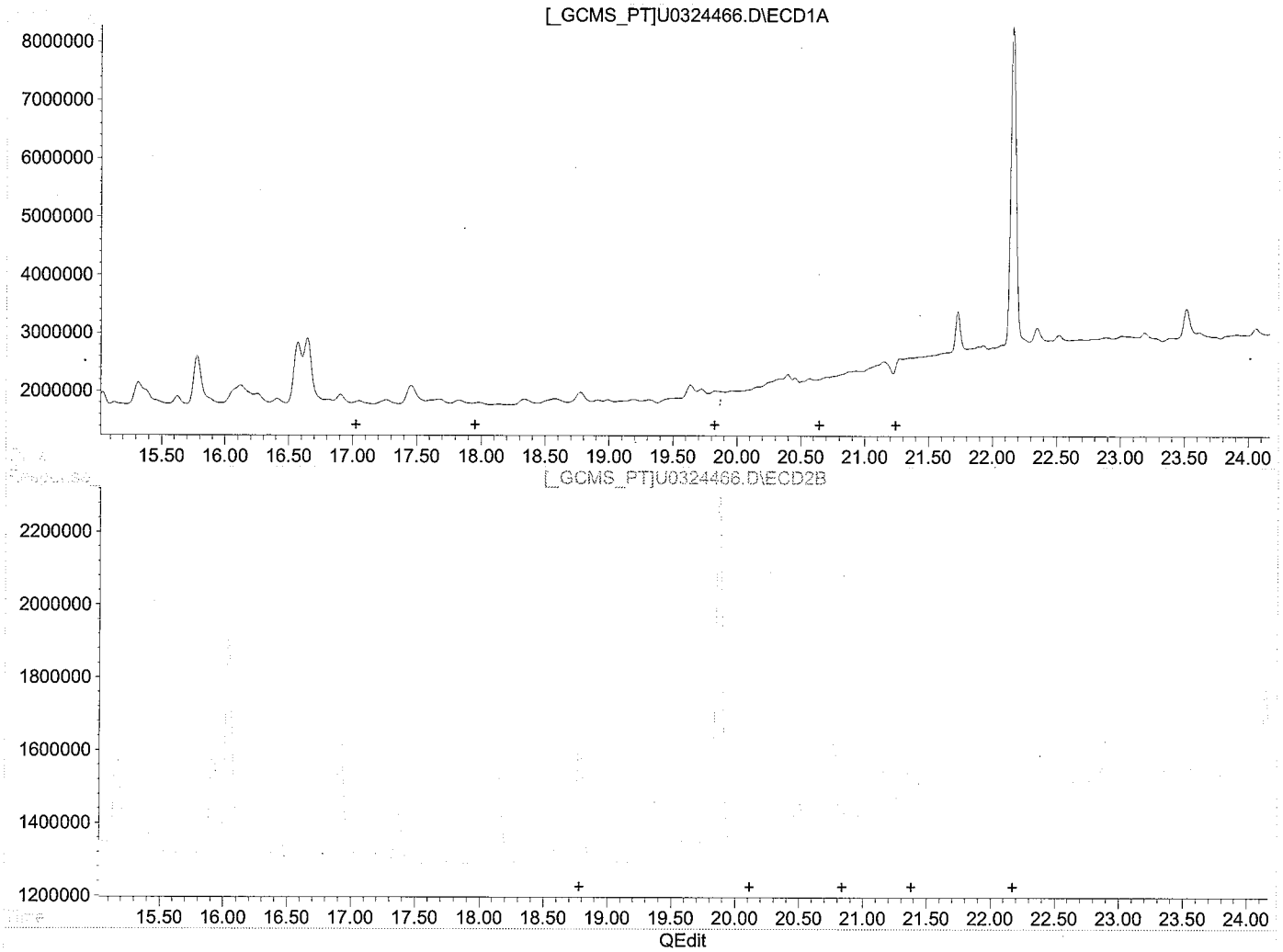
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324466.D\ECD1A.CH Vial: 13
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324466.D\ECD2B.CH
Acq On : 11-12-2010 15:20:39 Operator: RP
Sample : 1011013-01 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:04 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-002-1010

Sample Date/Time: 11/2/10 08:20

File ID: U0324469.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-02

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 16:57

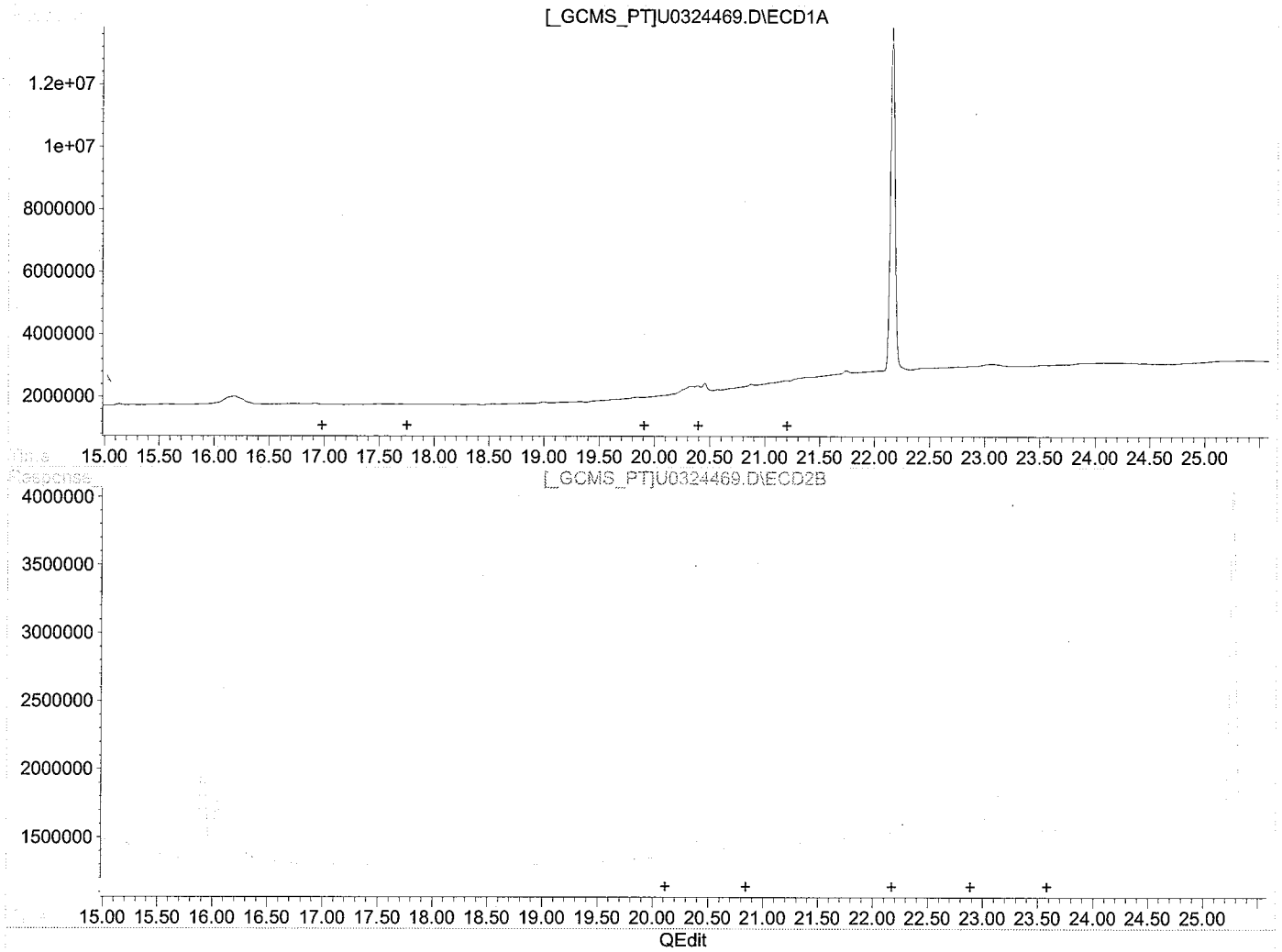
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.0 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.0 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324469.D\ECD1A.CH Vial: 16
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324469.D\ECD2B.CH
Acq On : 11-12-2010 16:57:01 Operator: RP
Sample : 1011013-02 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:11 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

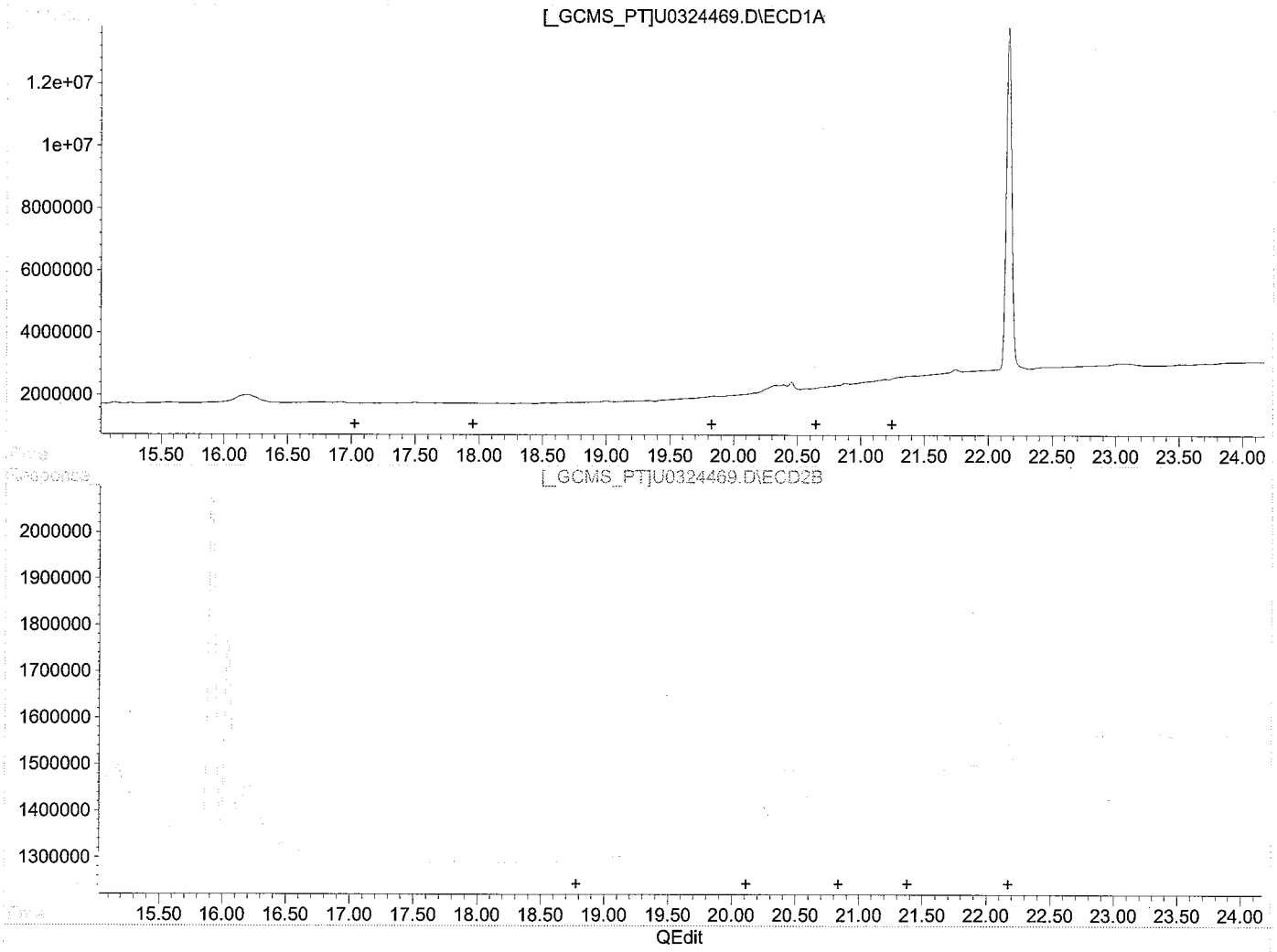
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324469.D\ECD1A.CH Vial: 16
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324469.D\ECD2B.CH
Acq On : 11-12-2010 16:57:01 Operator: RP
Sample : 1011013-02 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:11 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-003-1010

Sample Date/Time: 11/2/10 08:40

File ID: U0324470.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-03

Percent solids: 87%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 17:29

---

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.5 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.5 | 1 | ug/Kg |

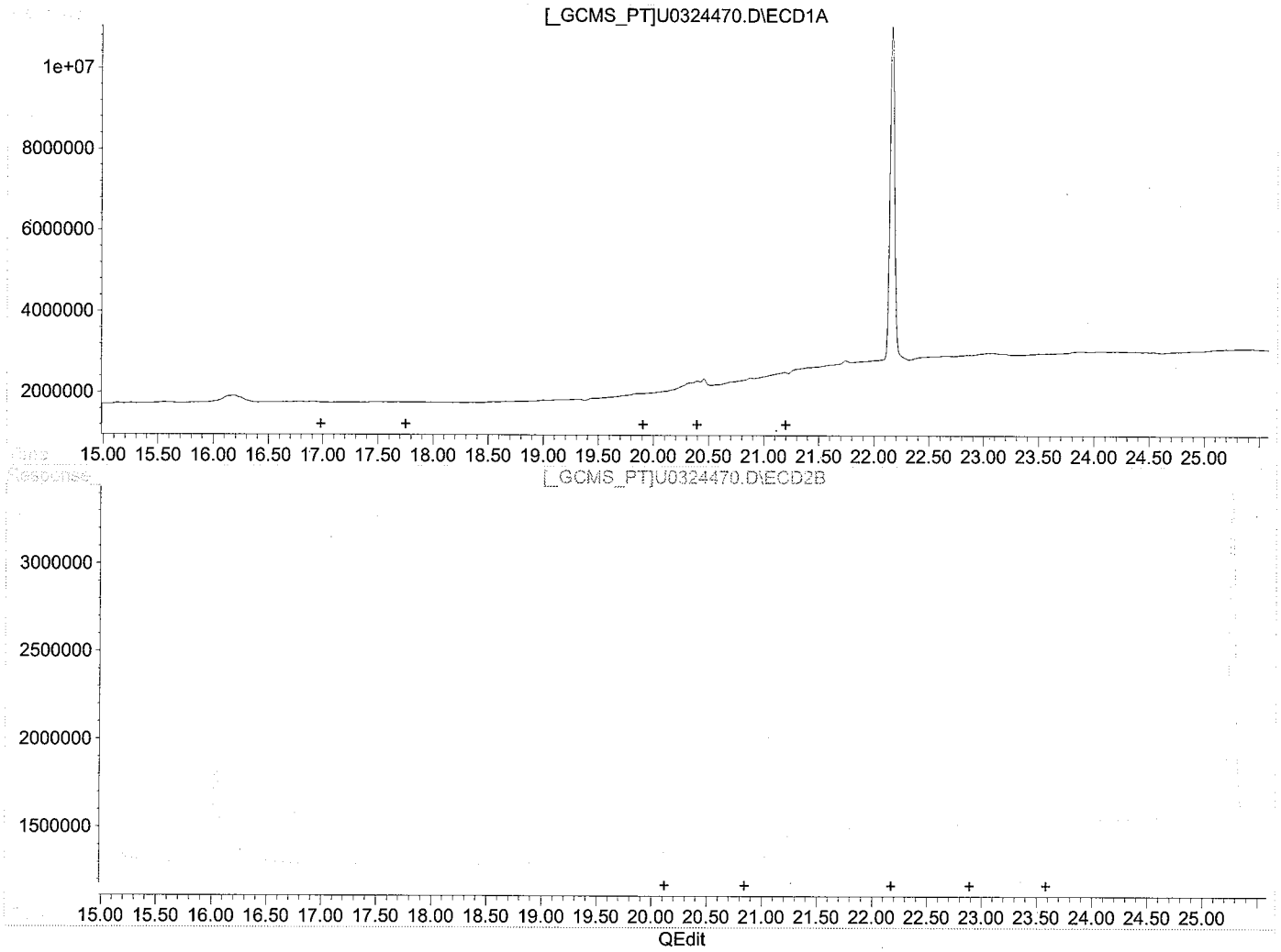
0

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324470.D\ECD1A.CH Vial: 17
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324470.D\ECD2B.CH
Acq On : 11-12-2010 17:29:10 Operator: RP
Sample : 1011013-03 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:12 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

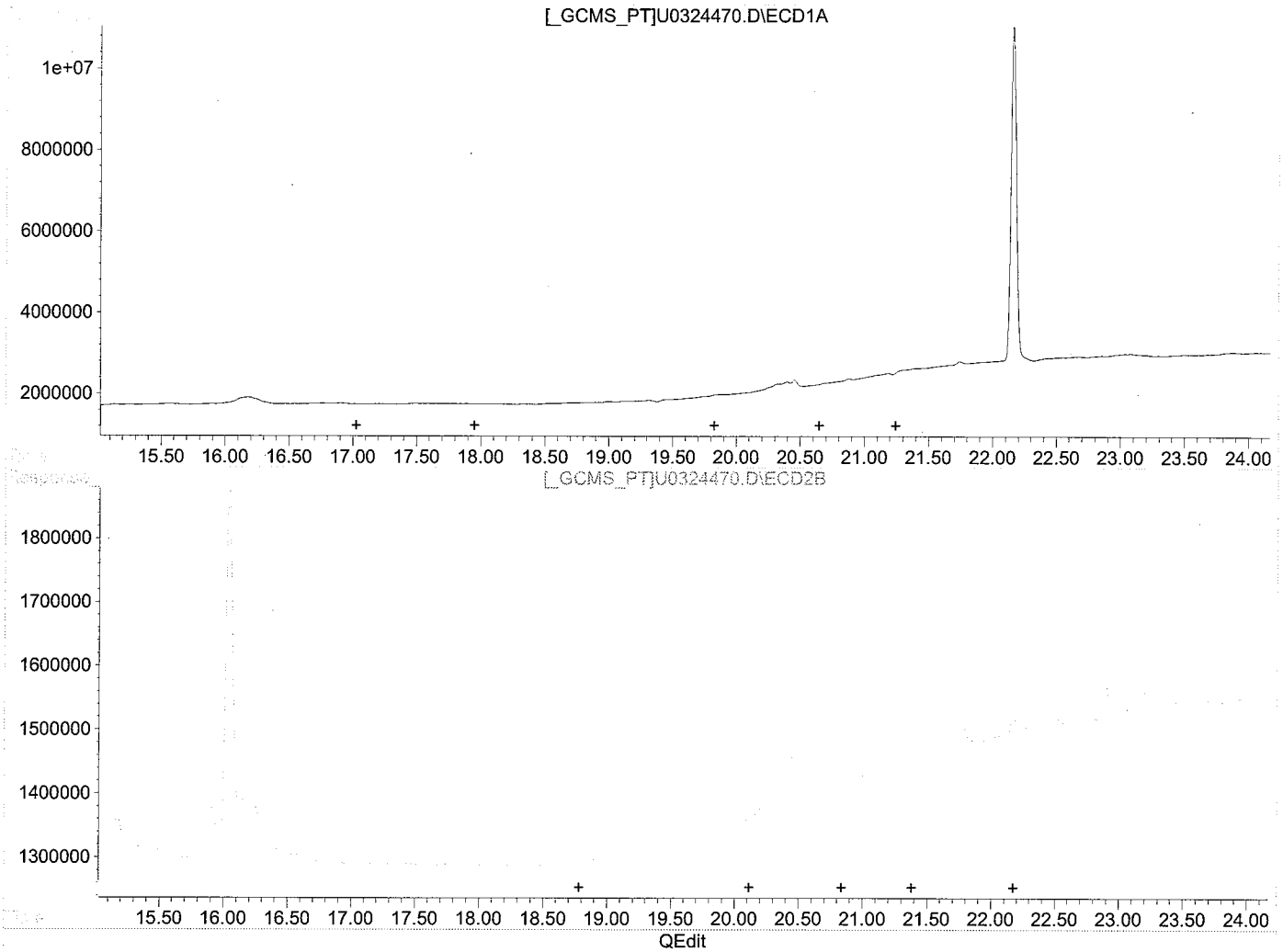
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324470.D\ECD1A.CH Vial: 17
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324470.D\ECD2B.CH
Acq On : 11-12-2010 17:29:10 Operator: RP
Sample : 1011013-03 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:12 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-005-1010

Sample Date/Time: 11/2/10 09:00

File ID: U0324471.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-04

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 18:01

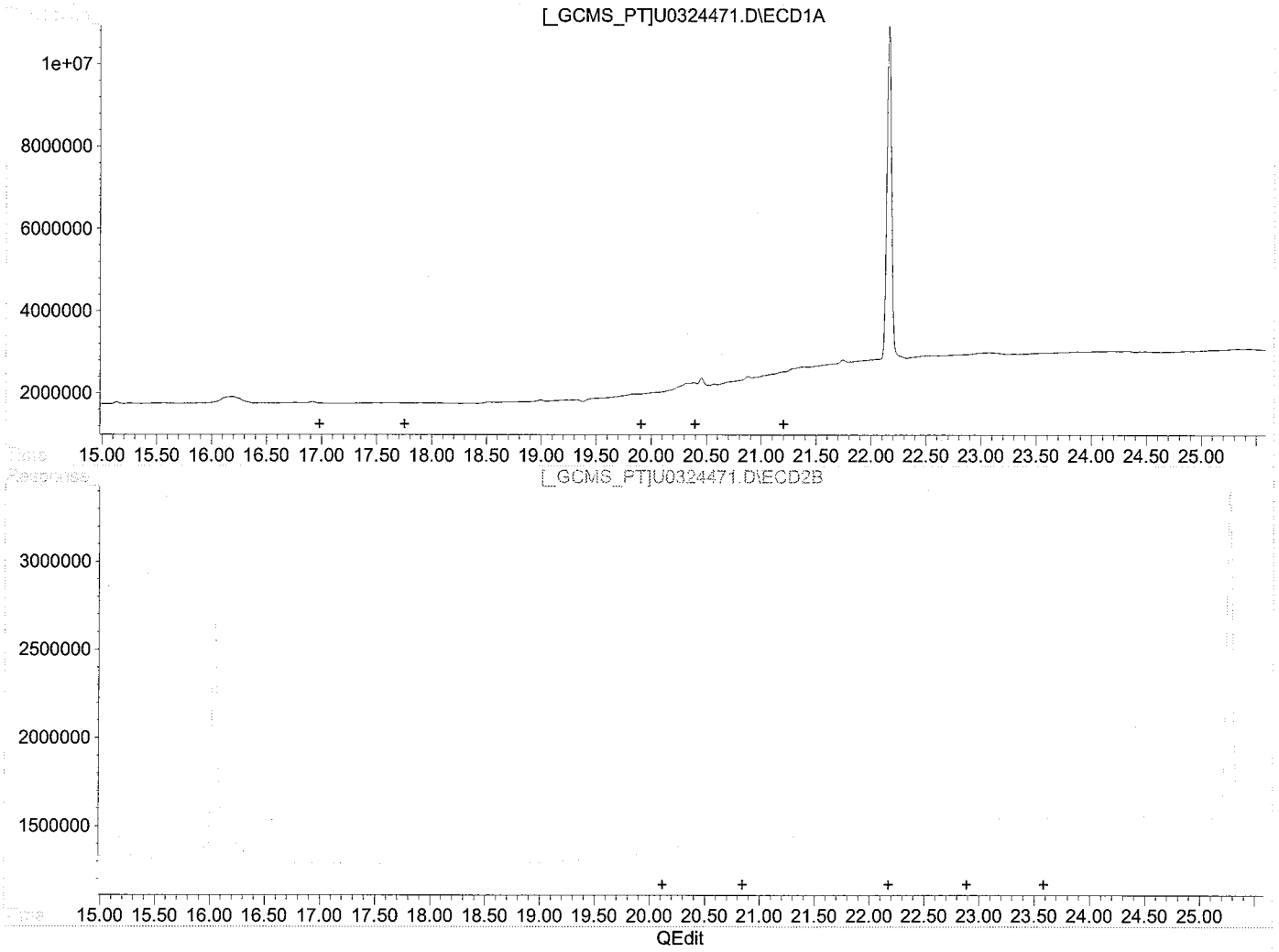
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.7 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.7 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324471.D\ECD1A.CH Vial: 18
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324471.D\ECD2B.CH
Acq On : 11-12-2010 18:01:14 Operator: RP
Sample : 1011013-04 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:14 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

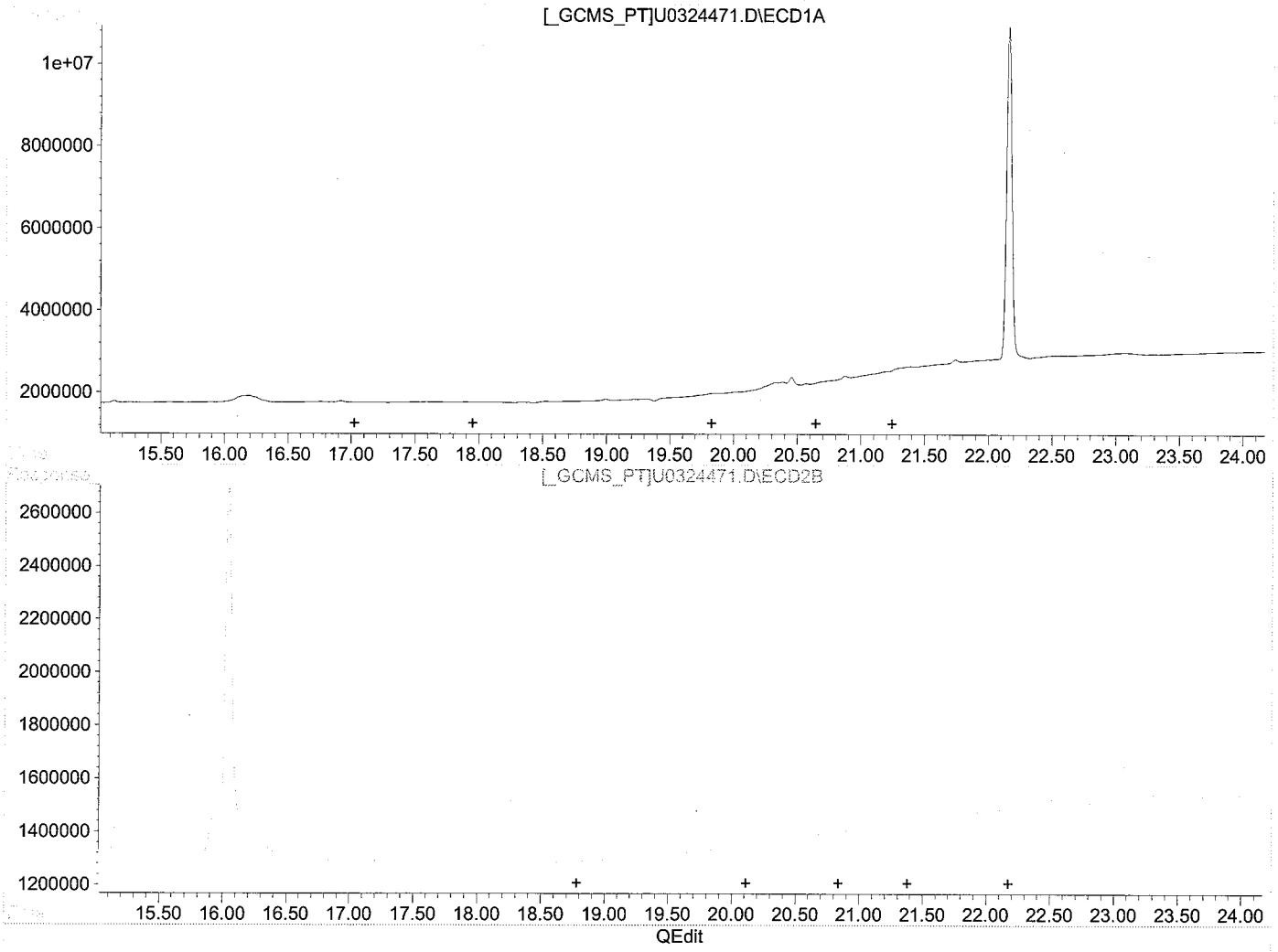
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324471.D\ECD1A.CH Vial: 18
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324471.D\ECD2B.CH
Acq On : 11-12-2010 18:01:14 Operator: RP
Sample : 1011013-04 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:14 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

# TIC Report

CHEMTECH

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-007-1010

Sample Date/Time: 11/2/10 09:20

File ID: U0324472.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-05

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 18:33

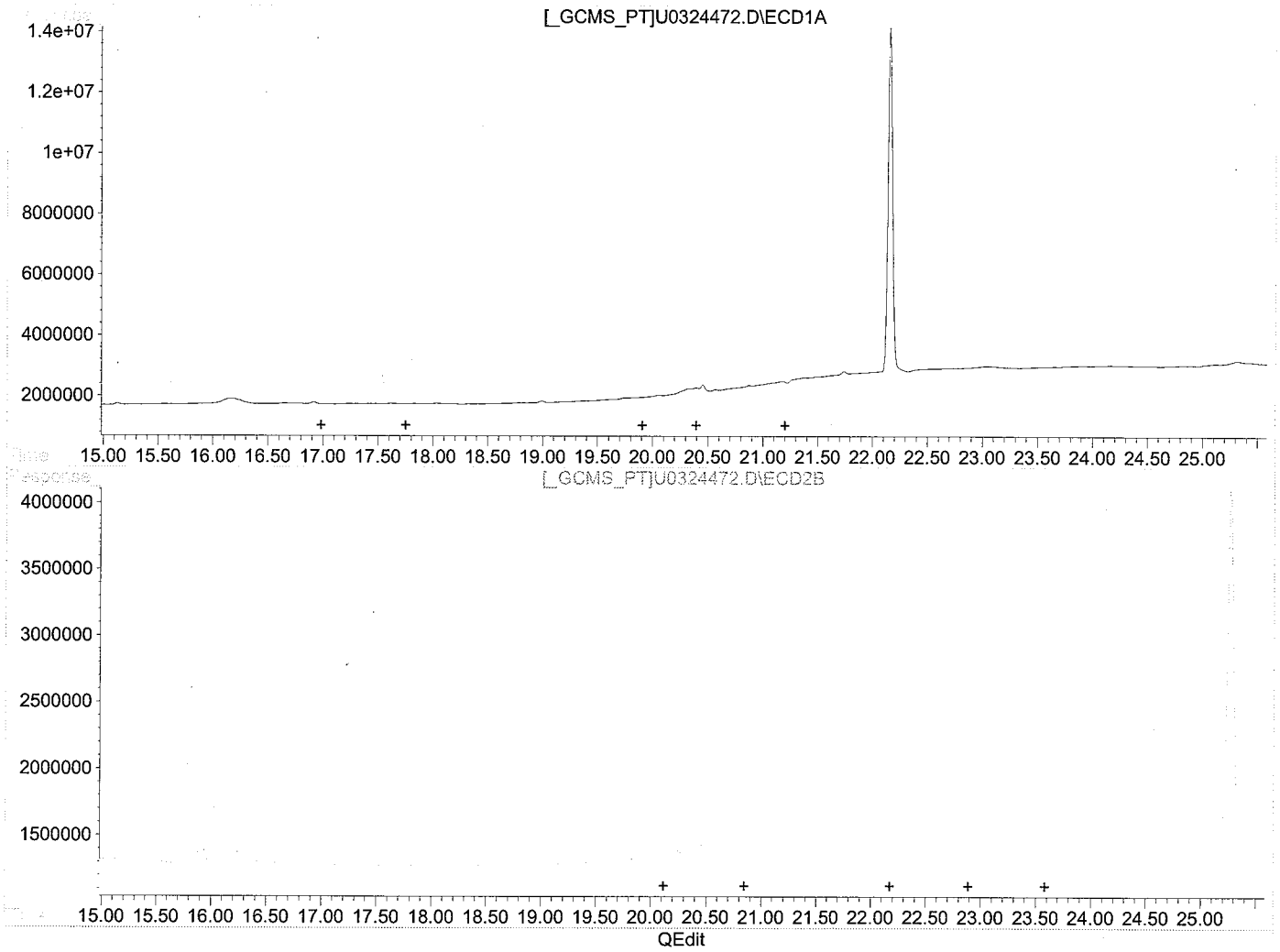
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 37.9 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 37.9 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324472.D\ECD1A.CH Vial: 19
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324472.D\ECD2B.CH
Acq On : 11-12-2010 18:33:23 Operator: RP
Sample : 1011013-05 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:15 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

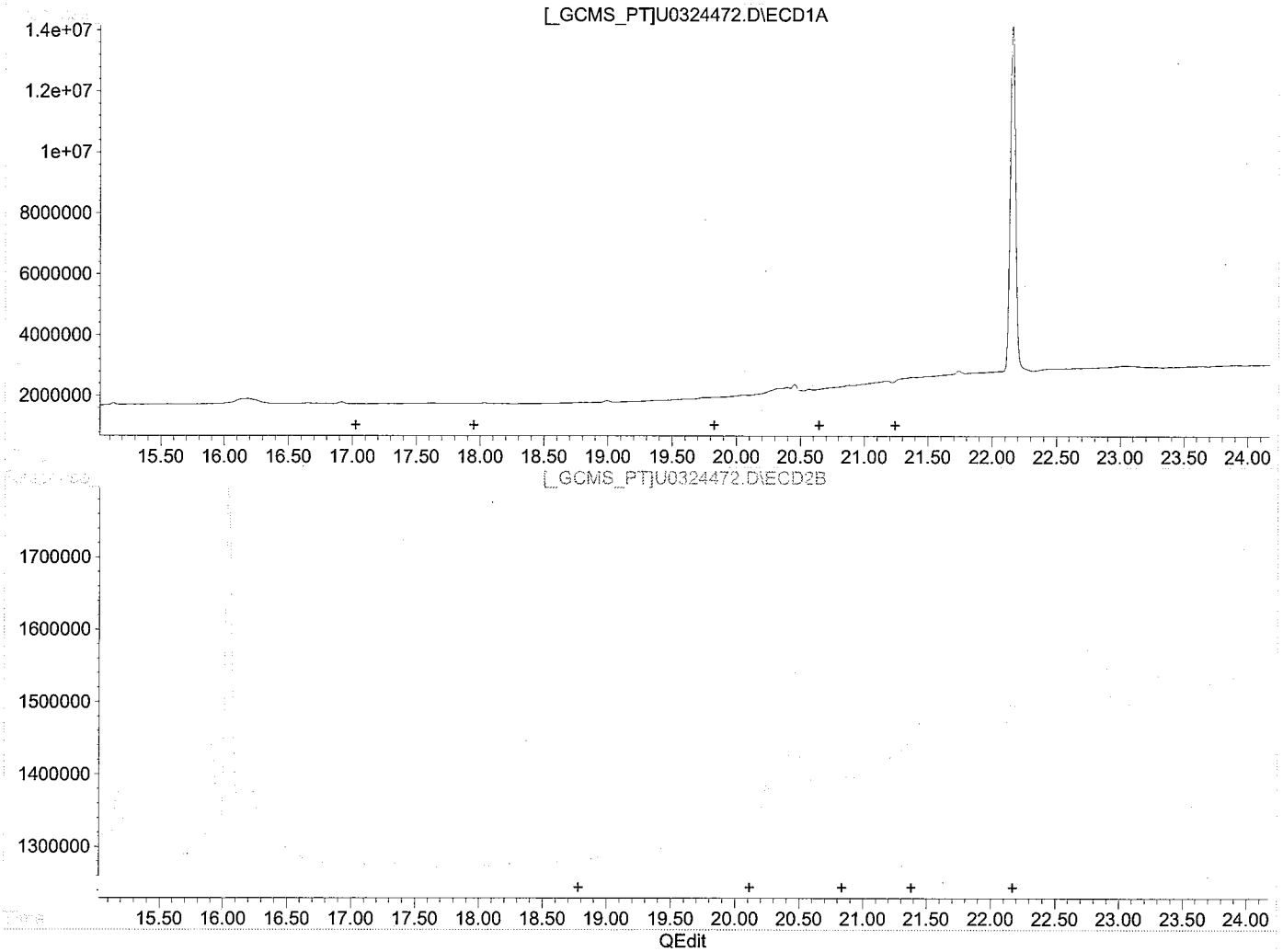
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324472.D\ECD1A.CH Vial: 19
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324472.D\ECD2B.CH
Acq On : 11-12-2010 18:33:23 Operator: RP
Sample : 1011013-05 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:15 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-011-1010

Sample Date/Time: 11/2/10 09:40

File ID: U0324473.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-06

Percent solids: 80%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 19:05

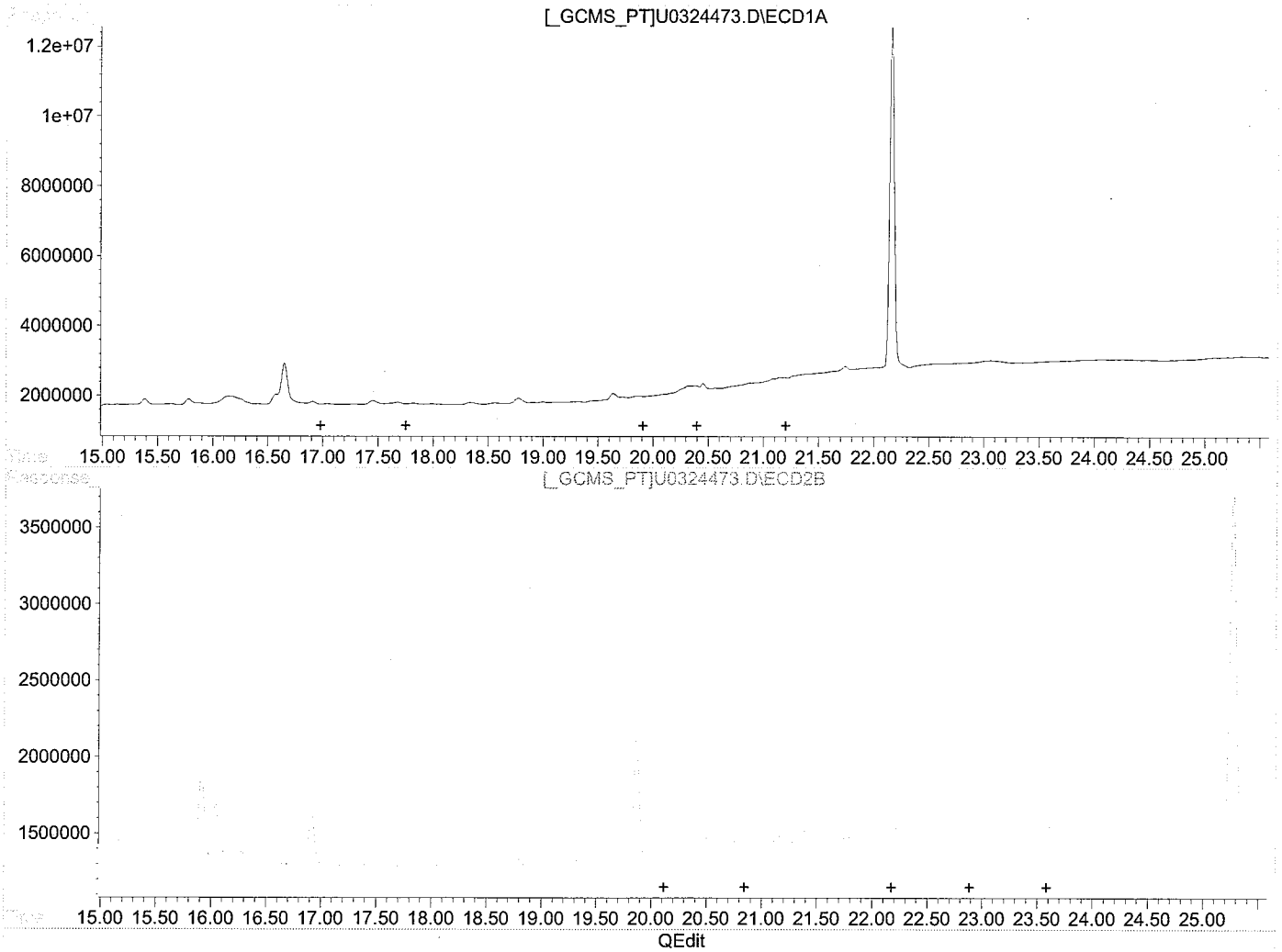
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 41.5 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 41.5 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324473.D\ECD1A.CH Vial: 20
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324473.D\ECD2B.CH
Acq On : 11-12-2010 19:05:28 Operator: RP
Sample : 1011013-06 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:17 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

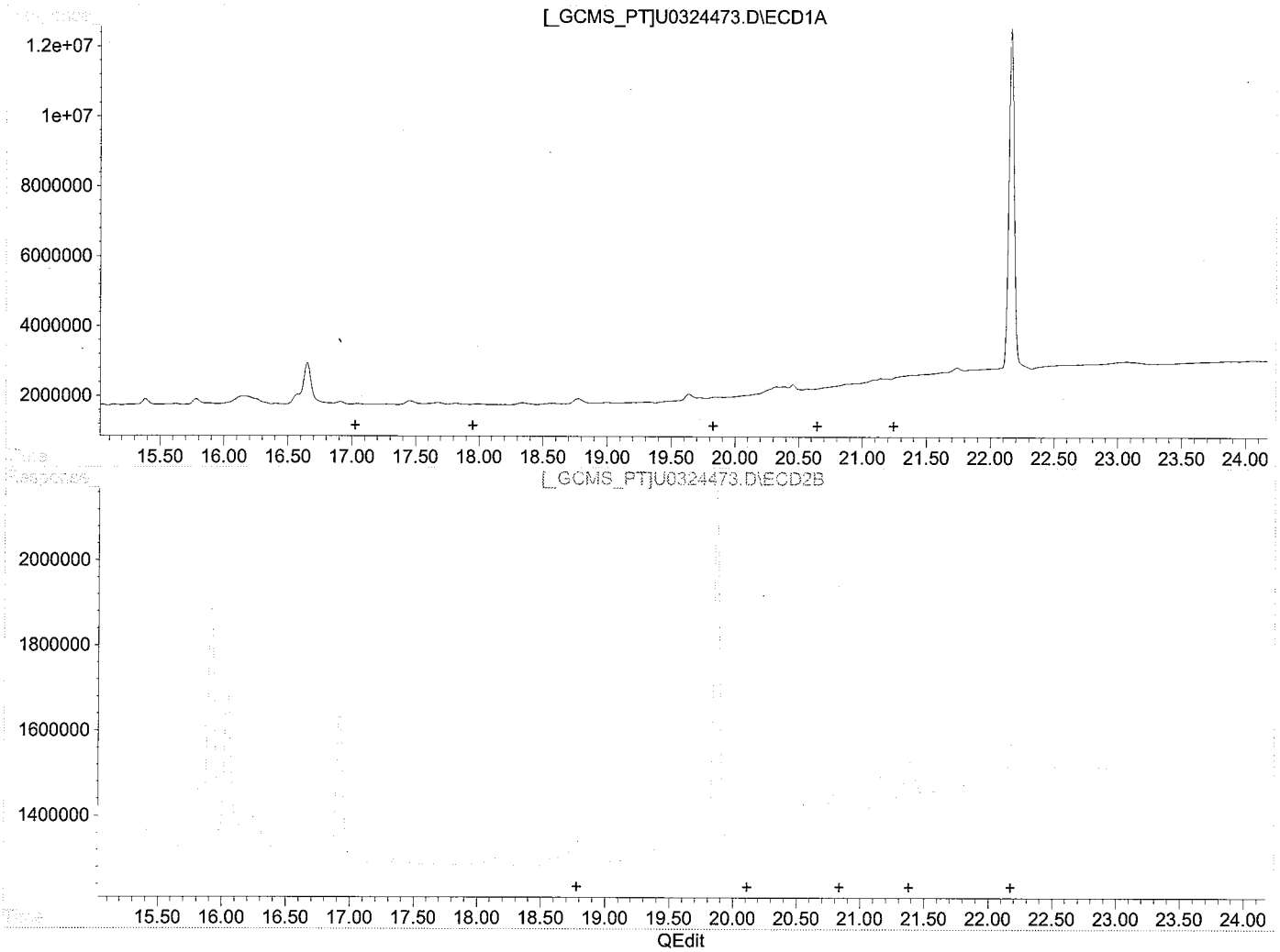
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324473.D\ECD1A.CH Vial: 20
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324473.D\ECD2B.CH
Acq On : 11-12-2010 19:05:28 Operator: RP
Sample : 1011013-06 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:17 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-012-1010

Sample Date/Time: 11/2/10 12:00

File ID: U0324474.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-07

Percent solids: 84%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 19:38

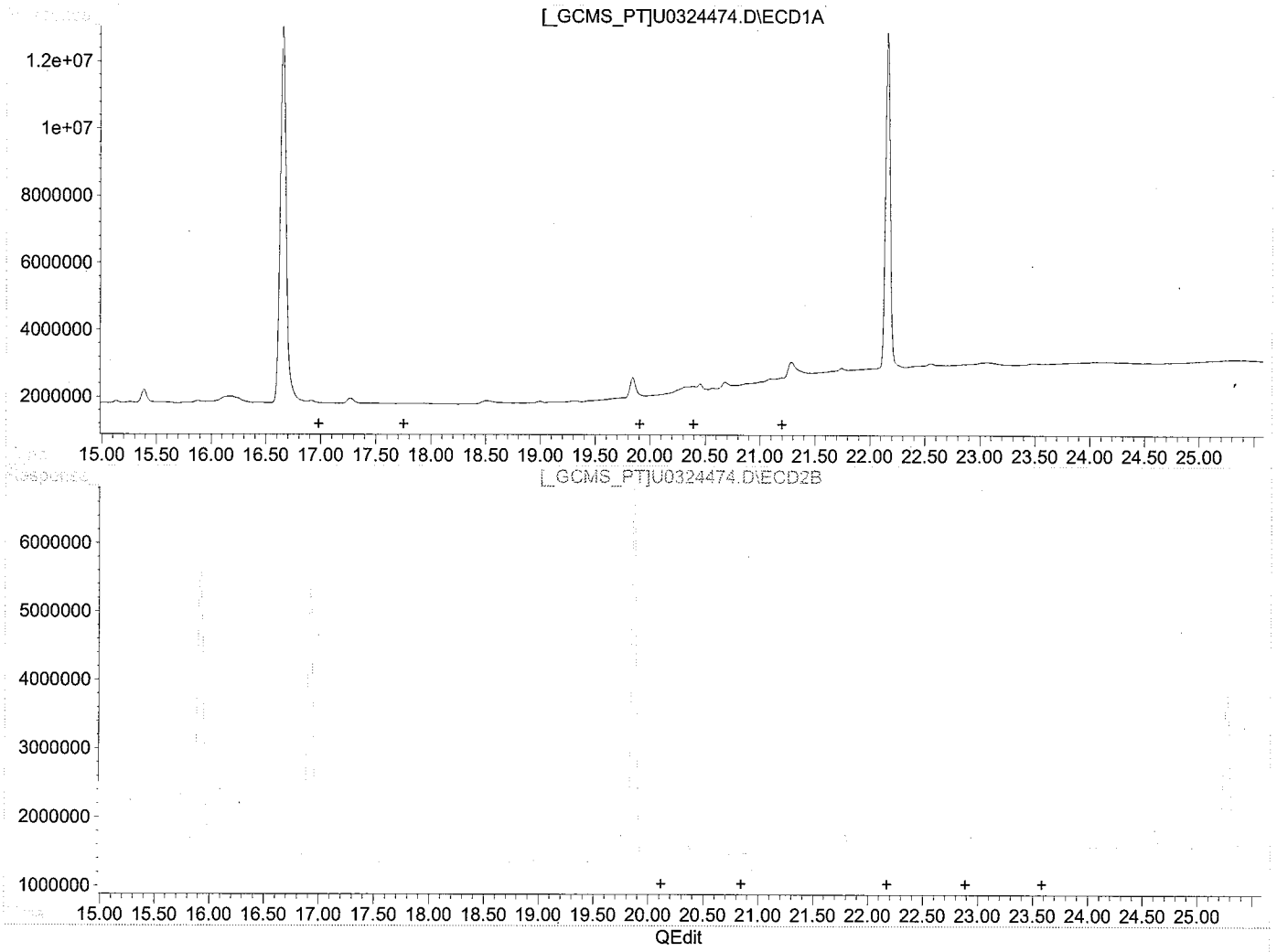
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 39.8 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 39.8 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324474.D\ECD1A.CH Vial: 21
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324474.D\ECD2B.CH
Acq On : 11-12-2010 19:37:38 Operator: RP
Sample : 1011013-07 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:19 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

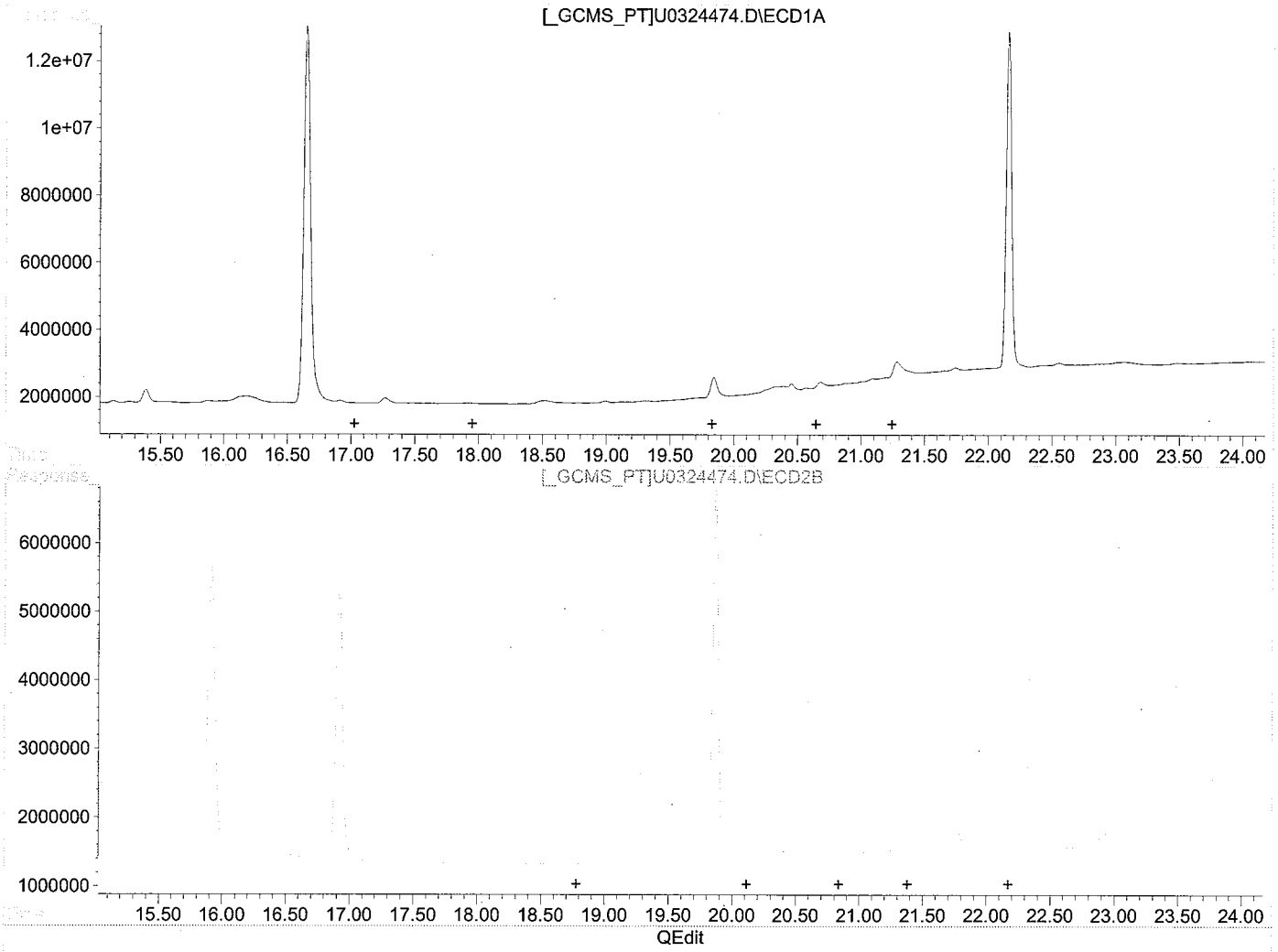
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324474.D\ECD1A.CH Vial: 21
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324474.D\ECD2B.CH
Acq On : 11-12-2010 19:37:38 Operator: RP
Sample : 1011013-07 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:19 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-014-1010

Sample Date/Time: 11/2/10 14:00

File ID: U0324475.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-08

Percent solids: 85%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 20:10

---

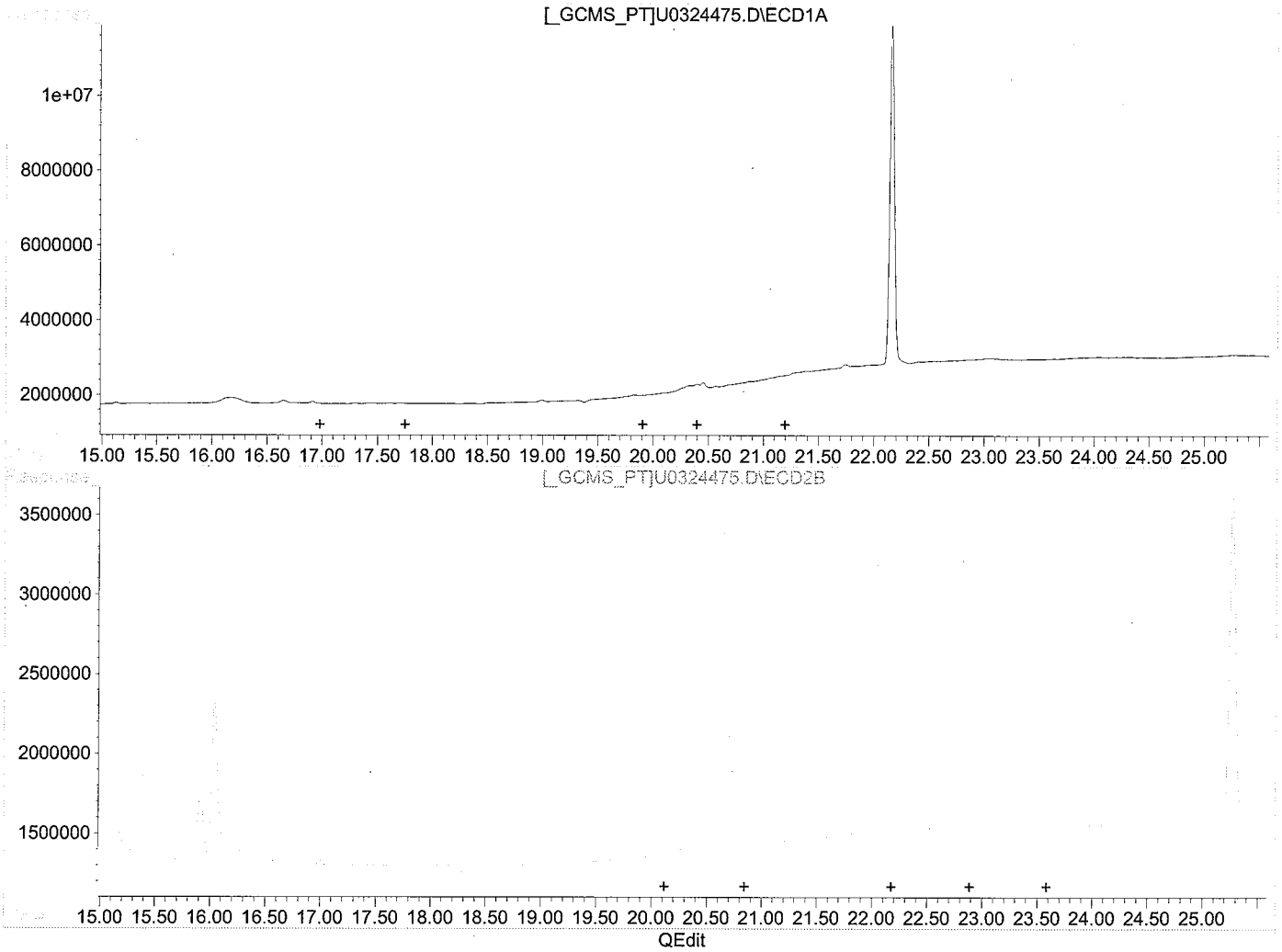
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 39.0 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 39.0 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324475.D\ECD1A.CH Vial: 22
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324475.D\ECD2B.CH
Acq On : 11-12-2010 20:09:42 Operator: RP
Sample : 1011013-08 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:20 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

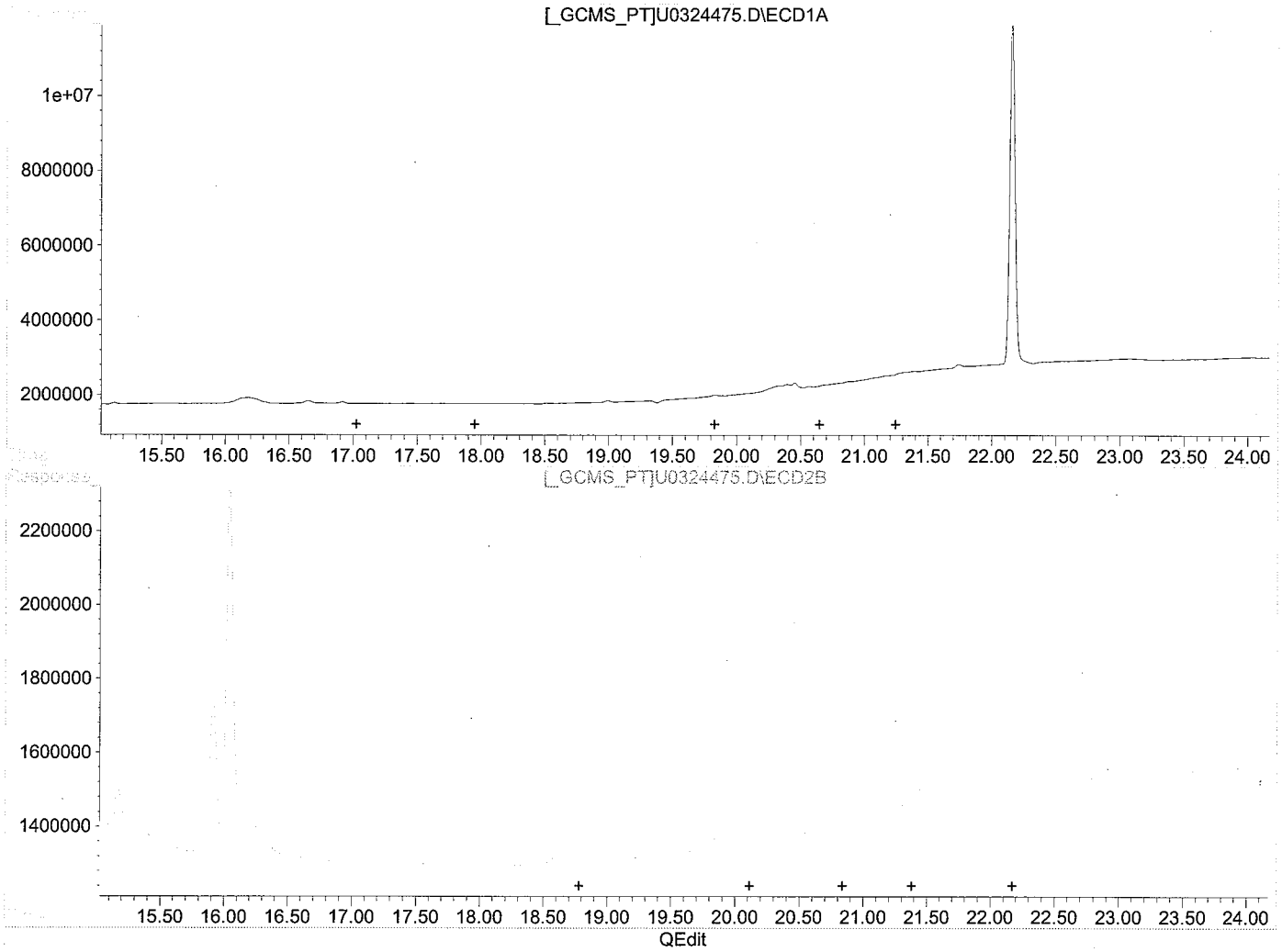
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324475.D\ECD1A.CH Vial: 22
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324475.D\ECD2B.CH
Acq On : 11-12-2010 20:09:42 Operator: RP
Sample : 1011013-08 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:20 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-017-1010

Sample Date/Time: 11/2/10 10:00

File ID: U0324478.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-09

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 21:46

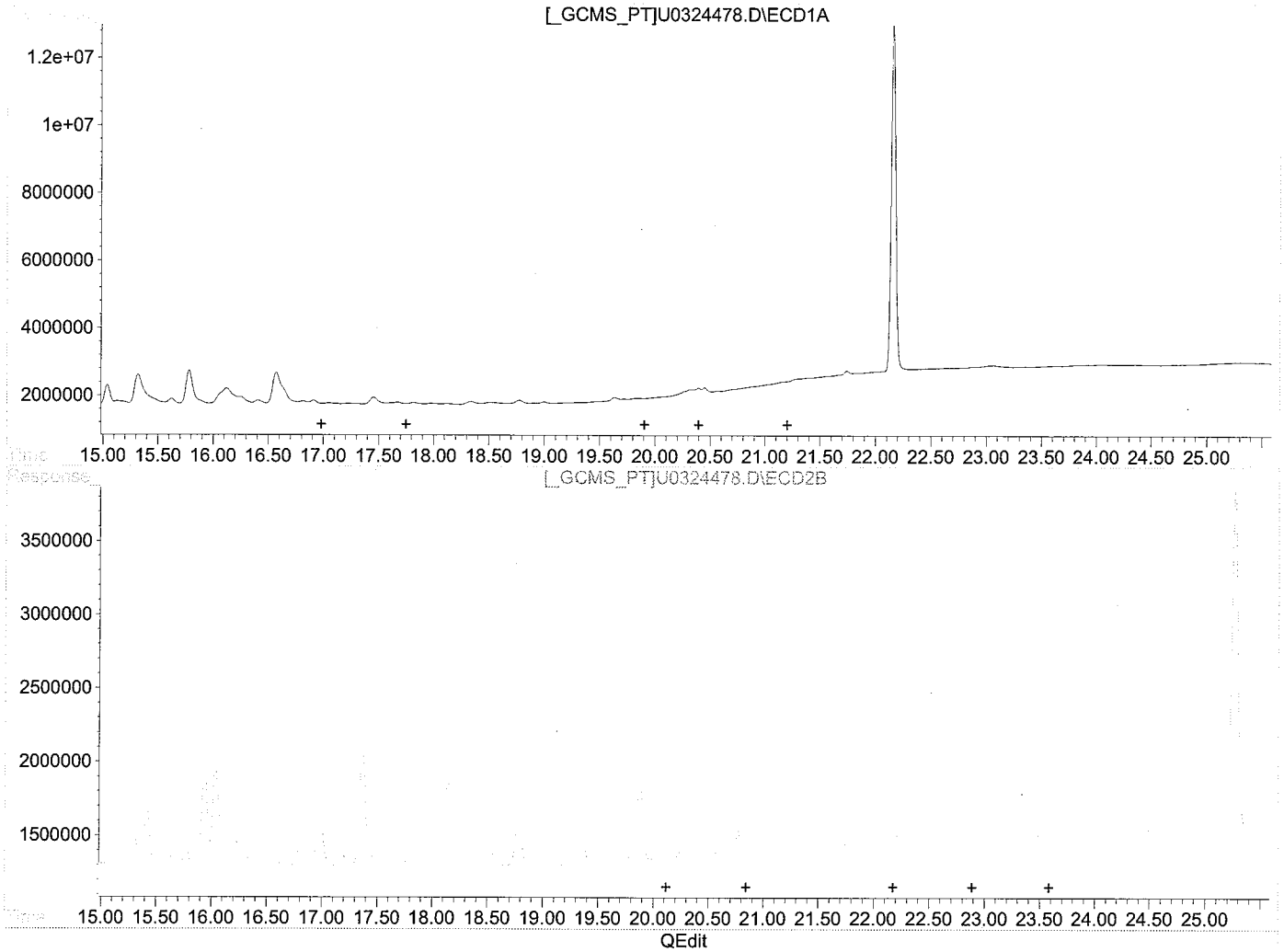
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 37.9 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 37.9 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324478.D\ECD1A.CH Vial: 25
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324478.D\ECD2B.CH
Acq On : 11-12-2010 21:46:05 Operator: RP
Sample : 1011013-09 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:29 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

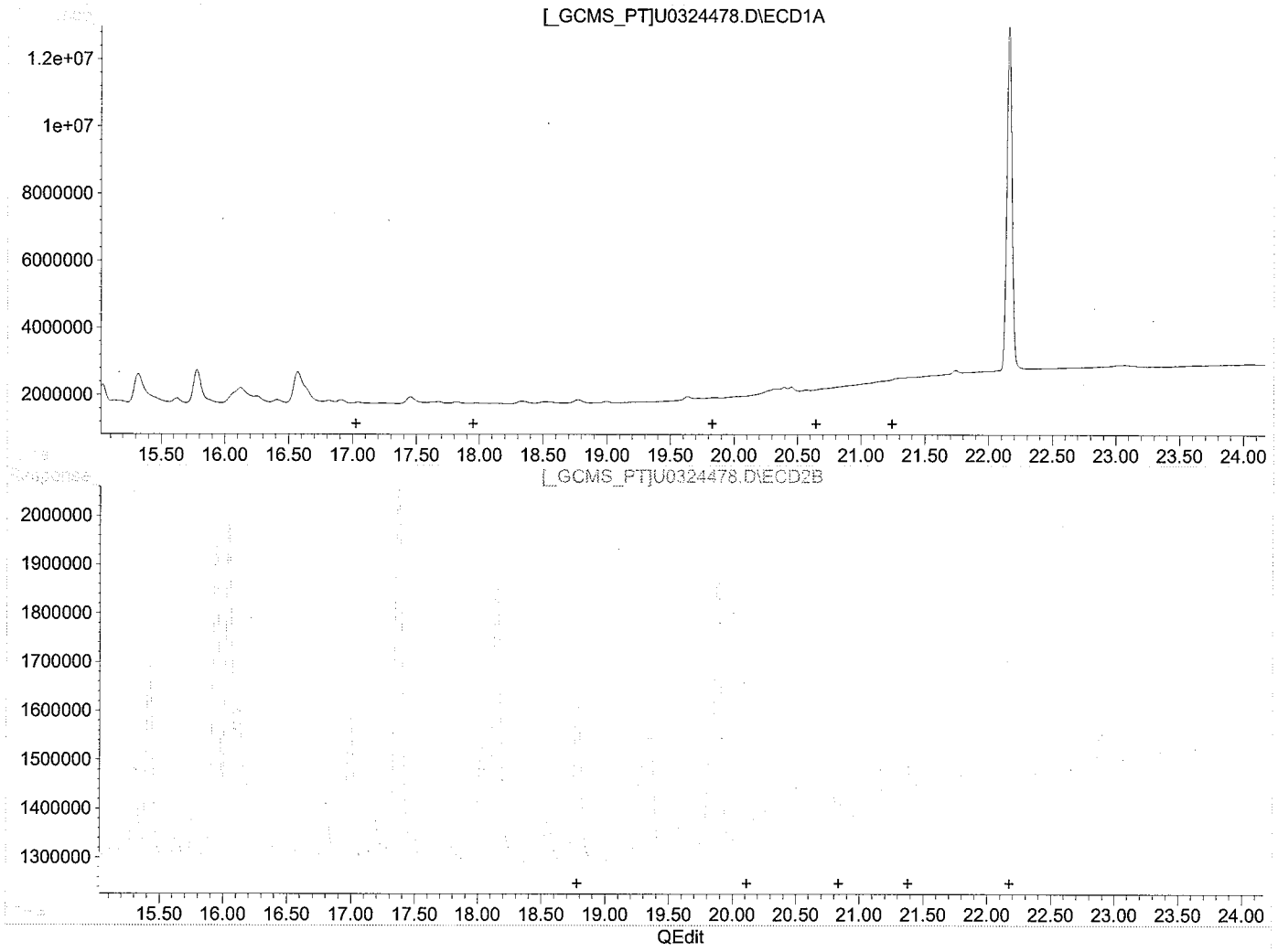
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324478.D\ECD1A.CH Vial: 25
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324478.D\ECD2B.CH
Acq On : 11-12-2010 21:46:05 Operator: RP
Sample : 1011013-09 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:29 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

# TIC Report

CHEMTECH

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-019-1010

Sample Date/Time: 11/2/10 10:20

File ID: U0324479.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-10

Percent solids: 87%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 22:18

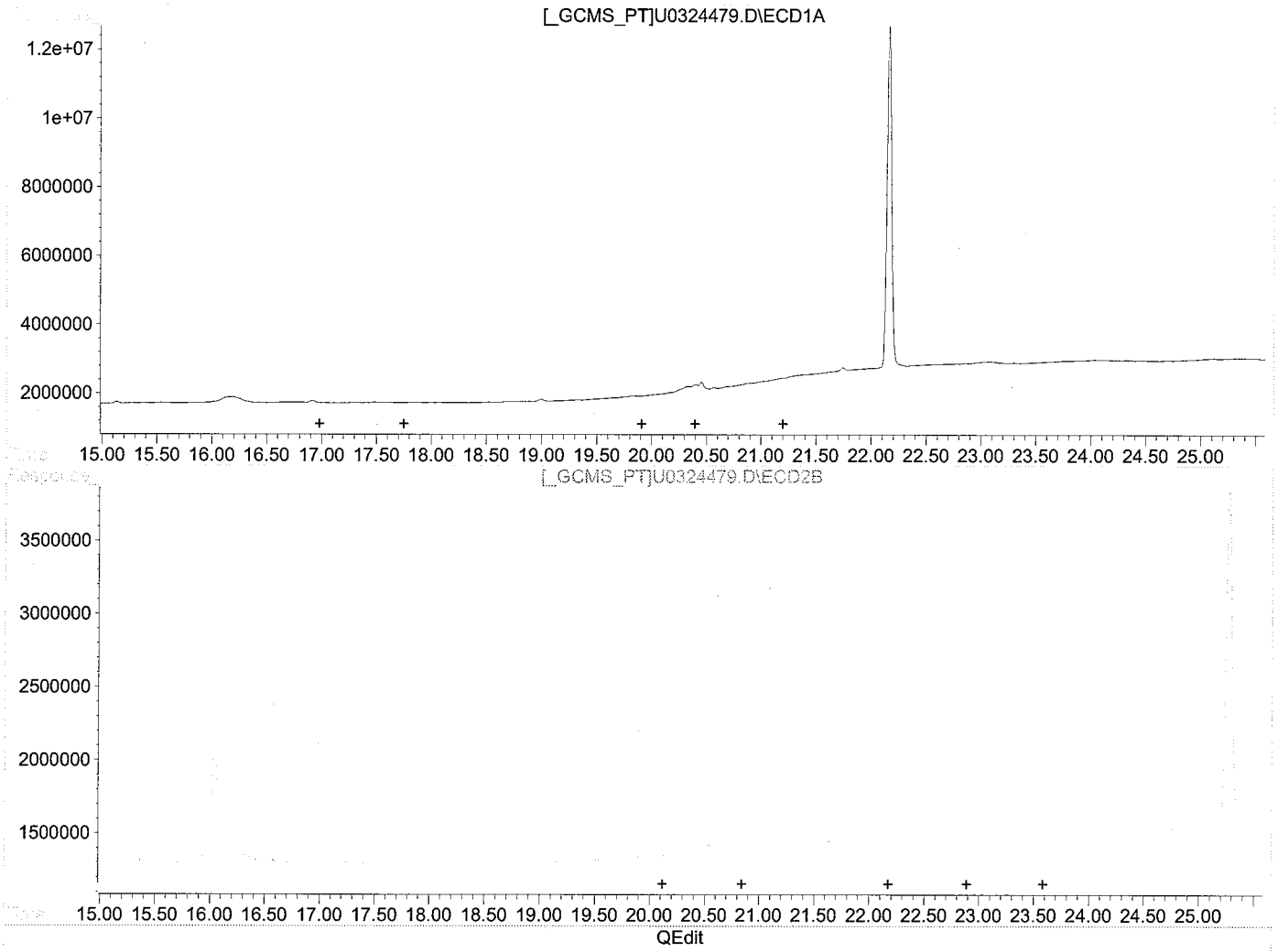
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.4 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.4 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324479.D\ECD1A.CH Vial: 26
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324479.D\ECD2B.CH
Acq On : 12 Nov 2010 22:18 Operator: RP
Sample : 1011013-10 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:30 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

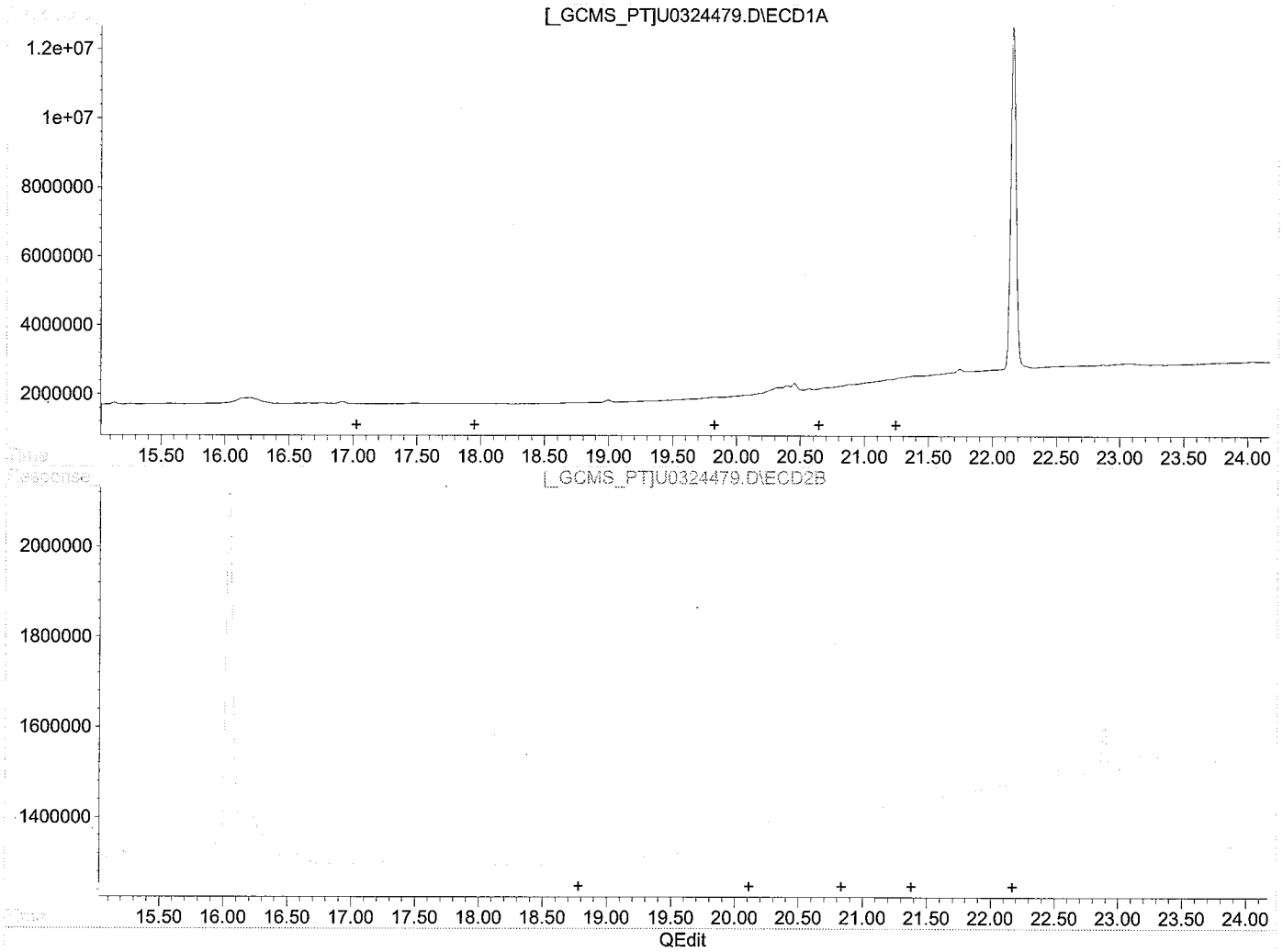
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324479.D\ECD1A.CH Vial: 26
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324479.D\ECD2B.CH
Acq On : 12 Nov 2010 22:18 Operator: RP
Sample : 1011013-10 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:30 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

# TIC Report

CHEMTECH

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-021-1010

Sample Date/Time: 11/2/10 10:40

File ID: U0324480.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-11

Percent solids: 87%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 22:50

---

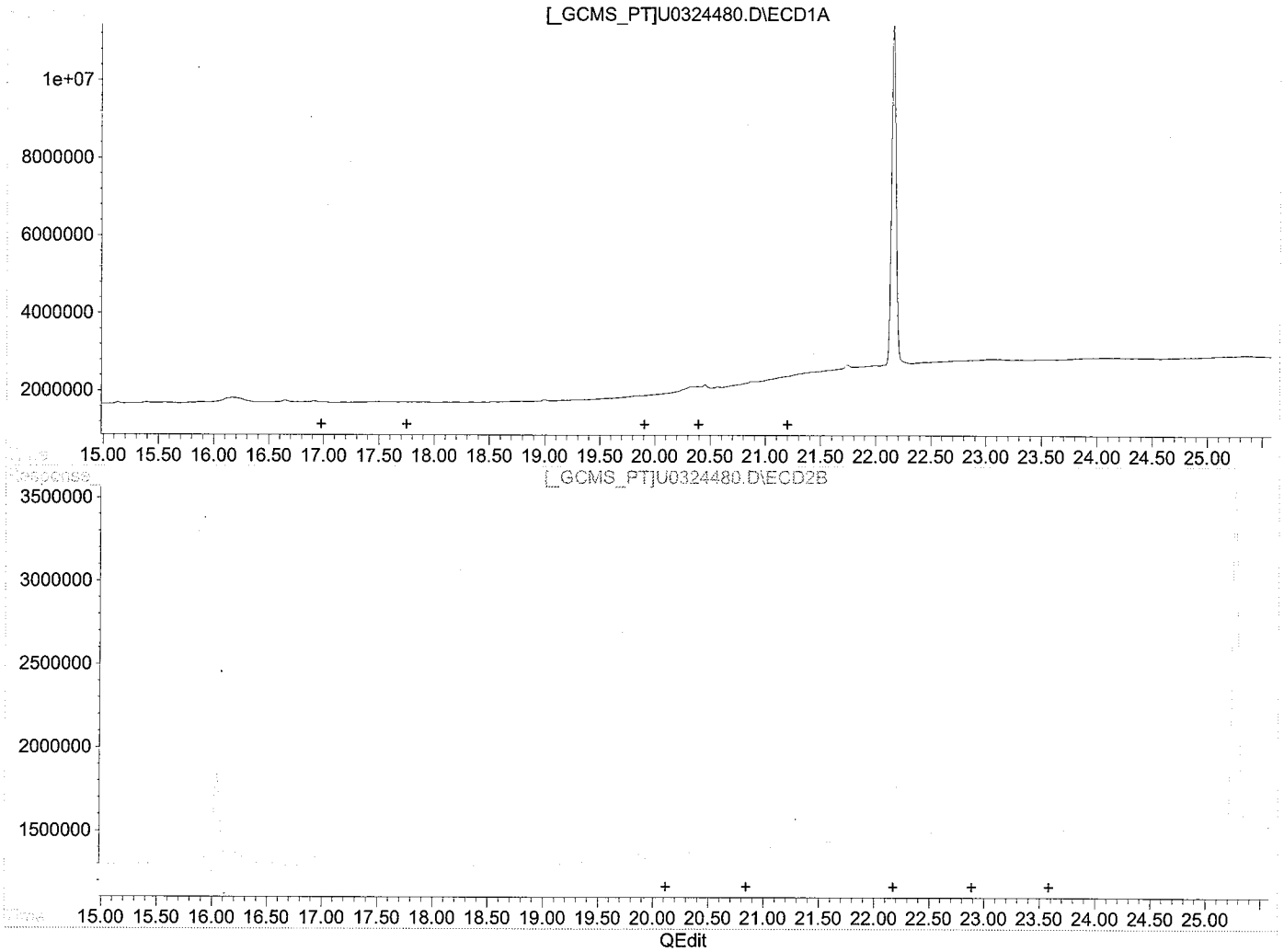
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.3 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.3 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324480.D\ECD1A.CH Vial: 27
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324480.D\ECD2B.CH
Acq On : 12 Nov 2010 22:50 Operator: RP
Sample : 1011013-11 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:31 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

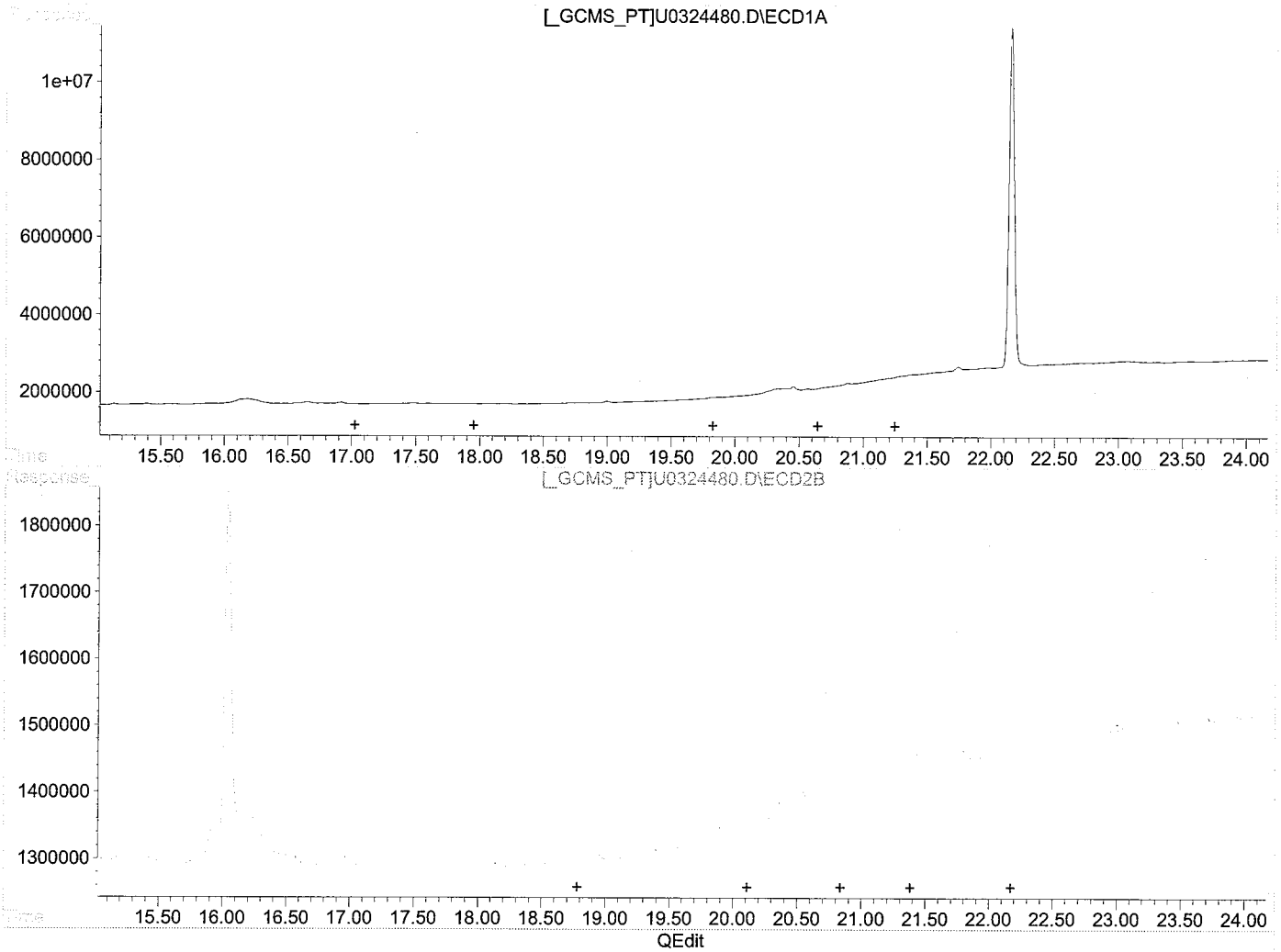
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324480.D\ECD1A.CH Vial: 27
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324480.D\ECD2B.CH
Acq On : 12 Nov 2010 22:50 Operator: RP
Sample : 1011013-11 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:31 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-022-1010

Sample Date/Time: 11/2/10 11:00

File ID: U0324481.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-12

Percent solids: 85%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 23:22

---

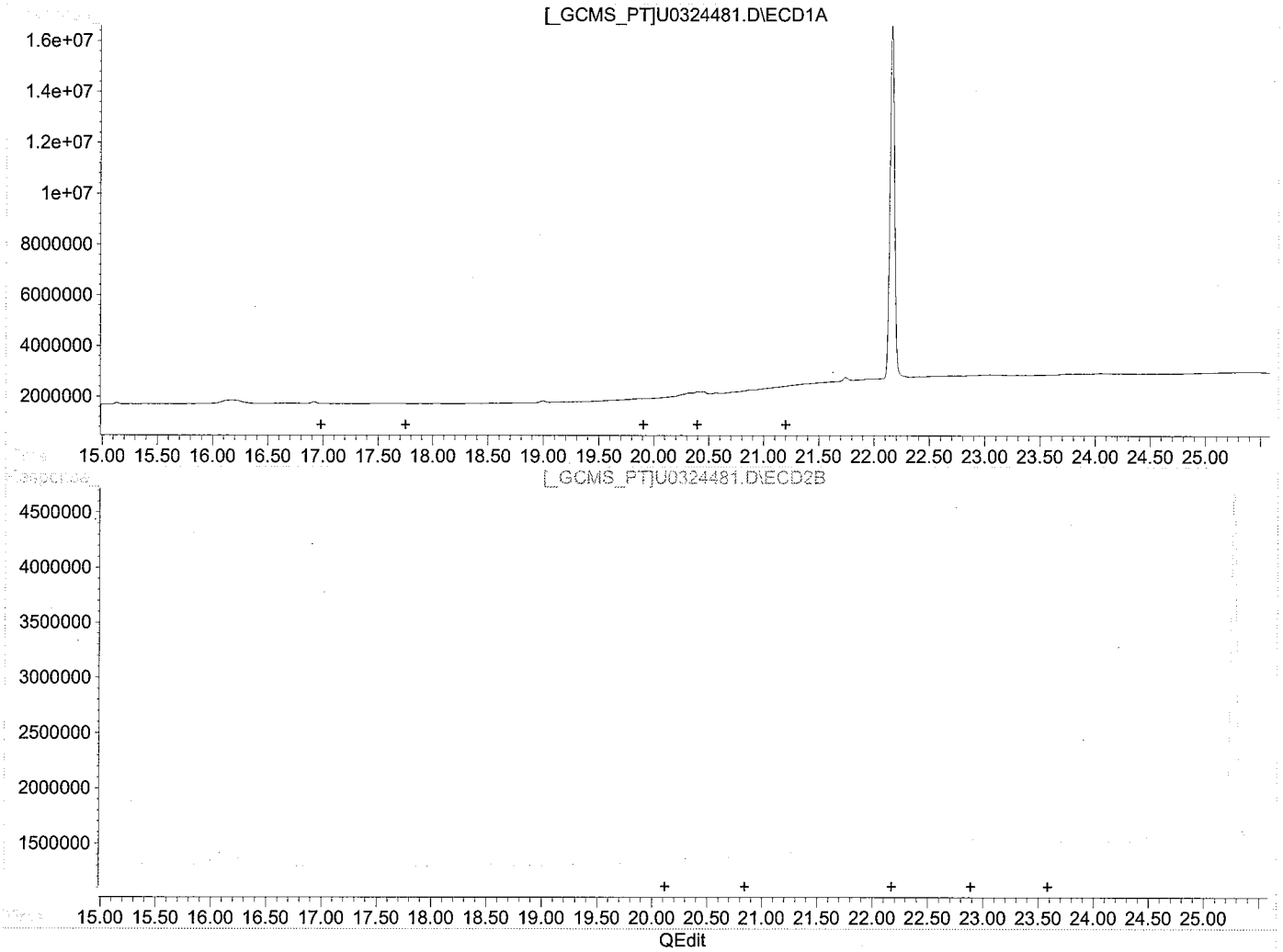
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 39.0 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 39.0 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324481.D\ECD1A.CH Vial: 28
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324481.D\ECD2B.CH
Acq On : 12 Nov 2010 23:22 Operator: RP
Sample : 1011013-12 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:32 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

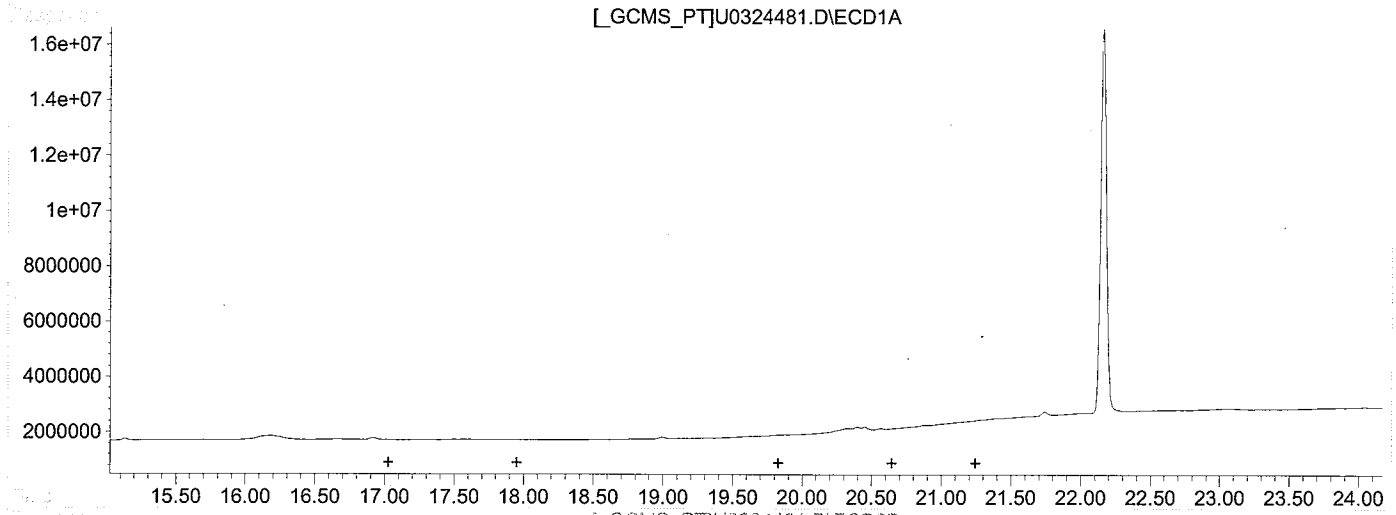
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

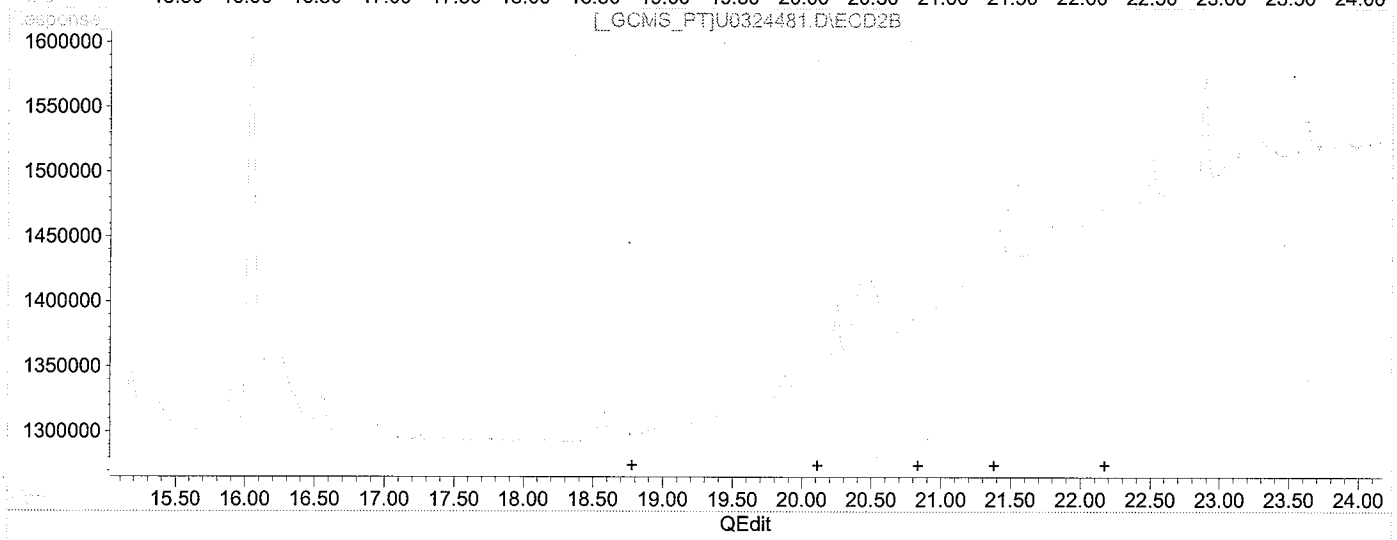
(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324481.D\ECD1A.CH Vial: 28
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324481.D\ECD2B.CH
Acq On : 12 Nov 2010 23:22 Operator: RP
Sample : 1011013-12 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:32 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-023-1010

Sample Date/Time: 11/2/10 13:40

File ID: U0324482.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-13

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/12/10 23:54

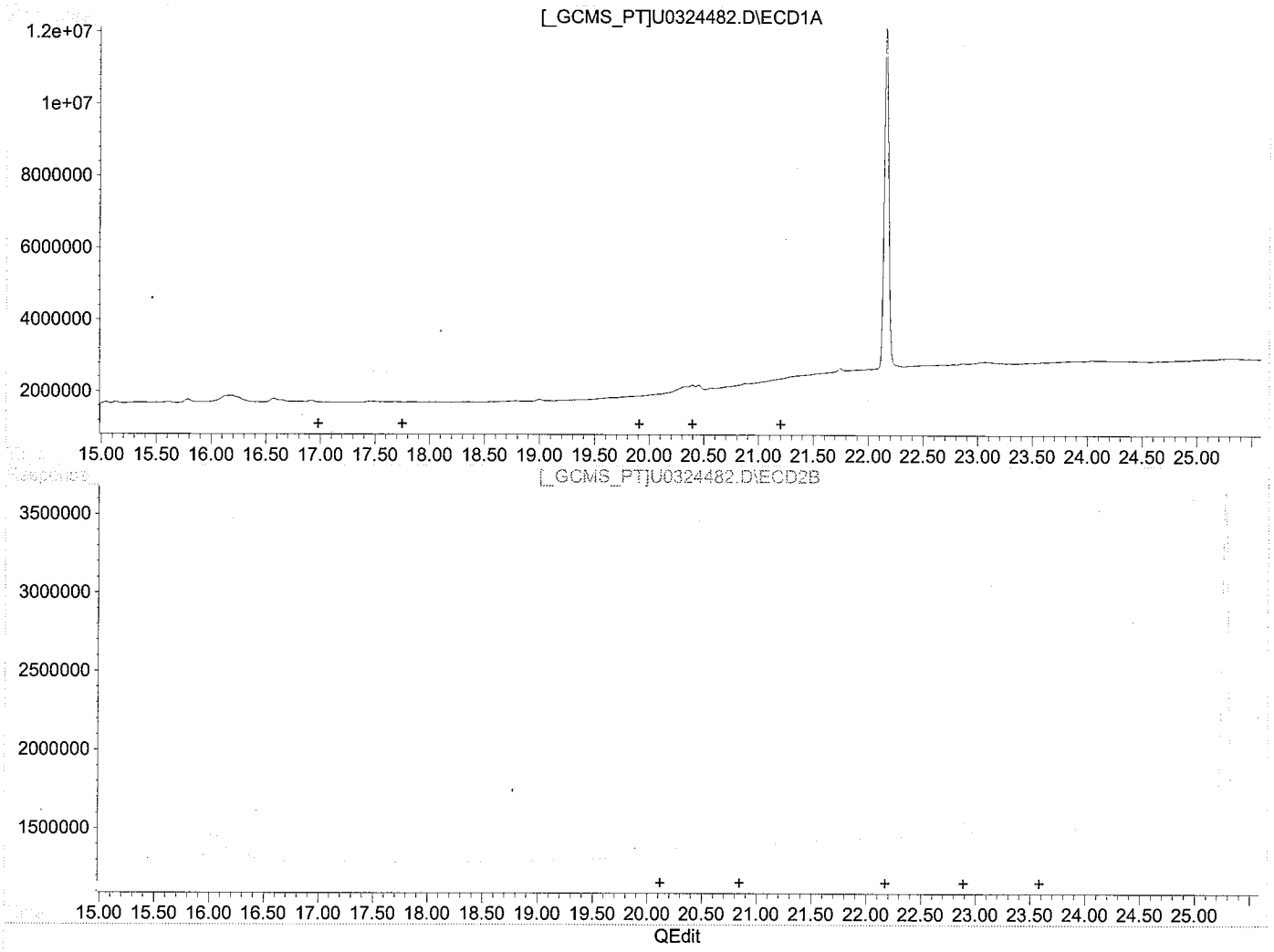
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.7 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.7 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324482.D\ECD1A.CH Vial: 29
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324482.D\ECD2B.CH
Acq On : 12 Nov 2010 23:54 Operator: RP
Sample : 1011013-13 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:33 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

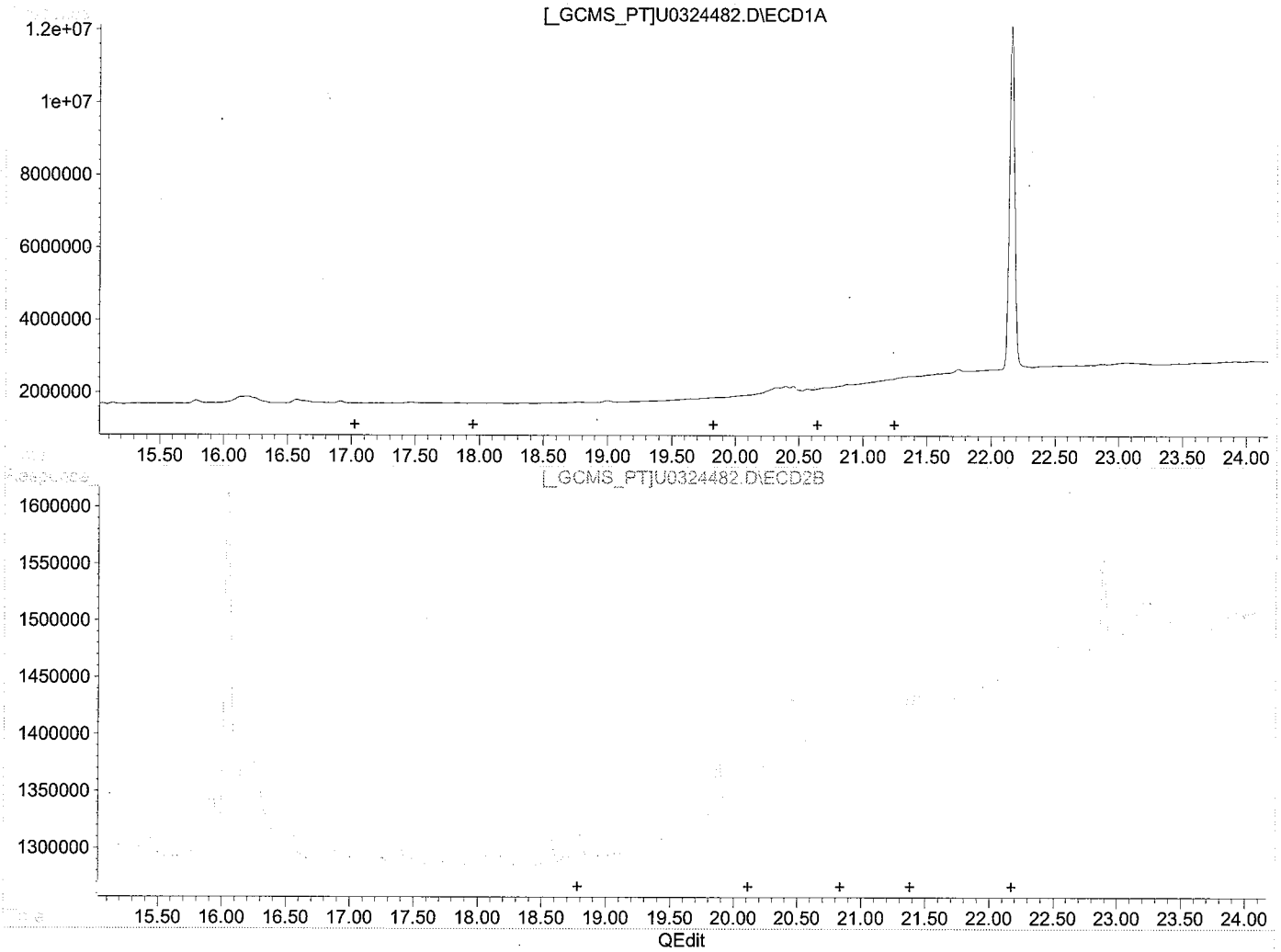
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324482.D\ECD1A.CH Vial: 29
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324482.D\ECD2B.CH
Acq On : 12 Nov 2010 23:54 Operator: RP
Sample : 1011013-13 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:33 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

# TIC Report

CHEMTECH

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-025-1010

Sample Date/Time: 11/2/10 11:20

File ID: U0324483.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-14

Percent solids: 84%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/13/10 00:26

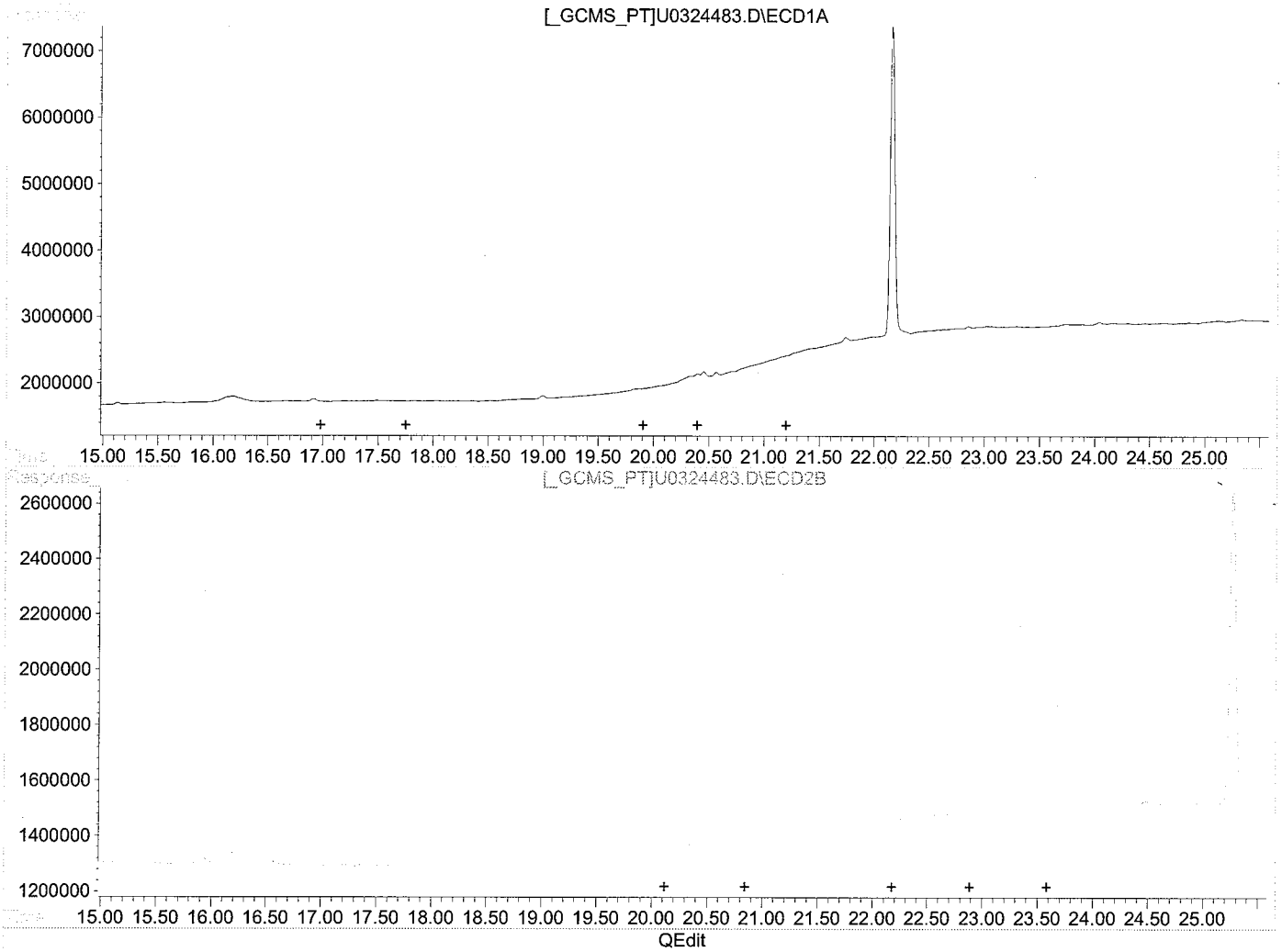
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 39.5 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 39.5 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324483.D\ECD1A.CH Vial: 30
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324483.D\ECD2B.CH
Acq On : 13 Nov 2010 00:26 Operator: RP
Sample : 1011013-14 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:34 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

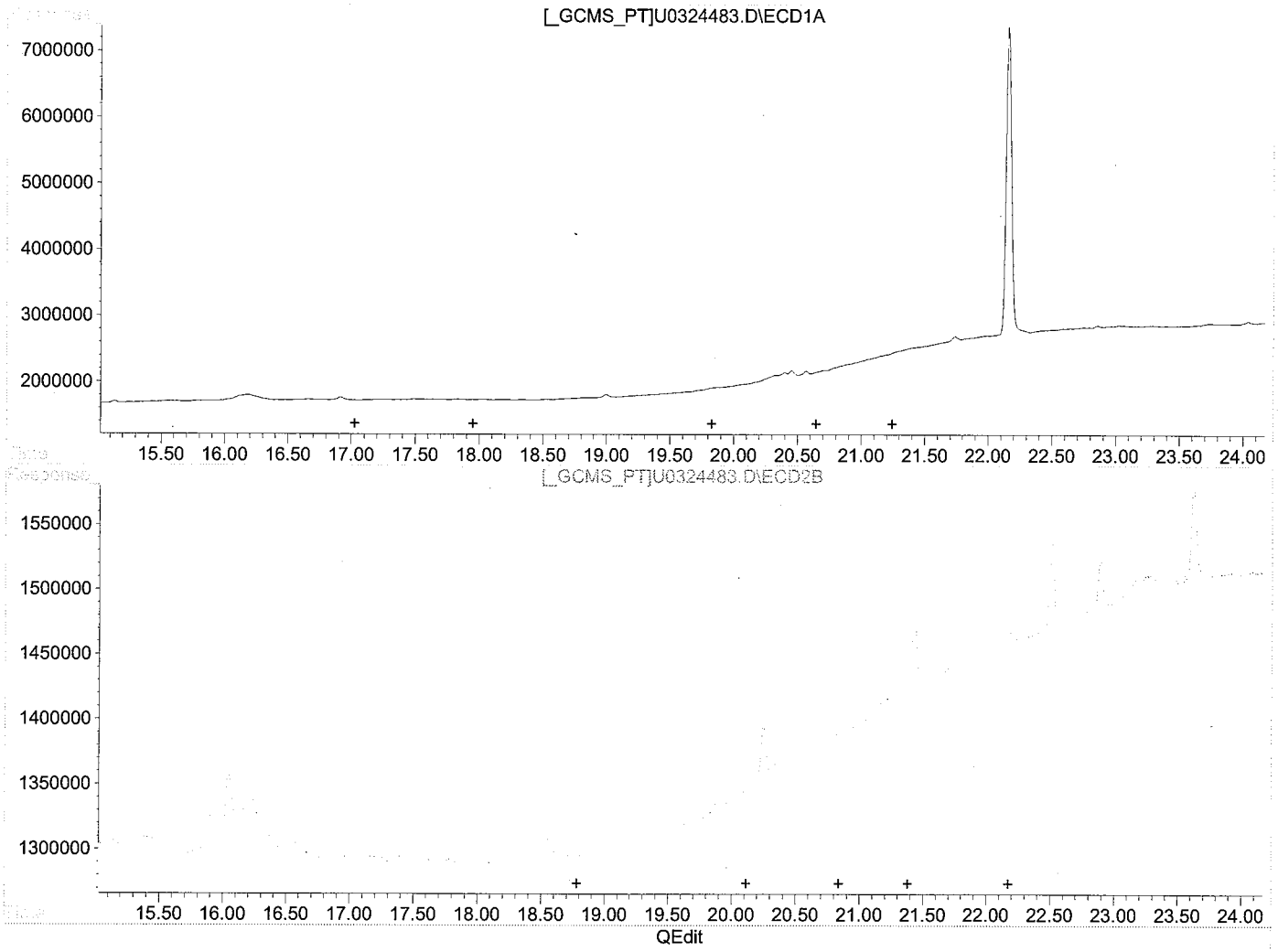
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324483.D\ECD1A.CH Vial: 30
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324483.D\ECD2B.CH
Acq On : 13 Nov 2010 00:26 Operator: RP
Sample : 1011013-14 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:34 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-028-1010

Sample Date/Time: 11/2/10 13:20

File ID: U0324484.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-15

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/13/10 00:58

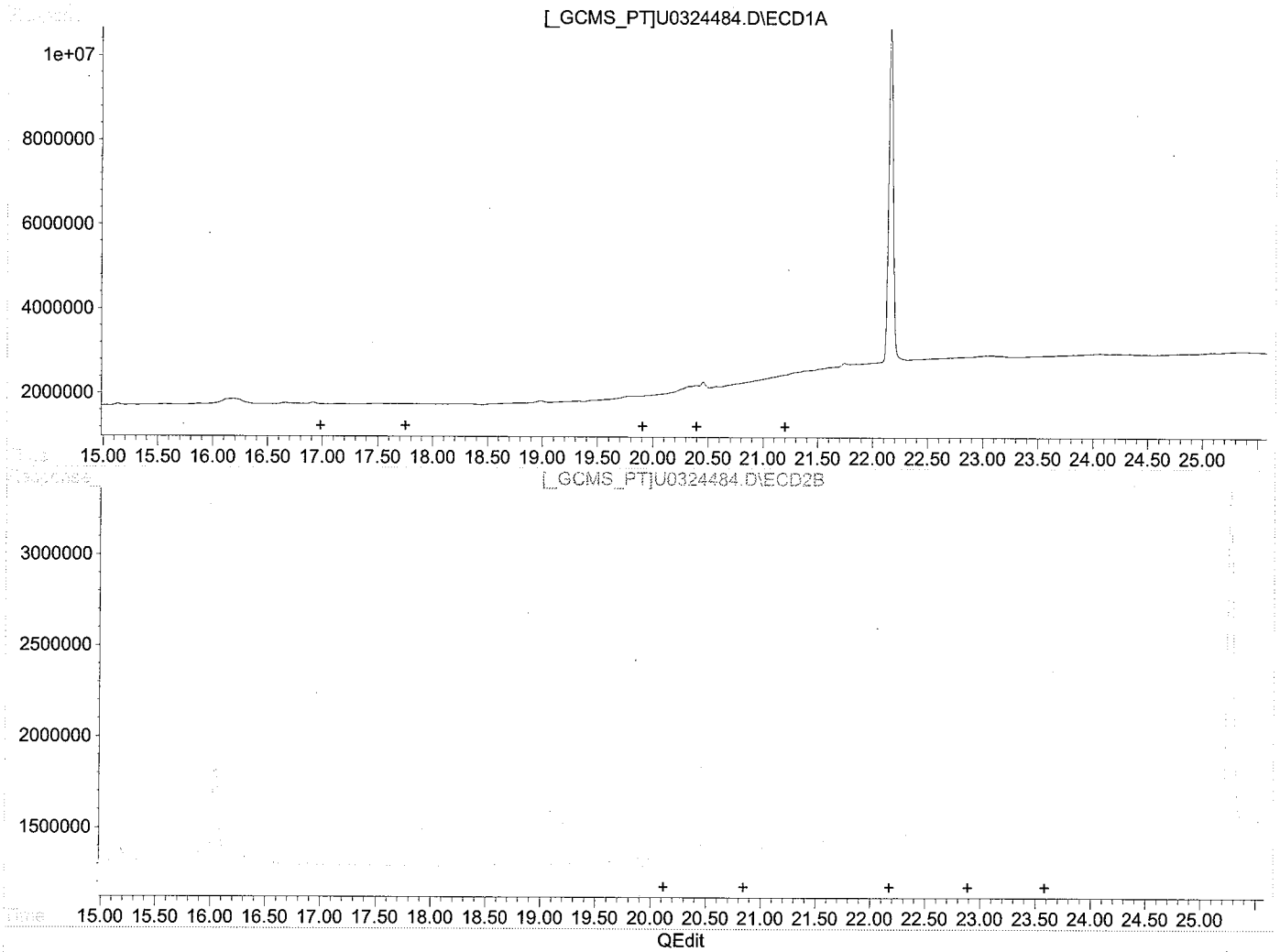
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.9 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.9 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324484.D\ECD1A.CH Vial: 31
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324484.D\ECD2B.CH
Acq On : 13 Nov 2010 00:58 Operator: RP
Sample : 1011013-15 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:34 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

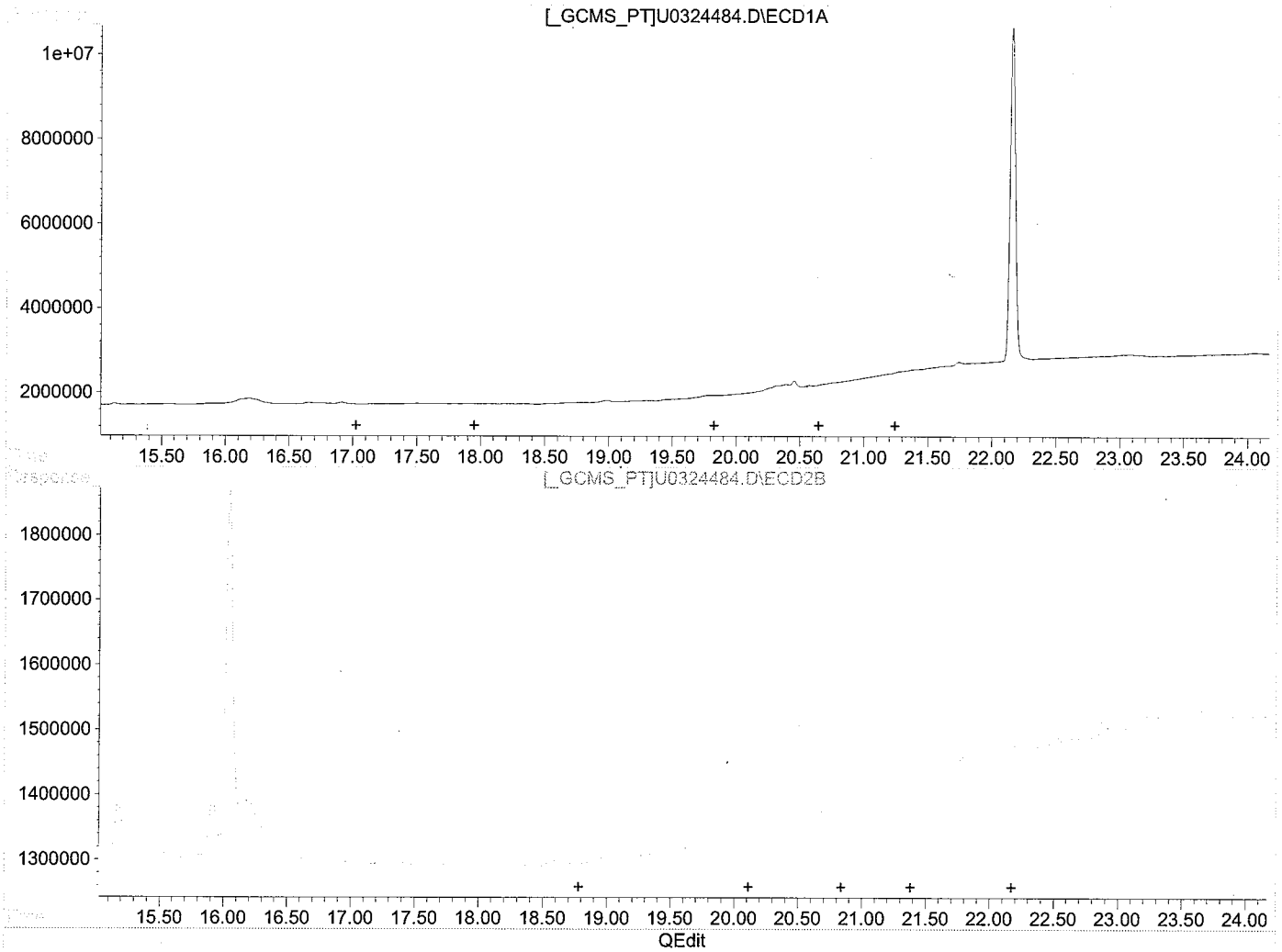
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324484.D\ECD1A.CH Vial: 31
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324484.D\ECD2B.CH
Acq On : 13 Nov 2010 00:58 Operator: RP
Sample : 1011013-15 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:34 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-030-1010

Sample Date/Time: 11/2/10 12:40

File ID: U0324485.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-16

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/13/10 01:31

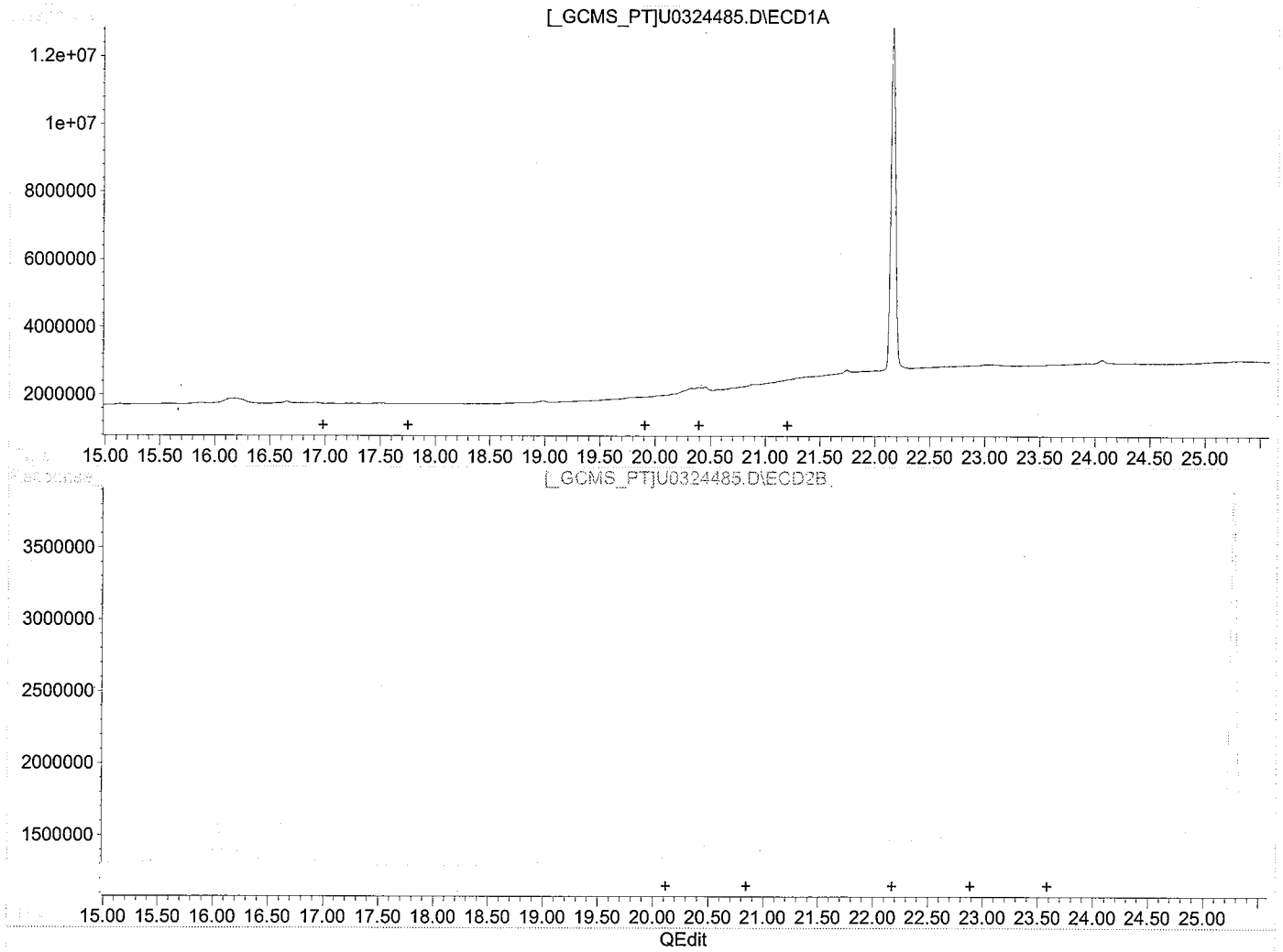
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 37.9 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 37.9 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324485.D\ECD1A.CH Vial: 32
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324485.D\ECD2B.CH
Acq On : 11-13-2010 01:30:53 Operator: RP
Sample : 1011013-16 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:35 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

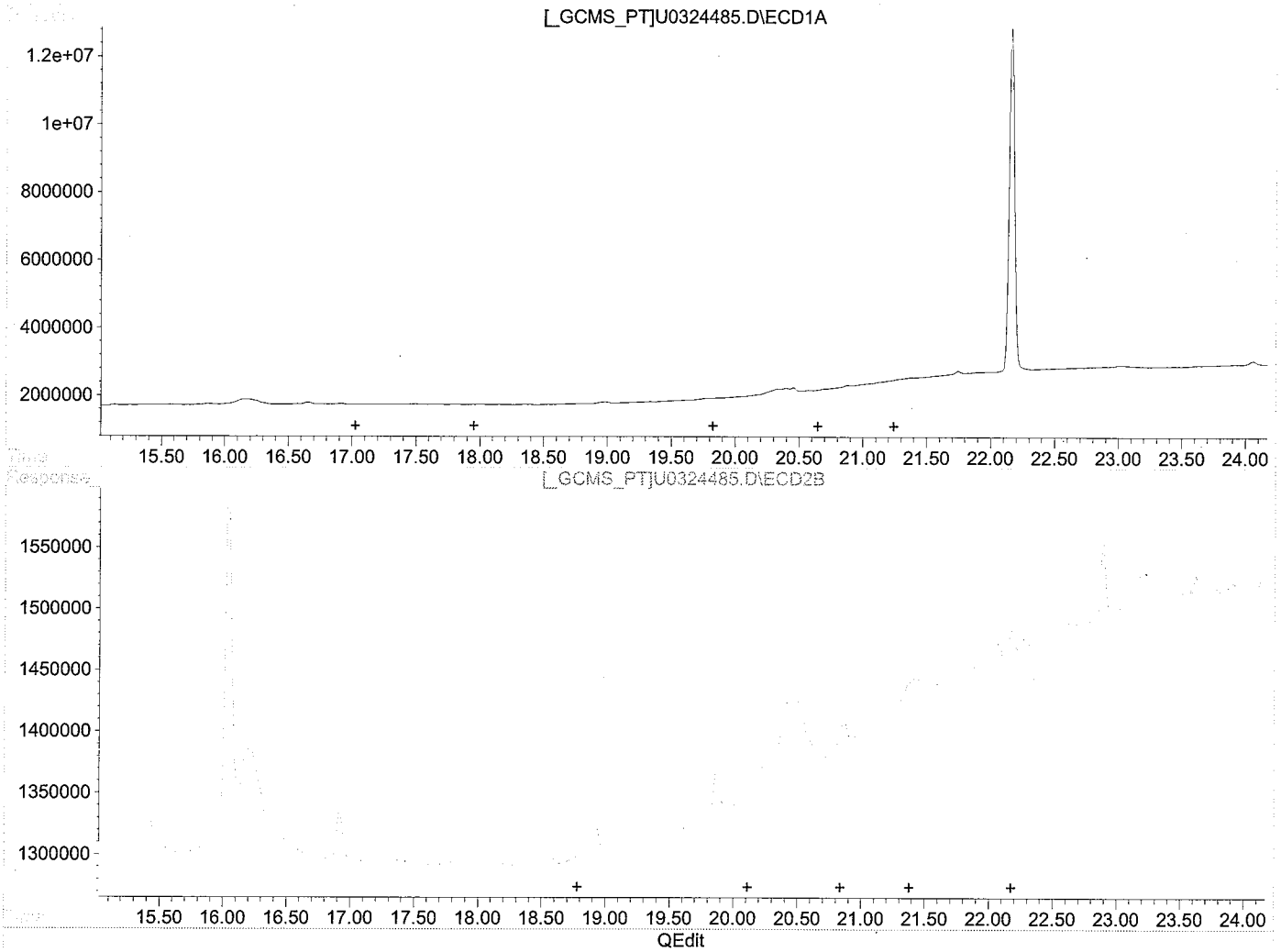
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324485.D\ECD1A.CH Vial: 32
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324485.D\ECD2B.CH
Acq On : 11-13-2010 01:30:53 Operator: RP
Sample : 1011013-16 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:35 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-031-1010

Sample Date/Time: 11/2/10 11:40

File ID: U0324486.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-17

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/13/10 02:03

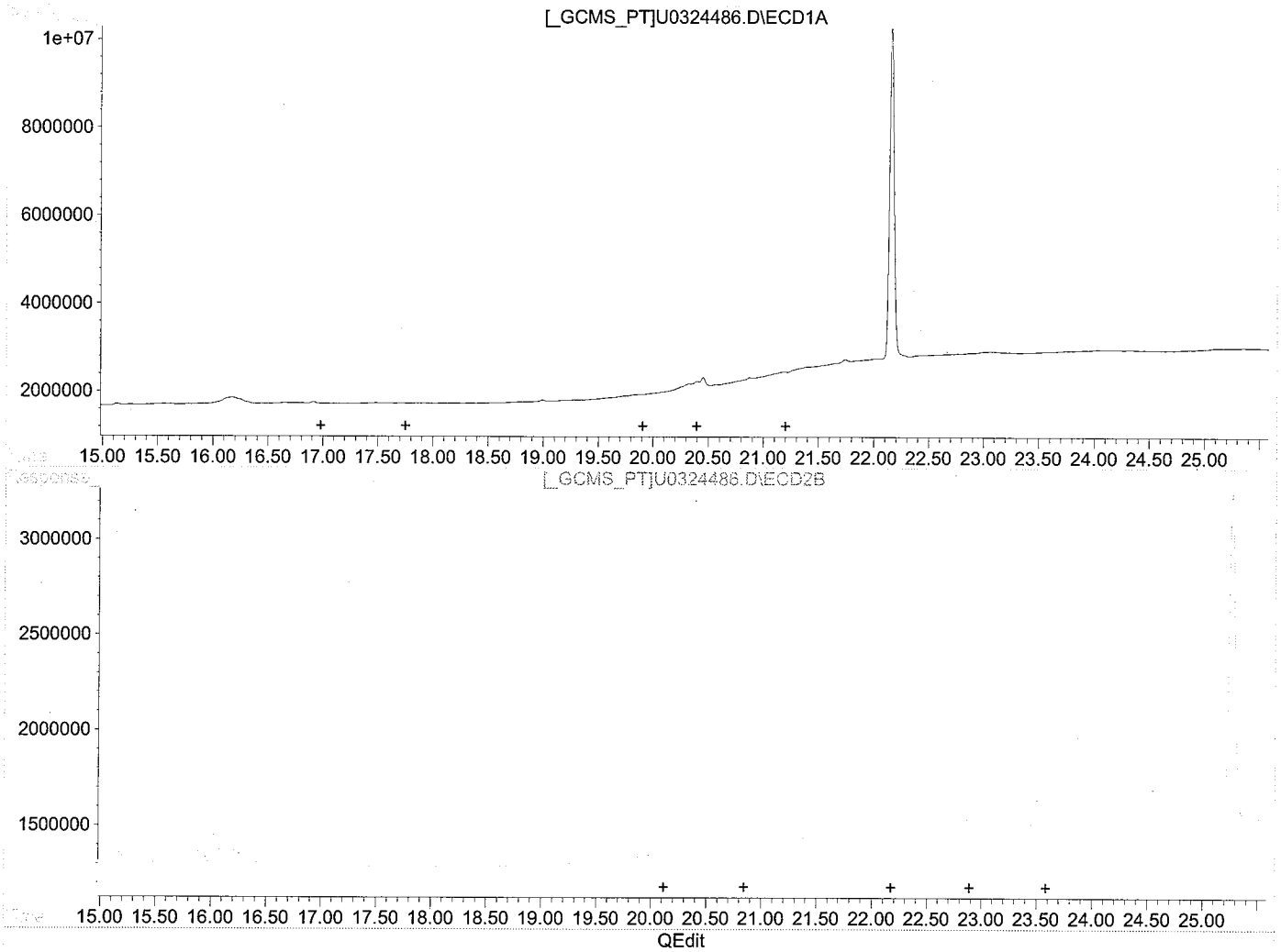
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 37.9 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 37.9 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324486.D\ECD1A.CH Vial: 33
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324486.D\ECD2B.CH
Acq On : 11-13-2010 02:03:04 Operator: RP
Sample : 1011013-17 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:38 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

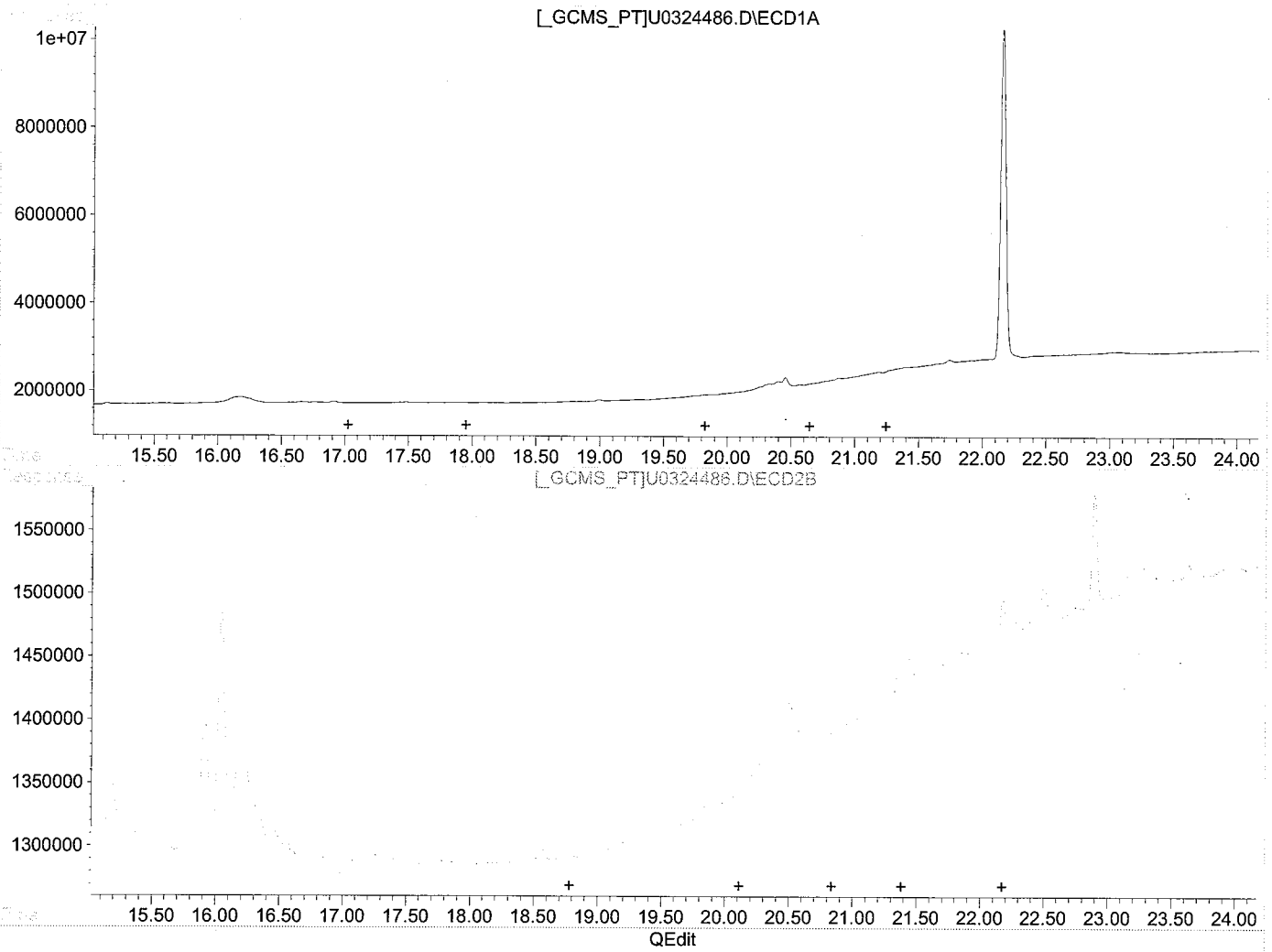
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324486.D\ECD1A.CH Vial: 33
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324486.D\ECD2B.CH
Acq On : 11-13-2010 02:03:04 Operator: RP
Sample : 1011013-17 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:38 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-032-1010

Sample Date/Time: 11/2/10 12:20

File ID: U03244687.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-18

Percent solids: 82%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/13/10 02:35

---

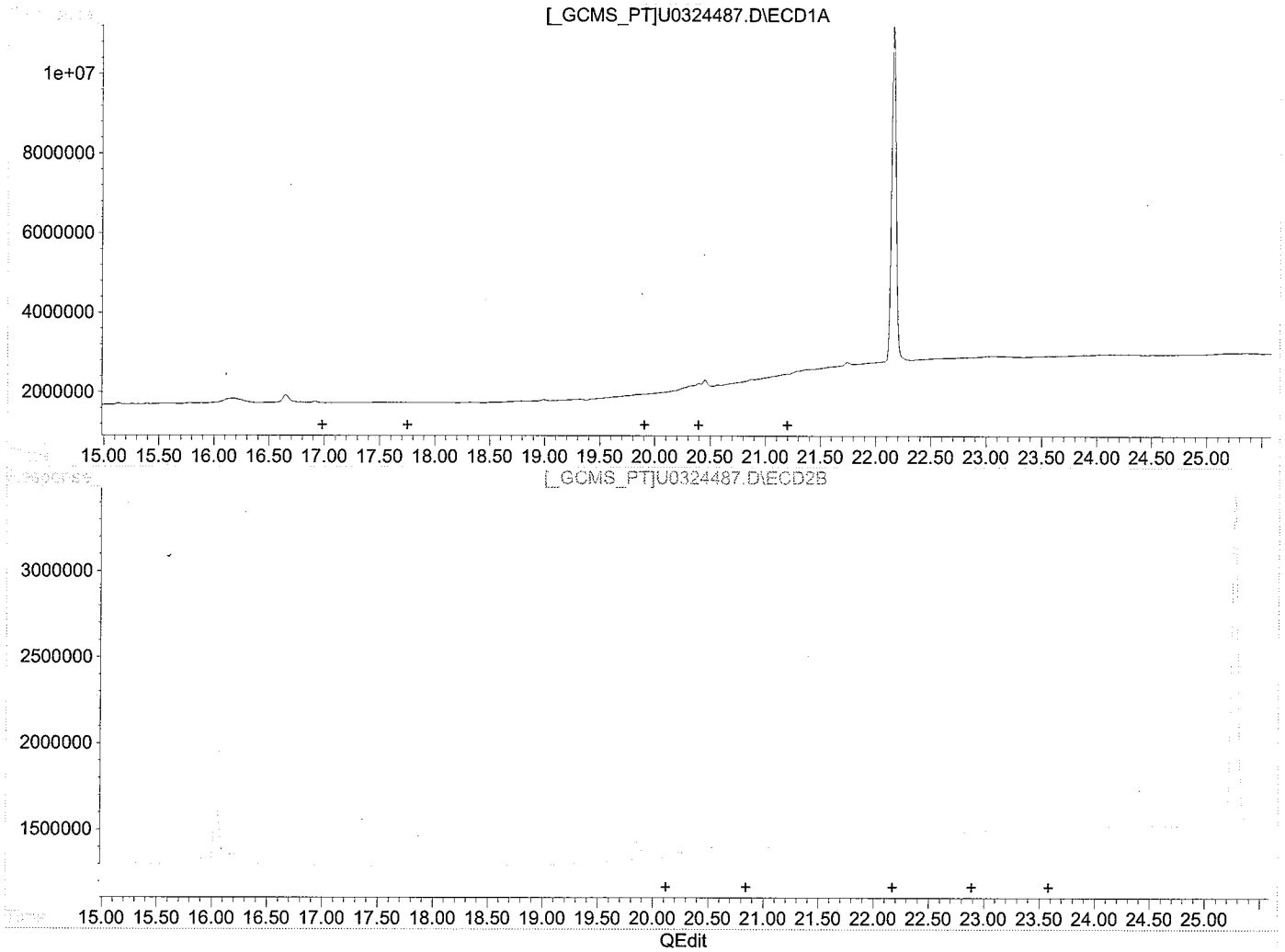
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 40.9 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 40.9 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324487.D\ECD1A.CH Vial: 34
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324487.D\ECD2B.CH
Acq On : 11-13-2010 02:35:07 Operator: RP
Sample : 1011013-18 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:38 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

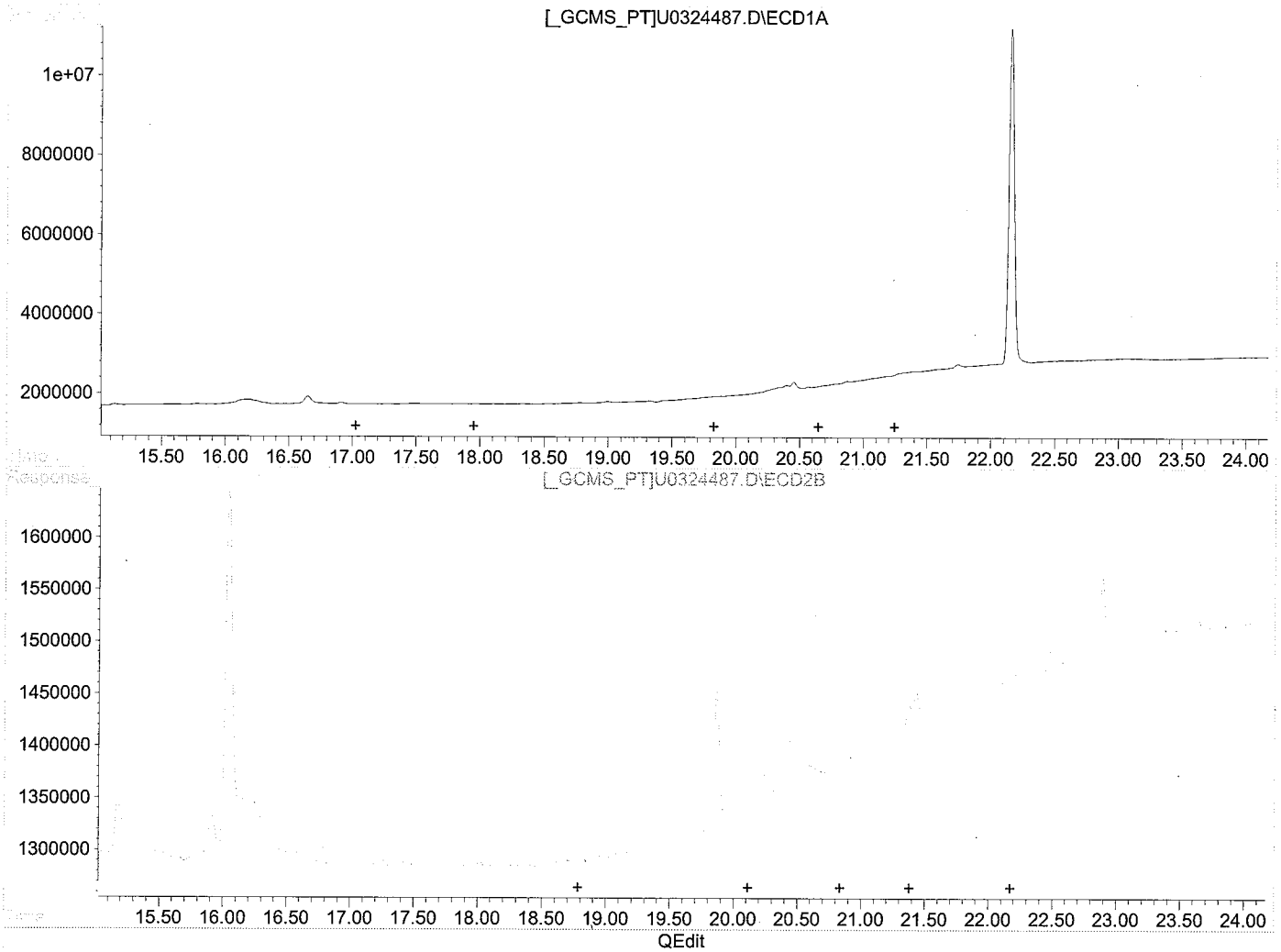
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324487.D\ECD1A.CH Vial: 34
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324487.D\ECD2B.CH
Acq On : 11-13-2010 02:35:07 Operator: RP
Sample : 1011013-18 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:38 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-034-1010

Sample Date/Time: 11/2/10 13:00

File ID: U0324495.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-19

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/15/10 13:09

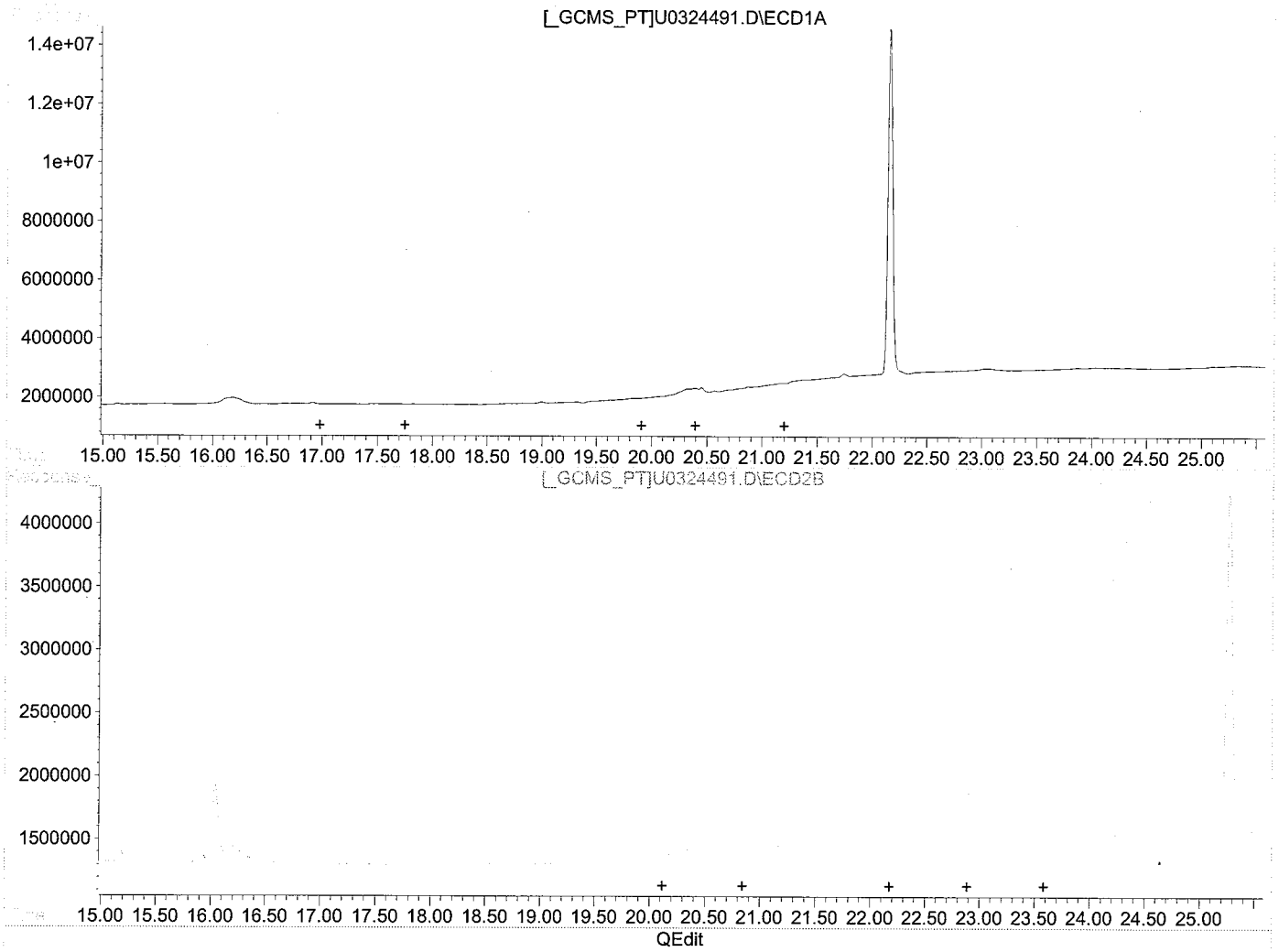
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.8 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.8 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324491.D\ECD1A.CH Vial: 37
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324491.D\ECD2B.CH
Acq On : 11-13-2010 04:43:35 Operator: RP
Sample : 1011013-20 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:39 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

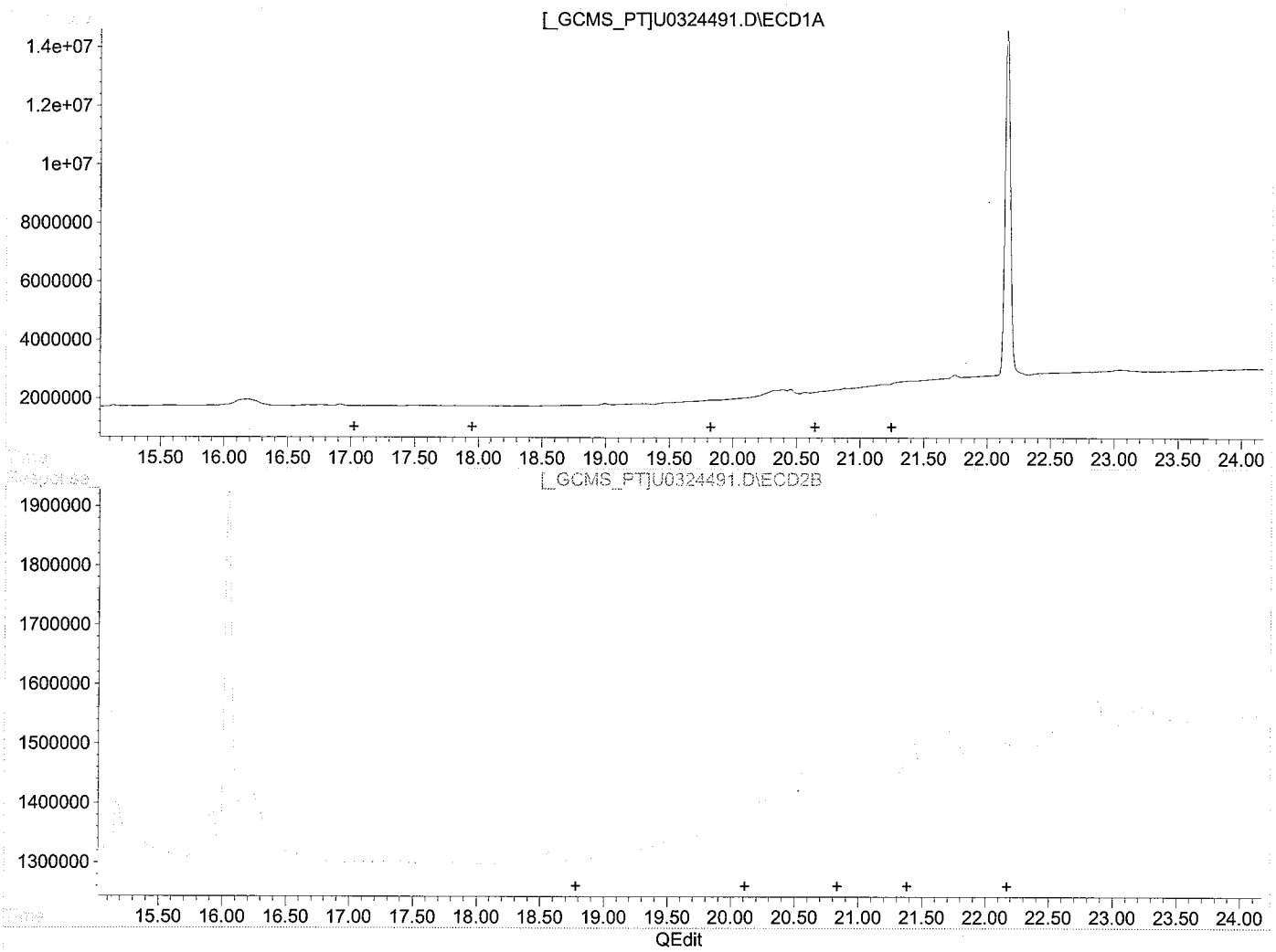
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324491.D\ECD1A.CH Vial: 37
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324491.D\ECD2B.CH
Acq On : 11-13-2010 04:43:35 Operator: RP
Sample : 1011013-20 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 15:39 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-FD002-1010

Sample Date/Time: 11/2/10 00:00

File ID: U0324491.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-20

Percent solids: 88%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 10:40

Analyzed Date/Time: 11/13/10 04:44

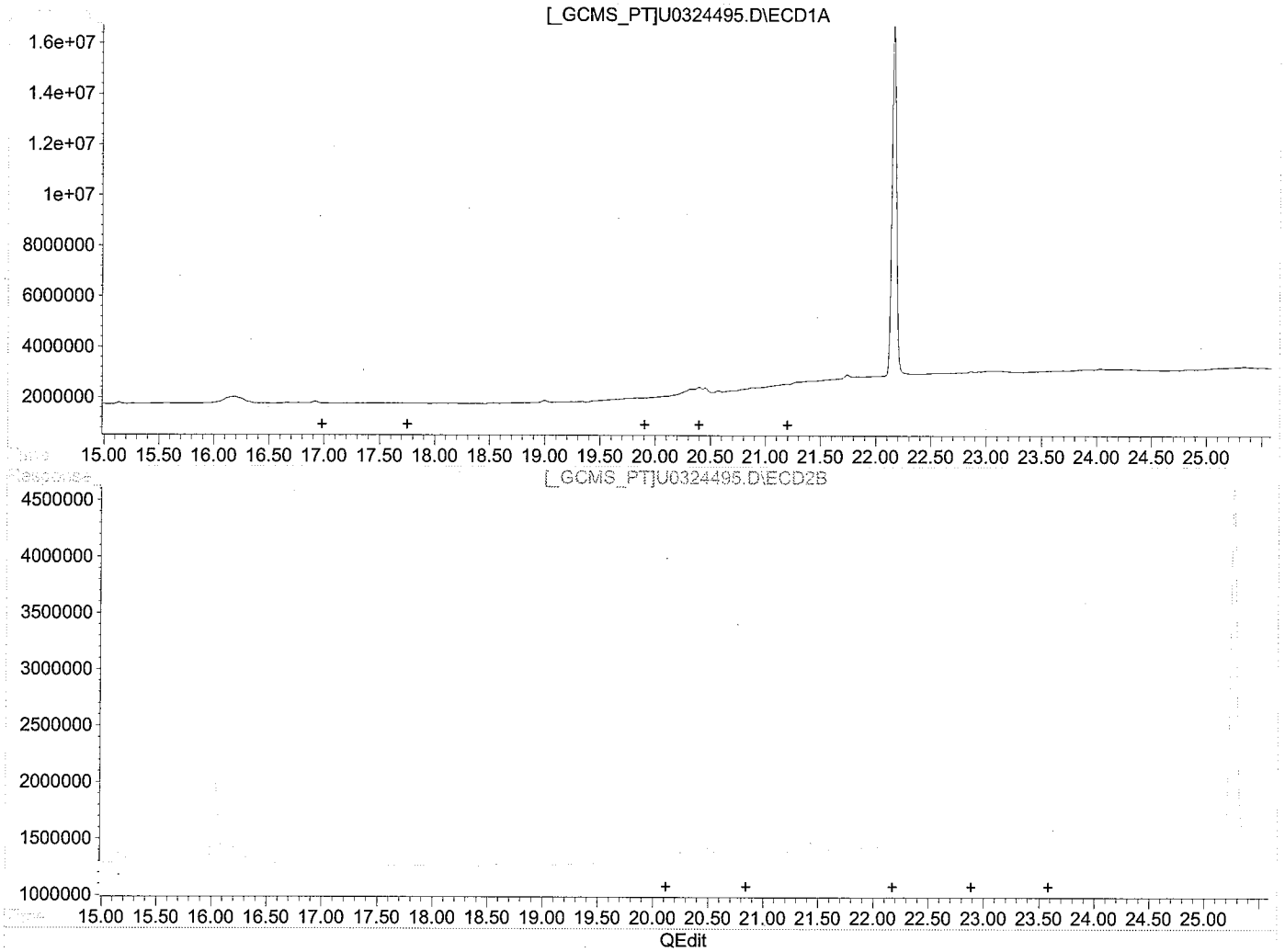
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.0 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.0 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111510\U0324495.D\ECD1A.CH Vial: 2
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111510\U0324495.D\ECD2B.CH
Acq On : 11-15-2010 13:08:42 Operator: RP
Sample : 1011013-19 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 16 7:55 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

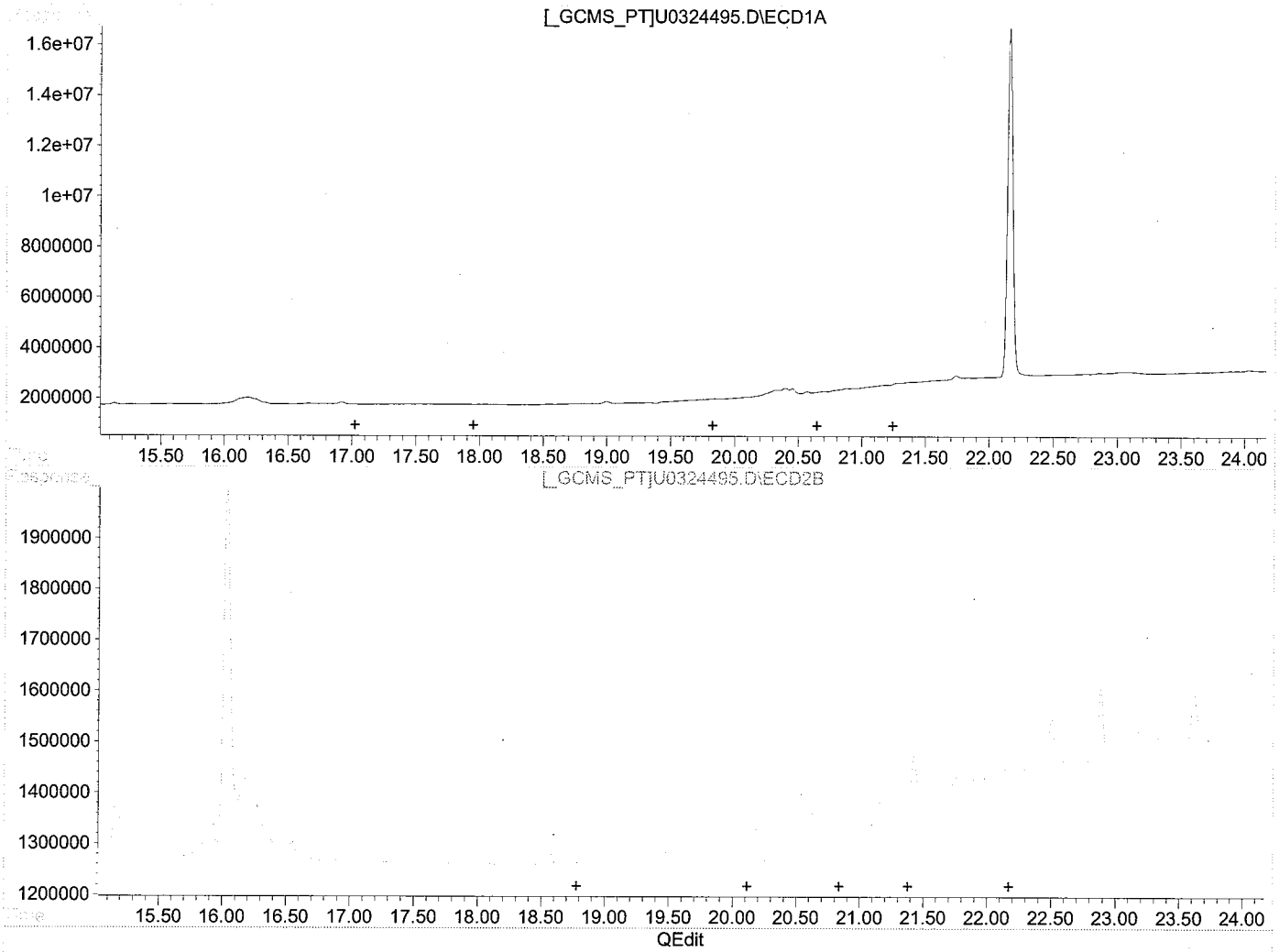
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111510\U0324495.D\ECD1A.CH Vial: 2
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111510\U0324495.D\ECD2B.CH
Acq On : 11-15-2010 13:08:42 Operator: RP
Sample : 1011013-19 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 16 7:55 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-001-1010

Sample Date/Time: 11/2/10 08:00

File ID: U0324461.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011013-21

Percent solids: 80%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 11:40

Analyzed Date/Time: 11/12/10 12:40

---

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 41.4 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 41.4 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

**Appendix C**

Support Documentation

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011013

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.

Several compounds had their average response factor updated for the calibration curve after the quant reports had been printed. Only samples GKHMS-SO-21-1010, GKHMS-SO-022-1010, and GKHMS-SO-FD001-1010 had compounds detected above the MDL that were reported from the incorrect calibration. A corrected Form 7, and report pages, Form 1's and analytical spectra are provided for those samples affected.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

PCBs

Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Mercury

Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director
Chemtech

2/4/2011

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PCS | % | GKHMS-SO-023-1010 | 1011013-13 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-025-1010 | 1011013-14 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-028-1010 | 1011013-15 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-030-1010 | 1011013-16 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-031-1010 | 1011013-17 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-032-1010 | 1011013-18 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-FD002-1010 | 1011013-20 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-017-1010 | 1011013-09 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-001-1010 | 1011013-01 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| OV | UG/KG | GKHMS-SO-022-1010 | 1011013-12 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-003-1010 | 1011013-03 | NM | 11/02/2010 | 11/12/2010 | 11/12/2010 | 10 | 0 | 10 |
| OV | UG/KG | GKHMS-SO-005-1010 | 1011013-04 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-007-1010 | 1011013-05 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-011-1010 | 1011013-06 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-012-1010 | 1011013-07 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-014-1010 | 1011013-08 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-017-1010 | 1011013-09 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-001-1010 | 1011013-01 | NM | 11/02/2010 | 11/12/2010 | 11/12/2010 | 10 | 0 | 10 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | UG/KG | GKHMS-SO-021-1010 | 1011013-11 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-002-1010 | 1011013-02 | NM | 11/02/2010 | 11/12/2010 | 11/12/2010 | 10 | 0 | 10 |
| OV | UG/KG | GKHMS-SO-023-1010 | 1011013-13 | NM | 11/02/2010 | 11/15/2010 | 11/15/2010 | 13 | 0 | 13 |
| OV | UG/KG | GKHMS-SO-025-1010 | 1011013-14 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-028-1010 | 1011013-15 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-030-1010 | 1011013-16 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-031-1010 | 1011013-17 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-032-1010 | 1011013-18 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| OV | UG/KG | GKHMS-SO-034-1010 | 1011013-19 | NM | 11/02/2010 | 11/15/2010 | 11/15/2010 | 13 | 0 | 13 |
| OV | UG/KG | GKHMS-SO-FD002-1010 | 1011013-20 | NM | 11/02/2010 | 11/15/2010 | 11/15/2010 | 13 | 0 | 13 |
| OV | UG/KG | GKHMS-SO-FD001-1010 | 1011013-21 | NM | 11/02/2010 | 11/15/2010 | 11/15/2010 | 13 | 0 | 13 |
| OV | UG/KG | GKHMS-SO-019-1010 | 1011013-10 | NM | 11/02/2010 | 11/13/2010 | 11/13/2010 | 11 | 0 | 11 |
| SIM | UG/KG | GKHMS-SO-FD001-1010 | 1011013-21 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-019-1010 | 1011013-10 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-001-1010 | 1011013-01 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-002-1010 | 1011013-02 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-003-1010 | 1011013-03 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-005-1010 | 1011013-04 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| SIM | UG/KG | GKHMS-SO-007-1010 | 1011013-05 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-011-1010 | 1011013-06 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-012-1010 | 1011013-07 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-FD002-1010 | 1011013-20 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-017-1010 | 1011013-09 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-034-1010 | 1011013-19 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-021-1010 | 1011013-11 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-022-1010 | 1011013-12 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-023-1010 | 1011013-13 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-025-1010 | 1011013-14 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-028-1010 | 1011013-15 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-030-1010 | 1011013-16 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-031-1010 | 1011013-17 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-032-1010 | 1011013-18 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| SIM | UG/KG | GKHMS-SO-014-1010 | 1011013-08 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| PCB | UG/KG | GKHMS-SO-028-1010 | 1011013-15 | NM | 11/02/2010 | 11/10/2010 | 11/13/2010 | 8 | 3 | 11 |
| PCB | UG/KG | GKHMS-SO-FD001-1010 | 1011013-21 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-001-1010 | 1011013-01 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB | UG/KG | GKHMS-SO-FD002-1010 | 1011013-20 | NM | 11/02/2010 | 11/10/2010 | 11/13/2010 | 8 | 3 | 11 |
| PCB | UG/KG | GKHMS-SO-034-1010 | 1011013-19 | NM | 11/02/2010 | 11/10/2010 | 11/15/2010 | 8 | 5 | 13 |
| PCB | UG/KG | GKHMS-SO-032-1010 | 1011013-18 | NM | 11/02/2010 | 11/10/2010 | 11/13/2010 | 8 | 3 | 11 |
| PCB | UG/KG | GKHMS-SO-030-1010 | 1011013-16 | NM | 11/02/2010 | 11/10/2010 | 11/13/2010 | 8 | 3 | 11 |
| PCB | UG/KG | GKHMS-SO-025-1010 | 1011013-14 | NM | 11/02/2010 | 11/10/2010 | 11/13/2010 | 8 | 3 | 11 |
| PCB | UG/KG | GKHMS-SO-023-1010 | 1011013-13 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-022-1010 | 1011013-12 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-005-1010 | 1011013-04 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-002-1010 | 1011013-02 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-031-1010 | 1011013-17 | NM | 11/02/2010 | 11/10/2010 | 11/13/2010 | 8 | 3 | 11 |
| PCB | UG/KG | GKHMS-SO-003-1010 | 1011013-03 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-021-1010 | 1011013-11 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-007-1010 | 1011013-05 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-011-1010 | 1011013-06 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-012-1010 | 1011013-07 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-014-1010 | 1011013-08 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-017-1010 | 1011013-09 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PCB | UG/KG | GKHMS-SO-019-1010 | 1011013-10 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PEST | UG/KG | GKHMS-SO-023-1010 | 1011013-13 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-001-1010 | 1011013-01 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |
| PEST | UG/KG | GKHMS-SO-FD001-1010 | 1011013-21 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-034-1010 | 1011013-19 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-032-1010 | 1011013-18 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-031-1010 | 1011013-17 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-030-1010 | 1011013-16 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-028-1010 | 1011013-15 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-025-1010 | 1011013-14 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-FD002-1010 | 1011013-20 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-022-1010 | 1011013-12 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-021-1010 | 1011013-11 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-019-1010 | 1011013-10 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-017-1010 | 1011013-09 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-014-1010 | 1011013-08 | NM | 11/02/2010 | 11/10/2010 | 11/19/2010 | 8 | 9 | 17 |
| PEST | UG/KG | GKHMS-SO-012-1010 | 1011013-07 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |
| PEST | UG/KG | GKHMS-SO-011-1010 | 1011013-06 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |
| PEST | UG/KG | GKHMS-SO-007-1010 | 1011013-05 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PEST | UG/KG | GKHMS-SO-005-1010 | 1011013-04 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |
| PEST | UG/KG | GKHMS-SO-002-1010 | 1011013-02 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |
| PEST | UG/KG | GKHMS-SO-003-1010 | 1011013-03 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-7

work 1011013

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8260B** | GKHMS-SO001 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO001 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8260B** | GKHMS-SO002 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO002 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8260B** | GKHMS-SO003 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO003 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8260B** | GKHMS-SO005 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO005 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8260B** | GKHMS-SO007 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO007 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8260B** | GKHMS-SO011 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO011 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-012-1010 | 12:00 | **SW846 8260B** | GKHMS-SO012 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-012- | 12:00 | **SW846** | GKHMS- | SO | SVOCs/SIM | 4°C | 1 | Glass - | 16 oz. wide-mouth | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | 8720D/8270DSIM/8082A/8081B/6010C | SO012 | | PAHs/PCBs/Pesticides/Metals | | | Clear | w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8260B | GKHMS-SO014 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO014 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8260B | GKHMS-SO017 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO017 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8260B | GKHMS-SO019 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO019 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8260B | GKHMS-SO021 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO021 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8260B | GKHMS-SO022 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO022 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8260B | GKHMS-SO023 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO023 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8260B | GKHMS-SO025 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO025 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8260B | GKHMS-SO028 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO028 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8260B | GKHMS-SO030 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO030 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8260B | GKHMS-SO031 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO031 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8260B | GKHMS-SO032 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO032 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8260B | GKHMS-SO034 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO034 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-FD002-1010 | 00:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO- | 00:00 | SW846 8260B | QC | SO | VOCs | 4°C/MeOH+DI | 3 | Glass - | 40 mL vial (pre- | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | FD002-1010 | | | | | | Combo | | Clear | tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8260B** | QC | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| 1. Relinquished By: **Gary Braganza** | Date: 11/03/2010 | Time: 15:08 | Received By: **Federal Express** | Date: 11/03/2010 | Time: 16:08 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: 11/4/10 | Time: 12:50pm |

Comments:

Work 1011013

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1011013 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 11/5/2010 10:31:00AM |
| Date Received: | 11/4/2010 12:50:00PM | Logged In By: | Chino Ortiz |
| Received By: | Chino Ortiz | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

| | |
|---|---|
| Shipping Container in good condition? | Y |
| Custody seals present on shipping container? | Y |
| Condition: *Intact-signed and dated* | |
| Chain-of-Custody present? | Y |
| COC agrees with sample labels? | Y |
| COC signed? | Y |
| Packing present in shipping container? | Y |
| Custody seals present on sample bottles? | N |
| Condition: *Intact* | |
| Samples intact? | Y |
| Sufficient volume for requested tests? | Y |
| Preservation confirmed? | Y |
| Are there Volatiles samples present? | N |
| Has Zero Headspace? | N/A |
| Total number of bottles: | |
| Total number of samples: | 22 |

Comments:

## Subcontracted Analyses

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1011013-01 | 6010C Full |
| 1011013-01 | 8270D LL SVOC TCL |
| 1011013-01 | Mercury, Total 7471B |
| 1011013-02 | 6010C Full |
| 1011013-02 | 8270D LL SVOC TCL |
| 1011013-02 | Mercury, Total 7471B |
| 1011013-03 | 6010C Full |
| 1011013-03 | 8270D LL SVOC TCL |
| 1011013-03 | Mercury, Total 7471B |
| 1011013-04 | 6010C Full |
| 1011013-04 | 8270D LL SVOC TCL |
| 1011013-04 | Mercury, Total 7471B |
| 1011013-05 | 6010C Full |
| 1011013-05 | 8270D LL SVOC TCL |
| 1011013-05 | Mercury, Total 7471B |
| 1011013-06 | 6010C Full |
| 1011013-06 | 8270D LL SVOC TCL |
| 1011013-06 | Mercury, Total 7471B |
| 1011013-07 | 6010C Full |
| 1011013-07 | 8270D LL SVOC TCL |
| 1011013-07 | Mercury, Total 7471B |
| 1011013-08 | 6010C Full |
| 1011013-08 | 8270D LL SVOC TCL |
| 1011013-08 | Mercury, Total 7471B |
| 1011013-09 | 6010C Full |
| 1011013-09 | 8270D LL SVOC TCL |
| 1011013-09 | Mercury, Total 7471B |
| 1011013-10 | 6010C Full |
| 1011013-10 | 8270D LL SVOC TCL |
| 1011013-10 | Mercury, Total 7471B |
| 1011013-11 | 6010C Full |
| 1011013-11 | 8270D LL SVOC TCL |
| 1011013-11 | Mercury, Total 7471B |
| 1011013-12 | 6010C Full |
| 1011013-12 | 8270D LL SVOC TCL |
| 1011013-12 | Mercury, Total 7471B |
| 1011013-13 | 6010C Full |
| 1011013-13 | 8270D LL SVOC TCL |
| 1011013-13 | Mercury, Total 7471B |
| 1011013-14 | 6010C Full |
| 1011013-14 | 8270D LL SVOC TCL |
| 1011013-14 | Mercury, Total 7471B |
| 1011013-15 | 6010C Full |
| 1011013-15 | 8270D LL SVOC TCL |
| 1011013-15 | Mercury, Total 7471B |
| 1011013-16 | 6010C Full |
| 1011013-16 | 8270D LL SVOC TCL |
| 1011013-16 | Mercury, Total 7471B |
| 1011013-17 | 6010C Full |
| 1011013-17 | 8270D LL SVOC TCL |
| 1011013-17 | Mercury, Total 7471B |
| 1011013-18 | 6010C Full |
| 1011013-18 | 8270D LL SVOC TCL |

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1011013-18 | Mercury, Total 7471B |
| 1011013-19 | 6010C Full |
| 1011013-19 | 8270D LL SVOC TCL |
| 1011013-19 | Mercury, Total 7471B |
| 1011013-20 | 6010C Full |
| 1011013-20 | 8270D LL SVOC TCL |
| 1011013-20 | Mercury, Total 7471B |
| 1011013-21 | 6010C Full |
| 1011013-21 | 8270D LL SVOC TCL |
| 1011013-21 | Mercury, Total 7471B |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-SO-001-1010 | 1011013-01 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-002-1010 | 1011013-02 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-003-1010 | 1011013-03 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-005-1010 | 1011013-04 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-007-1010 | 1011013-05 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-011-1010 | 1011013-06 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-012-1010 | 1011013-07 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |

| | | | | | |
|---|---|---|---|---|---|
| GKHMS-SO-012-1010 | 1011013-07 | SW8082<br>SW8260B<br>SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-014-1010 | 1011013-08 | Solids, Dry Weight<br>SW7471B<br>SW8081A<br>SW8082<br>SW8260B<br>SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-017-1010 | 1011013-09 | Solids, Dry Weight<br>SW7471B<br>SW8081A<br>SW8082<br>SW8260B<br>SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-019-1010 | 1011013-10 | Solids, Dry Weight<br>SW7471B<br>SW8081A<br>SW8082<br>SW8260B<br>SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-021-1010 | 1011013-11 | Solids, Dry Weight<br>SW7471B<br>SW8081A<br>SW8082<br>SW8260B<br>SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-022-1010 | 1011013-12 | Solids, Dry Weight<br>SW7471B<br>SW8081A<br>SW8082<br>SW8260B<br>SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-023-1010 | 1011013-13 | Solids, Dry Weight<br>SW7471B<br>SW8081A<br>SW8082<br>SW8260B<br>SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-025-1010 | 1011013-14 | Solids, Dry Weight<br>SW7471B<br>SW8081A<br>SW8082<br>SW8260B | Solid | 11/2/2010 | 11/4/2010 |

| | | | | | |
|---|---|---|---|---|---|
| GKHMS-SO-025-1010 | 1011013-14 | SW8270C SIM | Solid | 11/2/2010 | 11/4/2010 |
| GKHMS-SO-028-1010 | 1011013-15 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-030-1010 | 1011013-16 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-031-1010 | 1011013-17 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-032-1010 | 1011013-18 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-034-1010 | 1011013-19 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-FD001-1010 | 1011013-21 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-SO-FD002-1010 | 1011013-20 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |

**SAMPLE RECIEPT**

Twenty-one solid and one water samples were received on 11/4/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/06/2010.

**8260**

Twenty-two soil samples were analyzed for volatile organic compounds by the SW846 Method 8260B..
The samples were analyzed within the holding time.

Sample GKHMS-SO-019-1010 had several surrogate recoveries and internal standard responses outside of QC limits. Since no analytes were detected above the method detection limit the data is not affected. The response for one internal standard was below limits in the following samples: GKHMS-SO-001-1010, GKHMS-SO-019-1010, GKHMS-SO-025-1010, GKHMS-SO-030-1010, GKHMS-SO-031-1010, and GKHMS-SO-032-1010. The data is not affected because there were no analytes above the method detection limit in those samples. The recovery of one surrogate was below QC limits in samples GKHMS-SO-001-1010, GKHMS-SO-019-1010, GKHMS-SO-030-1010, and GKHMS-SO-031-1010. One remaining surrogate recovery was below QC limits in sample GKHMS-SO-031-1010. There were no target analytes corresponding to those surrogates detected in the samples.

All remaining surrogate recoveries and internal standard responses were within the QC limits.

Duplicate laboratory control samples were analyzed along with the first batch.

In batch B047059, recovery of twenty-two compounds in the LCS and fourteen compounds in the LCSD were above the QC limits. Because none of the compounds were detected above the reporting limit in the associated client samples, there is no effect on the results reported.
Recovery of two compounds in the LCS were below QC limits. Because none of the compounds were detected above the method detection limit in the associated client samples, there is no effect on the results reported. The % RPD for eight compounds was above the QC limits for the pair.

A matrix spike and matrix spike duplicate were performed on sample GKHMS-SO-FD001-1010. Fifteen analytes were outside QC limits in the MS and sixteen in the MSD. The % RPD for six compounds was above the QC limits for the pair.

In batch B048008, recovery of two compounds in the LCS were above the QC limits. The recovery for napthalene was above QC limits in the LCS and CCV and was detected in sample GKHMS-SO-FD001-1010. That result may be biased slightly high. Because no remaining compounds were detected above the reporting limit in the associated client samples, there is no effect

on the results reported.
Recovery of four compounds in the LCS was below QC limits. Because none of the compounds were detected above the method detection limit in the associated client samples, there is no effect on the results reported.

In sequence S047036, the response for three compounds was above QC limits and two compounds were below the QC limits in the daily CCV.
The compounds were not detected above the method detection limit in any associated client samples.

In sequence S048008, the response for four compounds was above QC limits and two compounds were below the QC limits in the daily CCV.
The compounds, except for napthalene discussed above, were not detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

Sample GKHMS-GW-017-1010 required reanalysis at 10X dilution to fit the results within the calibration range.

**SW8270LL-PAH SIM**

Twenty one soil samples were extracted by method 3550B. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
Thirteen samples had one surrogate recovery above the QC limits, seven samples had two surrogate recoveries above the QC limits. All other surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were performed on sample GKHMS-SO-001-1010. Seven spike recoveries were above the QC limits.
A laboratory control sample was extracted and analyzed with each batch. B046136-BS1 had four spike recoveries above the QC limits. B048004-BS1 had three spike recoveries above the QC limits.

**PESTICIDES**

Twenty-one soil samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
Several samples had surrogate recoveries above QC limits. No analytes were found in those samples above the reporting limit therefore the data is not affected. All remaining surrogate recoveries were within the QC limits.
A matrix spike and matrix spike duplicate were performed on sample GKHMS-SO-001-1010. Several recoveries for the MS and MSD were above QC limits. Duplicate laboratory control samples were analyzed instead. All recoveries were within the QC limits.
Some of the CCV responses for 4,4-DDT were below QC limits. Because that analyte was found in samples GKHMS-SO-011-1010, GKHMS-SO-012-1010, GKHMS-SO-017-1010 and GKHMS-SO-021-1010, the data may be biased low.
The response for endrin aldehyde in one CCV was above QC limits. Because that analyte was found in sample GKHMS-SO-011-1010, the result may be biased high.

**PCBs**

Twenty-one soil samples were extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
Several samples had surrogate recoveries outside QC limits. No analytes were found in those samples above the method detection limit therefore the data is not affected. All remaining surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis were performed on sample GKHMS-SO-001-1010. The recovery for PCB 1242 was above QC limits.
A laboratory control sample was also extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

Data Qualifiers Key Reference:

All Departments

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

Organics

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

Metals

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

CENTAURI LABS™

# SW8260B

7210 Corporate Court, Frederick, MD 21703 P:(240) 575-1150 F: (301) 620-0731 www.centaurilabs.com

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890285.D | Injection Date: | 11/11/10 |
| Instrument ID: | GCMS-B | Injection Time: | 08:22 |
| Sequence: | S047034 | Lab Sample ID: | S047034-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.3 | PASS |
| 75 | 30 - 60% of 95 | 45.5 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.8 | PASS |
| 175 | 5 - 9% of 174 | 7.16 | PASS |
| 176 | 95 - 101% of 174 | 97.5 | PASS |
| 177 | 5 - 9% of 176 | 6.47 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047034-CAL5 | B02890286.D | 11/11/2010 | 9:37:00 |
| Cal Standard | S047034-CAL3 | B02890287.D | 11/11/2010 | 10:06:00 |
| Cal Standard | S047034-CAL2 | B02890288.D | 11/11/2010 | 10:33:00 |
| Cal Standard | S047034-CAL1 | B02890289.D | 11/11/2010 | 11:00:00 |
| Cal Standard | S047034-CAL4 | B02890290.D | 11/11/2010 | 11:27:00 |
| Cal Standard | S047034-CAL6 | B02890291.D | 11/11/2010 | 11:54:00 |
| Cal Standard | S047034-CAL7 | B02890292.D | 11/11/2010 | 12:20:00 |
| Cal Standard | S047034-CAL8 | B02890293.D | 11/11/2010 | 12:47:00 |
| Secondary Cal Check | S047034-SCV1 | B02890299.D | 11/11/2010 | 16:39:00 |

# INITIAL CALIBRATION STANDARDS

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047034 | Instrument: | GCMS-B |
| Calibration: | 0111803 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002260 | VOA ICAL 40.0 PPB ELEMENT | S047034-CAL7 | | |
| 0002261 | VOA ICAL 50.0 PPB ELEMENT | S047034-CAL8 | | |
| 0001918 | VOA Tune (GC/MS-B) | S047034-TUN1 | B02890285.D | 11/11/10 08:22 |
| 0002258 | VOA ICAL 10.0 PPB ELEMENT | S047034-CAL5 | B02890286.D | 11/11/10 09:37 |
| 0002256 | VOA ICAL 2.0 PPB ELEMENT | S047034-CAL3 | B02890287.D | 11/11/10 10:06 |
| 0002255 | VOA ICAL 1.0 PPB ELEMENT | S047034-CAL2 | B02890288.D | 11/11/10 10:33 |
| 0002254 | VOA ICAL 0.5 PPB ELEMENT | S047034-CAL1 | B02890289.D | 11/11/10 11:00 |
| 0002257 | VOA ICAL 5.0 PPB ELEMENT | S047034-CAL4 | B02890290.D | 11/11/10 11:27 |
| 0002259 | VOA ICAL 20.0 PPB ELEMENT | S047034-CAL6 | B02890291.D | 11/11/10 11:54 |
| 0002260 | VOA ICAL 40.0 PPB ELEMENT | S047034-CAL7 | B02890292.D | 11/11/10 12:20 |
| 0002261 | VOA ICAL 50.0 PPB ELEMENT | S047034-CAL8 | B02890293.D | 11/11/10 12:47 |
| 0002266 | VOA MIX SECOND SOURCE ELEMENT | S047034-SCV1 | B02890299.D | 11/11/10 16:39 |

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# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9449965 | 2.996188 | | | 15 | |
| 1,1,1-Trichloroethane | 0.5659896 | 4.560913 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.4579836 | 6.241163 | | | 15 | |
| 1,1,2-Trichloroethane | 9.655389E-02 | 5.136963 | | | 15 | |
| 1,1-Dichloroethane | 0.5886556 | 5.340725 | | | 15 | |
| 1,1-Dichloroethene | 0.2945645 | 6.971788 | | | 15 | |
| 1,1-Dichloropropene | 0.4516883 | 6.89683 | | | 15 | |
| 1,2,3-Trichlorobenzene | 0.18017 | 37.97393 | | 0.9992497 | | |
| 1,2,3-Trichloropropane | 0.3987978 | 2.309246 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.2303203 | 37.55557 | | 0.9995881 | | |
| 1,2,4-Trimethylbenzene | 4.709513 | 9.55917 | | | 15 | |
| 1,2-Dibromo-3-chloropropane | 1.701376E-02 | 10.41317 | | | 15 | |
| 1,2-Dibromoethane | 0.4184844 | 2.192751 | | | 15 | |
| 1,2-Dichlorobenzene | 0.7312224 | 14.16362 | | | 15 | |
| 1,2-Dichloroethane | 0.2037538 | 12.07758 | | | 15 | |
| 1,2-Dichloroethene (total) | | | | | 15 | |
| 1,2-Dichloropropane | 0.2268516 | 3.229273 | | | 15 | |
| 1,3,5-Trimethylbenzene | 5.136773 | 4.363395 | | | 15 | |
| 1,3-Dichlorobenzene | 2.429237 | 4.866861 | | | 15 | |
| 1,3-Dichloropropane | 0.9832992 | 3.286307 | | | 15 | |
| 1,4-Dichlorobenzene | 2.361546 | 3.090043 | | | 15 | |
| 2,2-Dichloropropane | 0.3046553 | 5.396329 | | | 15 | |
| 2-Butanone | 2.988406E-02 | 5.864186 | | | 15 | |
| 2-Chloroethylvinyl Ether | 5.040849E-03 | 40.08566 | | 0.9790865 | | |
| 2-Chlorotoluene | 4.262763 | 2.473932 | | | 15 | |
| 2-Hexanone | 0.1678354 | 12.05372 | | | 15 | |
| 4-Chlorotoluene | 4.45775 | 3.06895 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.2832524 | 14.19025 | | | 15 | |
| Acetone | 3.530808E-02 | 60.72747 | | 0.999617 | | |
| Acetonitrile | 9.62937E-03 | 13.39067 | | | 15 | |
| Acrylonitrile | 2.462373E-02 | 8.722332 | | | 15 | |
| Benzene | 1.192023 | 7.986526 | | | 15 | |
| Bromobenzene | 1.15273 | 2.492457 | | | 15 | |
| Bromochloromethane | 0.1177031 | 7.751624 | | | 15 | |
| Bromodichloromethane | 0.2596342 | 3.823348 | | | 15 | |
| Bromoform | 0.290434 | 12.84001 | | | 15 | |
| Bromomethane | 2.574268E-02 | 41.48754 | | 0.9991388 | | |
| Carbon disulfide | 0.9743583 | 7.835565 | | | 15 | |
| Carbon tetrachloride | 0.8946293 | 63.11922 | 0.9984195 | | | |
| Chlorobenzene | 3.33925 | 7.36761 | | | 15 | |
| Chlorodibromomethane | 0.5999869 | 6.15232 | | | 15 | |
| Chloroethane | 0.5391721 | 54.15445 | 0.9722477 | | | |
| Chloroform | 0.5666822 | 5.796015 | | | 15 | |
| Chloromethane | 0.24454 | 16.79022 | | 0.9931096 | | |
| cis-1,2-Dichloroethene | 0.3797202 | 6.232311 | | | 15 | |
| cis-1,3-Dichloropropene | 0.2602865 | 13.76286 | | | 15 | |
| Cyclohexane | 0.7628433 | 5.840917 | | | 15 | |
| Dibromomethane | 7.125834E-02 | 3.732625 | | | 15 | |
| Dichlorodifluoromethane | 0.3660774 | 10.70454 | | | 15 | |
| Ethyl methacrylate | 0.1602354 | 14.89641 | | | 15 | |
| Ethylbenzene | 6.517445 | 5.849966 | | | 15 | |
| Freon 113 | 0.8352537 | 5.798705 | | | 15 | |
| Hexachlorobutadiene | 0.4443176 | 14.47997 | | | 15 | |
| Iodomethane | 1.948717 | 7.835569 | | | 15 | |

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# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 4974.099 | 4.738612 | | | 15 | |
| Isopropylbenzene | 6.236763 | 3.048825 | | | 15 | |
| m,p-Xylenes | 2.521251 | 9.628999 | | | 15 | |
| Methacrylonitrile | 4.057835E-02 | 5.161016 | | | 15 | |
| Methyl Acetate | 2.018245E-02 | 5.767039 | | | 15 | |
| Methyl tert-Butyl Ether | 0.354677 | 7.568475 | | | 15 | |
| Methylcyclohexane | 0.6187942 | 5.720732 | | | 15 | |
| Methylene Chloride | 0.8416174 | 84.28984 | 0.9310435 | | | |
| Methylmethacrylate | 492250.2 | 8.694056 | | | 15 | |
| Naphthalene | 0.1996723 | 32.92434 | | 0.9980256 | | |
| n-Butylbenzene | 4.521909 | 23.51799 | See revised form | | 15 | * |
| n-Propylbenzene | 7.637786 | 4.068436 | | | 15 | |
| o-Xylene | 2.238511 | 2.784486 | | | 15 | |
| p-Isopropyltoluene | 5.899351 | 9.677282 | | | 15 | |
| Propionitrile | 0.0113396 | 12.53996 | | | 15 | |
| sec-Butylbenzene | 7.313888 | 5.611493 | | | 15 | |
| Styrene | 3.406218 | 3.688098 | | | 15 | |
| tert-Butylbenzene | 4.832452 | 5.305811 | | | 15 | |
| Tetrachloroethene | 1.669076 | 4.675657 | | | 15 | |
| Toluene | 0.7629039 | 7.140552 | | | 15 | |
| trans-1,2-Dichloroethene | 0.473488 | 5.608299 | | | 15 | |
| trans-1,3-Dichloropropene | 0.171221 | 22.33747 | 0.9971556 | | | |
| Trichloroethene | 0.3581557 | 37.41458 | See Revised form | | 15 | * |
| Trichlorofluoromethane | 0.6463387 | 10.35389 | | | 15 | |
| Vinyl acetate | 190045.8 | 9.269583 | | | 15 | |
| Vinyl chloride | 0.3381399 | 16.17694 | 0.9962687 | | | |
| Xylene (Total) | | | | | 15 | |

Response Factor Report GCMS-B

Method Path : H:\VOL1\GCMSDATA\B\METHODS\
Method File : 8260_111110.M
Title :
Last Update : Wed Nov 17 19:08:22 2010
Response Via : Initial Calibration

Revised Forms

Calibration Files
0.5 =B02890289.D 1.0 =B02890288.D 2.0 =B02890287.D 5.0 =B02890290.D 10 =B02890286.D 20 =B
50 =B02890293.D

| | | Compound | 0.5 | 1.0 | 2.0 | 5.0 | 10 | 20 | 40 | 50 | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | ~~Pentafluoro~~benzene | ISTD | | | | | | | | | | |
| 2) | T | Dichlorodifluo... | 0.360 | 0.326 | 0.320 | 0.444 | 0.392 | 0.355 | 0.356 | 0.376 | 0.366 | 10.70 | Same |
| 3) | T | Chloromethane | 0.289 | 0.255 | 0.222 | 0.281 | 0.167 | 0.242 | 0.256 | | 0.245 | 16.79 | Same |
| 4) | T | Vinyl chloride | 0.291 | 0.281 | 0.284 | 0.410 | 0.299 | 0.385 | 0.363 | 0.393 | 0.338 | 16.18 | Same |
| 5) | T | Bromomethane | 0.039 | 0.035 | 0.031 | 0.021 | 0.016 | 0.017 | 0.018 | 0.021 | 0.025 | 35.98 | different |
| 6) | T | Chloroethane | 0.824 | 0.511 | 0.375 | 0.323 | 0.275 | | | | 0.461 | 47.87 | different |
| 7) | T | Trichlorofluor... | 0.662 | 0.599 | 0.600 | 0.788 | 0.675 | 0.649 | 0.623 | 0.574 | 0.646 | 10.35 | S |
| 8) | T | Freon 113 | 0.447 | 0.406 | 0.410 | 0.443 | 0.446 | 0.384 | 0.398 | 0.408 | 0.418 | 5.80 | S |
| 9) | T | 1,1-Dichloroethene | 0.327 | 0.295 | 0.298 | 0.310 | 0.305 | 0.265 | 0.273 | 0.282 | 0.295 | 6.97 | S |
| 10) | T | Methylene chlo... | | 2.119 | 1.006 | 0.984 | 0.316 | 0.323 | 0.302 | | 0.842 | 84.29 | Same |
| 11) | T | Methyl Acetate | 0.017 | 0.019 | 0.019 | 0.021 | 0.019 | 0.019 | 0.021 | 0.022 | 0.020 | 8.11 | different |
| 12) | T | Iodomethane | 2.217 | 1.968 | 1.991 | 2.040 | 1.992 | 1.735 | 1.795 | 1.851 | 1.949 | 7.84 | S |
| 13) | T | Trans-1,2-dich... | 0.516 | 0.473 | 0.482 | 0.496 | 0.479 | 0.431 | 0.451 | 0.459 | 0.473 | 5.61 | S |
| 14) | T | 1,1-Dichloroethene | 0.650 | 0.588 | 0.588 | 0.596 | 0.588 | 0.535 | 0.574 | 0.591 | 0.589 | 5.34 | S |
| 15) | T | Acetone | 0.083 | 0.047 | 0.033 | 0.033 | 0.025 | 0.023 | 0.020 | 0.019 | 0.035 | 60.73 | Same |
| 16) | T | MTBE | 0.409 | 0.363 | 0.336 | 0.368 | 0.355 | 0.320 | 0.337 | 0.349 | 0.355 | 7.57 | S |
| 17) | T | Acrylonitrile | 0.024 | 0.022 | 0.022 | 0.028 | 0.023 | 0.024 | 0.026 | 0.027 | 0.025 | 8.72 | Same |
| 18) | T | Acetonitrile | | | 0.010 | 0.012 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 13.39 | Same |
| 19) | T | Carbon disulfide | 1.109 | 0.984 | 0.995 | 1.020 | 0.996 | 0.868 | 0.897 | 0.926 | 0.974 | 7.84 | S |
| 20) | T | Vinyl Acetate | 0.147 | 0.141 | 0.137 | 0.153 | 0.136 | 0.146 | 0.161 | 0.168 | 0.149 | 7.68 | diff |
| 21) | T | Propionitrile | | | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.013 | 0.011 | 12.54 | Same |
| 22) | | 2,2-Dichloropr... | 0.305 | 0.294 | 0.279 | 0.318 | 0.321 | 0.288 | 0.306 | 0.325 | 0.305 | 5.40 | S |
| 23) | T | cis-1,2-Dichlo... | 0.417 | 0.382 | 0.385 | 0.393 | 0.397 | 0.347 | 0.355 | 0.363 | 0.380 | 6.23 | S |
| 24) | T | Bromochloromet... | 0.139 | 0.117 | 0.113 | 0.121 | 0.113 | 0.109 | 0.115 | 0.115 | 0.118 | 7.75 | S |
| 25) | T | Chloroform | 0.635 | 0.567 | 0.558 | 0.561 | 0.565 | 0.516 | 0.556 | 0.574 | 0.567 | 5.80 | S |
| 26) | T | 1,1,1-Trichlor... | 0.572 | 0.526 | 0.545 | 0.585 | 0.584 | 0.539 | 0.580 | 0.597 | 0.566 | 4.56 | S |
| 27) | T | Cychlohexane | 0.800 | 0.723 | 0.740 | 0.816 | 0.829 | 0.723 | 0.730 | 0.741 | 0.763 | 5.84 | S |
| ~~28)~~ | ~~S~~ | ~~Dibromofluorom...~~ | ~~0.296~~ | ~~0.306~~ | ~~0.296~~ | ~~0.313~~ | ~~0.315~~ | ~~0.319~~ | ~~0.322~~ | ~~0.333~~ | ~~0.312~~ | ~~4.11~~ | |
| 29) | T | Carbon tetrach... | 2.138 | 1.278 | 0.880 | 0.687 | 0.581 | 0.514 | 0.533 | 0.546 | 0.895 | 63.12 | Same |
| 30) | T | Methyl Methacr... | 0.405 | 0.368 | 0.374 | 0.417 | 0.411 | 0.363 | 0.368 | 0.375 | 0.385 | 5.73 | diff |
| 31) | T | Methacrylonitrile | 0.037 | 0.038 | 0.037 | 0.042 | 0.042 | 0.040 | 0.042 | 0.043 | 0.040 | 5.96 | different |
| 32) | T | Ethyl Methacry... | 0.137 | 0.130 | 0.138 | 0.162 | 0.163 | 0.171 | 0.184 | 0.197 | 0.160 | 14.90 | S |
| ~~33)~~ | ~~S~~ | ~~1,2-Dichloroet...~~ | ~~0.216~~ | ~~0.221~~ | ~~0.211~~ | ~~0.229~~ | ~~0.220~~ | ~~0.221~~ | ~~0.225~~ | ~~0.237~~ | ~~0.222~~ | ~~3.64~~ | |
| 34) | T | Isobutyl Alcohol | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 5.68 | diff |
| 35) | I | 1,4-Difluorobenzene | ISTD | | | | | | | | | | |
| 36) | T | 2-Butanone | 0.034 | 0.030 | 0.028 | 0.031 | 0.029 | 0.029 | 0.028 | 0.030 | 0.030 | 5.86 | Same |
| ~~37)~~ | ~~T~~ | ~~2-Chloroethylv...~~ | | | | ~~0.002~~ | ~~0.006~~ | ~~0.004~~ | ~~0.006~~ | ~~0.007~~ | ~~0.005~~ | ~~40.89~~ | |
| 38) | T | 1.1-Dichloropr... | 0.509 | 0.457 | 0.461 | 0.473 | 0.450 | 0.410 | 0.426 | 0.429 | 0.452 | 6.90 | S |
| 39) | T | Benzene | 1.354 | 1.229 | 1.237 | 1.249 | 1.192 | 1.086 | 1.097 | 1.092 | 1.192 | 7.99 | S |
| 40) | T | 1,2-Dchloroethane | 0.257 | 0.218 | 0.204 | 0.203 | 0.187 | 0.181 | 0.188 | 0.192 | 0.204 | 12.08 | S |
| 41) | T | Trichloroethene | | 0.315 | 0.322 | 0.320 | 0.317 | 0.292 | 0.303 | 0.307 | 0.311 | 3.52 | diff |
| 42) | T | Methylcyclohexane | 0.609 | 0.567 | 0.595 | 0.673 | 0.667 | 0.609 | 0.615 | 0.617 | 0.619 | 5.72 | S |
| 43) | T | 1,2-Dchloropro... | | | 0.230 | 0.237 | 0.230 | 0.216 | 0.223 | 0.226 | 0.227 | 3.23 | S |
| 44) | T | Dibromomethane | 0.073 | 0.067 | 0.068 | 0.073 | 0.072 | 0.071 | 0.073 | 0.074 | 0.071 | 3.73 | S |
| 45) | T | Bromodichlorom... | 0.264 | 0.245 | 0.250 | 0.261 | 0.261 | 0.252 | 0.268 | 0.275 | 0.260 | 3.82 | S |
| 46) | T | cis-1,3-Dichlo... | 0.215 | 0.216 | 0.233 | 0.261 | 0.280 | 0.270 | 0.297 | 0.309 | 0.260 | 13.76 | S |
| ~~47)~~ | ~~S~~ | ~~Toluene-d8~~ | ~~1.001~~ | ~~0.983~~ | ~~1.001~~ | ~~1.014~~ | ~~1.035~~ | ~~1.052~~ | ~~1.056~~ | ~~1.064~~ | ~~1.026~~ | ~~2.95~~ | |
| 48) | T | Toluene | 0.859 | 0.779 | 0.798 | 0.787 | 0.761 | 0.702 | 0.708 | 0.710 | 0.763 | 7.14 | S |
| 49) | T | trans-1,3-Dich... | 0.119 | 0.129 | 0.141 | 0.172 | 0.184 | 0.189 | 0.212 | 0.223 | 0.171 | 22.34 | Same |
| 50) | T | 1,1,2-Trichlor... | 0.107 | 0.093 | 0.094 | 0.100 | 0.097 | 0.095 | 0.093 | 0.093 | 0.097 | 5.14 | S |
| 51) | I | Chlorobenzene-d5 | ISTD | | | | | | | | | | |
| 52) | T | 4-Methyl-2-Pen... | | 0.370 | 0.288 | 0.274 | 0.251 | 0.254 | 0.270 | 0.277 | 0.283 | 14.19 | S |
| 53) | T | 2-Hexanone | 0.138 | 0.146 | 0.159 | 0.173 | 0.164 | 0.176 | 0.191 | 0.195 | 0.168 | 12.05 | S |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54) | T | Tetrachloroethene | 1.783 | 1.681 | 1.722 | 1.726 | 1.690 | 1.561 | 1.608 | 1.582 | 1.669 | 4.68 S |
| 55) | T | 1,3-Dichloropr... | 1.047 | 0.997 | 0.984 | 0.983 | 0.961 | 0.933 | 0.978 | 0.984 | 0.983 | 3.29 S |
| 56) | T | Dibromochlorom... | 0.565 | 0.565 | 0.563 | 0.603 | 0.600 | 0.597 | 0.648 | 0.658 | 0.600 | 6.15 S |
| 57) | T | 1,2-Dibromomet... | 0.417 | 0.410 | 0.410 | 0.419 | 0.425 | 0.408 | 0.431 | 0.429 | 0.418 | 2.19 S |
| 58) | T | Chlorobenzene | 3.780 | 3.515 | 3.503 | 3.342 | 3.235 | 3.045 | 3.161 | 3.133 | 3.339 | 7.37 S |
| 59) | T | 1,1,1,2-Tetrac... | 0.966 | 0.938 | 0.960 | 0.991 | 0.954 | 0.914 | 0.930 | 0.907 | 0.945 | 3.00 S |
| 60) | T | Ethylbenzene | 6.950 | 6.686 | 6.853 | 6.807 | 6.612 | 6.108 | 6.144 | 5.979 | 6.517 | 5.85 S |
| 61) | T | m,p-xylene | 2.746 | 2.656 | 2.739 | 2.726 | 2.571 | 2.350 | 2.239 | 2.143 | 2.521 | 9.63 S |
| 62) | T | o-xylene | 2.258 | 2.221 | 2.282 | 2.331 | 2.286 | 2.144 | 2.214 | 2.173 | 2.239 | 2.78 S |
| 63) | T | Styrene | 3.226 | 3.282 | 3.434 | 3.625 | 3.439 | 3.328 | 3.482 | 3.434 | 3.406 | 3.69 S |
| 64) | T | Bromoform | 0.243 | 0.249 | 0.263 | 0.293 | 0.292 | 0.307 | 0.336 | 0.341 | 0.290 | 12.84 S |
| 65) | T | Isopropylbenzene | 6.000 | 6.015 | 6.238 | 6.468 | 6.504 | 6.133 | 6.339 | 6.197 | 6.237 | 3.05 S |
| 66) | S | 4-Bromofluorob... | 1.391 | 1.380 | 1.409 | 1.478 | 1.489 | 1.554 | 1.570 | 1.575 | 1.481 | 5.45 |
| 67) | T | Bromobenzene | 1.198 | 1.149 | 1.135 | 1.162 | 1.130 | 1.106 | 1.172 | 1.170 | 1.153 | 2.49 S |
| 68) | T | 1,1,2,2-Tetrac... | 0.499 | 0.468 | 0.479 | 0.480 | 0.447 | 0.447 | 0.430 | 0.413 | 0.458 | 6.24 S |
| 69) | T | 1,2,3-Trichlor... | 0.409 | 0.394 | 0.394 | 0.411 | 0.384 | 0.393 | 0.404 | 0.402 | 0.399 | 2.31 S |
| 70) | T | N-propylbenzene | 7.250 | 7.235 | 7.599 | 8.023 | 8.079 | 7.616 | 7.743 | 7.557 | 7.638 | 4.07 S |
| 71) | T | 2-Chlorotoluene | 4.451 | 4.274 | 4.235 | 4.345 | 4.287 | 4.102 | 4.231 | 4.177 | 4.263 | 2.47 S |
| 72) | T | 4-Chlorotoluene | 4.519 | 4.395 | 4.531 | 4.690 | 4.542 | 4.344 | 4.378 | 4.264 | 4.458 | 3.07 S |
| 73) | T | 1,3,5-Trimethy... | | 4.903 | 5.157 | 5.490 | 5.369 | 5.075 | 5.073 | 4.891 | 5.137 | 4.36 S |
| 74) | T | Tert-butylbenzene | 4.443 | 4.486 | 4.733 | 5.017 | 5.119 | 4.854 | 5.045 | 4.962 | 4.832 | 5.31 S |
| 75) | T | 1,2,4-Trimethy... | 3.905 | 4.219 | 4.510 | 4.981 | 4.990 | 4.863 | 5.144 | 5.065 | 4.710 | 9.56 S |
| 76) | T | Sec-butylbenzene | | 6.608 | 6.963 | 7.670 | 7.761 | 7.303 | 7.562 | 7.331 | 7.314 | 5.61 S |
| 77) | T | 1,3-Dichlorobe... | 2.294 | 2.296 | 2.287 | 2.498 | 2.508 | 2.444 | 2.560 | 2.546 | 2.429 | 4.87 S |
| 78) | T | 4-Isopropyltol... | | 4.853 | 5.347 | 6.261 | 6.319 | 6.087 | 6.303 | 6.125 | 5.899 | 9.68 S |
| 79) | T | 1,4-Dichlorobe... | 2.294 | 2.287 | 2.300 | 2.481 | 2.367 | 2.320 | 2.429 | 2.414 | 2.362 | 3.09 S |
| 80) | I | 1,4-Dichlorobenzen... | ---------- | ISTD | ---------- | | | | | | | |
| 81) | T | 1,2-Dichlorobe... | 0.832 | 0.860 | 0.802 | 0.734 | 0.719 | 0.617 | 0.558 | 0.728 | 0.731 | 14.16 S |
| 82) | T | n-Butylbenzene | | 1.334 | 1.623 | 1.881 | 1.975 | 1.718 | 1.574 | 2.074 | 1.740 | 14.70 diff |
| 83) | T | 1,2-Dibromo-3-... | | | 0.014 | 0.017 | 0.018 | 0.019 | 0.017 | | 0.017 | 10.41 Same |
| 84) | T | 1,2,4-Trichlor... | 0.144 | 0.159 | 0.146 | 0.224 | 0.270 | 0.304 | 0.365 | | 0.230 | 37.56 Same |
| 85) | T | Hexachlorobuta... | 0.323 | 0.433 | 0.446 | 0.441 | 0.482 | 0.460 | 0.418 | 0.552 | 0.444 | 14.48 S |
| 86) | T | Naphthalene | 0.161 | 0.170 | 0.156 | 0.149 | 0.188 | 0.244 | 0.330 | | 0.200 | 32.92 Same |
| 87) | T | 1,2,3-Trichlor... | 0.103 | 0.115 | 0.111 | 0.143 | 0.202 | 0.230 | 0.280 | | 0.169 | 40.73 diff. |

(#) = Out of Range

8260_111110.M Fri Feb 04 13:40:47 2011

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9661999 | 0.938158 | 0.9598089 | 0.9913526 | 0.9540768 | 0.9140259 |
| 1,1,1-Trichloroethane | 0.5716372 | 0.5260339 | 0.5448277 | 0.5851371 | 0.5837521 | 0.5389697 |
| 1,1,2,2-Tetrachloroethane | 0.4991332 | 0.4678964 | 0.4789108 | 0.4800518 | 0.4474796 | 0.4470107 |
| 1,1,2-Trichloroethane | 0.1071959 | 9.324399E-02 | 9.380141E-02 | 0.1001158 | 9.701462E-02 | 9.500757E-02 |
| 1,1-Dichloroethane | 0.649798 | 0.5882044 | 0.5879825 | 0.5956452 | 0.5884075 | 0.534779 |
| 1,1-Dichloroethene | 0.3273262 | 0.2950931 | 0.2983486 | 0.3104462 | 0.3054459 | 0.2651381 |
| 1,1-Dichloropropene | 0.5093143 | 0.4565944 | 0.4605008 | 0.4725697 | 0.4498223 | 0.4098715 |
| 1,2,3-Trichlorobenzene | | 0.114735 | 0.1106954 | 0.1432215 | 0.2024936 | 0.2299118 |
| 1,2,3-Trichloropropane | 0.4090994 | 0.3943578 | 0.3939365 | 0.4106789 | 0.3835681 | 0.3928662 |
| 1,2,4-Trichlorobenzene | 0.14378 | 0.1591681 | 0.1457298 | 0.2244915 | 0.2702248 | 0.3037425 |
| 1,2,4-Trimethylbenzene | 3.904644 | 4.219085 | 4.510162 | 4.981189 | 4.990102 | 4.862537 |
| 1,2-Dibromo-3-chloropropane | | | 1.419877E-02 | 1.714451E-02 | 1.845253E-02 | 1.857679E-02 |
| 1,2-Dibromoethane | 0.4173095 | 0.4097333 | 0.4095069 | 0.4186066 | 0.4252138 | 0.4075379 |
| 1,2-Dichlorobenzene | 0.8323534 | 0.8597073 | 0.8020552 | 0.7343178 | 0.7189839 | 0.6165872 |
| 1,2-Dichloroethane | 0.2572232 | 0.2177472 | 0.2036481 | 0.2032915 | 0.1866651 | 0.1808935 |
| 1,2-Dichloroethene (total) | | | | | | |
| 1,2-Dichloropropane | | ~~0.1241845~~ | 0.2298079 | 0.2371826 | 0.2298952 | 0.2156876 |
| 1,3,5-Trimethylbenzene | ~~4.787505~~ | 4.903282 | 5.156683 | 5.489605 | 5.36881 | 5.075123 |
| 1,3-Dichlorobenzene | 2.294399 | 2.296009 | 2.287492 | 2.498121 | 2.507999 | 2.444228 |
| 1,3-Dichloropropane | 1.046708 | 0.9969618 | 0.9844731 | 0.98262 | 0.960785 | 0.9326723 |
| 1,4-Dichlorobenzene | 2.294373 | 2.286968 | 2.299539 | 2.481075 | 2.367444 | 2.32001 |
| 2,2-Dichloropropane | 0.3053055 | 0.2943166 | 0.2791844 | 0.3179525 | 0.320566 | 0.2881492 |
| 2-Butanone | 3.379595E-02 | 2.968932E-02 | 2.846133E-02 | 3.071546E-02 | 2.943599E-02 | 2.878061E-02 |
| 2-Chloroethylvinyl Ether | | | | 2.202396E-03 | 5.937742E-03 | 3.667766E-03 |
| 2-Chlorotoluene | 4.450536 | 4.274091 | 4.234549 | 4.345189 | 4.28737 | 4.101524 |
| 2-Hexanone | 0.1375177 | 0.1464787 | 0.1594265 | 0.1729784 | 0.1635128 | 0.1761758 |
| 4-Chlorotoluene | 4.518525 | 4.394811 | 4.531095 | 4.689819 | 4.542225 | 4.343801 |
| 4-Methyl-2-pentanone | ~~0.4791755~~ | 0.3695585 | 0.2882822 | 0.2736929 | 0.2507166 | 0.2542846 |
| Acetone | 8.309848E-02 | 0.047196 | 3.338935E-02 | 3.268382E-02 | 2.485234E-02 | 2.262677E-02 |
| Acetonitrile | ~~2.018391E-02~~ | ~~6.639723E-03~~ | 1.043236E-02 | 1.191338E-02 | 8.887109E-03 | 8.677949E-03 |
| Acrylonitrile | 2.429409E-02 | 2.242279E-02 | 2.211917E-02 | 2.834626E-02 | 2.332459E-02 | 2.419232E-02 |

CENTAURI LABS™

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Benzene | 1.354317 | 1.228835 | 1.237473 | 1.249095 | 1.192221 | 1.085697 |
| Bromobenzene | 1.197837 | 1.149164 | 1.134679 | 1.162135 | 1.130194 | 1.106302 |
| Bromochloromethane | 0.1386507 | 0.1172922 | 0.1127188 | 0.1208019 | 0.1129928 | 0.1092236 |
| Bromodichloromethane | 0.2639263 | 0.24504 | 0.2503774 | 0.2612257 | 0.2608899 | 0.2523614 |
| Bromoform | 0.2427173 | 0.248688 | 0.2626604 | 0.2931309 | 0.2922784 | 0.3065906 |
| Bromomethane | 4.607583E-02 | 3.528978E-02 | 3.081432E-02 | 0.0214595 | 0.0162045 | 1.680047E-02 |
| Carbon disulfide | 1.108554 | 0.984223 | 0.9953507 | 1.020147 | 0.9959798 | 0.8676915 |
| Carbon tetrachloride | 2.137978 | 1.278169 | 0.8802421 | 0.686505 | 0.5814422 | 0.5136549 |
| Chlorobenzene | 3.779919 | 3.515188 | 3.503233 | 3.341518 | 3.235002 | 3.04529 |
| Chlorodibromomethane | 0.564885 | 0.5653688 | 0.5630434 | 0.6027943 | 0.6002471 | 0.597042 |
| Chloroethane | 0.8235289 | 0.8877947 | 0.3745473 | 0.3353815 | 0.2746081 | ~~8.904902E-02~~ |
| Chloroform | 0.6353806 | 0.5672441 | 0.5581153 | 0.5607959 | 0.565272 | 0.5160746 |
| Chloromethane | 0.2889733 | 0.2551 | 0.2219589 | 0.2812103 | 0.1667933 | 0.2420746 |
| cis-1,2-Dichloroethene | 0.4174071 | 0.3815376 | 0.3846656 | 0.3931812 | 0.3966853 | 0.3466856 |
| cis-1,3-Dichloropropene | 0.2150437 | 0.2164152 | 0.2326314 | 0.2614359 | 0.2798653 | 0.2704006 |
| Cyclohexane | 0.7999126 | 0.7227084 | 0.7397237 | 0.816483 | 0.8291821 | 0.7232401 |
| Dibromomethane | 7.250767E-02 | 6.702767E-02 | 6.770604E-02 | 7.336583E-02 | 7.176191E-02 | 7.054501E-02 |
| Dichlorodifluoromethane | 0.3603113 | 0.3259786 | 0.3203894 | 0.4438325 | 0.3917254 | 0.3548379 |
| Ethyl methacrylate | 0.1371765 | 0.1299339 | 0.1382099 | 0.1616313 | 0.1629551 | 0.1707297 |
| Ethylbenzene | 6.949865 | 6.685956 | 6.852572 | 6.80743 | 6.612465 | 6.107955 |
| Freon 113 | 0.8939477 | 0.8128159 | 0.8197047 | 0.8858423 | 0.891281 | 0.767886 |
| Hexachlorobutadiene | 0.3226116 | 0.4330054 | 0.4459612 | 0.441418 | 0.4818242 | 0.4598152 |
| Iodomethane | 2.217108 | 1.968446 | 1.990701 | 2.040294 | 1.99196 | 1.735383 |
| Isobutyl alcohol | | 4611.55 | 4878.875 | 5197.4 | 5286.265 | 4810.8 |
| Isopropylbenzene | 6.000104 | 6.014735 | 6.238216 | 6.468397 | 6.503671 | 6.132555 |
| m,p-Xylenes | 2.745616 | 2.656072 | 2.739383 | 2.726084 | 2.570926 | 2.349657 |
| Methacrylonitrile | | 3.836895E-02 | 3.716805E-02 | 4.166184E-02 | 4.209348E-02 | 4.032259E-02 |
| Methyl Acetate | | 0.0192473 | 1.931544E-02 | 2.090567E-02 | 1.924052E-02 | 1.938094E-02 |
| Methyl tert-Butyl Ether | 0.4090424 | 0.3625357 | 0.3362333 | 0.3683095 | 0.3545392 | 0.3204985 |
| Methylcyclohexane | 0.6087532 | 0.5665355 | 0.5948937 | 0.6726231 | 0.6672519 | 0.6085483 |
| Methylene Chloride | ~~4.398411~~ | 2.119454 | 1.005618 | 0.9835308 | 0.3160566 | 0.3232213 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Methylmethacrylate | 466518 | 439231 | 495394 | 544349.2 | 566605.9 | 462965.6 |
| Naphthalene | 0.161446 | 0.1699645 | 0.1559003 | 0.1486942 | 0.1879901 | 0.2436457 |
| n-Butylbenzene | ~~1.904706~~ | 2.623383 | 3.422787 | 4.790123 | 5.131009 | 5.093937 |
| n-Propylbenzene | 7.249518 | 7.23528 | 7.598912 | 8.023235 | 8.079361 | 7.615503 |
| o-Xylene | 2.257541 | 2.22104 | 2.281944 | 2.330894 | 2.286187 | 2.144324 |
| p-Isopropyltoluene | ~~4.354749~~ | 4.853078 | 5.347195 | 6.260868 | 6.318688 | 6.087148 |
| Propionitrile | | ~~7.041204E-03~~ | 8.733931E-03 | 1.101073E-02 | 1.147258E-02 | 1.173797E-02 |
| sec-Butylbenzene | ~~6.234999~~ | 6.607846 | 6.962683 | 7.670025 | 7.761215 | 7.302712 |
| Styrene | 3.226224 | 3.28174 | 3.433672 | 3.6254 | 3.439261 | 3.327536 |
| tert-Butylbenzene | 4.443203 | 4.486326 | 4.732752 | 5.017155 | 5.119426 | 4.853839 |
| Tetrachloroethene | 1.783438 | 1.68053 | 1.72214 | 1.725551 | 1.689709 | 1.560537 |
| Toluene | 0.8586267 | 0.7792881 | 0.7980623 | 0.786509 | 0.760969 | 0.7020673 |
| trans-1,2-Dichloroethene | 0.5159202 | 0.4727767 | 0.4820972 | 0.4963073 | 0.479277 | 0.430957 |
| trans-1,3-Dichloropropene | 0.1191728 | 0.1291264 | 0.1409263 | 0.1717877 | 0.1844577 | 0.1893872 |
| Trichloroethene | 0.6888442 | 0.3154824 | 0.3224835 | 0.3195452 | 0.3172878 | 0.2915877 |
| Trichlorofluoromethane | 0.6618447 | 0.5994312 | 0.5999676 | 0.788383 | 0.674507 | 0.6493505 |
| Vinyl acetate | 169074 | 168848 | 182227.8 | 199568.3 | 187861.8 | 185777.8 |
| Vinyl chloride | 0.2913112 | 0.2808113 | 0.283743 | 0.4098663 | 0.2985892 | 0.3845848 |
| Xylene (Total) | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9297198 | 0.9066298 | | | | |
| 1,1,1-Trichloroethane | 0.580488 | 0.5970709 | | | | |
| 1,1,2,2-Tetrachloroethane | 0.4299956 | 0.4133906 | | | | |
| 1,1,2-Trichloroethane | 9.268048E-02 | 9.337135E-02 | | | | |
| 1,1-Dichloroethane | 0.5736988 | 0.5907297 | | | | |
| 1,1-Dichloroethene | 0.2731361 | 0.2815821 | | | | |
| 1,1-Dichloropropene | 0.4259392 | 0.4288945 | | | | |
| 1,2,3-Trichlorobenzene | 0.2799629 | ~~0.3925256~~ | | | | |
| 1,2,3-Trichloropropane | 0.403843 | 0.4020327 | | | | |
| 1,2,4-Trichlorobenzene | 0.3651051 | ~~0.5110207~~ | | | | |
| 1,2,4-Trimethylbenzene | 5.143735 | 5.06465 | | | | |
| 1,2-Dibromo-3-chloropropane | 0.0166962 | ~~2.300326E-02~~ | | | | |
| 1,2-Dibromoethane | 0.4307833 | 0.4291841 | | | | |
| 1,2-Dichlorobenzene | 0.5579643 | 0.7278097 | | | | |
| 1,2-Dichloroethane | 0.1884956 | 0.1920658 | | | | |
| 1,2-Dichloroethene (total) | | | | | | |
| 1,2-Dichloropropane | 0.2225932 | 0.2259433 | | | | |
| 1,3,5-Trimethylbenzene | 5.072618 | 4.891289 | | | | |
| 1,3-Dichlorobenzene | 2.559945 | 2.545702 | | | | |
| 1,3-Dichloropropane | 0.977883 | 0.9842906 | | | | |
| 1,4-Dichlorobenzene | 2.429367 | 2.413593 | | | | |
| 2,2-Dichloropropane | 0.3063628 | 0.3254052 | | | | |
| 2-Butanone | 2.847084E-02 | 0.029723 | | | | |
| 2-Chloroethylvinyl Ether | 6.483452E-03 | 6.912889E-03 | | | | |
| 2-Chlorotoluene | 4.231436 | 4.177407 | | | | |
| 2-Hexanone | 0.1913384 | 0.1952547 | | | | |
| 4-Chlorotoluene | 4.377985 | 4.26374 | | | | |
| 4-Methyl-2-pentanone | 0.2695934 | 0.2766388 | | | | |
| Acetone | 1.971482E-02 | 1.890304E-02 | | | | |
| Acetonitrile | 8.821065E-03 | 9.044358E-03 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Acrylonitrile | 2.555238E-02 | 2.673821E-02 | | | | |
| Benzene | 1.096578 | 1.09197 | | | | |
| Bromobenzene | 1.171928 | 1.169604 | | | | |
| Bromochloromethane | 0.1145832 | 0.1153619 | | | | |
| Bromodichloromethane | 0.2678817 | 0.2753713 | | | | |
| Bromoform | 0.3362345 | 0.341172 | | | | |
| Bromomethane | 1.813708E-02 | 2.115997E-02 | | | | |
| Carbon disulfide | 0.8973035 | 0.9256172 | | | | |
| Carbon tetrachloride | 0.5325763 | 0.5464664 | | | | |
| Chlorobenzene | 3.161003 | 3.132851 | | | | |
| Chlorodibromomethane | 0.6482285 | 0.6582862 | | | | |
| Chloroethane | ~~4.028737E-02~~ | ~~4.203815E-02~~ | | | | |
| Chloroform | 0.5564346 | 0.5741406 | | | | |
| Chloromethane | 0.2556699 | ~~0.3016193~~ | | | | |
| cis-1,2-Dichloroethene | 0.3545202 | 0.3630787 | | | | |
| cis-1,3-Dichloropropene | 0.2974244 | 0.3090755 | | | | |
| Cyclohexane | 0.7301316 | 0.7413651 | | | | |
| Dibromomethane | 7.271194E-02 | 7.444064E-02 | | | | |
| Dichlorodifluoromethane | 0.3560107 | 0.3755334 | | | | |
| Ethyl methacrylate | 0.1840324 | 0.1972141 | | | | |
| Ethylbenzene | 6.144073 | 5.979243 | | | | |
| Freon 113 | 0.7953603 | 0.8151915 | | | | |
| Hexachlorobutadiene | 0.4175951 | 0.55231 | | | | |
| Iodomethane | 1.794607 | 1.851234 | | | | |
| Isobutyl alcohol | 4929.766 | 5104.037 | | | | |
| Isopropylbenzene | 6.339132 | 6.19729 | | | | |
| m,p-Xylenes | 2.239335 | 2.142936 | | | | |
| Methacrylonitrile | 4.154591E-02 | 4.288763E-02 | | | | |
| Methyl Acetate | 2.111068E-02 | 2.207662E-02 | | | | |
| Methyl tert-Butyl Ether | 0.337393 | 0.3488646 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Methylcyclohexane | 0.6151213 | 0.6166269 | | | | |
| Methylene Chloride | 0.3018239 | ~~0.2360642~~ | | | | |
| Methylmethacrylate | 482983.8 | 479954.4 | | | | |
| Naphthalene | 0.3300656 | ~~0.4809107~~ | | | | |
| n-Butylbenzene | 5.343307 | 5.248814 | | | | |
| n-Propylbenzene | 7.743135 | 7.557342 | | | | |
| o-Xylene | 2.213517 | 2.172644 | | | | |
| p-Isopropyltoluene | 6.303304 | 6.125174 | | | | |
| Propionitrile | 1.226879E-02 | 1.281361E-02 | | | | |
| sec-Butylbenzene | 7.561813 | 7.330924 | | | | |
| Styrene | 3.481905 | 3.434006 | | | | |
| tert-Butylbenzene | 5.04541 | 4.961506 | | | | |
| Tetrachloroethene | 1.60839 | 1.582312 | | | | |
| Toluene | 0.7081545 | 0.7095543 | | | | |
| trans-1,2-Dichloroethene | 0.451097 | 0.4594715 | | | | |
| trans-1,3-Dichloropropene | 0.2119729 | 0.2229369 | | | | |
| Trichloroethene | 0.3032111 | 0.3068037 | | | | |
| Trichlorofluoromethane | 0.6233459 | 0.5738795 | | | | |
| Vinyl acetate | 211525 | 215483.4 | | | | |
| Vinyl chloride | 0.3631753 | 0.3930379 | | | | |
| Xylene (Total) | | | | | | |

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| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047036-CCV1 | B02890331.D | 11/12/2010 | 20:02:00 |
| Blank | B047059-BLK1 | B02890332.D | 11/12/2010 | 20:29:00 |
| LCS Dup | B047059-BSD1 | B02890334.D | 11/12/2010 | 21:22:00 |
| GKHMS-SO-001-1010 | 1011013-01 | B02890337.D | 11/12/2010 | 22:42:00 |
| GKHMS-SO-002-1010 | 1011013-02 | B02890338.D | 11/12/2010 | 23:09:00 |
| GKHMS-SO-003-1010 | 1011013-03 | B02890339.D | 11/12/2010 | 23:36:00 |
| GKHMS-SO-005-1010 | 1011013-04 | B02890340.D | 11/13/2010 | 0:02:00 |
| GKHMS-SO-007-1010 | 1011013-05 | B02890341.D | 11/13/2010 | 0:29:00 |
| GKHMS-SO-011-1010 | 1011013-06 | B02890342.D | 11/13/2010 | 0:56:00 |
| GKHMS-SO-012-1010 | 1011013-07 | B02890343.D | 11/13/2010 | 1:22:00 |
| GKHMS-SO-014-1010 | 1011013-08 | B02890344.D | 11/13/2010 | 1:49:00 |
| GKHMS-SO-017-1010 | 1011013-09 | B02890345.D | 11/13/2010 | 2:15:00 |
| GKHMS-SO-019-1010 | 1011013-10 | B02890346.D | 11/13/2010 | 2:42:00 |
| GKHMS-SO-021-1010 | 1011013-11 | B02890347.D | 11/13/2010 | 3:09:00 |
| GKHMS-SO-022-1010 | 1011013-12 | B02890348.D | 11/13/2010 | 3:35:00 |
| GKHMS-SO-025-1010 | 1011013-14 | B02890350.D | 11/13/2010 | 4:29:00 |
| GKHMS-SO-028-1010 | 1011013-15 | B02890351.D | 11/13/2010 | 4:55:00 |
| GKHMS-SO-030-1010 | 1011013-16 | B02890352.D | 11/13/2010 | 5:22:00 |
| GKHMS-SO-031-1010 | 1011013-17 | B02890353.D | 11/13/2010 | 5:48:00 |
| GKHMS-SO-032-1010 | 1011013-18 | B02890354.D | 11/13/2010 | 6:15:00 |
| LCS | B047059-BS1 | B02890356.D | 11/13/2010 | 7:08:00 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890330.D | Injection Date: | 11/12/10 |
| Instrument ID: | GCMS-B | Injection Time: | 19:36 |
| Sequence: | S047036 | Lab Sample ID: | S047036-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.7 | PASS |
| 75 | 30 - 60% of 95 | 46.8 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.61 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 85.5 | PASS |
| 175 | 5 - 9% of 174 | 7.11 | PASS |
| 176 | 95 - 101% of 174 | 96.8 | PASS |
| 177 | 5 - 9% of 176 | 6.61 | PASS |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890331.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047036 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047036-CCV1 | Injection Time: | 20:02 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 10.3 | 0.9449965 | 0.9699687 | | 2.6 | 20 |
| 1,1,1-Trichloroethane | A | 10.0 | 10.7 | 0.5659896 | 0.603495 | | 6.6 | 20 |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 11.2 | 0.4579836 | 0.5139936 | | 12.2 | 20 |
| 1,1,2-Trichloroethane OK | A | 10.0 | 10.1 | 9.655389E-02 | 9.758376E-02 OK | | 1.1 | 20 |
| 1,1-Dichloroethane | A | 10.0 | 10.0 | 0.5886556 | 0.5908239 | | 0.4 | 20 |
| 1,1-Dichloroethene | A | 10.0 | 10.4 | 0.2945645 | 0.3052948 | | 3.6 | 20 |
| 1,1-Dichloropropene | A | 10.0 | 9.94 | 0.4516883 | 0.4490843 | | -0.6 | 20 |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 8.43 | 0.18017 | 0.1616839 | | -15.7 | 20 |
| 1,2,3-Trichloropropane | A | 10.0 | 11.0 | 0.3987978 | 0.4388374 | | 10.0 | 20 |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 8.50 | 0.2303203 | 0.2211858 | | -15.0 | 20 |
| 1,2,4-Trimethylbenzene | A | 10.0 | 11.0 | 4.709513 | 5.160599 | | 9.6 | 20 |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 9.09 | 1.701376E-02 | 1.545709E-02 | | -9.1 | 20 |
| 1,2-Dibromoethane | A | 10.0 | 9.80 | 0.4184844 | 0.4099832 | | -2.0 | 20 |
| 1,2-Dichlorobenzene | A | 10.0 | 8.90 | 0.7312224 | 0.6509546 | | -11.0 | 20 |
| 1,2-Dichloroethane | A | 10.0 | 10.0 | 0.2037538 | 0.2040807 | | 0.2 | 20 |
| 1,2-Dichloropropane | A | 10.0 | 10.1 | 0.2268516 | 0.2296139 | | 1.2 | 20 |
| 1,3,5-Trimethylbenzene | A | 10.0 | 10.8 | 5.136773 | 5.555372 | | 8.1 | 20 |
| 1,3-Dichlorobenzene | A | 10.0 | 10.7 | 2.429237 | 2.607372 | | 7.3 | 20 |
| 1,3-Dichloropropane | A | 10.0 | 9.76 | 0.9832992 | 0.959605 | | -2.4 | 20 |
| 1,4-Dichlorobenzene | A | 10.0 | 10.7 | 2.361546 | 2.528679 | | 7.1 | 20 |
| 2,2-Dichloropropane | A | 10.0 | 10.1 | 0.3046553 | 0.3090006 | | 1.4 | 20 |
| 2-Butanone | A | 20.0 | 19.1 | 2.988406E-02 | 2.853357E-02 | | -4.5 | 20 |
| 2-Chlorotoluene | A | 10.0 | 10.5 | 4.262763 | 4.472068 | | 4.9 | 20 |
| 2-Hexanone | A | 20.0 | 20.4 | 0.1678354 | 0.1710855 | | 1.9 | 20 |
| 4-Chlorotoluene | A | 10.0 | 10.8 | 4.45775 | 4.805091 | | 7.8 | 20 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890331.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047036 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047036-CCV1 | Injection Time: | 20:02 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 20.0 | 17.9 | 0.2832524 | 0.253527 | | -10.5 | 20 | |
| Acetone | Q | 20.0 | 19.0 | 3.530808E-02 | 2.402814E-02 | | -4.9 | 20 | |
| Acetonitrile | A | 100 | 99.1 | 9.62937E-03 | 9.538758E-03 | | -0.9 | 20 | |
| Acrylonitrile | A | 50.0 | 53.4 | 2.462373E-02 | 2.629258E-02 | | 6.8 | 20 | |
| Benzene | A | 10.0 | 9.86 | 1.192023 | 1.175073 | | -1.4 | 20 | |
| Bromobenzene | A | 10.0 | 9.96 | 1.15273 | 1.14839 | | -0.4 | 20 | |
| Bromochloromethane | A | 10.0 | 8.85 | 0.1177031 | 0.1042118 | | -11.5 | 20 | |
| Bromodichloromethane | A | 10.0 | 10.1 | 0.2596342 | 0.2621987 | | 1.0 | 20 | |
| Bromoform | A | 10.0 | 10.0 | 0.290434 | 0.2907461 | | 0.1 | 20 | |
| Bromomethane | Q | 10.0 | 11.2 | 2.574268E-02 | 2.843006E-02 | | 11.6 | 20 | |
| Carbon disulfide | A | 20.0 | 20.0 | 0.9743583 | 0.9744818 | | 0.01 | 20 | |
| Carbon tetrachloride | L | 10.0 | 10.6 | 0.8946293 | 0.6197027 | | 6.5 | 20 | |
| Chlorobenzene | A | 10.0 | 9.44 | 3.33925 | 3.153574 | | -5.6 | 20 | |
| Chlorodibromomethane | A | 10.0 | 9.75 | 0.5999869 | 0.5848993 | | -2.5 | 20 | |
| Chloroethane | L | 10.0 | 9.73 | 0.5391721 | 0.2630701 | | -2.7 | 20 | |
| Chloroform | A | 10.0 | 9.89 | 0.5666822 | 0.5603542 | | -1.1 | 20 | |
| Chloromethane | Q | 10.0 | 18.0 | 0.24454 | 0.4100583 | | 80.5 | 20 | * |
| cis-1,2-Dichloroethene | A | 10.0 | 9.75 | 0.3797202 | 0.370092 | | -2.5 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 9.55 | 0.2602865 | 0.1879278 | | -27.8 | 20 | * |
| Cyclohexane | A | 10.0 | 10.3 | 0.7628433 | 0.7835701 | | 2.7 | 20 | |
| Dibromomethane | A | 10.0 | 10.0 | 7.125834E-02 | 7.154885E-02 | | 0.4 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 10.3 | 0.3660774 | 0.3756826 | | 2.6 | 20 | |
| Ethyl methacrylate | A | 10.0 | 10.1 | 0.1602354 | 0.1616718 | | 0.9 | 20 | |
| Ethylbenzene | A | 10.0 | 10.1 | 6.517445 | 6.599899 | | 1.3 | 20 | |
| Freon 113 | A | 5.00 | 10.7 | 0.8352537 | 0.8912318 | | 6.7 | 20 | |

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890331.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047036 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047036-CCV1 | Injection Time: | 20:02 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 8.45 | 0.4443176 | 0.3752849 | | -15.5 | 20 | |
| Iodomethane | A | 10.0 | 10.0 | 1.948717 | 1.948964 | | 0.01 | 20 | |
| Isopropylbenzene | A | 10.0 | 10.3 | 6.236763 | 6.412045 | | 2.8 | 20 | |
| m,p-Xylenes | A | 20.0 | 20.6 | 2.521251 | 2.594023 | | 2.9 | 20 | |
| Methacrylonitrile | A | 10.0 | 10.0 | 4.057835E-02 | 4.014671E-02 | | -1.1 | 20 | |
| Methyl Acetate | A | 10.0 | 10.5 | 2.018245E-02 | 2.073803E-02 | | 2.8 | 20 | |
| Methyl tert-Butyl Ether | A | 10.0 | 6.32 | 0.354677 | 0.2242652 | | -36.8 | 20 | * |
| Methylcyclohexane | A | 10.0 | 10.4 | 0.6187942 | 0.6414042 | | 3.7 | 20 | |
| Methylene Chloride | L | 10.0 | 5.01 | 0.8416174 | 0.3147239 | | -49.9 | 20 | * |
| Methylmethacrylate | A | 10.0 | 10.5 | 492250.2? | 418185.1? | | -15.0 | 20 | |
| Naphthalene | Q | 10.0 | 7.97 | 0.1996723 | 0.1465341 | | -20.3 | 20 | * |
| n-Butylbenzene | A | 10.0 | 10.3 | 4.521909 | 5.16638 | | 14.3 | 20 | |
| n-Propylbenzene | A | 10.0 | 10.5 | 7.637786 | 8.051659 | | 5.4 | 20 | |
| o-Xylene | A | 10.0 | 10.0 | 2.238511 | 2.248948 | | 0.5 | 20 | |
| p-Isopropyltoluene | A | 10.0 | 11.1 | 5.899351 | 6.527108 | | 10.6 | 20 | |
| Propionitrile | A | 10.0 | 9.81 | 0.0113396 | 1.112799E-02 | | -1.9 | 20 | |
| sec-Butylbenzene | A | 10.0 | 10.9 | 7.313888 | 7.964866 | | 8.9 | 20 | |
| Styrene | A | 10.0 | 10.5 | 3.406218 | 3.59062 | | 5.4 | 20 | |
| tert-Butylbenzene | A | 10.0 | 10.8 | 4.832452 | 5.198568 | | 7.6 | 20 | |
| Tetrachloroethene | A | 10.0 | 9.63 | 1.669076 | 1.607807 | | -3.7 | 20 | |
| Toluene | A | 10.0 | 9.85 | 0.7629039 | 0.7513365 | | -1.5 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 10.3 | 0.473488 | 0.4857 | | 2.6 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 9.55 | 0.171221 | 0.1879278 | | -4.5 | 20 | |
| Trichloroethene | A | 10.0 | 9.83 | 0.3581557 | 0.3056493 | | -14.7 | 20 | |
| Trichlorofluoromethane | A | 10.0 | 11.4 | 0.6463387 | 0.7398041 | | 14.5 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890331.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047036 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047036-CCV1 | Injection Time: | 20:02 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Vinyl acetate | A | 20.0 | 21.2 | 190045.8 | 163015.7 | | -14.2 | 20 | |
| Vinyl chloride | L | 10.0 | 13.0 | 0.3381399 | 0.4797943 | | 29.8 | 20 | * |
| Xylene (Total) | A | 30.0 | 30.6 | | 2.478998 | | | | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CENTAURI LABS™

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047059-BLK1 | Batch: | B047059 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-SO-019-1010 | 1011013-10 | B02890346.D | 02:42 |
| GKHMS-SO-001-1010 | 1011013-01 | B02890337.D | 22:42 |
| GKHMS-SO-002-1010 | 1011013-02 | B02890338.D | 23:09 |
| GKHMS-SO-003-1010 | 1011013-03 | B02890339.D | 23:36 |
| GKHMS-SO-005-1010 | 1011013-04 | B02890340.D | 00:02 |
| GKHMS-SO-007-1010 | 1011013-05 | B02890341.D | 00:29 |
| GKHMS-SO-011-1010 | 1011013-06 | B02890342.D | 00:56 |
| GKHMS-SO-012-1010 | 1011013-07 | B02890343.D | 01:22 |
| LCS Dup | B047059-BSD1 | B02890334.D | 21:22 |
| GKHMS-SO-017-1010 | 1011013-09 | B02890345.D | 02:15 |
| LCS | B047059-BS1 | B02890356.D | 07:08 |
| GKHMS-SO-021-1010 | 1011013-11 | B02890347.D | 03:09 |
| GKHMS-SO-022-1010 | 1011013-12 | B02890348.D | 03:35 |
| GKHMS-SO-025-1010 | 1011013-14 | B02890350.D | 04:29 |
| GKHMS-SO-028-1010 | 1011013-15 | B02890351.D | 04:55 |
| GKHMS-SO-030-1010 | 1011013-16 | B02890352.D | 05:22 |
| GKHMS-SO-031-1010 | 1011013-17 | B02890353.D | 05:48 |
| GKHMS-SO-032-1010 | 1011013-18 | B02890354.D | 06:15 |
| GKHMS-SO-014-1010 | 1011013-08 | B02890344.D | 01:49 |

CENTAURI LABS™

# ANALYSIS DATA SHEET

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| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011013 | |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS | |
| Matrix: | Solid | Laboratory ID: | B047059-BLK1 | File ID: | B02890332.D |
| Sampled: | | Prepared: | 11/12/10 20:29 | Analyzed: | 11/12/10 20:29 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B047059 | Sequence: | S047036 | Calibration: | 0111803 |
| Column: | 1 | | | | Instrument: GCMS-B |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 5.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.00 | U |
| 78-93-3 | 2-Butanone | 10.0 | U |
| 95-49-8 | 2-Chlorotoluene | 5.00 | U |
| 591-78-6 | 2-Hexanone | 10.0 | U |
| 106-43-4 | 4-Chlorotoluene | 5.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10.0 | U |

CENTAURI LABS™

# ANALYSIS DATA SHEET

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| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B047059-BLK1 | File ID: | B02890332.D |
| Sampled: | | Prepared: | 11/12/10 20:29 | Analyzed: | 11/12/10 20:29 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B047059 | Sequence: | S047036 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 10.0 | U |
| 75-05-8 | Acetonitrile | 50.0 | U |
| 107-02-8 | Acrolein | 25.0 | U |
| 107-13-1 | Acrylonitrile | 25.0 | U |
| 71-43-2 | Benzene | 5.00 | U |
| 108-86-1 | Bromobenzene | 5.00 | U |
| 74-97-5 | Bromochloromethane | 5.00 | U |
| 75-27-4 | Bromodichloromethane | 5.00 | U |
| 75-25-2 | Bromoform | 5.00 | U |
| 74-83-9 | Bromomethane | 10.0 | U |
| 75-15-0 | Carbon disulfide | 5.00 | U |
| 56-23-5 | Carbon tetrachloride | 5.00 | U |
| 108-90-7 | Chlorobenzene | 10.0 | U |
| 124-48-1 | Chlorodibromomethane | 5.00 | U |
| 75-00-3 | Chloroethane | 10.0 | U |
| 67-66-3 | Chloroform | 5.00 | U |
| 74-87-3 | Chloromethane | 10.0 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.00 | U |
| 110-82-7 | Cyclohexane | 5.00 | U |
| 74-95-3 | Dibromomethane | 5.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 10.0 | U |
| 97-63-2 | Ethyl methacrylate | 5.00 | U |
| 100-41-4 | Ethylbenzene | 5.00 | U |
| 76-13-1 | Freon 113 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U |

# ANALYSIS DATA SHEET

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| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B047059-BLK1 | File ID: | B02890332.D |
| Sampled: | | Prepared: | 11/12/10 20:29 | Analyzed: | 11/12/10 20:29 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B047059 | Sequence: | S047036 | Calibration: | 0111803 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 74-88-4 | Iodomethane | 5.00 | U |
| 98-82-8 | Isopropylbenzene | 5.00 | U |
| | m,p-Xylenes | 5.00 | U |
| 126-98-7 | Methacrylonitrile | 5.00 | U |
| 76-20-9 | Methyl Acetate | 5.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 5.00 | U |
| 108-87-2 | Methylcyclohexane | 5.00 | U |
| 75-09-2 | Methylene Chloride | 5.00 | U |
| 80-62-6 | Methylmethacrylate | 5.00 | U |
| 91-20-3 | Naphthalene | 5.00 | U |
| 104-51-8 | n-Butylbenzene | 5.00 | U |
| 103-65-1 | n-Propylbenzene | 5.00 | U |
| 95-47-6 | o-Xylene | 5.00 | U |
| 99-87-6 | p-Isopropyltoluene | 5.00 | U |
| 107-12-0 | Propionitrile | 50.0 | U |
| 135-98-8 | sec-Butylbenzene | 5.00 | U |
| 100-42-5 | Styrene | 5.00 | U |
| 98-06-6 | tert-Butylbenzene | 5.00 | U |
| 127-18-4 | Tetrachloroethene | 5.00 | U |
| 108-88-3 | Toluene | 5.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.00 | U |
| 79-01-6 | Trichloroethene | 5.00 | U |
| 75-69-4 | Trichlorofluoromethane | 10.0 | U |
| 108-05-4 | Vinyl acetate | 5.00 | U |
| 75-01-4 | Vinyl chloride | 10.0 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Solid | Laboratory ID: | B047059-BLK1 | File ID: | B02890332.D | | |
| Sampled: | | Prepared: | 11/12/10 20:29 | Analyzed: | 11/12/10 20:29 | | |
| Solids: | | Preparation: | EPA 5035 | Dilution: | | | |
| Batch: | B047059 | Sequence: | S047036 | Calibration: | 0111803 | Instrument: | GCMS-B |
| Column: | 1 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 1330-20-7 | Xylene (Total) | 5.00 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B047059 | Laboratory ID: | B047059-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 11.7 | 117 | 75 - 125 |
| 1,1,1-Trichloroethane | 10.0 | 12.8 | 128 | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 11.8 | 118 | 55 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 12.4 | 124 | 60 - 125 |
| 1,1-Dichloroethane | 10.0 | 11.6 | 116 | 75 - 125 |
| 1,1-Dichloroethene | 10.0 | 13.3 | 133 | 65 - 135 |
| 1,1-Dichloropropene | 10.0 | 13.1 | 131 | 70 - 135 |
| 1,2,3-Trichlorobenzene | 10.0 | 12.2 | 122 | 60 - 135 |
| 1,2,3-Trichloropropane | 10.0 | 12.4 | 124 | 65 - 130 |
| 1,2,4-Trichlorobenzene | 10.0 | 11.9 | 119 | 65 - 130 |
| 1,2,4-Trimethylbenzene | 10.0 | 14.2 | 142 * | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 9.14 | 91 | 40 - 135 |
| 1,2-Dibromoethane | 10.0 | 12.1 | 121 | 70 - 125 |
| 1,2-Dichlorobenzene | 10.0 | 11.3 | 113 | 75 - 120 |
| 1,2-Dichloroethane | 10.0 | 12.0 | 120 | 70 - 135 |
| 1,2-Dichloropropane | 10.0 | 12.0 | 120 | 70 - 120 |
| 1,3,5-Trimethylbenzene | 10.0 | 13.9 | 139 * | 65 - 135 |
| 1,3-Dichlorobenzene | 10.0 | 14.1 | 141 * | 70 - 125 |
| 1,3-Dichloropropane | 10.0 | 11.4 | 114 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 13.8 | 138 * | 70 - 125 |
| 2,2-Dichloropropane | 10.0 | 8.37 | 84 | 65 - 135 |
| 2-Chlorotoluene | 10.0 | 13.3 | 133 * | 70 - 130 |
| 2-Hexanone | 10.0 | 12.0 | 120 | 45 - 145 |
| 4-Chlorotoluene | 10.0 | 13.4 | 134 * | 75 - 125 |
| 4-Methyl-2-pentanone | 10.0 | 11.7 | 117 | 45 - 145 |
| Acetone | 10.0 | 21.3 | 213 * | 20 - 160 |
| Acetonitrile | 100 | 104 | 104 | 75 - 125 |
| Acrylonitrile | 10.0 | 9.34 | 93 | 75 - 125 |
| Benzene | 10.0 | 12.0 | 120 | 75 - 125 |
| Bromobenzene | 10.0 | 12.6 | 126 * | 65 - 120 |
| Bromochloromethane | 10.0 | 10.7 | 107 | 70 - 125 |
| Bromodichloromethane | 10.0 | 10.8 | 108 | 70 - 130 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B047059 | Laboratory ID: | B047059-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 9.10 | 91 | 55 - 135 |
| Bromomethane | 10.0 | 10.4 | 104 | 30 - 160 |
| Carbon disulfide | 10.0 | 12.5 | 125 | 45 - 160 |
| Carbon tetrachloride | 10.0 | 11.8 | 118 | 65 - 135 |
| Chlorobenzene | 10.0 | 12.2 | 122 | 75 - 125 |
| Chlorodibromomethane | 10.0 | 10.3 | 103 | 65 - 130 |
| Chloroethane | 10.0 | 7.84 | 78 | 40 - 155 |
| Chloroform | 10.0 | 12.0 | 120 | 70 - 125 |
| Chloromethane | 10.0 | 12.4 | 124 | 50 - 130 |
| cis-1,2-Dichloroethene | 10.0 | 12.9 | 129 * | 65 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 9.99 | 100 | 70 - 125 |
| Cyclohexane | 10.0 | 11.0 | 110 | 75 - 125 |
| Dibromomethane | 10.0 | 12.2 | 122 | 75 - 130 |
| Dichlorodifluoromethane | 10.0 | 4.65 | 46 | 35 - 135 |
| Ethyl methacrylate | 10.0 | 11.0 | 110 | 75 - 125 |
| Ethylbenzene | 10.0 | 12.6 | 126 * | 75 - 125 |
| Freon 113 | 10.0 | 10.4 | 104 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 11.8 | 118 | 55 - 140 |
| Iodomethane | 10.0 | 6.26 | 63 * | 75 - 125 |
| Isopropylbenzene | 10.0 | 14.2 | 142 * | 75 - 130 |
| m,p-Xylenes | 20.0 | 25.6 | 128 * | 80 - 125 |
| Methacrylonitrile | 10.0 | 10.9 | 109 | 75 - 125 |
| Methyl Acetate | 10.0 | 8.42 | 84 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 2.99 | 30 * | 65 - 125 |
| Methylcyclohexane | 10.0 | 12.9 | 129 * | 75 - 125 |
| Methylene Chloride | 10.0 | 6.38 | 64 | 55 - 140 |
| Methylmethacrylate | 10.0 | 11.2 | 112 | 75 - 125 |
| Naphthalene | 10.0 | 11.0 | 110 | 40 - 125 |
| n-Butylbenzene | 10.0 | 13.3 | 133 | 65 - 140 |
| n-Propylbenzene | 10.0 | 12.8 | 128 | 65 - 135 |
| o-Xylene | 10.0 | 12.8 | 128 * | 75 - 125 |
| p-Isopropyltoluene | 10.0 | 14.6 | 146 * | 75 - 135 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B047059 | Laboratory ID: | B047059-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Propionitrile | 10.0 | 58.8 | 588 * | 75 - 125 |
| sec-Butylbenzene | 10.0 | 14.0 | 140 * | 65 - 130 |
| Styrene | 10.0 | 12.7 | 127 * | 75 - 125 |
| tert-Butylbenzene | 10.0 | 14.3 | 143 * | 65 - 130 |
| Tetrachloroethene | 10.0 | 20.5 | 205 * | 65 - 140 |
| Toluene | 10.0 | 12.1 | 121 | 70 - 125 |
| trans-1,2-Dichloroethene | 10.0 | 11.3 | 113 | 65 - 135 |
| trans-1,3-Dichloropropene | 10.0 | 9.99 | 100 | 65 - 125 |
| Trichloroethene | 10.0 | 12.8 | 128 * | 75 - 125 |
| Trichlorofluoromethane | 10.0 | 9.88 | 99 | 25 - 185 |
| Vinyl acetate | 20.0 | 13.2 | 66 * | 75 - 125 |
| Vinyl chloride | 10.0 | 9.73 | 97 | 60 - 125 |
| Xylene (Total) | 30.0 | 38.4 | 128 * | 75 - 125 |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCSD CONCENTRATION (ug/Kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 13.2 | 132 * | 12 | 30 | 75 - 125 |
| 1,1,1-Trichloroethane | 10.0 | 13.6 | 136 * | 7 | 30 | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 13.2 | 132 * | 11 | 30 | 55 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 12.8 | 128 * | 4 | 30 | 60 - 125 |
| 1,1-Dichloroethane | 10.0 | 12.1 | 121 | 4 | 30 | 75 - 125 |
| 1,1-Dichloroethene | 10.0 | 13.3 | 133 | 0.3 | 30 | 65 - 135 |
| 1,1-Dichloropropene | 10.0 | 13.1 | 131 | 0.3 | 30 | 70 - 135 |
| 1,2,3-Trichlorobenzene | 10.0 | 11.4 | 114 | 7 | 30 | 60 - 135 |
| 1,2,3-Trichloropropane | 10.0 | 13.0 | 130 | 5 | 30 | 65 - 130 |
| 1,2,4-Trichlorobenzene | 10.0 | 11.3 | 113 | 5 | 30 | 65 - 130 |
| 1,2,4-Trimethylbenzene | 10.0 | 12.9 | 129 | 9 | 30 | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 14.0 | 140 * | 42 | 30 | 40 - 135 |
| 1,2-Dibromoethane | 10.0 | 12.7 | 127 * | 5 | 30 | 70 - 125 |
| 1,2-Dichlorobenzene | 10.0 | 10.9 | 109 | 4 | 30 | 75 - 120 |
| 1,2-Dichloroethane | 10.0 | 12.6 | 126 | 4 | 30 | 70 - 135 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B047059 | Laboratory ID: | B047059-BSD1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCSD CONCENTRATION (ug/Kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 10.0 | 12.8 | 128 * | 6 | 30 | 70 - 120 |
| 1,3,5-Trimethylbenzene | 10.0 | 12.8 | 128 | 8 | 30 | 65 - 135 |
| 1,3-Dichlorobenzene | 10.0 | 12.5 | 125 | 12 | 30 | 70 - 125 |
| 1,3-Dichloropropane | 10.0 | 12.2 | 122 | 7 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 12.3 | 123 | 11 | 30 | 70 - 125 |
| 2,2-Dichloropropane | 10.0 | 13.2 | 132 | 45 | 30 | 65 - 135 |
| 2-Chlorotoluene | 10.0 | 12.3 | 123 | 7 | 30 | 70 - 130 |
| 2-Hexanone | 10.0 | 12.6 | 126 | 6 | 30 | 45 - 145 |
| 4-Chlorotoluene | 10.0 | 12.5 | 125 | 7 | 30 | 75 - 125 |
| 4-Methyl-2-pentanone | 10.0 | 14.9 | 149 * | 25 | 30 | 45 - 145 |
| Acetone | 10.0 | 12.9 | 129 | 49 | 30 | 20 - 160 |
| Acetonitrile | 100 | 119 | 119 | 13 | 30 | 75 - 125 |
| Acrylonitrile | 10.0 | 10.9 | 109 | 16 | 30 | 75 - 125 |
| Benzene | 10.0 | 12.3 | 123 | 3 | 30 | 75 - 125 |
| Bromobenzene | 10.0 | 11.7 | 117 | 8 | 30 | 65 - 120 |
| Bromochloromethane | 10.0 | 11.1 | 111 | 4 | 30 | 70 - 125 |
| Bromodichloromethane | 10.0 | 12.4 | 124 | 13 | 30 | 70 - 130 |
| Bromoform | 10.0 | 12.4 | 124 | 30 | 30 | 55 - 135 |
| Bromomethane | 10.0 | 11.0 | 110 | 6 | 30 | 30 - 160 |
| Carbon disulfide | 10.0 | 12.9 | 129 | 3 | 30 | 45 - 160 |
| Carbon tetrachloride | 10.0 | 13.4 | 134 | 13 | 30 | 65 - 135 |
| Chlorobenzene | 10.0 | 11.9 | 119 | 2 | 30 | 75 - 125 |
| Chlorodibromomethane | 10.0 | 12.6 | 126 | 20 | 30 | 65 - 130 |
| Chloroethane | 10.0 | 9.15 | 92 | 15 | 30 | 40 - 155 |
| Chloroform | 10.0 | 12.5 | 125 | 4 | 30 | 70 - 125 |
| Chloromethane | 10.0 | 13.5 | 135 * | 8 | 30 | 50 - 130 |
| cis-1,2-Dichloroethene | 10.0 | 13.7 | 137 * | 6 | 30 | 65 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 12.0 | 120 | 18 | 30 | 70 - 125 |
| Cyclohexane | 10.0 | 11.7 | 117 | 6 | 30 | 75 - 125 |
| Dibromomethane | 10.0 | 12.5 | 125 | 3 | 30 | 75 - 130 |
| Dichlorodifluoromethane | 10.0 | 5.07 | 51 | 9 | 30 | 35 - 135 |
| Ethyl methacrylate | 10.0 | 12.5 | 125 | 13 | 30 | 75 - 125 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B047059 | Laboratory ID: | B047059-BSD1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCSD CONCENTRATION (ug/Kg wet) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Ethylbenzene | 10.0 | 12.3 | 123 | 3 | 30 | 75 - 125 |
| Freon 113 | 10.0 | 10.1 | 101 | 3 | 30 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.4 | 104 | 13 | 30 | 55 - 140 |
| Iodomethane | 10.0 | 6.43 | 64 * | 3 | 30 | 75 - 125 |
| Isopropylbenzene | 10.0 | 13.2 | 132 * | 7 | 30 | 75 - 130 |
| m,p-Xylenes | 20.0 | 24.8 | 124 | 3 | 30 | 80 - 125 |
| Methacrylonitrile | 10.0 | 12.8 | 128 * | 15 | 30 | 75 - 125 |
| Methyl Acetate | 10.0 | 9.55 | 96 | 13 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 11.8 | 118 | 119 | 30 | 65 - 125 |
| Methylcyclohexane | 10.0 | 12.8 | 128 * | 0.7 | 30 | 75 - 125 |
| Methylene Chloride | 10.0 | 13.4 | 134 | 71 | 30 | 55 - 140 |
| Methylmethacrylate | 10.0 | 11.9 | 119 | 6 | 30 | 75 - 125 |
| Naphthalene | 10.0 | 10.9 | 109 | 0.5 | 30 | 40 - 125 |
| n-Butylbenzene | 10.0 | 12.7 | 127 | 5 | 30 | 65 - 140 |
| n-Propylbenzene | 10.0 | 11.8 | 118 | 8 | 30 | 65 - 135 |
| o-Xylene | 10.0 | 12.3 | 123 | 4 | 30 | 75 - 125 |
| p-Isopropyltoluene | 10.0 | 12.8 | 128 | 13 | 30 | 75 - 135 |
| Propionitrile | 10.0 | 11.4 | 114 | 135 | 30 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 12.5 | 125 | 11 | 30 | 65 - 130 |
| Styrene | 10.0 | 12.3 | 123 | 3 | 30 | 75 - 125 |
| tert-Butylbenzene | 10.0 | 13.8 | 138 * | 3 | 30 | 65 - 130 |
| Tetrachloroethene | 10.0 | 12.7 | 127 | 47 | 30 | 65 - 140 |
| Toluene | 10.0 | 12.0 | 120 | 0.5 | 30 | 70 - 125 |
| trans-1,2-Dichloroethene | 10.0 | 11.7 | 117 | 4 | 30 | 65 - 135 |
| trans-1,3-Dichloropropene | 10.0 | 12.0 | 120 | 18 | 30 | 65 - 125 |
| Trichloroethene | 10.0 | 12.5 | 125 | 3 | 30 | 75 - 125 |
| Trichlorofluoromethane | 10.0 | 10.6 | 106 | 8 | 30 | 25 - 185 |
| Vinyl acetate | 20.0 | 19.5 | 98 | 39 | 30 | 75 - 125 |
| Vinyl chloride | 10.0 | 10.9 | 109 | 11 | 30 | 60 - 125 |
| Xylene (Total) | 30.0 | 37.1 | 124 | 3 | 30 | 75 - 125 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890378.D | Injection Date: | 11/15/10 |
| Instrument ID: | GCMS-B | Injection Time: | 09:23 |
| Sequence: | S048008 | Lab Sample ID: | S048008-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.5 | PASS |
| 75 | 30 - 60% of 95 | 46.4 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.55 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.3 | PASS |
| 175 | 5 - 9% of 174 | 7.06 | PASS |
| 176 | 95 - 101% of 174 | 97.7 | PASS |
| 177 | 5 - 9% of 176 | 6.63 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S048008-CCV1 | B02890379.D | 11/15/2010 | 9:49:00 |
| Blank | B048008-BLK1 | B02890386.D | 11/15/2010 | 12:59:00 |
| LCS | B048008-BS1 | B02890387.D | 11/15/2010 | 13:26:00 |
| GKHMS-SO-023-1010 | 1011013-13 | B02890388.D | 11/15/2010 | 13:53:00 |
| GKHMS-SO-034-1010 | 1011013-19 | B02890389.D | 11/15/2010 | 14:20:00 |
| GKHMS-SO-FD002-1010 | 1011013-20 | B02890390.D | 11/15/2010 | 14:47:00 |
| GKHMS-SO-FD001-1010 | 1011013-21 | B02890391.D | 11/15/2010 | 15:13:00 |
| Matrix Spike | B048008-MS1 | B02890393.D | 11/15/2010 | 16:34:00 |
| Matrix Spike Dup | B048008-MSD1 | B02890394.D | 11/15/2010 | 17:24:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 10.0 | 0.9449965 | 0.9491511 | | 0.4 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.2 | 0.5659896 | 0.5779784 | | 2.1 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 10.7 | 0.4579836 | 0.4903044 | | 7.1 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 9.85 | 9.655389E-02 | 9.510526E-02 | | -1.5 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 9.37 | 0.5886556 | 0.5517367 | | -6.3 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 9.71 | 0.2945645 | 0.2858931 | | -2.9 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 9.35 | 0.4516883 | 0.4223942 | | -6.5 | 20 | |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 12.5 | 0.18017 | 0.2590719 | | 25.4 | 20 | * |
| 1,2,3-Trichloropropane | A | 10.0 | 10.6 | 0.3987978 | 0.4218935 | | 5.8 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 11.7 | 0.2303203 | 0.3213208 | | 17.3 | 20 | |
| 1,2,4-Trimethylbenzene | A | 10.0 | 11.2 | 4.709513 | 5.297978 | | 12.5 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 9.53 | 1.701376E-02 | 1.621781E-02 | | -4.7 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 9.74 | 0.4184844 | 0.4074317 | | -2.6 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 8.70 | 0.7312224 | 0.6361926 | | -13.0 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 9.30 | 0.2037538 | 0.189547 | | -7.0 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 9.45 | 0.2268516 | 0.2143169 | | -5.5 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 10.9 | 5.136773 | 5.577743 | | 8.6 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 11.0 | 2.429237 | 2.67406 | | 10.1 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 9.15 | 0.9832992 | 0.9001943 | | -8.5 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 10.8 | 2.361546 | 2.547879 | | 7.9 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 9.38 | 0.3046553 | 0.2859123 | | -6.2 | 20 | |
| 2-Butanone | A | 20.0 | 17.9 | 2.988406E-02 | 2.678289E-02 | | -10.4 | 20 | |
| 2-Chlorotoluene | A | 10.0 | 10.4 | 4.262763 | 4.454226 | | 4.5 | 20 | |
| 2-Hexanone | A | 20.0 | 18.6 | 0.1678354 | 0.1559188 | | -7.1 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 10.8 | 4.45775 | 4.836953 | | 8.5 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 20.0 | 16.3 | 0.2832524 | 0.2311587 | | -18.4 | 20 | |
| Acetone OK | Q | 20.0 | 18.0 | 3.530808E-02 | 2.293622E-02 OK | | -10.0 | 20 | |
| Acetonitrile | A | 100 | 87.1 | 9.62937E-03 | 8.386615E-03 | | -12.9 | 20 | |
| Acrylonitrile | A | 50.0 | 46.1 | 2.462373E-02 | 2.270745E-02 | | -7.8 | 20 | |
| Benzene | A | 10.0 | 9.28 | 1.192023 | 1.106421 | | -7.2 | 20 | |
| Bromobenzene | A | 10.0 | 10.4 | 1.15273 | 1.19706 | | 3.8 | 20 | |
| Bromochloromethane | A | 10.0 | 8.68 | 0.1177031 | 0.1022244 | | -13.2 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.87 | 0.2596342 | 0.2562424 | | -1.3 | 20 | |
| Bromoform | A | 10.0 | 10.8 | 0.290434 | 0.3140696 | | 8.1 | 20 | |
| Bromomethane | Q | 10.0 | 3.54 | 2.574268E-02 | 8.303776E-03 | | -64.6 | 20 | * |
| Carbon disulfide | A | 20.0 | 19.0 | 0.9743583 | 0.9271374 | | -4.8 | 20 | |
| Carbon tetrachloride | L | 10.0 | 9.99 | 0.8946293 | 0.5851107 | | -0.1 | 20 | |
| Chlorobenzene | A | 10.0 | 9.32 | 3.33925 | 3.112225 | | -6.8 | 20 | |
| Chlorodibromomethane | A | 10.0 | 9.71 | 0.5999869 | 0.5824614 | | -2.9 | 20 | |
| Chloroethane | L | 10.0 | 12.3 | 0.5391721 | 0.3287941 | | 23.3 | 20 | * |
| Chloroform | A | 10.0 | 9.43 | 0.5666822 | 0.5342691 | | -5.7 | 20 | |
| Chloromethane | Q | 10.0 | 11.3 | 0.24454 | 0.2475351 | | 12.8 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 9.44 | 0.3797202 | 0.3583891 | | -5.6 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 9.24 | 0.2602865 | 0.1812066 | | -30.4 | 20 | * |
| Cyclohexane | A | 10.0 | 9.43 | 0.7628433 | 0.7189971 | | -5.7 | 20 | |
| Dibromomethane | A | 10.0 | 10.1 | 7.125834E-02 | 7.186451E-02 | | 0.9 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 9.13 | 0.3660774 | 0.3344005 | | -8.7 | 20 | |
| Ethyl methacrylate | A | 10.0 | 9.78 | 0.1602354 | 0.1567041 | | -2.2 | 20 | |
| Ethylbenzene | A | 10.0 | 9.79 | 6.517445 | 6.379796 | | -2.1 | 20 | |
| Freon 113 | A | 5.00 | 10.3 | 0.8352537 | 0.8568153 | | 2.6 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 9.59 | 0.4443176 | 0.4261461 | | -4.1 | 20 | |
| Iodomethane | A | 10.0 | 9.52 | 1.948717 | 1.854275 | | -4.8 | 20 | |
| Isopropylbenzene | A | 10.0 | 10.4 | 6.236763 | 6.485165 | | 4.0 | 20 | |
| m,p-Xylenes | A | 20.0 | 19.9 | 2.521251 | 2.504389 | | -0.7 | 20 | |
| Methacrylonitrile | A | 10.0 | 9.31 | 4.057835E-02 | 3.734427E-02 | | -8.0 | 20 | |
| Methyl Acetate | A | 10.0 | 9.61 | 2.018245E-02 | 1.898982E-02 | | -5.9 | 20 | |
| Methyl tert-Butyl Ether | A | 10.0 | 9.20 | 0.354677 | 0.3261366 | | -8.0 | 20 | |
| Methylcyclohexane | A | 10.0 | 9.90 | 0.6187942 | 0.6126558 | | -1.0 | 20 | |
| Methylene Chloride | L | 10.0 | 1.01 | 0.8416174 | 0.2436185 | | -89.9 | 20 | * |
| Methylmethacrylate | A | 10.0 | 9.46 | 492250.2 | 429827.4 | | -12.7 | 20 | |
| Naphthalene | Q | 10.0 | 13.0 | 0.1996723 | 0.269702 | | 29.9 | 20 | * |
| n-Butylbenzene | A | 10.0 | 11.1 | 4.521909 | 5.683387 | | 25.7 | 20 | * |
| n-Propylbenzene | A | 10.0 | 10.8 | 7.637786 | 8.233208 | | 7.8 | 20 | |
| o-Xylene | A | 10.0 | 9.94 | 2.238511 | 2.226065 | | -0.6 | 20 | |
| p-Isopropyltoluene | A | 10.0 | 11.5 | 5.899351 | 6.784484 | | 15.0 | 20 | |
| Propionitrile | A | 10.0 | 9.47 | 0.0113396 | 1.073394E-02 | | -5.3 | 20 | |
| sec-Butylbenzene | A | 10.0 | 11.2 | 7.313888 | 8.206134 | | 12.2 | 20 | |
| Styrene | A | 10.0 | 10.2 | 3.406218 | 3.475528 | | 2.0 | 20 | |
| tert-Butylbenzene | A | 10.0 | 11.1 | 4.832452 | 5.37384 | | 11.2 | 20 | |
| Tetrachloroethene | A | 10.0 | 9.58 | 1.669076 | 1.599099 | | -4.2 | 20 | |
| Toluene | A | 10.0 | 9.64 | 0.7629039 | 0.7350667 | | -3.6 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 9.42 | 0.473488 | 0.4459864 | | -5.8 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 9.24 | 0.171221 | 0.1812066 | | -7.6 | 20 | |
| Trichloroethene | A | 10.0 | 9.54 | 0.3581557 | 0.296764 | | -17.1 | 20 | |
| Trichlorofluoromethane | A | 10.0 | 11.1 | 0.6463387 | 0.7163621 | | 10.8 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Vinyl acetate | A | 20.0 | 18.4 | 190045.8 | 161470.9 | | -15.0 | 20 |
| Vinyl chloride | L | 10.0 | 8.20 | 0.3381399 | 0.295515 | | -18.0 | 20 |
| Xylene (Total) | A | 30.0 | 29.8 | | 2.411614 | | | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048008-BLK1 | Batch: | B048008 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B048008-MSD1 | B02890394.D | 17:24 |
| Matrix Spike | B048008-MS1 | B02890393.D | 16:34 |
| GKHMS-SO-FD001-1010 | 1011013-21 | B02890391.D | 15:13 |
| GKHMS-SO-FD002-1010 | 1011013-20 | B02890390.D | 14:47 |
| GKHMS-SO-034-1010 | 1011013-19 | B02890389.D | 14:20 |
| GKHMS-SO-023-1010 | 1011013-13 | B02890388.D | 13:53 |
| LCS | B048008-BS1 | B02890387.D | 13:26 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B048008-BLK1 | File ID: | B02890386.D |
| Sampled: | | Prepared: | 11/15/10 12:59 | Analyzed: | 11/15/10 12:59 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B048008 | Sequence: | S048008 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 5.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.00 | U |
| 78-93-3 | 2-Butanone | 10.0 | U |
| 95-49-8 | 2-Chlorotoluene | 5.00 | U |
| 591-78-6 | 2-Hexanone | 10.0 | U |
| 106-43-4 | 4-Chlorotoluene | 5.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10.0 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B048008-BLK1 | File ID: | B02890386.D |
| Sampled: | | Prepared: | 11/15/10 12:59 | Analyzed: | 11/15/10 12:59 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B048008 | Sequence: | S048008 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 10.0 | U |
| 75-05-8 | Acetonitrile | 50.0 | U |
| 107-13-1 | Acrylonitrile | 25.0 | U |
| 71-43-2 | Benzene | 5.00 | U |
| 108-86-1 | Bromobenzene | 5.00 | U |
| 74-97-5 | Bromochloromethane | 5.00 | U |
| 75-27-4 | Bromodichloromethane | 5.00 | U |
| 75-25-2 | Bromoform | 5.00 | U |
| 74-83-9 | Bromomethane | 10.0 | U |
| 75-15-0 | Carbon disulfide | 5.00 | U |
| 56-23-5 | Carbon tetrachloride | 5.00 | U |
| 108-90-7 | Chlorobenzene | 10.0 | U |
| 124-48-1 | Chlorodibromomethane | 5.00 | U |
| 75-00-3 | Chloroethane | 10.0 | U |
| 67-66-3 | Chloroform | 5.00 | U |
| 74-87-3 | Chloromethane | 10.0 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.00 | U |
| 110-82-7 | Cyclohexane | 5.00 | U |
| 74-95-3 | Dibromomethane | 5.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 10.0 | U |
| 97-63-2 | Ethyl methacrylate | 5.00 | U |
| 100-41-4 | Ethylbenzene | 5.00 | U |
| 76-13-1 | Freon 113 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U |
| 74-88-4 | Iodomethane | 5.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B048008-BLK1 | File ID: | B02890386.D |
| Sampled: | | Prepared: | 11/15/10 12:59 | Analyzed: | 11/15/10 12:59 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B048008 | Sequence: | S048008 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 98-82-8 | Isopropylbenzene | 5.00 | U |
| | m,p-Xylenes | 5.00 | U |
| 126-98-7 | Methacrylonitrile | 5.00 | U |
| 76-20-9 | Methyl Acetate | 5.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 5.00 | U |
| 108-87-2 | Methylcyclohexane | 5.00 | U |
| 75-09-2 | Methylene Chloride | 5.00 | U |
| 80-62-6 | Methylmethacrylate | 5.00 | U |
| 91-20-3 | Naphthalene | 5.00 | U |
| 104-51-8 | n-Butylbenzene | 5.00 | U |
| 103-65-1 | n-Propylbenzene | 5.00 | U |
| 95-47-6 | o-Xylene | 5.00 | U |
| 99-87-6 | p-Isopropyltoluene | 5.00 | U |
| 107-12-0 | Propionitrile | 50.0 | U |
| 135-98-8 | sec-Butylbenzene | 5.00 | U |
| 100-42-5 | Styrene | 5.00 | U |
| 98-06-6 | tert-Butylbenzene | 5.00 | U |
| 127-18-4 | Tetrachloroethene | 5.00 | U |
| 108-88-3 | Toluene | 5.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.00 | U |
| 79-01-6 | Trichloroethene | 5.00 | U |
| 75-69-4 | Trichlorofluoromethane | 10.0 | U |
| 108-05-4 | Vinyl acetate | 5.00 | U |
| 75-01-4 | Vinyl chloride | 10.0 | U |
| 1330-20-7 | Xylene (Total) | 5.00 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B048008 | Laboratory ID: | B048008-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 10.8 | 108 | | 75 - 125 |
| 1,1,1-Trichloroethane | 10.0 | 10.6 | 106 | | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.5 | 105 | | 55 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.3 | 103 | | 60 - 125 |
| 1,1-Dichloroethane | 10.0 | 9.17 | 92 | | 75 - 125 |
| 1,1-Dichloroethene | 10.0 | 9.77 | 98 | | 65 - 135 |
| 1,1-Dichloropropene | 10.0 | 10.1 | 101 | | 70 - 135 |
| 1,2,3-Trichlorobenzene | 10.0 | 12.9 | 129 | | 60 - 135 |
| 1,2,3-Trichloropropane | 10.0 | 10.5 | 105 | | 65 - 130 |
| 1,2,4-Trichlorobenzene | 10.0 | 12.1 | 121 | | 65 - 130 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.1 | 111 | | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 11.4 | 114 | | 40 - 135 |
| 1,2-Dibromoethane | 10.0 | 10.6 | 106 | | 70 - 125 |
| 1,2-Dichlorobenzene | 10.0 | 9.36 | 94 | | 75 - 120 |
| 1,2-Dichloroethane | 10.0 | 9.70 | 97 | | 70 - 135 |
| 1,2-Dichloropropane | 10.0 | 9.93 | 99 | | 70 - 120 |
| 1,3,5-Trimethylbenzene | 10.0 | 10.7 | 107 | | 65 - 135 |
| 1,3-Dichlorobenzene | 10.0 | 10.9 | 109 | | 70 - 125 |
| 1,3-Dichloropropane | 10.0 | 9.73 | 97 | | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 10.8 | 108 | | 70 - 125 |
| 2,2-Dichloropropane | 10.0 | 10.1 | 101 | | 65 - 135 |
| 2-Chlorotoluene | 10.0 | 10.3 | 103 | | 70 - 130 |
| 2-Hexanone | 10.0 | 13.5 | 135 | | 45 - 145 |
| 4-Chlorotoluene | 10.0 | 10.4 | 104 | | 75 - 125 |
| 4-Methyl-2-pentanone | 10.0 | 11.5 | 115 | | 45 - 145 |
| Acetone | 10.0 | 17.6 | 176 | * | 20 - 160 |
| Acetonitrile | 100 | 82.8 | 83 | | 75 - 125 |
| Acrylonitrile | 10.0 | 7.70 | 77 | | 75 - 125 |
| Benzene | 10.0 | 9.57 | 96 | | 75 - 125 |
| Bromobenzene | 10.0 | 10.1 | 101 | | 65 - 120 |
| Bromochloromethane | 10.0 | 8.86 | 89 | | 70 - 125 |
| Bromodichloromethane | 10.0 | 9.69 | 97 | | 70 - 130 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B048008 | Laboratory ID: | B048008-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|
| Bromoform | 10.0 | 10.1 | 101 | | 55 - 135 |
| Bromomethane | 10.0 | 7.57 | 76 | | 30 - 160 |
| Carbon disulfide | 10.0 | 9.38 | 94 | | 45 - 160 |
| Carbon tetrachloride | 10.0 | 10.0 | 100 | | 65 - 135 |
| Chlorobenzene | 10.0 | 9.90 | 99 | | 75 - 125 |
| Chlorodibromomethane | 10.0 | 10.2 | 102 | | 65 - 130 |
| Chloroethane | 10.0 | 10.4 | 104 | | 40 - 155 |
| Chloroform | 10.0 | 9.88 | 99 | | 70 - 125 |
| Chloromethane | 10.0 | 12.2 | 122 | | 50 - 130 |
| cis-1,2-Dichloroethene | 10.0 | 10.7 | 107 | | 65 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 9.42 | 94 | | 70 - 125 |
| Cyclohexane | 10.0 | 8.67 | 87 | | 75 - 125 |
| Dibromomethane | 10.0 | 10.1 | 101 | | 75 - 130 |
| Dichlorodifluoromethane | 10.0 | 7.22 | 72 | | 35 - 135 |
| Ethyl methacrylate | 10.0 | 9.74 | 97 | | 75 - 125 |
| Ethylbenzene | 10.0 | 10.1 | 101 | | 75 - 125 |
| Freon 113 | 10.0 | 7.63 | 76 | | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 9.13 | 91 | | 55 - 140 |
| Iodomethane | 10.0 | 5.00 U | 0 | * | 75 - 125 |
| Isopropylbenzene | 10.0 | 11.0 | 110 | | 75 - 130 |
| m,p-Xylenes | 20.0 | 20.4 | 102 | | 80 - 125 |
| Methacrylonitrile | 10.0 | 9.61 | 96 | | 75 - 125 |
| Methyl Acetate | 10.0 | 7.03 | 70 | * | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.4 | 104 | | 65 - 125 |
| Methylcyclohexane | 10.0 | 9.82 | 98 | | 75 - 125 |
| Methylene Chloride | 10.0 | 0.740 | 7 | * | 55 - 140 |
| Methylmethacrylate | 10.0 | 8.67 | 87 | | 75 - 125 |
| Naphthalene | 10.0 | 13.0 | 130 | * | 40 - 125 |
| n-Butylbenzene | 10.0 | 11.1 | 111 | | 65 - 140 |
| n-Propylbenzene | 10.0 | 9.79 | 98 | | 65 - 135 |
| o-Xylene | 10.0 | 10.2 | 102 | | 75 - 125 |
| p-Isopropyltoluene | 10.0 | 10.9 | 109 | | 75 - 135 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B048008 | Laboratory ID: | B048008-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|
| Propionitrile | 10.0 | 9.24 | 92 | | 75 - 125 |
| sec-Butylbenzene | 10.0 | 10.5 | 105 | | 65 - 130 |
| Styrene | 10.0 | 9.96 | 100 | | 75 - 125 |
| tert-Butylbenzene | 10.0 | 11.2 | 112 | | 65 - 130 |
| Tetrachloroethene | 10.0 | 13.6 | 136 | | 65 - 140 |
| Toluene | 10.0 | 9.58 | 96 | | 70 - 125 |
| trans-1,2-Dichloroethene | 10.0 | 8.51 | 85 | | 65 - 135 |
| trans-1,3-Dichloropropene | 10.0 | 9.42 | 94 | | 65 - 125 |
| Trichloroethene | 10.0 | 10.0 | 100 | | 75 - 125 |
| Trichlorofluoromethane | 10.0 | 10.2 | 102 | | 25 - 185 |
| Vinyl acetate | 20.0 | 13.2 | 66 | * | 75 - 125 |
| Vinyl chloride | 10.0 | 8.79 | 88 | | 60 - 125 |
| Xylene (Total) | 30.0 | 30.5 | 102 | | 75 - 125 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-FD001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MS1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 12.4 | 6.22 U | 11.8 | 95 | 75 - 125 |
| 1,1,1-Trichloroethane | 12.4 | 6.22 U | 12.5 | 101 | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 12.4 | 6.22 U | 8.28 | 67 | 55 - 130 |
| 1,1,2-Trichloroethane | 12.4 | 6.22 U | 13.9 | 112 | 60 - 125 |
| 1,1-Dichloroethane | 12.4 | 6.22 U | 11.8 | 95 | 75 - 125 |
| 1,1-Dichloroethene | 12.4 | 6.22 U | 11.5 | 92 | 65 - 135 |
| 1,1-Dichloropropene | 12.4 | 6.22 U | 13.2 | 106 | 70 - 135 |
| 1,2,3-Trichlorobenzene | 12.4 | 6.22 U | 22.2 | 179 * | 60 - 135 |
| 1,2,3-Trichloropropane | 12.4 | 6.22 U | 13.1 | 105 | 65 - 130 |
| 1,2,4-Trichlorobenzene | 12.4 | 6.22 U | 21.3 | 172 * | 65 - 130 |
| 1,2,4-Trimethylbenzene | 12.4 | 6.22 U | 14.4 | 116 | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 12.4 | 6.22 U | 12.8 | 103 | 40 - 135 |
| 1,2-Dibromoethane | 12.4 | 6.22 U | 13.3 | 107 | 70 - 125 |
| 1,2-Dichlorobenzene | 12.4 | 6.22 U | 12.4 | 99 | 75 - 120 |
| 1,2-Dichloroethane | 12.4 | 6.22 U | 12.3 | 99 | 70 - 135 |
| 1,2-Dichloropropane | 12.4 | 6.22 U | 13.0 | 105 | 70 - 120 |
| 1,3,5-Trimethylbenzene | 12.4 | 6.22 U | 14.1 | 113 | 65 - 135 |
| 1,3-Dichlorobenzene | 12.4 | 6.22 U | 13.8 | 111 | 70 - 125 |
| 1,3-Dichloropropane | 12.4 | 6.22 U | 12.5 | 100 | 75 - 125 |
| 1,4-Dichlorobenzene | 12.4 | 6.22 U | 13.4 | 108 | 70 - 125 |
| 2,2-Dichloropropane | 12.4 | 6.22 U | 12.0 | 96 | 65 - 135 |
| 2-Chlorotoluene | 12.4 | 6.22 U | 13.4 | 108 | 70 - 130 |
| 2-Hexanone | 12.4 | 12.4 U | 9.91 | 80 | 45 - 145 |
| 4-Chlorotoluene | 12.4 | 6.22 U | 13.8 | 111 | 75 - 125 |
| 4-Methyl-2-pentanone | 12.4 | 12.4 U | 10.3 | 82 | 45 - 145 |
| Acetone | 12.4 | 12.4 U | 23.2 | 187 * | 20 - 160 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-FD001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MS1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| Acetonitrile | 124 | 62.2 U | 77.9 | 63 * | 75 - 125 |
| Acrylonitrile | 12.4 | 31.1 U | 10.0 | 81 | 75 - 125 |
| Benzene | 12.4 | 6.22 U | 12.7 | 102 | 75 - 125 |
| Bromobenzene | 12.4 | 6.22 U | 13.2 | 106 | 65 - 120 |
| Bromochloromethane | 12.4 | 6.22 U | 11.4 | 92 | 70 - 125 |
| Bromodichloromethane | 12.4 | 6.22 U | 10.5 | 84 | 70 - 130 |
| Bromoform | 12.4 | 6.22 U | 8.43 | 68 | 55 - 135 |
| Bromomethane | 12.4 | 12.4 U | 2.55 | 20 * | 30 - 160 |
| Carbon disulfide | 12.4 | 6.22 U | 11.4 | 91 | 45 - 160 |
| Carbon tetrachloride | 12.4 | 6.22 U | 10.6 | 85 | 65 - 135 |
| Chlorobenzene | 12.4 | 12.4 U | 12.8 | 103 | 75 - 125 |
| Chlorodibromomethane | 12.4 | 6.22 U | 9.81 | 79 | 65 - 130 |
| Chloroethane | 12.4 | 12.4 U | 1.54 | 12 * | 40 - 155 |
| Chloroform | 12.4 | 6.22 U | 12.8 | 103 | 70 - 125 |
| Chloromethane | 12.4 | 12.4 U | 12.8 | 103 | 50 - 130 |
| cis-1,2-Dichloroethene | 12.4 | 6.22 U | 14.2 | 114 | 65 - 125 |
| cis-1,3-Dichloropropene | 12.4 | 6.22 U | 10.9 | 88 | 70 - 125 |
| Cyclohexane | 12.4 | 6.22 U | 11.4 | 92 | 75 - 125 |
| Dibromomethane | 12.4 | 6.22 U | 12.8 | 103 | 75 - 130 |
| Dichlorodifluoromethane | 12.4 | 12.4 U | 7.39 | 59 | 35 - 135 |
| Ethyl methacrylate | 12.4 | 6.22 U | 12.3 | 99 | 75 - 125 |
| Ethylbenzene | 12.4 | 6.22 U | 13.4 | 108 | 75 - 125 |
| Freon 113 | 12.4 | 6.22 U | 6.22 U | 0 * | 75 - 125 |
| Hexachlorobutadiene | 12.4 | 6.22 U | 12.4 | 100 | 55 - 140 |
| Iodomethane | 12.4 | 6.22 U | 6.22 U | 0 * | 75 - 125 |
| Isopropylbenzene | 12.4 | 0.659 | 15.2 | 117 | 75 - 130 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-FD001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MS1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| m,p-Xylenes | 24.9 | 6.22 U | 26.7 | 107 | 80 - 125 |
| Methacrylonitrile | 12.4 | 6.22 U | 12.0 | 96 | 75 - 125 |
| Methyl Acetate | 12.4 | 6.22 U | 12.0 | 97 | 75 - 125 |
| Methyl tert-Butyl Ether | 12.4 | 6.22 U | 14.0 | 113 | 65 - 125 |
| Methylcyclohexane | 12.4 | 6.22 U | 12.3 | 99 | 75 - 125 |
| Methylene Chloride | 12.4 | 6.22 U | 2.23 | 18 * | 55 - 140 |
| Methylmethacrylate | 12.4 | 6.22 U | 11.5 | 93 | 75 - 125 |
| Naphthalene | 12.4 | 28.6 | 48.0 | 156 * | 40 - 125 |
| n-Butylbenzene | 12.4 | 2.26 | 17.8 | 125 | 65 - 140 |
| n-Propylbenzene | 12.4 | 1.23 | 14.5 | 106 | 65 - 135 |
| o-Xylene | 12.4 | 6.22 U | 13.5 | 109 | 75 - 125 |
| p-Isopropyltoluene | 12.4 | 6.22 U | 14.2 | 114 | 75 - 135 |
| Propionitrile | 12.4 | 62.2 U | 9.33 | 75 | 75 - 125 |
| sec-Butylbenzene | 12.4 | 1.70 | 15.5 | 111 | 65 - 130 |
| Styrene | 12.4 | 6.22 U | 12.9 | 104 | 75 - 125 |
| tert-Butylbenzene | 12.4 | 6.22 U | 14.1 | 114 | 65 - 130 |
| Tetrachloroethene | 12.4 | 6.22 U | 24.7 | 199 * | 65 - 140 |
| Toluene | 12.4 | 6.22 U | 12.6 | 102 | 70 - 125 |
| trans-1,2-Dichloroethene | 12.4 | 6.22 U | 11.1 | 89 | 65 - 135 |
| trans-1,3-Dichloropropene | 12.4 | 6.22 U | 10.9 | 88 | 65 - 125 |
| Trichloroethene | 12.4 | 6.22 U | 17.9 | 144 * | 75 - 125 |
| Trichlorofluoromethane | 12.4 | 12.4 U | 0.933 | 8 * | 25 - 185 |
| Vinyl acetate | 24.9 | 6.22 U | 6.22 U | 0 * | 75 - 125 |
| Vinyl chloride | 12.4 | 12.4 U | 6.04 | 49 * | 60 - 125 |
| Xylene (Total) | 37.3 | 6.22 U | 40.2 | 108 | 75 - 125 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-FD001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MSD1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 12.4 | 11.4 | 92 | 4 | 30 | 75 - 125 |
| 1,1,1-Trichloroethane | 12.4 | 12.5 | 100 | 0.1 | 30 | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 12.4 | 7.34 | 59 | 12 | 30 | 55 - 130 |
| 1,1,2-Trichloroethane | 12.4 | 14.4 | 116 | 3 | 30 | 60 - 125 |
| 1,1-Dichloroethane | 12.4 | 12.8 | 103 | 9 | 30 | 75 - 125 |
| 1,1-Dichloroethene | 12.4 | 13.0 | 105 | 13 | 30 | 65 - 135 |
| 1,1-Dichloropropene | 12.4 | 13.0 | 104 | 2 | 30 | 70 - 135 |
| 1,2,3-Trichlorobenzene | 12.4 | 20.6 | 166 * | 7 | 30 | 60 - 135 |
| 1,2,3-Trichloropropane | 12.4 | 12.2 | 98 | 7 | 30 | 65 - 130 |
| 1,2,4-Trichlorobenzene | 12.4 | 19.3 | 155 * | 10 | 30 | 65 - 130 |
| 1,2,4-Trimethylbenzene | 12.4 | 11.4 | 91 | 24 | 30 | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 12.4 | 10.9 | 87 | 16 | 30 | 40 - 135 |
| 1,2-Dibromoethane | 12.4 | 14.8 | 119 | 11 | 30 | 70 - 125 |
| 1,2-Dichlorobenzene | 12.4 | 12.9 | 104 | 4 | 30 | 75 - 120 |
| 1,2-Dichloroethane | 12.4 | 13.8 | 111 | 11 | 30 | 70 - 135 |
| 1,2-Dichloropropane | 12.4 | 13.8 | 111 | 6 | 30 | 70 - 120 |
| 1,3,5-Trimethylbenzene | 12.4 | 11.4 | 92 | 21 | 30 | 65 - 135 |
| 1,3-Dichlorobenzene | 12.4 | 10.8 | 87 | 25 | 30 | 70 - 125 |
| 1,3-Dichloropropane | 12.4 | 14.2 | 114 | 13 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 12.4 | 10.6 | 85 | 23 | 30 | 70 - 125 |
| 2,2-Dichloropropane | 12.4 | 12.3 | 99 | 3 | 30 | 65 - 135 |
| 2-Chlorotoluene | 12.4 | 11.1 | 89 | 19 | 30 | 70 - 130 |
| 2-Hexanone | 12.4 | 20.0 | 161 * | 67 * | 30 | 45 - 145 |
| 4-Chlorotoluene | 12.4 | 11.2 | 90 | 20 | 30 | 75 - 125 |
| 4-Methyl-2-pentanone | 12.4 | 14.5 | 116 | 34 * | 30 | 45 - 145 |
| Acetone | 12.4 | 35.3 | 284 * | 41 * | 30 | 20 - 160 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-FD001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MSD1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Acetonitrile | 124 | 129 | 104 | 49 * | 30 | 75 - 125 |
| Acrylonitrile | 12.4 | 12.6 | 102 | 23 | 30 | 75 - 125 |
| Benzene | 12.4 | 13.0 | 105 | 3 | 30 | 75 - 125 |
| Bromobenzene | 12.4 | 11.6 | 93 | 13 | 30 | 65 - 120 |
| Bromochloromethane | 12.4 | 13.3 | 107 | 15 | 30 | 70 - 125 |
| Bromodichloromethane | 12.4 | 11.1 | 89 | 6 | 30 | 70 - 130 |
| Bromoform | 12.4 | 7.56 | 61 | 11 | 30 | 55 - 135 |
| Bromomethane | 12.4 | 5.27 | 42 | 70 * | 30 | 30 - 160 |
| Carbon disulfide | 12.4 | 12.0 | 97 | 6 | 30 | 45 - 160 |
| Carbon tetrachloride | 12.4 | 10.3 | 83 | 2 | 30 | 65 - 135 |
| Chlorobenzene | 12.4 | 12.4 | 99 | 4 | 30 | 75 - 125 |
| Chlorodibromomethane | 12.4 | 10.3 | 83 | 5 | 30 | 65 - 130 |
| Chloroethane | 12.4 | 1.47 | 12 * | 5 | 30 | 40 - 155 |
| Chloroform | 12.4 | 14.2 | 114 | 10 | 30 | 70 - 125 |
| Chloromethane | 12.4 | 13.6 | 110 | 6 | 30 | 50 - 130 |
| cis-1,2-Dichloroethene | 12.4 | 16.0 | 128 * | 11 | 30 | 65 - 125 |
| cis-1,3-Dichloropropene | 12.4 | 10.2 | 82 | 7 | 30 | 70 - 125 |
| Cyclohexane | 12.4 | 11.3 | 91 | 1 | 30 | 75 - 125 |
| Dibromomethane | 12.4 | 14.0 | 112 | 9 | 30 | 75 - 130 |
| Dichlorodifluoromethane | 12.4 | 7.75 | 62 | 5 | 30 | 35 - 135 |
| Ethyl methacrylate | 12.4 | 12.5 | 100 | 1 | 30 | 75 - 125 |
| Ethylbenzene | 12.4 | 12.1 | 98 | 10 | 30 | 75 - 125 |
| Freon 113 | 12.4 | 10.0 | 81 | | 30 | 75 - 125 |
| Hexachlorobutadiene | 12.4 | 9.53 | 77 | 26 | 30 | 55 - 140 |
| Iodomethane | 12.4 | 6.22 U | 0 * | | 30 | 75 - 125 |
| Isopropylbenzene | 12.4 | 12.8 | 98 | 17 | 30 | 75 - 130 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-FD001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MSD1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| m,p-Xylenes | 24.9 | 24.2 | 97 | 10 | 30 | 80 - 125 |
| Methacrylonitrile | 12.4 | 16.3 | 131 * | 31 * | 30 | 75 - 125 |
| Methyl Acetate | 12.4 | 13.8 | 111 | 14 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 12.4 | 17.7 | 142 * | 23 | 30 | 65 - 125 |
| Methylcyclohexane | 12.4 | 10.7 | 86 | 14 | 30 | 75 - 125 |
| Methylene Chloride | 12.4 | 3.25 | 26 * | 37 * | 30 | 55 - 140 |
| Methylmethacrylate | 12.4 | 11.3 | 91 | 2 | 30 | 75 - 125 |
| Naphthalene | 12.4 | 45.9 | 139 * | 5 | 30 | 40 - 125 |
| n-Butylbenzene | 12.4 | 15.6 | 108 | 13 | 30 | 65 - 140 |
| n-Propylbenzene | 12.4 | 11.6 | 83 | 22 | 30 | 65 - 135 |
| o-Xylene | 12.4 | 12.2 | 98 | 10 | 30 | 75 - 125 |
| p-Isopropyltoluene | 12.4 | 10.5 | 84 | 30 * | 30 | 75 - 135 |
| Propionitrile | 12.4 | 12.8 | 103 | 32 * | 30 | 75 - 125 |
| sec-Butylbenzene | 12.4 | 11.7 | 81 | 28 | 30 | 65 - 130 |
| Styrene | 12.4 | 11.4 | 92 | 12 | 30 | 75 - 125 |
| tert-Butylbenzene | 12.4 | 10.9 | 88 | 26 | 30 | 65 - 130 |
| Tetrachloroethene | 12.4 | 23.9 | 192 * | 3 | 30 | 65 - 140 |
| Toluene | 12.4 | 11.6 | 93 | 9 | 30 | 70 - 125 |
| trans-1,2-Dichloroethene | 12.4 | 11.8 | 95 | 7 | 30 | 65 - 135 |
| trans-1,3-Dichloropropene | 12.4 | 10.2 | 82 | 7 | 30 | 65 - 125 |
| Trichloroethene | 12.4 | 17.8 | 143 * | 0.9 | 30 | 75 - 125 |
| Trichlorofluoromethane | 12.4 | 1.09 | 9 * | 16 | 30 | 25 - 185 |
| Vinyl acetate | 24.9 | 6.22 U | 0 * | | 30 | 75 - 125 |
| Vinyl chloride | 12.4 | 6.41 | 52 * | 6 | 30 | 60 - 125 |
| Xylene (Total) | 37.3 | 36.5 | 98 | 10 | 30 | 75 - 125 |

CENTAURI LABS™

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (85 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 115) |
|---|---|---|---|---|
| 1011013-01 | 101 | 39* | 92 | 95 |
| 1011013-02 | 105 | 93 | 99 | 99 |
| 1011013-03 | 102 | 91 | 91 | 97 |
| 1011013-04 | 107 | 95 | 101 | 98 |
| 1011013-05 | 109 | 94 | 101 | 98 |
| 1011013-06 | 106 | 92 | 102 | 98 |
| 1011013-07 | 106 | 93 | 103 | 98 |
| 1011013-08 | 106 | 93 | 103 | 98 |
| 1011013-09 | 110 | 92 | 106 | 99 |
| 1011013-10 | 138* | 81* | 117* | 100 |
| 1011013-11 | 108 | 94 | 104 | 98 |
| 1011013-12 | 108 | 92 | 107 | 97 |
| 1011013-14 | 106 | 88 | 87 | 94 |
| 1011013-15 | 110 | 92 | 104 | 98 |
| 1011013-16 | 104 | 39* | 90 | 92 |
| 1011013-17 | 99 | 53* | 72* | 96 |
| 1011013-18 | 107 | 88 | 100 | 94 |
| B047059-BLK1 | 103 | 89 | 102 | 96 |
| B047059-BS1 | 101 | 106 | 103 | 99 |
| B047059-BSD1 | 113 | 104 | 111 | 99 |

SO-001 ✓

SO-019 ✓

SO-031

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (85 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 115) |
|---|---|---|---|---|
| 1011013-13 | 137* | 99 | 118* | 101 |
| 1011013-19 | 103 | 96 | 101 | 100 |
| 1011013-20 | 105 | 95 | 104 | 100 |
| 1011013-21 | 100 | 101 | 92 | 99 |
| B048008-BLK1 | 106 | 95 | 102 | 98 |
| B048008-BS1 | 109 | 106 | 108 | 99 |
| B048008-MS1 | 102 | 107 | 90 | 99 |
| B048008-MSD1 | 120 | 95 | 100 | 93 |

6 0-023

CENTAURI LABS™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047036 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-SO-014-1010 (1011013-08 )** | | | *Lab File ID: B02890344.D* | | | *Analyzed: 11/13/10 01:49* | | | |
| 1,4-Dichlorobenzene-d4 | 4887765 | 11.281 | 8437360 | 11.274 | 58 | 50 - 200 | 0.0070 | +/-0.50 | |
| 1,4-Difluorobenzene | 12411510 | 4.122 | 13533830 | 4.119 | 92 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 2614503 | 7.577 | 2930313 | 7.576 | 89 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9307896 | 3.484 | 10365930 | 3.482 | 90 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-SO-017-1010 (1011013-09 )** | | | *Lab File ID: B02890345.D* | | | *Analyzed: 11/13/10 02:15* | | | |
| 1,4-Dichlorobenzene-d4 | 4770094 | 11.279 | 8437360 | 11.274 | 57 | 50 - 200 | 0.0050 | +/-0.50 | |
| 1,4-Difluorobenzene | 12339480 | 4.121 | 13533830 | 4.119 | 91 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2640597 | 7.577 | 2930313 | 7.576 | 90 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9054891 | 3.484 | 10365930 | 3.482 | 87 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-SO-019-1010 (1011013-10 )** | | | *Lab File ID: B02890346.D* | | | *Analyzed: 11/13/10 02:42* | | | |
| 1,4-Dichlorobenzene-d4 | 496101 | 11.297 | 8437360 | 11.274 | 6 | 50 - 200 | 0.0230 | +/-0.50 | * |
| 1,4-Difluorobenzene | 1924654 | 4.125 | 13533830 | 4.119 | 14 | 50 - 200 | 0.0060 | +/-0.50 | * |
| Chlorobenzene-d5 | 425978 | 7.585 | 2930313 | 7.576 | 15 | 50 - 200 | 0.0090 | +/-0.50 | * |
| Pentafluorobenzene | 1446266 | 3.489 | 10365930 | 3.482 | 14 | 50 - 200 | 0.0070 | +/-0.50 | * |
| **GKHMS-SO-021-1010 (1011013-11 )** | | | *Lab File ID: B02890347.D* | | | *Analyzed: 11/13/10 03:09* | | | |
| 1,4-Dichlorobenzene-d4 | 5135729 | 11.277 | 8437360 | 11.274 | 61 | 50 - 200 | 0.0030 | +/-0.50 | |
| 1,4-Difluorobenzene | 12238940 | 4.121 | 13533830 | 4.119 | 90 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2570207 | 7.577 | 2930313 | 7.576 | 88 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9053895 | 3.484 | 10365930 | 3.482 | 87 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-SO-022-1010 (1011013-12 )** | | | *Lab File ID: B02890348.D* | | | *Analyzed: 11/13/10 03:35* | | | |
| 1,4-Dichlorobenzene-d4 | 4531598 | 11.28 | 8437360 | 11.274 | 54 | 50 - 200 | 0.0060 | +/-0.50 | |
| 1,4-Difluorobenzene | 12076450 | 4.121 | 13533830 | 4.119 | 89 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2496453 | 7.577 | 2930313 | 7.576 | 85 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9017868 | 3.484 | 10365930 | 3.482 | 87 | 50 - 200 | 0.0020 | +/-0.50 | |

CENTAURI LABS™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047036 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047036-CCV1 )** | | | *Lab File ID: B02890331.D* | | | *Analyzed: 11/12/10 20:02* | | | |
| 1,4-Dichlorobenzene-d4 | 8437360 | 11.274 | 7318237 | 11.276 | 115 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Difluorobenzene | 13533830 | 4.119 | 1.714212E+07 | 4.121 | 79 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2930313 | 7.576 | 3469404 | 7.576 | 84 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 10365930 | 3.482 | 1.32552E+07 | 3.484 | 78 | 50 - 200 | -0.0020 | +/-0.50 | |
| **Blank (B047059-BLK1 )** | | | *Lab File ID: B02890332.D* | | | *Analyzed: 11/12/10 20:29* | | | |
| 1,4-Dichlorobenzene-d4 | 3940353 | 11.282 | 8437360 | 11.274 | 47 | 50 - 200 | 0.0080 | +/-0.50 | * |
| 1,4-Difluorobenzene | 11741030 | 4.121 | 13533830 | 4.119 | 87 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2383501 | 7.577 | 2930313 | 7.576 | 81 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 8916503 | 3.483 | 10365930 | 3.482 | 86 | 50 - 200 | 0.0010 | +/-0.50 | |
| **LCS Dup (B047059-BSD1 )** | | | *Lab File ID: B02890334.D* | | | *Analyzed: 11/12/10 21:22* | | | |
| 1,4-Dichlorobenzene-d4 | 7132334 | 11.274 | 8437360 | 11.274 | 85 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Difluorobenzene | 12220950 | 4.119 | 13533830 | 4.119 | 90 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 2545676 | 7.576 | 2930313 | 7.576 | 87 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 9320253 | 3.482 | 10365930 | 3.482 | 90 | 50 - 200 | 0.0000 | +/-0.50 | |
| **GKHMS-SO-001-1010 (1011013-01 )** | | | *Lab File ID: B02890337.D* | | | *Analyzed: 11/12/10 22:42* | | | |
| 1,4-Dichlorobenzene-d4 | 2847244 | 11.313 | 8437360 | 11.274 | 34 | 50 - 200 | 0.0390 | +/-0.50 | * |
| 1,4-Difluorobenzene | 12232500 | 4.093 | 13533830 | 4.119 | 90 | 50 - 200 | -0.0260 | +/-0.50 | |
| Chlorobenzene-d5 | 2310601 | 7.567 | 2930313 | 7.576 | 79 | 50 - 200 | -0.0090 | +/-0.50 | |
| Pentafluorobenzene | 9622587 | 3.447 | 10365930 | 3.482 | 93 | 50 - 200 | -0.0350 | +/-0.50 | |
| **GKHMS-SO-002-1010 (1011013-02 )** | | | *Lab File ID: B02890338.D* | | | *Analyzed: 11/12/10 23:09* | | | |
| 1,4-Dichlorobenzene-d4 | 5486641 | 11.274 | 8437360 | 11.274 | 65 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Difluorobenzene | 13418220 | 4.119 | 13533830 | 4.119 | 99 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 2891227 | 7.575 | 2930313 | 7.576 | 99 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 10089930 | 3.481 | 10365930 | 3.482 | 97 | 50 - 200 | -0.0010 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047036 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-SO-003-1010 (1011013-03 )** | | | *Lab File ID: B02890339.D* | | | *Analyzed: 11/12/10 23:36* | | | |
| 1,4-Dichlorobenzene-d4 | 4393913 | 11.279 | 8437360 | 11.274 | 52 | 50 - 200 | 0.0050 | +/-0.50 | |
| 1,4-Difluorobenzene | 12512300 | 4.107 | 13533830 | 4.119 | 92 | 50 - 200 | -0.0120 | +/-0.50 | |
| Chlorobenzene-d5 | 2627191 | 7.571 | 2930313 | 7.576 | 90 | 50 - 200 | -0.0050 | +/-0.50 | |
| Pentafluorobenzene | 9525399 | 3.467 | 10365930 | 3.482 | 92 | 50 - 200 | -0.0150 | +/-0.50 | |
| **GKHMS-SO-005-1010 (1011013-04 )** | | | *Lab File ID: B02890340.D* | | | *Analyzed: 11/13/10 00:02* | | | |
| 1,4-Dichlorobenzene-d4 | 5159869 | 11.281 | 8437360 | 11.274 | 61 | 50 - 200 | 0.0070 | +/-0.50 | |
| 1,4-Difluorobenzene | 12689050 | 4.121 | 13533830 | 4.119 | 94 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2685654 | 7.577 | 2930313 | 7.576 | 92 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9573611 | 3.484 | 10365930 | 3.482 | 92 | 50 - 200 | 0.0020 | +/-0.50 | |
| **GKHMS-SO-007-1010 (1011013-05 )** | | | *Lab File ID: B02890341.D* | | | *Analyzed: 11/13/10 00:29* | | | |
| 1,4-Dichlorobenzene-d4 | 5095490 | 11.279 | 8437360 | 11.274 | 60 | 50 - 200 | 0.0050 | +/-0.50 | |
| 1,4-Difluorobenzene | 12747050 | 4.121 | 13533830 | 4.119 | 94 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2714986 | 7.576 | 2930313 | 7.576 | 93 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 9489104 | 3.483 | 10365930 | 3.482 | 92 | 50 - 200 | 0.0010 | +/-0.50 | |
| **GKHMS-SO-011-1010 (1011013-06 )** | | | *Lab File ID: B02890342.D* | | | *Analyzed: 11/13/10 00:56* | | | |
| 1,4-Dichlorobenzene-d4 | 4973318 | 11.281 | 8437360 | 11.274 | 59 | 50 - 200 | 0.0070 | +/-0.50 | |
| 1,4-Difluorobenzene | 12679120 | 4.123 | 13533830 | 4.119 | 94 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 2708274 | 7.578 | 2930313 | 7.576 | 92 | 50 - 200 | 0.0020 | +/-0.50 | |
| Pentafluorobenzene | 9496900 | 3.485 | 10365930 | 3.482 | 92 | 50 - 200 | 0.0030 | +/-0.50 | |
| **GKHMS-SO-012-1010 (1011013-07 )** | | | *Lab File ID: B02890343.D* | | | *Analyzed: 11/13/10 01:22* | | | |
| 1,4-Dichlorobenzene-d4 | 4938861 | 11.28 | 8437360 | 11.274 | 59 | 50 - 200 | 0.0060 | +/-0.50 | |
| 1,4-Difluorobenzene | 12432310 | 4.121 | 13533830 | 4.119 | 92 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2650770 | 7.577 | 2930313 | 7.576 | 90 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9315458 | 3.484 | 10365930 | 3.482 | 90 | 50 - 200 | 0.0020 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047036 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| GKHMS-SO-025-1010 (1011013-14 ) | | | *Lab File ID: B02890350.D* | | | *Analyzed: 11/13/10 04:29* | | | |
| 1,4-Dichlorobenzene-d4 | 3405800 | 11.282 | 8437360 | 11.274 | 40 | 50 - 200 | 0.0080 | +/-0.50 | * |
| 1,4-Difluorobenzene | 11330070 | 4.106 | 13533830 | 4.119 | 84 | 50 - 200 | -0.0130 | +/-0.50 | |
| Chlorobenzene-d5 | 2251023 | 7.571 | 2930313 | 7.576 | 77 | 50 - 200 | -0.0050 | +/-0.50 | |
| Pentafluorobenzene | 8619417 | 3.464 | 10365930 | 3.482 | 83 | 50 - 200 | -0.0180 | +/-0.50 | |
| GKHMS-SO-028-1010 (1011013-15 ) | | | *Lab File ID: B02890351.D* | | | *Analyzed: 11/13/10 04:55* | | | |
| 1,4-Dichlorobenzene-d4 | 4915533 | 11.279 | 8437360 | 11.274 | 58 | 50 - 200 | 0.0050 | +/-0.50 | |
| 1,4-Difluorobenzene | 12694800 | 4.121 | 13533830 | 4.119 | 94 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2688615 | 7.577 | 2930313 | 7.576 | 92 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9370845 | 3.484 | 10365930 | 3.482 | 90 | 50 - 200 | 0.0020 | +/-0.50 | |
| GKHMS-SO-030-1010 (1011013-16 ) | | | *Lab File ID: B02890352.D* | | | *Analyzed: 11/13/10 05:22* | | | |
| 1,4-Dichlorobenzene-d4 | 2423356 | 11.309 | 8437360 | 11.274 | 29 | 50 - 200 | 0.0350 | +/-0.50 | * |
| 1,4-Difluorobenzene | 11253970 | 4.098 | 13533830 | 4.119 | 83 | 50 - 200 | -0.0210 | +/-0.50 | |
| Chlorobenzene-d5 | 2042199 | 7.569 | 2930313 | 7.576 | 70 | 50 - 200 | -0.0070 | +/-0.50 | |
| Pentafluorobenzene | 8750910 | 3.453 | 10365930 | 3.482 | 84 | 50 - 200 | -0.0290 | +/-0.50 | |
| GKHMS-SO-031-1010 (1011013-17 ) | | | *Lab File ID: B02890353.D* | | | *Analyzed: 11/13/10 05:48* | | | |
| 1,4-Dichlorobenzene-d4 | 3958633 | 11.282 | 8437360 | 11.274 | 47 | 50 - 200 | 0.0080 | +/-0.50 | * |
| 1,4-Difluorobenzene | 11664970 | 4.105 | 13533830 | 4.119 | 86 | 50 - 200 | -0.0140 | +/-0.50 | |
| Chlorobenzene-d5 | 2421241 | 7.57 | 2930313 | 7.576 | 83 | 50 - 200 | -0.0060 | +/-0.50 | |
| Pentafluorobenzene | 8927691 | 3.463 | 10365930 | 3.482 | 86 | 50 - 200 | -0.0190 | +/-0.50 | |
| GKHMS-SO-032-1010 (1011013-18 ) | | | *Lab File ID: B02890354.D* | | | *Analyzed: 11/13/10 06:15* | | | |
| 1,4-Dichlorobenzene-d4 | 4057479 | 11.278 | 8437360 | 11.274 | 48 | 50 - 200 | 0.0040 | +/-0.50 | * |
| 1,4-Difluorobenzene | 11618180 | 4.121 | 13533830 | 4.119 | 86 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2377088 | 7.576 | 2930313 | 7.576 | 81 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 8971157 | 3.483 | 10365930 | 3.482 | 87 | 50 - 200 | 0.0010 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047036 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| LCS (B047059-BS1 ) | | | *Lab File ID: B02890356.D* | | | *Analyzed: 11/13/10 07:08* | | | |
| 1,4-Dichlorobenzene-d4 | 8574201 | 11.274 | 8437360 | 11.274 | 102 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Difluorobenzene | 13100780 | 4.12 | 13533830 | 4.119 | 97 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2798309 | 7.576 | 2930313 | 7.576 | 95 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 10188300 | 3.483 | 10365930 | 3.482 | 98 | 50 - 200 | 0.0010 | +/-0.50 | |

CENTAURI LABS™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048008 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-SO-FD002-1010 (1011013-20 )** | | | *Lab File ID: B02890390.D* | | | *Analyzed: 11/15/10 14:47* | | | |
| 1,4-Dichlorobenzene-d4 | 4598776 | 11.28 | 10149770 | 11.274 | 45 | 50 - 200 | 0.0060 | +/-0.50 | * |
| 1,4-Difluorobenzene | 11051550 | 4.121 | 15337070 | 4.12 | 72 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2363208 | 7.578 | 3456145 | 7.577 | 68 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 8351970 | 3.484 | 11796320 | 3.483 | 71 | 50 - 200 | 0.0010 | +/-0.50 | |
| **GKHMS-SO-FD001-1010 (1011013-21 )** | | | *Lab File ID: B02890391.D* | | | *Analyzed: 11/15/10 15:13* | | | |
| 1,4-Dichlorobenzene-d4 | 6220872 | 11.28 | 10149770 | 11.274 | 61 | 50 - 200 | 0.0060 | +/-0.50 | |
| 1,4-Difluorobenzene | 13649780 | 4.109 | 15337070 | 4.12 | 89 | 50 - 200 | -0.0110 | +/-0.50 | |
| Chlorobenzene-d5 | 2903859 | 7.572 | 3456145 | 7.577 | 84 | 50 - 200 | -0.0050 | +/-0.50 | |
| Pentafluorobenzene | 10435540 | 3.468 | 11796320 | 3.483 | 88 | 50 - 200 | -0.0150 | +/-0.50 | |
| **Matrix Spike (B048008-MS1 )** | | | *Lab File ID: B02890393.D* | | | *Analyzed: 11/15/10 16:34* | | | |
| 1,4-Dichlorobenzene-d4 | 7695116 | 11.28 | 10149770 | 11.274 | 76 | 50 - 200 | 0.0060 | +/-0.50 | |
| 1,4-Difluorobenzene | 13348290 | 4.108 | 15337070 | 4.12 | 87 | 50 - 200 | -0.0120 | +/-0.50 | |
| Chlorobenzene-d5 | 2842510 | 7.572 | 3456145 | 7.577 | 82 | 50 - 200 | -0.0050 | +/-0.50 | |
| Pentafluorobenzene | 10284910 | 3.468 | 11796320 | 3.483 | 87 | 50 - 200 | -0.0150 | +/-0.50 | |
| **Matrix Spike Dup (B048008-MSD1 )** | | | *Lab File ID: B02890394.D* | | | *Analyzed: 11/15/10 17:24* | | | |
| 1,4-Dichlorobenzene-d4 | 2182558 | 11.274 | 10149770 | 11.274 | 22 | 50 - 200 | 0.0000 | +/-0.50 | * |
| 1,4-Difluorobenzene | 5208133 | 4.111 | 15337070 | 4.12 | 34 | 50 - 200 | -0.0090 | +/-0.50 | * |
| Chlorobenzene-d5 | 1010035 | 7.572 | 3456145 | 7.577 | 29 | 50 - 200 | -0.0050 | +/-0.50 | * |
| Pentafluorobenzene | 3818654 | 3.473 | 11796320 | 3.483 | 32 | 50 - 200 | -0.0100 | +/-0.50 | * |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048008 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048008-CCV1 )** | | | *Lab File ID: B02890379.D* | | | *Analyzed: 11/15/10 09:49* | | | |
| 1,4-Dichlorobenzene-d4 | 10149770 | 11.274 | 7318237 | 11.276 | 139 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Difluorobenzene | 15337070 | 4.12 | 1.714212E+07 | 4.121 | 89 | 50 - 200 | -0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3456145 | 7.577 | 3469404 | 7.576 | 100 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11796320 | 3.483 | 1.32552E+07 | 3.484 | 89 | 50 - 200 | -0.0010 | +/-0.50 | |
| **Blank (B048008-BLK1 )** | | | *Lab File ID: B02890386.D* | | | *Analyzed: 11/15/10 12:59* | | | |
| 1,4-Dichlorobenzene-d4 | 6778793 | 11.277 | 10149770 | 11.274 | 67 | 50 - 200 | 0.0030 | +/-0.50 | |
| 1,4-Difluorobenzene | 16444530 | 4.122 | 15337070 | 4.12 | 107 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3371044 | 7.578 | 3456145 | 7.577 | 98 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12503460 | 3.484 | 11796320 | 3.483 | 106 | 50 - 200 | 0.0010 | +/-0.50 | |
| **LCS (B048008-BS1 )** | | | *Lab File ID: B02890387.D* | | | *Analyzed: 11/15/10 13:26* | | | |
| 1,4-Dichlorobenzene-d4 | 9365005 | 11.275 | 10149770 | 11.274 | 92 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Difluorobenzene | 15752900 | 4.121 | 15337070 | 4.12 | 103 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3261571 | 7.577 | 3456145 | 7.577 | 94 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 12055060 | 3.484 | 11796320 | 3.483 | 102 | 50 - 200 | 0.0010 | +/-0.50 | |
| **GKHMS-SO-023-1010 (1011013-13 )** | | | *Lab File ID: B02890388.D* | | | *Analyzed: 11/15/10 13:53* | | | |
| 1,4-Dichlorobenzene-d4 | 4030147 | 11.281 | 10149770 | 11.274 | 40 | 50 - 200 | 0.0070 | +/-0.50 | * |
| 1,4-Difluorobenzene | 8452133 | 4.108 | 15337070 | 4.12 | 55 | 50 - 200 | -0.0120 | +/-0.50 | |
| Chlorobenzene-d5 | 1999257 | 7.572 | 3456145 | 7.577 | 58 | 50 - 200 | -0.0050 | +/-0.50 | |
| Pentafluorobenzene | 5683240 | 3.467 | 11796320 | 3.483 | 48 | 50 - 200 | -0.0160 | +/-0.50 | * |
| **GKHMS-SO-034-1010 (1011013-19 )** | | | *Lab File ID: B02890389.D* | | | *Analyzed: 11/15/10 14:20* | | | |
| 1,4-Dichlorobenzene-d4 | 6480344 | 11.278 | 10149770 | 11.274 | 64 | 50 - 200 | 0.0040 | +/-0.50 | |
| 1,4-Difluorobenzene | 14600470 | 4.121 | 15337070 | 4.12 | 95 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3110064 | 7.577 | 3456145 | 7.577 | 90 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11050890 | 3.484 | 11796320 | 3.483 | 94 | 50 - 200 | 0.0010 | +/-0.50 | |

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\B\111110\
Data File : B02890293.D
Acq On : 11 Nov 2010 12:47 pm
Operator : MP
Sample : SEQ-CAL-7
Misc : 50.0PPB
ALS Vial : 9 Sample Multiplier: 1

IS.

Quant Time: Nov 17 16:57:06 2010
Quant Method : H:\GCMSDATA\B\METHODS\8260_111110.M
Quant Title :
QLast Update : Wed Nov 17 16:31:23 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Pentafluorobenzene | 3.479 | 168 | 12789254 | 10.00 | PPB | | 0.00 |
| 35) 1,4-Difluorobenzene | 4.117 | 114 | 17172013 | 10.00 | PPB | | 0.00 |
| 51) Chlorobenzene-d5 | 7.578 | 119 | 3908689 | 10.00 | PPB | | 0.00 |
| 80) 1,4-Dichlorobenzene-d4 | 11.282 | 150 | 9894111 | 10.00 | PPB | | 0.01 |
| System Monitoring Compounds | | | | | | | |
| 28) Dibromofluoromethane | 3.429 | 111 | 4254959 | 10.65 | PPB | | 0.00 |
| 33) 1,2-Dichloroethane-d4 | 3.737 | 65 | 3035196 | 10.67 | PPB | | 0.00 |
| 47) Toluene-d8 | 5.649 | 98 | 18275531 | 10.38 | PPB | | 0.00 |
| 66) 4-Bromofluorobenzene | 9.404 | 95 | 6154651 | 10.63 | PPB | | 0.00 |
| Target Compounds | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.074 | 85 | 24013947 | 51.29 | PPB | | 98 |
| 3) Chloromethane | 1.175 | 50 | 19287420 | 54.51 | PPB | | 99 |
| 4) Vinyl chloride | 1.226 | 62 | 25133299 | 51.49 | PPB | | 94 |
| 5) Bromomethane | 1.390 | 94 | 1353101 | 36.90 | PPB | | 95 |
| 6) Chloroethane | 1.439 | 64 | 2688182 | 7.41 | PPB | | 99 |
| 7) Trichlorofluoromethane | 1.542 | 101 | 36697439 | 44.40 | PPB | | 99 |
| 8) Freon 113 | 1.821 | 101 | 26064225 | 48.80 | PPB | | 95 |
| 9) 1,1-Dichloroethene | 1.845 | 96 | 18006121 | 47.80 | PPB | | 93 |
| 10) Methylene chloride | 2.171 | 84 | 15095417 | 40.12 | PPB | # | 82 |
| 11) Methyl Acetate | 2.108 | 74 | 1411717 | 55.85 | PPB | # | 50 |
| 12) Iodomethane | 1.964 | 76 | 118379464 | 47.50 | | | 97 |
| 13) Trans-1,2-dichloroethene | 2.304 | 61 | 29381477 | 48.52 | PPB | | 93 |
| 14) 1,1-Dichloroethane | 2.616 | 63 | 37774952 | 50.18 | PPB | | 98 |
| 15) Acetone | 1.943 | 43 | 2417557 | 100.71 | PPB | | 91 |
| 16) MTBE | 2.306 | 73 | 22308576 | 49.18 | PPB | | 96 |
| 17) Acrylonitrile | 2.387 | 52 | 8549040 | 271.47 | PPB | | 98 |
| 18) Acetonitrile | 2.157 | 41 | 5783528 | 469.62 | PPB | | 93 |
| 19) Carbon disulfide | 1.964 | 76 | 118379464 | 95.00 | PPB | | 100 |
| 20) Vinyl Acetate | 2.651 | 43 | 21548340 | 113.28 | PPB | # | 85 |
| 21) Propionitrile | 3.208 | 54 | 819382 | 56.50 | PPB | # | 64 |
| 22) 2,2-Dichloropropane | 3.012 | 41 | 20808439 | 53.41 | PPB | # | 78 |
| 23) cis-1,2-Dichloroethene | 3.042 | 96 | 23217524 | 47.81 | PPB | | 94 |
| 24) Bromochloromethane | 3.234 | 128 | 7376963 | 49.01 | PPB | # | 75 |
| 25) Chloroform | 3.292 | 83 | 36714134 | 50.66 | PPB | | 98 |
| 26) 1,1,1-Trichloroethane | 3.395 | 97 | 38180446 | 52.75 | PPB | | 96 |
| 27) Cychlohexane | 3.368 | 56 | 47407520 | 48.59 | PPB | # | 84 |
| 29) Carbon tetrachloride | 3.493 | 117 | 34944477 | 50.99 | PPB | # | 82 |
| 30) Methyl Methacrylate | 3.368 | 41 | 23997722 | 48.73 | PPB | # | 100 |
| 31) Methacrylonitrile | 3.283 | 67 | 2742503 | 53.45 | PPB | # | 84 |
| 32) Ethyl Methacrylate | 6.235 | 69 | 12611104 | 61.54 | PPB | | 96 |
| 34) Isobutyl Alcohol | 3.094 | 43 | 5104037 | 1021.18 | PPB | # | 76 |
| 36) 2-Butanone | 3.094 | 43 | 5104037 | 99.46 | PPB | # | 78 |
| 37) 2-Chloroethylvinylether | 5.246 | 63 | 1187082m | Below Cal | | | |
| 38) 1.1-Dichloropropene | 3.532 | 75 | 36824899 | 47.48 | PPB | # | 94 |
| 39) Benzene | 3.707 | 78 | 93756599 | 45.80 | PPB | | 100 |
| 40) 1,2-Dchloroethane | 3.806 | 62 | 16490777 | 47.13 | PPB | | 95 |
| 41) Trichloroethene | 4.319 | 95 | 26342183 | 49.34 | PPB | | 97 |
| 42) Methylcyclohexane | 4.420 | 83 | 52943618 | 49.82 | PPB | | 98 |
| 43) 1,2-Dchloropropane | 4.601 | 63 | 19399498 | 49.80 | PPB | | 98 |
| 44) Dibromomethane | 4.722 | 93 | 6391477 | 52.23 | PPB | | 100 |
| 45) Bromodichloromethane | 4.895 | 83 | 23643389 | 53.03 | PPB | | 100 |
| 46) cis-1,3-Dichloropropene | 5.414 | 75 | 26537244 | 70.82 | PPB | | 98 |
| 48) Toluene | 5.731 | 92 | 60922367 | 46.50 | PPB | | 97 |
| 49) trans-1,3-Dichloropropene | 6.146 | 75 | 19141366 | 51.37 | PPB | | 99 |
| 50) 1,1,2-Trichloroethane | 6.365 | 83 | 8016869 | 48.35 | PPB | | 98 |

Quantitation Report (QT Reviewed)

Data Path : H:\GCMSDATA\B\111110\
Data File : B02890293.D
Acq On : 11 Nov 2010 12:47 pm
Operator : MP
Sample : SEQ-CAL-7
Misc : 50.0PPB
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 17 16:57:06 2010
Quant Method : H:\GCMSDATA\B\METHODS\8260_111110.M
Quant Title :
QLast Update : Wed Nov 17 16:31:23 2010
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 52) 4-Methyl-2-Pentanone | 5.632 | 43 | 10812946 | 97.67 PPB | | 98 |
| 53) 2-Hexanone | 6.717 | 43 | 7631899 | 116.34 PPB | # | 38 |
| 54) Tetrachloroethene | 6.364 | 166 | 30923824 | 47.40 PPB | | 94 |
| 55) 1,3-Dichloropropane | 6.579 | 76 | 19236431 | 50.05 PPB | | 100 |
| 56) Dibromochloromethane | 6.815 | 129 | 12865176 | 54.84 PPB | | 100 |
| 57) 1,2-Dibromomethane | 6.951 | 107 | 8387736 | 51.28 PPB | | 100 |
| 58) Chlorobenzene | 7.618 | 112 | 61226694 | 46.91 PPB | | 99 |
| 59) 1,1,1,2-Tetrachloroethane | 7.787 | 131 | 17718667 | 47.97 PPB | | 98 |
| 60) Ethylbenzene | 7.775 | 91 | 116854993 | 45.87 PPB | | 99 |
| 61) m,p-xylene | 7.969 | 106 | 83760721 | 84.99 PPB | # | 1 |
| 62) o-xylene | 8.549 | 106 | 42460939 | 48.53 PPB | | 95 |
| 63) Styrene | 8.603 | 104 | 67112293 | 50.41 PPB | | 100 |
| 64) Bromoform | 8.868 | 173 | 6667677 | 58.73 PPB | | 99 |
| 65) Isopropylbenzene | 9.125 | 105 | 121116366 | 49.68 PPB | | 98 |
| 67) Bromobenzene | 9.576 | 156 | 22858105 | 50.73 PPB | # | 94 |
| 68) 1,1,2,2-Tetrachloroethane | 9.789 | 83 | 8079076 | 45.13 PPB | | 99 |
| 69) 1,2,3-Trichloropropane | 9.820 | 75 | 7857103 | 50.41 PPB | # | 45 |
| 70) N-propylbenzene | 9.789 | 91 | 147696530 | 49.47 PPB | # | 50 |
| 71) 2-Chlorotoluene | 9.909 | 91 | 81640932 | 49.00 PPB | | 97 |
| 72) 4-Chlorotoluene | 10.111 | 91 | 83328161 | 47.82 PPB | | 98 |
| 73) 1,3,5-Trimethylbenzene | 10.120 | 105 | 95592634 | 47.61 PPB | | 97 |
| 74) Tert-butylbenzene | 10.603 | 119 | 96964916 | 51.34 PPB | # | 79 |
| 75) 1,2,4-Trimethylbenzene | 10.716 | 105 | 98980698 | 53.77 PPB | | 98 |
| 76) Sec-butylbenzene | 10.977 | 105 | 143271472 | 50.12 PPB | | 97 |
| 77) 1,3-Dichlorobenzene | 11.144 | 146 | 49751782 | 52.40 PPB | | 97 |
| 78) 4-Isoprpylbenzene | 11.261 | 119 | 119707035 | 51.91 PPB | # | 84 |
| 79) 1,4-Dichlorobenzene | 11.323 | 146 | 47169920 | 51.10 PPB | | 97 |
| 81) 1,2-Dichlorobenzene | 11.922 | 146 | 36005150 | 49.77 PPB | # | 30 |
| 82) n-Butylbenzene | 11.949 | 91 | 102579868 | 59.59 PPB | | 92 |
| 83) 1,2-Dibromo-3-Chloropr... | 13.335 | 75 | 1137984 | 67.60 PPB | | 94 |
| 84) 1,2,4-Trichlorobenzene | 14.711 | 180 | 25280485 | 60.06 PPB | | 100 |
| 85) Hexachlorobutadiene | 14.985 | 225 | 27323085 | 62.15 PPB | | 96 |
| 86) Naphthalene | 15.106 | 128 | 23790917 | 58.27 PPB | | 98 |
| 87) 1,2,3-Trichlorobenzene | 15.514 | 180 | 19418457 | 59.63 PPB | # | 89 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

IS - 1,4-dichlorobenzene-d4

CENTAURI LABS™

# SW8270C SIM

7210 Corporate Court, Frederick, MD 21703 P:(240) 575-1150 F: (301) 620-0731 www.centaurilabs.com

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |

# INITIAL CALIBRATION STANDARDS

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046039 | Instrument: | GCMS-D |
| Calibration: | 0111602 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001979 | DFTPP050 WORKING STANDARD | S046039-TUN1 | D46148.D | 11/03/10 11:30 |
| 0001565 | SSTD001 8270LL 1/5ppm | S046039-CAL5 | D46149.D | 11/03/10 11:53 |
| 0001811 | SSTD00.05 8270LL 0.05/0.25ppm | S046039-CAL1 | D46150.D | 11/03/10 12:17 |
| 0001810 | SSTD00.1 8270LL 0.1/0.5ppm | S046039-CAL2 | D46151.D | 11/03/10 12:41 |
| 0001562 | SSTD00.2 8270LL 0.2/1ppm | S046039-CAL3 | D46152.D | 11/03/10 13:06 |
| 0001563 | SSTD00.5 8270LL 0.5/2.5ppm | S046039-CAL4 | D46153.D | 11/03/10 13:30 |
| 0001566 | SSTD02.5 8270LL 2.5/12.5ppm | S046039-CAL6 | D46154.D | 11/03/10 13:54 |
| 0001567 | SSTD005 8270LL 5/25ppm | S046039-CAL7 | D46155.D | 11/03/10 14:19 |
| 0001568 | SSTD010 8270LL 10/50ppm | S046039-CAL8 | D46156.D | 11/03/10 14:43 |
| 0001561 | SSTD020 8270LL 20/100ppm | S046039-CAL9 | D46157.D | 11/03/10 15:07 |
| 0002011 | SSTD02.5ICV 8270LL 2.5 PPM | S046039-SCV1 | D46158.D | 11/03/10 15:49 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# INITIAL CALIBRATION DATA

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6998678 | 0.6928788 | 0.7861832 | 0.7182898 | 0.7454438 | 0.61871 |
| Acenaphthene | 1.35609 | 1.360759 | 1.542331 | 1.393121 | 1.417282 | 1.167548 |
| Acenaphthylene | 2.086527 | 2.173511 | 2.491196 | 2.304639 | 2.469502 | 2.015595 |
| Anthracene | 1.149397 | 1.195438 | 1.414392 | 1.285541 | 1.359337 | 1.083758 |
| Benzo[a]anthracene | 1.729219 | 1.635469 | 1.813508 | 1.628326 | 1.718838 | 1.44421 |
| Benzo[a]pyrene | 2.070213 | 2.152228 | 2.357776 | 2.177479 | 2.432008 | 2.360145 |
| Benzo[b]fluoranthene | 2.246619 | 2.450026 | 2.745016 | 2.563208 | 2.684552 | 2.708263 |
| Benzo[g,h,i]perylene | 1.621029 | 1.623379 | 1.846475 | 1.621483 | 1.867722 | 1.766085 |
| Benzo[k]fluoranthene | 2.554631 | 2.745418 | 2.750892 | 2.509434 | 2.719822 | 2.637611 |
| Carbazole | | | | | | |
| Chrysene | 1.633828 | 1.648224 | 1.866568 | 1.657847 | 1.728138 | 1.451514 |
| Dibenz[a,h]anthracene | 1.483124 | 1.483425 | 1.698972 | 1.573097 | 1.820535 | 1.690607 |
| Fluoranthene | 1.147919 | 1.226292 | 1.417924 | 1.322613 | 1.35443 | 1.086918 |
| Fluorene | 1.312635 | 1.311524 | 1.539282 | 1.413423 | 1.529181 | 1.220159 |
| Indeno[1,2,3-cd]pyrene | 2.025178 | 2.055117 | 2.35135 | 2.143138 | 2.49272 | 2.320363 |
| Naphthalene | 1.206408 | 1.218463 | 1.346238 | 1.232176 | 1.223558 | 1.165698 |
| Phenanthrene | 1.297902 | 1.313994 | 1.460657 | 1.328181 | 1.32559 | 1.074443 |
| Pyrene | 2.116627 | 2.296767 | 2.490596 | 2.333519 | 2.284912 | 2.077411 |
| 2-Fluorobiphenyl | 1.610498 | 1.620703 | 1.860345 | 1.676616 | 1.680071 | 1.416445 |
| Nitrobenzene-d5 | 0.3799167 | 0.3872439 | 0.4331469 | 0.3960707 | 0.4245936 | 0.3431777 |
| Terphenyl-d14 | 0.981781 | 1.066537 | 1.231772 | 1.108824 | 1.08851 | 0.9848726 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6906016 | 0.6715998 | 0.6387307 | | | |
| Acenaphthene | 1.308477 | 1.243833 | 1.133641 | | | |
| Acenaphthylene | 2.290065 | 2.191529 | 1.97907 | | | |
| Anthracene | 1.242426 | 1.185892 | 1.132079 | | | |
| Benzo[a]anthracene | 1.562415 | 1.496959 | 1.418862 | | | |
| Benzo[a]pyrene | 2.31118 | 2.256053 | 2.168264 | | | |
| Benzo[b]fluoranthene | 2.449553 | 2.584195 | 2.489339 | | | |
| Benzo[g,h,i]perylene | 1.715931 | 1.685418 | 1.62047 | | | |
| Benzo[k]fluoranthene | 2.595031 | 2.355483 | 2.209489 | | | |
| Carbazole | | | | | | |
| Chrysene | 1.530943 | 1.447942 | 1.359459 | | | |
| Dibenz[a,h]anthracene | 1.653509 | 1.640184 | 1.593958 | | | |
| Fluoranthene | 1.235483 | 1.171686 | 1.152857 | | | |
| Fluorene | 1.408747 | 1.358794 | 1.264352 | | | |
| Indeno[1,2,3-cd]pyrene | 2.265913 | 2.244316 | 2.162238 | | | |
| Naphthalene | 1.271896 | 1.232873 | 1.173873 | | | |
| Phenanthrene | 1.227056 | 1.161614 | 1.111768 | | | |
| Pyrene | 2.143779 | 1.993386 | 1.77759 | | | |
| 2-Fluorobiphenyl | 1.592496 | 1.52104 | 1.347374 | | | |
| Nitrobenzene-d5 | 0.3923432 | 0.4061396 | 0.4113819 | | | |
| Terphenyl-d14 | 1.036812 | 0.9830102 | 0.8780064 | | | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46158.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S046039 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S046039-SCV1 | Injection Time: | 15:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 2500 | 2450 | 0.6958117 | 0.6817819 | | -2.0 | 20 |
| Acenaphthene | A | 2500 | 2370 | 1.324787 | 1.25343 | | -5.4 | 20 |
| Acenaphthylene | A | 2500 | 2390 | 2.222404 | 2.121 | | -4.6 | 20 |
| Anthracene | A | 2500 | 2380 | 1.227584 | 1.168661 | | -4.8 | 20 |
| Benzo[a]anthracene | A | 2500 | 2330 | 1.605312 | 1.496478 | | -6.8 | 20 |
| Benzo[a]pyrene | A | 2500 | 2370 | 2.253927 | 2.136756 | | -5.2 | 20 |
| Benzo[b]fluoranthene | A | 2500 | 2270 | 2.546752 | 2.312748 | | -9.2 | 20 |
| Benzo[g,h,i]perylene | A | 2500 | 2450 | 1.707555 | 1.675813 | | -1.9 | 20 |
| Benzo[k]fluoranthene | A | 2500 | 2380 | 2.564201 | 2.441688 | | -4.8 | 20 |
| Chrysene | A | 2500 | 2280 | 1.591607 | 1.453402 | | -8.7 | 20 |
| Dibenz[a,h]anthracene | A | 2500 | 2440 | 1.626379 | 1.584666 | | -2.6 | 20 |
| Fluoranthene | A | 2500 | 2350 | 1.235125 | 1.161404 | | -6.0 | 20 |
| Fluorene | A | 2500 | 2370 | 1.373122 | 1.301104 | | -5.2 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 2500 | 2260 | 2.228926 | 2.014394 | | -9.6 | 20 |
| Naphthalene | A | 2500 | 2480 | 1.230131 | 1.221897 | | -0.7 | 20 |
| Phenanthrene | A | 2500 | 2280 | 1.255689 | 1.144927 | | -8.8 | 20 |
| Pyrene | A | 2500 | 2400 | 2.168287 | 2.080985 | | -4.0 | 20 |
| 2-Fluorobiphenyl | A | 2500 | 2440 | 1.591732 | 1.552743 | | -2.4 | 20 |
| Nitrobenzene-d5 | A | 2500 | 2470 | 0.3971127 | 0.3917262 | | -1.4 | 20 |
| Terphenyl-d14 | A | 2500 | 2360 | 1.040014 | 0.9812326 | | -5.7 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46241.D | Injection Date: | 11/15/10 |
| Instrument ID: | GCMS-D | Injection Time: | 15:44 |
| Sequence: | S047051 | Lab Sample ID: | S047051-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.3 | PASS |
| 70 | Less than 2% of 69 | 0.983 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 49.1 | PASS |
| 197 | Less than 1% of 198 | 0.0964 | PASS |
| 199 | 5 - 9% of 198 | 6.29 | PASS |
| 275 | 10 - 30% of 198 | 20.4 | PASS |
| 365 | 1 - 200% of 198 | 2.37 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |
| 441 | Less than 100% of 443 | 76 | PASS |
| 442 | 40 - 200% of 198 | 53.9 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047051-CCV1 | D46242.D | 11/15/2010 | 15:59:00 |
| Blank | B046136-BLK1 | D46257.D | 11/15/2010 | 22:06:00 |
| LCS | B046136-BS1 | D46258.D | 11/15/2010 | 22:30:00 |
| Matrix Spike | B046136-MS1 | D46259.D | 11/15/2010 | 22:54:00 |
| Matrix Spike Dup | B046136-MSD1 | D46260.D | 11/15/2010 | 23:19:00 |
| GKHMS-SO-FD001-1010 | 1011013-21 | D46263.D | 11/16/2010 | 0:32:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46242.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S047051 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S047051-CCV1 | Injection Time: | 15:59 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1000 | 0.6958117 | 0.6971865 | | 0.2 | 20 |
| Acenaphthene | A | 1000 | 1050 | 1.324787 | 1.391577 | | 5.0 | 20 |
| Acenaphthylene | A | 1000 | 1090 | 2.222404 | 2.428374 | | 9.3 | 20 |
| Anthracene | A | 1000 | 1050 | 1.227584 | 1.293011 | | 5.3 | 20 |
| Benzo[a]anthracene | A | 1000 | 1050 | 1.605312 | 1.692061 | | 5.4 | 20 |
| Benzo[a]pyrene | A | 1000 | 1100 | 2.253927 | 2.469795 | | 9.6 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1040 | 2.546752 | 2.645648 | | 3.9 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 1010 | 1.707555 | 1.731324 | | 1.4 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1170 | 2.564201 | 3.006795 | | 17.3 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.754186 | | 10.2 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 995 | 1.626379 | 1.617862 | | -0.5 | 20 |
| Fluoranthene | A | 1000 | 1020 | 1.235125 | 1.261707 | | 2.2 | 20 |
| Fluorene | A | 1000 | 1040 | 1.373122 | 1.428469 | | 4.0 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 1030 | 2.228926 | 2.291624 | | 2.8 | 20 |
| Naphthalene | A | 1000 | 972 | 1.230131 | 1.19618 | | -2.8 | 20 |
| Phenanthrene | A | 1000 | 999 | 1.255689 | 1.254105 | | -0.1 | 20 |
| Pyrene | A | 1000 | 1030 | 2.168287 | 2.224069 | | 2.6 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1080 | 1.591732 | 1.717497 | | 7.9 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1120 | 0.3971127 | 0.444155 | | 11.8 | 20 |
| Terphenyl-d14 | A | 1000 | 995 | 1.040014 | 1.034785 | | -0.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S048009-CCV1 | D46266.D | 11/16/2010 | 10:40:00 |
| Blank | B048004-BLK1 | D46267.D | 11/16/2010 | 11:06:00 |
| LCS | B048004-BS1 | D46268.D | 11/16/2010 | 11:30:00 |
| Matrix Spike | B048004-MS1 | D46269.D | 11/16/2010 | 11:54:00 |
| Matrix Spike Dup | B048004-MSD1 | D46270.D | 11/16/2010 | 12:19:00 |
| GKHMS-SO-001-1010 | 1011013-01 | D46271.D | 11/16/2010 | 12:43:00 |
| GKHMS-SO-002-1010 | 1011013-02 | D46272.D | 11/16/2010 | 13:07:00 |
| GKHMS-SO-003-1010 | 1011013-03 | D46273.D | 11/16/2010 | 13:31:00 |
| GKHMS-SO-005-1010 | 1011013-04 | D46274.D | 11/16/2010 | 13:55:00 |
| GKHMS-SO-007-1010 | 1011013-05 | D46275.D | 11/16/2010 | 14:20:00 |
| GKHMS-SO-011-1010 | 1011013-06 | D46276.D | 11/16/2010 | 14:44:00 |
| GKHMS-SO-012-1010 | 1011013-07 | D46277.D | 11/16/2010 | 15:09:00 |
| GKHMS-SO-014-1010 | 1011013-08 | D46278.D | 11/16/2010 | 15:33:00 |
| GKHMS-SO-017-1010 | 1011013-09 | D46279.D | 11/16/2010 | 15:58:00 |
| GKHMS-SO-019-1010 | 1011013-10 | D46280.D | 11/16/2010 | 16:22:00 |
| GKHMS-SO-021-1010 | 1011013-11 | D46281.D | 11/16/2010 | 16:50:00 |
| GKHMS-SO-022-1010 | 1011013-12 | D46282.D | 11/16/2010 | 17:15:00 |
| GKHMS-SO-023-1010 | 1011013-13 | D46283.D | 11/16/2010 | 17:39:00 |
| GKHMS-SO-025-1010 | 1011013-14 | D46284.D | 11/16/2010 | 18:03:00 |
| GKHMS-SO-028-1010 | 1011013-15 | D46285.D | 11/16/2010 | 18:28:00 |
| GKHMS-SO-030-1010 | 1011013-16 | D46286.D | 11/16/2010 | 18:52:00 |
| GKHMS-SO-031-1010 | 1011013-17 | D46287.D | 11/16/2010 | 19:16:00 |
| GKHMS-SO-032-1010 | -18 | 288.D | 11/16/2010 | 19:41 |
| GKHMS-SO-034-1010 | -19 | 289.D | ↓ | 20:05 |
| GKHMS-SO-FD0002-1010 | -20 | 290.D | ↓ | 20:29 |

JK 1/19/11

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46265.D | Injection Date: | 11/16/10 |
| Instrument ID: | GCMS-D | Injection Time: | 10:25 |
| Sequence: | S048009 | Lab Sample ID: | S048009-TUN1 |

| | m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|---|
| | 198 | Base peak, 100% relative abundance | 100 | PASS |
| | 51 | 30 - 60% of 198 | 39.6 | PASS |
| | 70 | Less than 2% of 69 | 0.608 | PASS |
| | 68 | Less than 2% of 69 | 0.477 | PASS |
| | 69 | Base peak, 100% relative abundance | 100 | PASS |
| | 127 | 40 - 60% of 198 | 50.8 | PASS |
| | 197 | Less than 1% of 198 | 0 | PASS |
| | 199 | 5 - 9% of 198 | 6.63 | PASS |
| | 275 | 10 - 30% of 198 | 20 | PASS |
| | 365 | 1 - 200% of 198 | 2.75 | PASS |
| | 443 | 17 - 23% of 442 | 19 | PASS |
| | 441 | Less than 100% of 443 | 77.8 | PASS |
| | 442 | 40 - 200% of 198 | 50.4 | PASS |

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# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46266.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S048009 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S048009-CCV1 | Injection Time: | 10:40 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 2-Methylnaphthalene | A | 1000 | 1020 | 0.6958117 | 0.7076517 | | 1.7 | 20 | |
| Acenaphthene | A | 1000 | 1020 | 1.324787 | 1.345497 | | 1.6 | 20 | |
| Acenaphthylene | A | 1000 | 967 | 2.222404 | 2.150074 | | -3.3 | 20 | |
| Anthracene | A | 1000 | 1030 | 1.227584 | 1.26095 | | 2.7 | 20 | |
| Benzo[a]anthracene | A | 1000 | 1050 | 1.605312 | 1.687734 | | 5.1 | 20 | |
| Benzo[a]pyrene | A | 1000 | 1090 | 2.253927 | 2.46392 | | 9.3 | 20 | |
| Benzo[b]fluoranthene | A | 1000 | 1130 | 2.546752 | 2.869626 | | 12.7 | 20 | |
| Benzo[g,h,i]perylene | A | 1000 | 820 | 1.707555 | 1.400757 | | -18.0 | 20 | |
| Benzo[k]fluoranthene | A | 1000 | 1230 | 2.564201 | 3.165423 | | 23.4 | 20 | * |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.743988 | | 9.6 | 20 | |
| Dibenz[a,h]anthracene | A | 1000 | 837 | 1.626379 | 1.361885 | | -16.3 | 20 | |
| Fluoranthene | A | 1000 | 1140 | 1.235125 | 1.414208 | | 14.5 | 20 | |
| Fluorene | A | 1000 | 942 | 1.373122 | 1.293941 | | -5.8 | 20 | |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 857 | 2.228926 | 1.91056 | | -14.3 | 20 | |
| Naphthalene | A | 1000 | 1100 | 1.230131 | 1.349731 | | 9.7 | 20 | |
| Phenanthrene | A | 1000 | 1010 | 1.255689 | 1.265699 | | 0.8 | 20 | |
| Pyrene | A | 1000 | 1250 | 2.168287 | 2.702163 | | 24.6 | 20 | * |
| 2-Fluorobiphenyl | A | 1000 | 1080 | 1.591732 | 1.718975 | | 8.0 | 20 | |
| Nitrobenzene-d5 | A | 1000 | 933 | 0.3971127 | 0.3703808 | | -6.7 | 20 | |
| Terphenyl-d14 | A | 1000 | 1130 | 1.040014 | 1.174007 | | 12.9 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CENTAURI LABS™

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048004-BLK1 | Batch: | B048004 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-SO-023-1010 | 1011013-13 | D46283.D | 17:39 |
| GKHMS-SO-002-1010 | 1011013-02 | D46272.D | 13:07 |
| GKHMS-SO-003-1010 | 1011013-03 | D46273.D | 13:31 |
| GKHMS-SO-005-1010 | 1011013-04 | D46274.D | 13:55 |
| GKHMS-SO-007-1010 | 1011013-05 | D46275.D | 14:20 |
| GKHMS-SO-011-1010 | 1011013-06 | D46276.D | 14:44 |
| GKHMS-SO-012-1010 | 1011013-07 | D46277.D | 15:09 |
| GKHMS-SO-014-1010 | 1011013-08 | D46278.D | 15:33 |
| GKHMS-SO-017-1010 | 1011013-09 | D46279.D | 15:58 |
| GKHMS-SO-019-1010 | 1011013-10 | D46280.D | 16:22 |
| GKHMS-SO-001-1010 | 1011013-01 | D46271.D | 12:43 |
| GKHMS-SO-022-1010 | 1011013-12 | D46282.D | 17:15 |
| Matrix Spike Dup | B048004-MSD1 | D46270.D | 12:19 |
| GKHMS-SO-025-1010 | 1011013-14 | D46284.D | 18:03 |
| GKHMS-SO-028-1010 | 1011013-15 | D46285.D | 18:28 |
| GKHMS-SO-030-1010 | 1011013-16 | D46286.D | 18:52 |
| GKHMS-SO-031-1010 | 1011013-17 | D46287.D | 19:16 |
| GKHMS-SO-032-1010 | 1011013-18 | D46288.D | 19:41 |
| GKHMS-SO-034-1010 | 1011013-19 | D46289.D | 20:05 |
| GKHMS-SO-FD002-1010 | 1011013-20 | D46290.D | 20:29 |
| LCS | B048004-BS1 | D46268.D | 11:30 |
| Matrix Spike | B048004-MS1 | D46269.D | 11:54 |
| GKHMS-SO-021-1010 | 1011013-11 | D46281.D | 16:50 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B048004-BLK1 | File ID: | D46267.D |
| Sampled: | | Prepared: | 11/11/10 08:10 | Analyzed: | 11/16/10 11:06 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B048004 | Sequence: | S048009 | Calibration: | 0111602 |
| Column: | 1 | | | | |

Instrument: GCMS-D

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 1.67 | U |
| 83-32-9 | Acenaphthene | 1.67 | U |
| 208-96-8 | Acenaphthylene | 1.67 | U |
| 120-12-7 | Anthracene | 1.67 | U |
| 56-55-3 | Benzo[a]anthracene | 1.67 | U |
| 50-32-8 | Benzo[a]pyrene | 1.67 | U |
| 205-99-2 | Benzo[b]fluoranthene | 1.67 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 1.67 | U |
| 207-08-9 | Benzo[k]fluoranthene | 1.67 | U |
| 218-01-9 | Chrysene | 1.67 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 1.67 | U |
| 206-44-0 | Fluoranthene | 1.67 | U |
| 86-73-7 | Fluorene | 1.67 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 1.67 | U |
| 91-20-3 | Naphthalene | 1.67 | U |
| 85-01-8 | Phenanthrene | 1.67 | U |
| 129-00-0 | Pyrene | 1.67 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B048004 | Laboratory ID: | B048004-BS1 |
| Column: | | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 2-Methylnaphthalene | 167 | 175 | 105 | 45 - 105 |
| Acenaphthene | 167 | 164 | 99 | 45 - 110 |
| Acenaphthylene | 167 | 150 | 90 | 45 - 105 |
| Anthracene | 167 | 164 | 98 | 55 - 105 |
| Benzo[a]anthracene | 167 | 175 | 105 | 50 - 110 |
| Benzo[a]pyrene | 167 | 212 | 127 * | 50 - 110 |
| Benzo[b]fluoranthene | 167 | 241 | 144 * | 45 - 115 |
| Benzo[g,h,i]perylene | 167 | 181 | 109 | 40 - 125 |
| Benzo[k]fluoranthene | 167 | 243 | 146 * | 45 - 125 |
| Chrysene | 167 | 175 | 105 | 55 - 110 |
| Dibenz[a,h]anthracene | 167 | 178 | 107 | 40 - 125 |
| Fluoranthene | 167 | 183 | 110 | 55 - 115 |
| Fluorene | 167 | 163 | 98 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 167 | 171 | 103 | 40 - 120 |
| Naphthalene | 167 | 159 | 95 | 40 - 105 |
| Phenanthrene | 167 | 162 | 97 | 50 - 110 |
| Pyrene | 167 | 187 | 112 | 45 - 125 |

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046136-BLK1 | Batch: | B046136 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B046136-MSD1 | D46260.D | 23:19 |
| Matrix Spike | B046136-MS1 | D46259.D | 22:54 |
| LCS | B046136-BS1 | D46258.D | 22:30 |
| GKHMS-SO-FD001-1010 | 1011013-21 | D46263.D | 00:32 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046136-BLK1 | File ID: | D46257.D |
| Sampled: | | Prepared: | 11/11/10 11:55 | Analyzed: | 11/15/10 22:06 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046136 | Sequence: | S047051 | Calibration: | 0111602 |
| Column: | 1 | | | | |

Instrument: GCMS-D

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 1.67 | U |
| 83-32-9 | Acenaphthene | 1.67 | U |
| 208-96-8 | Acenaphthylene | 1.67 | U |
| 120-12-7 | Anthracene | 1.67 | U |
| 56-55-3 | Benzo[a]anthracene | 1.67 | U |
| 50-32-8 | Benzo[a]pyrene | 1.67 | U |
| 205-99-2 | Benzo[b]fluoranthene | 1.67 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 1.67 | U |
| 207-08-9 | Benzo[k]fluoranthene | 1.67 | U |
| 218-01-9 | Chrysene | 1.67 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 1.67 | U |
| 206-44-0 | Fluoranthene | 1.67 | U |
| 86-73-7 | Fluorene | 1.67 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 1.67 | U |
| 91-20-3 | Naphthalene | 1.67 | U |
| 85-01-8 | Phenanthrene | 1.67 | U |
| 129-00-0 | Pyrene | 1.67 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046136 | Laboratory ID: | B046136-BS1 |
| Column: | | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 2-Methylnaphthalene | 167 | 178 | 107 * | 45 - 105 |
| Acenaphthene | 167 | 167 | 100 | 45 - 110 |
| Acenaphthylene | 167 | 149 | 89 | 45 - 105 |
| Anthracene | 167 | 166 | 99 | 55 - 105 |
| Benzo[a]anthracene | 167 | 171 | 102 | 50 - 110 |
| Benzo[a]pyrene | 167 | 203 | 122 * | 50 - 110 |
| Benzo[b]fluoranthene | 167 | 223 | 134 * | 45 - 115 |
| Benzo[g,h,i]perylene | 167 | 184 | 111 | 40 - 125 |
| Benzo[k]fluoranthene | 167 | 221 | 133 * | 45 - 125 |
| Chrysene | 167 | 172 | 103 | 55 - 110 |
| Dibenz[a,h]anthracene | 167 | 180 | 108 | 40 - 125 |
| Fluoranthene | 167 | 166 | 100 | 55 - 115 |
| Fluorene | 167 | 165 | 99 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 167 | 173 | 104 | 40 - 120 |
| Naphthalene | 167 | 162 | 97 | 40 - 105 |
| Phenanthrene | 167 | 165 | 99 | 50 - 110 |
| Pyrene | 167 | 172 | 103 | 45 - 125 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8270C SIM |
| Batch: | B048004 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B048004-MS1 |
| Column: | | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 193 | 1.93 U | 188 | 97 | 45 - 105 |
| Acenaphthene | 193 | 1.93 U | 186 | 96 | 45 - 110 |
| Acenaphthylene | 193 | 1.93 U | 168 | 87 | 45 - 105 |
| Anthracene | 193 | 1.93 U | 197 | 102 | 55 - 105 |
| Benzo[a]anthracene | 193 | 1.04 | 216 | 111 * | 50 - 110 |
| Benzo[a]pyrene | 193 | 1.07 | 252 | 130 * | 50 - 110 |
| Benzo[b]fluoranthene | 193 | 1.31 | 297 | 153 * | 45 - 115 |
| Benzo[g,h,i]perylene | 193 | 1.39 | 234 | 120 | 40 - 125 |
| Benzo[k]fluoranthene | 193 | 1.17 | 270 | 139 * | 45 - 125 |
| Chrysene | 193 | 1.04 | 211 | 109 | 55 - 110 |
| Dibenz[a,h]anthracene | 193 | 1.93 U | 233 | 120 | 40 - 125 |
| Fluoranthene | 193 | 1.72 | 215 | 110 | 55 - 115 |
| Fluorene | 193 | 1.93 U | 197 | 102 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 193 | 0.819 | 221 | 114 | 40 - 120 |
| Naphthalene | 193 | 1.93 U | 164 | 85 | 40 - 105 |
| Phenanthrene | 193 | 0.939 | 195 | 101 | 50 - 110 |
| Pyrene | 193 | 1.73 | 233 | 120 | 45 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8270C SIM |
| Batch: | B048004 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B048004-MSD1 |
| Column: | | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 194 | 178 | 92 | 5 | 20 | 45 - 105 |
| Acenaphthene | 194 | 183 | 95 | 2 | 20 | 45 - 110 |
| Acenaphthylene | 194 | 169 | 87 | 0.7 | 20 | 45 - 105 |
| Anthracene | 194 | 190 | 98 | 4 | 20 | 55 - 105 |
| Benzo[a]anthracene | 194 | 208 | 107 | 4 | 20 | 50 - 110 |
| Benzo[a]pyrene | 194 | 241 | 124 * | 4 | 20 | 50 - 110 |
| Benzo[b]fluoranthene | 194 | 274 | 141 * | 8 | 20 | 45 - 115 |
| Benzo[g,h,i]perylene | 194 | 236 | 121 | 1 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 194 | 266 | 137 * | 2 | 20 | 45 - 125 |
| Chrysene | 194 | 204 | 105 | 3 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 194 | 237 | 123 | 2 | 20 | 40 - 125 |
| Fluoranthene | 194 | 194 | 99 | 10 | 20 | 55 - 115 |
| Fluorene | 194 | 194 | 100 | 2 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 194 | 225 | 116 | 1 | 20 | 40 - 120 |
| Naphthalene | 194 | 152 | 79 | 7 | 20 | 40 - 105 |
| Phenanthrene | 194 | 191 | 98 | 2 | 20 | 50 - 110 |
| Pyrene | 194 | 223 | 114 | 4 | 20 | 45 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8270C SIM |
| Batch: | B046136 | Preparation: | 3550B Sonic. |
| % Solids: | 90.70 | Laboratory ID: | B046136-MS1 |
| Column: | | Sample Lab ID: | 1011008-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 184 | | 196 | 107 * | 45 - 105 |
| Acenaphthene | 184 | | 185 | 101 | 45 - 110 |
| Acenaphthylene | 184 | | 165 | 90 | 45 - 105 |
| Anthracene | 184 | | 184 | 100 | 55 - 105 |
| Benzo[a]anthracene | 184 | | 197 | 107 | 50 - 110 |
| Benzo[a]pyrene | 184 | | 226 | 123 * | 50 - 110 |
| Benzo[b]fluoranthene | 184 | | 253 | 138 * | 45 - 115 |
| Benzo[g,h,i]perylene | 184 | | 228 | 124 | 40 - 125 |
| Benzo[k]fluoranthene | 184 | | 248 | 135 * | 45 - 125 |
| Chrysene | 184 | | 197 | 107 | 55 - 110 |
| Dibenz[a,h]anthracene | 184 | | 217 | 118 | 40 - 125 |
| Fluoranthene | 184 | | 185 | 101 | 55 - 115 |
| Fluorene | 184 | | 186 | 101 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 184 | | 209 | 114 | 40 - 120 |
| Naphthalene | 184 | | 176 | 96 | 40 - 105 |
| Phenanthrene | 184 | | 188 | 102 | 50 - 110 |
| Pyrene | 184 | | 194 | 106 | 45 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike Dup

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8270C SIM |
| Batch: | B046136 | Preparation: | 3550B Sonic. |
| % Solids: | 90.70 | Laboratory ID: | B046136-MSD1 |
| Column: | | Sample Lab ID: | 1011008-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 184 | 184 | 100 | 6 | 20 | 45 - 105 |
| Acenaphthene | 184 | 175 | 95 | 6 | 20 | 45 - 110 |
| Acenaphthylene | 184 | 161 | 87 | 3 | 20 | 45 - 105 |
| Anthracene | 184 | 170 | 93 | 8 | 20 | 55 - 105 |
| Benzo[a]anthracene | 184 | 182 | 99 | 8 | 20 | 50 - 110 |
| Benzo[a]pyrene | 184 | 212 | 115 * | 7 | 20 | 50 - 110 |
| Benzo[b]fluoranthene | 184 | 242 | 132 * | 5 | 20 | 45 - 115 |
| Benzo[g,h,i]perylene | 184 | 204 | 111 | 11 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 184 | 227 | 123 | 9 | 20 | 45 - 125 |
| Chrysene | 184 | 182 | 99 | 8 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 184 | 196 | 106 | 10 | 20 | 40 - 125 |
| Fluoranthene | 184 | 172 | 94 | 7 | 20 | 55 - 115 |
| Fluorene | 184 | 176 | 96 | 5 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 184 | 188 | 103 | 10 | 20 | 40 - 120 |
| Naphthalene | 184 | 165 | 90 | 6 | 20 | 40 - 105 |
| Phenanthrene | 184 | 175 | 95 | 7 | 20 | 50 - 110 |
| Pyrene | 184 | 171 | 93 | 13 | 20 | 45 - 125 |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCMS-D |

| | 2FBPL (45 - 105) | NB-d5 (35 - 100) | TRPL-D14 (30 - 125) |
|---|---|---|---|
| 1011013-01 | 81 | 86 | 125 |
| 1011013-02 | 90 | 83 | 142* |
| 1011013-03 | 88 | 95 | 116 |
| 1011013-04 | 87 | 89 | 139* |
| 1011013-05 | 92 | 97 | 139* |
| 1011013-06 | 97 | 101* | 141* |
| 1011013-07 | 87 | 93 | 130* |
| 1011013-08 | 94 | 102* | 142* |
| 1011013-09 | 103 | 105* | 153* |
| 1011013-10 | 98 | 99 | 156* |
| 1011013-11 | 99 | 107* | 149* |
| 1011013-12 | 94 | 105* | 136* |
| 1011013-13 | 96 | 101* | 144* |
| 1011013-14 | 83 | 84 | 146* |
| 1011013-15 | 91 | 85 | 159* |
| 1011013-16 | 85 | 82 | 147* |
| 1011013-17 | 89 | 88 | 152* |
| 1011013-18 | 89 | 86 | 160* |
| 1011013-19 | 90 | 86 | 151* |
| 1011013-20 | 87 | 82 | 153* |
| B048004-BLK1 | 92 | 88 | 120 |
| B048004-BS1 | 95 | 98 | 116 |
| B048004-MS1 | 83 | 85 | 126* |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCMS-D |

| | 2FBPL (45 - 105) | NB-d5 (35 - 100) | TRPL-D14 (30 - 125) |
|---|---|---|---|
| 1011013-21 | 97 | 103* | 141* |
| B046136-BLK1 | 93 | 86 | 116 |
| B046136-BS1 | 94 | 88 | 109 |
| B046136-MS1 | 90 | 93 | 110 |
| B046136-MSD1 | 93 | 95 | 105 |

| | 2FBPL (45 - 105) | NB-d5 (35 - 100) | TRPL-D14 (30 - 125) |
|---|---|---|---|
| B048004-MSD1 | 84 | 87 | 125 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048009-CCV1 )** | | | *Lab File ID: D46266.D* | | | *Analyzed: 11/16/10 10:40* | | | |
| 1,4-Dichlorobenzene-d4 | 226981 | 3.77 | 524277 | 3.79 | 43 | 50 - 200 | -0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 335088 | 6.88 | 890160 | 6.91 | 38 | 50 - 200 | -0.0300 | +/-30.00 | |
| Chrysene-d12 | 263167 | 11.33 | 837431 | 11.37 | 31 | 50 - 200 | -0.0400 | +/-30.00 | |
| Naphthalene-d8 | 771973 | 5.05 | 1909751 | 5.08 | 40 | 50 - 200 | -0.0300 | +/-30.00 | |
| Perylene-d12 | 106708 | 14.06 | 457505 | 14.11 | 23 | 50 - 200 | -0.0500 | +/-30.00 | |
| Phenanthrene-d10 | 483499 | 8.42 | 1402237 | 8.45 | 34 | 50 - 200 | -0.0300 | +/-30.00 | |
| **Blank (B048004-BLK1 )** | | | *Lab File ID: D46267.D* | | | *Analyzed: 11/16/10 11:06* | | | |
| 1,4-Dichlorobenzene-d4 | 190238 | 3.76 | 226981 | 3.77 | 84 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 285443 | 6.88 | 335088 | 6.88 | 85 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 215370 | 11.34 | 263167 | 11.33 | 82 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 644917 | 5.05 | 771973 | 5.05 | 84 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 80803 | 14.06 | 106708 | 14.06 | 76 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 419326 | 8.42 | 483499 | 8.42 | 87 | 50 - 200 | 0.0000 | +/-30.00 | |
| **LCS (B048004-BS1 )** | | | *Lab File ID: D46268.D* | | | *Analyzed: 11/16/10 11:30* | | | |
| 1,4-Dichlorobenzene-d4 | 208578 | 3.76 | 226981 | 3.77 | 92 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 332206 | 6.88 | 335088 | 6.88 | 99 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 291258 | 11.34 | 263167 | 11.33 | 111 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 723091 | 5.05 | 771973 | 5.05 | 94 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 105251 | 14.06 | 106708 | 14.06 | 99 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 497265 | 8.42 | 483499 | 8.42 | 103 | 50 - 200 | 0.0000 | +/-30.00 | |
| **Matrix Spike (B048004-MS1 )** | | | *Lab File ID: D46269.D* | | | *Analyzed: 11/16/10 11:54* | | | |
| 1,4-Dichlorobenzene-d4 | 207838 | 3.77 | 226981 | 3.77 | 92 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 351516 | 6.89 | 335088 | 6.88 | 105 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 285879 | 11.34 | 263167 | 11.33 | 109 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 739269 | 5.06 | 771973 | 5.05 | 96 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 103659 | 14.07 | 106708 | 14.06 | 97 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 529193 | 8.42 | 483499 | 8.42 | 109 | 50 - 200 | 0.0000 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B046136-MSD1 )** | | | *Lab File ID: D46260.D* | | | *Analyzed: 11/15/10 23:19* | | | |
| 1,4-Dichlorobenzene-d4 | 206601 | 3.76 | 325841 | 3.77 | 63 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 327860 | 6.89 | 464052 | 6.88 | 71 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 286499 | 11.34 | 405437 | 11.32 | 71 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 728756 | 5.05 | 1103894 | 5.05 | 66 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 141352 | 14.06 | 215613 | 14.04 | 66 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 479280 | 8.42 | 703035 | 8.41 | 68 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-FD001-1010 (1011013-21 )** | | | *Lab File ID: D46263.D* | | | *Analyzed: 11/16/10 00:32* | | | |
| 1,4-Dichlorobenzene-d4 | 211932 | 3.77 | 325841 | 3.77 | 65 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 343461 | 6.89 | 464052 | 6.88 | 74 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 285355 | 11.34 | 405437 | 11.32 | 70 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 755775 | 5.06 | 1103894 | 5.05 | 68 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 116823 | 14.07 | 215613 | 14.04 | 54 | 50 - 200 | 0.0300 | +/-30.00 | |
| Phenanthrene-d10 | 578734 | 8.42 | 703035 | 8.41 | 82 | 50 - 200 | 0.0100 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047051-CCV1 )** | | | *Lab File ID: D46242.D* | | | *Analyzed: 11/15/10 15:59* | | | |
| 1,4-Dichlorobenzene-d4 | 325841 | 3.77 | 524277 | 3.79 | 62 | 50 - 200 | -0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 464052 | 6.88 | 890160 | 6.91 | 52 | 50 - 200 | -0.0300 | +/-30.00 | |
| Chrysene-d12 | 405437 | 11.32 | 837431 | 11.37 | 48 | 50 - 200 | -0.0500 | +/-30.00 | |
| Naphthalene-d8 | 1103894 | 5.05 | 1909751 | 5.08 | 58 | 50 - 200 | -0.0300 | +/-30.00 | |
| Perylene-d12 | 215613 | 14.04 | 457505 | 14.11 | 47 | 50 - 200 | -0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 703035 | 8.41 | 1402237 | 8.45 | 50 | 50 - 200 | -0.0400 | +/-30.00 | |
| **Blank (B046136-BLK1 )** | | | *Lab File ID: D46257.D* | | | *Analyzed: 11/15/10 22:06* | | | |
| 1,4-Dichlorobenzene-d4 | 218467 | 3.76 | 325841 | 3.77 | 67 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 351242 | 6.89 | 464052 | 6.88 | 76 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 265970 | 11.34 | 405437 | 11.32 | 66 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 777765 | 5.05 | 1103894 | 5.05 | 70 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 125147 | 14.06 | 215613 | 14.04 | 58 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 519961 | 8.42 | 703035 | 8.41 | 74 | 50 - 200 | 0.0100 | +/-30.00 | |
| **LCS (B046136-BS1 )** | | | *Lab File ID: D46258.D* | | | *Analyzed: 11/15/10 22:30* | | | |
| 1,4-Dichlorobenzene-d4 | 210261 | 3.76 | 325841 | 3.77 | 65 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 327728 | 6.89 | 464052 | 6.88 | 71 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 269871 | 11.34 | 405437 | 11.32 | 67 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 736300 | 5.05 | 1103894 | 5.05 | 67 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 126971 | 14.06 | 215613 | 14.04 | 59 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 475376 | 8.42 | 703035 | 8.41 | 68 | 50 - 200 | 0.0100 | +/-30.00 | |
| **Matrix Spike (B046136-MS1 )** | | | *Lab File ID: D46259.D* | | | *Analyzed: 11/15/10 22:54* | | | |
| 1,4-Dichlorobenzene-d4 | 213132 | 3.76 | 325841 | 3.77 | 65 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 343469 | 6.89 | 464052 | 6.88 | 74 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 279724 | 11.34 | 405437 | 11.32 | 69 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 752193 | 5.05 | 1103894 | 5.05 | 68 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 139193 | 14.06 | 215613 | 14.04 | 65 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 494313 | 8.42 | 703035 | 8.41 | 70 | 50 - 200 | 0.0100 | +/-30.00 | |

CENTAURI LABS™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B048004-MSD1 )** | | | *Lab File ID: D46270.D* | | | *Analyzed: 11/16/10 12:19* | | | |
| 1,4-Dichlorobenzene-d4 | 245435 | 3.77 | 226981 | 3.77 | 108 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 401326 | 6.89 | 335088 | 6.88 | 120 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 288111 | 11.34 | 263167 | 11.33 | 109 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 870838 | 5.05 | 771973 | 5.05 | 113 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 113714 | 14.07 | 106708 | 14.06 | 107 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 570198 | 8.42 | 483499 | 8.42 | 118 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-SO-001-1010 (1011013-01 )** | | | *Lab File ID: D46271.D* | | | *Analyzed: 11/16/10 12:43* | | | |
| 1,4-Dichlorobenzene-d4 | 207305 | 3.77 | 226981 | 3.77 | 91 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 339259 | 6.89 | 335088 | 6.88 | 101 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 238795 | 11.34 | 263167 | 11.33 | 91 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 727712 | 5.06 | 771973 | 5.05 | 94 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 83023 | 14.08 | 106708 | 14.06 | 78 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 516690 | 8.42 | 483499 | 8.42 | 107 | 50 - 200 | 0.0000 | +/-30.00 | |
| **GKHMS-SO-002-1010 (1011013-02 )** | | | *Lab File ID: D46272.D* | | | *Analyzed: 11/16/10 13:07* | | | |
| 1,4-Dichlorobenzene-d4 | 143600 | 3.9 | 226981 | 3.77 | 63 | 50 - 200 | 0.1300 | +/-30.00 | |
| Acenaphthene-d10 | 315594 | 6.92 | 335088 | 6.88 | 94 | 50 - 200 | 0.0400 | +/-30.00 | |
| Chrysene-d12 | 247081 | 11.34 | 263167 | 11.33 | 94 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 668530 | 5.14 | 771973 | 5.05 | 87 | 50 - 200 | 0.0900 | +/-30.00 | |
| Perylene-d12 | 84568 | 14.08 | 106708 | 14.06 | 79 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 497998 | 8.43 | 483499 | 8.42 | 103 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-003-1010 (1011013-03 )** | | | *Lab File ID: D46273.D* | | | *Analyzed: 11/16/10 13:31* | | | |
| 1,4-Dichlorobenzene-d4 | 261222 | 3.77 | 226981 | 3.77 | 115 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 416221 | 6.89 | 335088 | 6.88 | 124 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 321935 | 11.35 | 263167 | 11.33 | 122 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 917165 | 5.06 | 771973 | 5.05 | 119 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 134985 | 14.09 | 106708 | 14.06 | 126 | 50 - 200 | 0.0300 | +/-30.00 | |
| Phenanthrene-d10 | 620004 | 8.43 | 483499 | 8.42 | 128 | 50 - 200 | 0.0100 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-SO-005-1010 (1011013-04 )** | | | *Lab File ID: D46274.D* | | | *Analyzed: 11/16/10 13:55* | | | |
| 1,4-Dichlorobenzene-d4 | 219789 | 3.77 | 226981 | 3.77 | 97 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 366072 | 6.89 | 335088 | 6.88 | 109 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 252630 | 11.35 | 263167 | 11.33 | 96 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 785536 | 5.06 | 771973 | 5.05 | 102 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 86509 | 14.08 | 106708 | 14.06 | 81 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 553236 | 8.43 | 483499 | 8.42 | 114 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-007-1010 (1011013-05 )** | | | *Lab File ID: D46275.D* | | | *Analyzed: 11/16/10 14:20* | | | |
| 1,4-Dichlorobenzene-d4 | 202197 | 3.77 | 226981 | 3.77 | 89 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 340948 | 6.89 | 335088 | 6.88 | 102 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 245601 | 11.35 | 263167 | 11.33 | 93 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 723021 | 5.06 | 771973 | 5.05 | 94 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 84388 | 14.08 | 106708 | 14.06 | 79 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 524825 | 8.43 | 483499 | 8.42 | 109 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-011-1010 (1011013-06 )** | | | *Lab File ID: D46276.D* | | | *Analyzed: 11/16/10 14:44* | | | |
| 1,4-Dichlorobenzene-d4 | 179076 | 3.77 | 226981 | 3.77 | 79 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 300044 | 6.89 | 335088 | 6.88 | 90 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 226639 | 11.35 | 263167 | 11.33 | 86 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 640158 | 5.06 | 771973 | 5.05 | 83 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 76209 | 14.08 | 106708 | 14.06 | 71 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 458877 | 8.43 | 483499 | 8.42 | 95 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-012-1010 (1011013-07 )** | | | *Lab File ID: D46277.D* | | | *Analyzed: 11/16/10 15:09* | | | |
| 1,4-Dichlorobenzene-d4 | 205643 | 3.77 | 226981 | 3.77 | 91 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 344876 | 6.89 | 335088 | 6.88 | 103 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 251090 | 11.35 | 263167 | 11.33 | 95 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 731361 | 5.06 | 771973 | 5.05 | 95 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 86860 | 14.09 | 106708 | 14.06 | 81 | 50 - 200 | 0.0300 | +/-30.00 | |
| Phenanthrene-d10 | 525436 | 8.43 | 483499 | 8.42 | 109 | 50 - 200 | 0.0100 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-SO-014-1010 (1011013-08 )** | | | *Lab File ID: D46278.D* | | | *Analyzed: 11/16/10 15:33* | | | |
| 1,4-Dichlorobenzene-d4 | 223073 | 3.77 | 226981 | 3.77 | 98 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 380627 | 6.89 | 335088 | 6.88 | 114 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 265757 | 11.35 | 263167 | 11.33 | 101 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 801600 | 5.06 | 771973 | 5.05 | 104 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 95118 | 14.09 | 106708 | 14.06 | 89 | 50 - 200 | 0.0300 | +/-30.00 | |
| Phenanthrene-d10 | 578559 | 8.43 | 483499 | 8.42 | 120 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-017-1010 (1011013-09 )** | | | *Lab File ID: D46279.D* | | | *Analyzed: 11/16/10 15:58* | | | |
| 1,4-Dichlorobenzene-d4 | 211320 | 3.77 | 226981 | 3.77 | 93 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 340308 | 6.89 | 335088 | 6.88 | 102 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 238362 | 11.35 | 263167 | 11.33 | 91 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 749726 | 5.06 | 771973 | 5.05 | 97 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 95603 | 14.09 | 106708 | 14.06 | 90 | 50 - 200 | 0.0300 | +/-30.00 | |
| Phenanthrene-d10 | 530850 | 8.43 | 483499 | 8.42 | 110 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-019-1010 (1011013-10 )** | | | *Lab File ID: D46280.D* | | | *Analyzed: 11/16/10 16:22* | | | |
| 1,4-Dichlorobenzene-d4 | 216933 | 3.78 | 226981 | 3.77 | 96 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 355252 | 6.9 | 335088 | 6.88 | 106 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 253652 | 11.36 | 263167 | 11.33 | 96 | 50 - 200 | 0.0300 | +/-30.00 | |
| Naphthalene-d8 | 770314 | 5.07 | 771973 | 5.05 | 100 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 98618 | 14.1 | 106708 | 14.06 | 92 | 50 - 200 | 0.0400 | +/-30.00 | |
| Phenanthrene-d10 | 582847 | 8.43 | 483499 | 8.42 | 121 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-021-1010 (1011013-11 )** | | | *Lab File ID: D46281.D* | | | *Analyzed: 11/16/10 16:50* | | | |
| 1,4-Dichlorobenzene-d4 | 236253 | 3.78 | 226981 | 3.77 | 104 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 378486 | 6.9 | 335088 | 6.88 | 113 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 262698 | 11.36 | 263167 | 11.33 | 100 | 50 - 200 | 0.0300 | +/-30.00 | |
| Naphthalene-d8 | 832408 | 5.07 | 771973 | 5.05 | 108 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 110670 | 14.12 | 106708 | 14.06 | 104 | 50 - 200 | 0.0600 | +/-30.00 | |
| Phenanthrene-d10 | 613267 | 8.44 | 483499 | 8.42 | 127 | 50 - 200 | 0.0200 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-SO-022-1010 (1011013-12 )** | | | *Lab File ID: D46282.D* | | | *Analyzed: 11/16/10 17:15* | | | |
| 1,4-Dichlorobenzene-d4 | 208997 | 3.78 | 226981 | 3.77 | 92 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 384281 | 6.9 | 335088 | 6.88 | 115 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 284774 | 11.36 | 263167 | 11.33 | 108 | 50 - 200 | 0.0300 | +/-30.00 | |
| Naphthalene-d8 | 762460 | 5.07 | 771973 | 5.05 | 99 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 127190 | 14.12 | 106708 | 14.06 | 119 | 50 - 200 | 0.0600 | +/-30.00 | |
| Phenanthrene-d10 | 652992 | 8.44 | 483499 | 8.42 | 135 | 50 - 200 | 0.0200 | +/-30.00 | |
| **GKHMS-SO-023-1010 (1011013-13 )** | | | *Lab File ID: D46283.D* | | | *Analyzed: 11/16/10 17:39* | | | |
| 1,4-Dichlorobenzene-d4 | 219105 | 3.77 | 226981 | 3.77 | 97 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 389216 | 6.9 | 335088 | 6.88 | 116 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 256176 | 11.37 | 263167 | 11.33 | 97 | 50 - 200 | 0.0400 | +/-30.00 | |
| Naphthalene-d8 | 800519 | 5.07 | 771973 | 5.05 | 104 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 110720 | 14.13 | 106708 | 14.06 | 104 | 50 - 200 | 0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 619311 | 8.44 | 483499 | 8.42 | 128 | 50 - 200 | 0.0200 | +/-30.00 | |
| **GKHMS-SO-025-1010 (1011013-14 )** | | | *Lab File ID: D46284.D* | | | *Analyzed: 11/16/10 18:03* | | | |
| 1,4-Dichlorobenzene-d4 | 170141 | 3.77 | 226981 | 3.77 | 75 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 321165 | 6.9 | 335088 | 6.88 | 96 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 186009 | 11.37 | 263167 | 11.33 | 71 | 50 - 200 | 0.0400 | +/-30.00 | |
| Naphthalene-d8 | 619677 | 5.07 | 771973 | 5.05 | 80 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 76399 | 14.13 | 106708 | 14.06 | 72 | 50 - 200 | 0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 551629 | 8.44 | 483499 | 8.42 | 114 | 50 - 200 | 0.0200 | +/-30.00 | |
| **GKHMS-SO-028-1010 (1011013-15 )** | | | *Lab File ID: D46285.D* | | | *Analyzed: 11/16/10 18:28* | | | |
| 1,4-Dichlorobenzene-d4 | 178361 | 3.78 | 226981 | 3.77 | 79 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 309085 | 6.9 | 335088 | 6.88 | 92 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 176641 | 11.36 | 263167 | 11.33 | 67 | 50 - 200 | 0.0300 | +/-30.00 | |
| Naphthalene-d8 | 637511 | 5.07 | 771973 | 5.05 | 83 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 68083 | 14.12 | 106708 | 14.06 | 64 | 50 - 200 | 0.0600 | +/-30.00 | |
| Phenanthrene-d10 | 525010 | 8.44 | 483499 | 8.42 | 109 | 50 - 200 | 0.0200 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **GKHMS-SO-030-1010 (1011013-16 )** | | | *Lab File ID: D46286.D* | | | *Analyzed: 11/16/10 18:52* | | | |
| 1,4-Dichlorobenzene-d4 | 194473 | 3.78 | 226981 | 3.77 | 86 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 333267 | 6.9 | 335088 | 6.88 | 99 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 195975 | 11.37 | 263167 | 11.33 | 74 | 50 - 200 | 0.0400 | +/-30.00 | |
| Naphthalene-d8 | 697474 | 5.07 | 771973 | 5.05 | 90 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 79198 | 14.13 | 106708 | 14.06 | 74 | 50 - 200 | 0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 542646 | 8.44 | 483499 | 8.42 | 112 | 50 - 200 | 0.0200 | +/-30.00 | |
| **GKHMS-SO-031-1010 (1011013-17 )** | | | *Lab File ID: D46287.D* | | | *Analyzed: 11/16/10 19:16* | | | |
| 1,4-Dichlorobenzene-d4 | 169145 | 3.78 | 226981 | 3.77 | 75 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 299305 | 6.9 | 335088 | 6.88 | 89 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 185243 | 11.37 | 263167 | 11.33 | 70 | 50 - 200 | 0.0400 | +/-30.00 | |
| Naphthalene-d8 | 606706 | 5.07 | 771973 | 5.05 | 79 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 73330 | 14.13 | 106708 | 14.06 | 69 | 50 - 200 | 0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 512752 | 8.44 | 483499 | 8.42 | 106 | 50 - 200 | 0.0200 | +/-30.00 | |
| **GKHMS-SO-032-1010 (1011013-18 )** | | | *Lab File ID: D46288.D* | | | *Analyzed: 11/16/10 19:41* | | | |
| 1,4-Dichlorobenzene-d4 | 177777 | 3.78 | 226981 | 3.77 | 78 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 318056 | 6.9 | 335088 | 6.88 | 95 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 181704 | 11.37 | 263167 | 11.33 | 69 | 50 - 200 | 0.0400 | +/-30.00 | |
| Naphthalene-d8 | 642643 | 5.07 | 771973 | 5.05 | 83 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 68602 | 14.13 | 106708 | 14.06 | 64 | 50 - 200 | 0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 541294 | 8.44 | 483499 | 8.42 | 112 | 50 - 200 | 0.0200 | +/-30.00 | |
| **GKHMS-SO-034-1010 (1011013-19 )** | | | *Lab File ID: D46289.D* | | | *Analyzed: 11/16/10 20:05* | | | |
| 1,4-Dichlorobenzene-d4 | 188743 | 3.77 | 226981 | 3.77 | 83 | 50 - 200 | 0.0000 | +/-30.00 | |
| Acenaphthene-d10 | 321288 | 6.9 | 335088 | 6.88 | 96 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 198254 | 11.37 | 263167 | 11.33 | 75 | 50 - 200 | 0.0400 | +/-30.00 | |
| Naphthalene-d8 | 671996 | 5.07 | 771973 | 5.05 | 87 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 77043 | 14.13 | 106708 | 14.06 | 72 | 50 - 200 | 0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 527460 | 8.44 | 483499 | 8.42 | 109 | 50 - 200 | 0.0200 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048009 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| GKHMS-SO-FD002-1010 (1011013-20 ) | | | *Lab File ID: D46290.D* | | | *Analyzed: 11/16/10 20:29* | | | |
| 1,4-Dichlorobenzene-d4 | 174112 | 3.78 | 226981 | 3.77 | 77 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 298221 | 6.9 | 335088 | 6.88 | 89 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 194887 | 11.37 | 263167 | 11.33 | 74 | 50 - 200 | 0.0400 | +/-30.00 | |
| Naphthalene-d8 | 617220 | 5.07 | 771973 | 5.05 | 80 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 74252 | 14.14 | 106708 | 14.06 | 70 | 50 - 200 | 0.0800 | +/-30.00 | |
| Phenanthrene-d10 | 512721 | 8.44 | 483499 | 8.42 | 106 | 50 - 200 | 0.0200 | +/-30.00 | |

## GCMS ANALYSIS LOG - SEMIVOLATILES

Reviewed By: MM Date: 11/16/10

| | |
|---|---|
| Instrument ID: | HP# D |
| Analysis/Fraction | BNA |
| Analyst(s): | AR |

| | |
|---|---|
| Method File: | 110310D.m |
| Sequence FILE: | 111510 |
| Tune File: | DFTPP.U |
| Column: DB-5MS | |

ICAL Date: 11/03/10

Directory: c:\gcmsdata\d\111510

### Injection Log

| al | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| | d46241.d | 1. | DFTPP050 OK | DFTPP050 HP#P JI | 15 Nov 10 15:44 |
| | d46242.d | 1. | SSTD001 OK | SIMPAH CURVE HP#P JI | 15 Nov 10 15:59 |
| | d46243.d | 1. | B046055-BLK1 OK | BLK, TETRATECH, WATER HP#P JI | 15 Nov 10 16:24 |
| | d46244.d | 1. | B046055-BS1 OK | BKS, TETRATECH, WATER HP#P JI | 15 Nov 10 16:48 |
| | d46245.d | 1. | B046055-MS1 OK | MS, TETRATECH, WATER HP#P JI | 15 Nov 10 17:13 |
| | d46246.d | 1. | B046055-MSD1 OK | MSD, TETRATECH, WATER HP#P JI | 15 Nov 10 17:37 |
| | d46247.d | 1. | 1011003-02 OK (needs 10X dil., ref. d46294) | TETRATECH, WATER HP#P JI | 15 Nov 10 18:01 |
| | d46248.d | 1. | 1011003-03 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 18:26 |
| | d46249.d | 1. | 1011003-04 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 18:50 |
| ) | d46250.d | 1. | 1011003-05 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 19:14 |
| | d46251.d | 1. | 1011003-06 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 19:39 |
| ! | d46252.d | 1. | 1011003-08 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 20:03 |
| ; | d46253.d | 1. | 1011003-09 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 20:28 |
| | d46254.d | 1. | 1011015-01 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 20:52 |
| ; | d46255.d | 1. | 1011015-02 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 21:17 |
| ; | d46256.d | 1. | 1011015-03 OK | TETRATECH, WATER HP#P JI | 15 Nov 10 21:41 |
| | d46257.d | 1. | B046137\B046136-BLK1 OK | BLK, SOIL HP#P JI | 15 Nov 10 22:06 |
| ; | d46258.d | 1. | B046137\B046136-BS1 OK | BKS, SOIL HP#P JI | 15 Nov 10 22:30 |
| ) | d46259.d | 1. | B046136-MS1 OK | SHAW, SOIL HP#P JI | 15 Nov 10 22:54 |
| ) | d46260.d | 1. | B046136-MSD1 OK | SHAW, SOIL HP#P JI | 15 Nov 10 23:19 |
| | d46261.d | 1. | 1011008-01 OK | SHAW, SOIL HP#P JI | 15 Nov 10 23:43 |
| : | d46262.d | 1. | 1011008-02 OK | SHAW, SOIL HP#P JI | 16 Nov 10 00:08 |
| ; | d46263.d | 1. | 1011013-21 OK | TETRATECH, WATER HP#P JI | 16 Nov 10 00:32 |
| | d46264.d | 1. | 1011014-01 OK | TETRATECH, WATER HP#P JI | 16 Nov 10 00:57 |

| Remarks | Standards | Lot# | Volume | Conc. | Date Prepared |
|---|---|---|---|---|---|
| 5047051 | DFTPP050 | 1979 | 1µL | 50 PPM | 11/03/10 |
| | SSTD001 | 1565 | 4µL | 25 ↓ | 05/24/10 |
| | LLISTD | 1982 | 20µL | 200 PPM | 08/26/10 |
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| Syringe ID: | | | | | |

## GCMS ANALYSIS LOG - SEMIVOLATILES

Reviewed By: _____ Date: 11/18/10

| | |
|---|---|
| Instrument ID: | HP# D |
| Analysis/Fraction | BNA |
| Analyst(s): | JM |

| | |
|---|---|
| Method File: | H0310D.m |
| Sequence FILE: | 111610 |
| Tune File: | DFTPP.U |
| Column: DB-5MS | |

ICAL Date: 11/03/10

Attach Run Summary Below

Injection Log

Directory: c:\gcmsdata\d\111610

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | d46265.d | 1. | DFTPP050 ok | DFTPP050 HP#P JI | 16 Nov 10 10:25 |
| 2 | 2 | d46266.d | 1. | SSTD001 ok | SIMPAH CURVE HP#P JI | 16 Nov 10 10:40 |
| 3 | 3 | d46267.d | 1. | B046132-BLK1 ok | BLK, TETRATECH, SOIL HP#P JI | 16 Nov 10 11:06 |
| 4 | 4 | d46268.d | 1. | B046132-BS1 ok | BKS, TETRATECH, SOIL HP#P JI | 16 Nov 10 11:30 |
| 5 | 5 | d46269.d | 1. | B046132-MS1 ok | MS, TETRATECH, SOIL HP#P JI | 16 Nov 10 11:54 |
| 6 | 6 | d46270.d | 1. | ~~B046132-MSD1 ok~~ | MSD, TETRATECH, SOIL HP#P JI | 16 Nov 10 12:19 |
| 7 | 7 | d46271.d | 1. | 1011013-01 ok | TETRATECH, SOIL HP#P JI | 16 Nov 10 12:43 |
| 8 | 8 | d46272.d | 1. | 1011013-02 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 13:07 |
| 9 | 9 | d46273.d | 1. | 1011013-03 ok | TETRATECH, SOIL HP#P JI | 16 Nov 10 13:31 |
| 10 | 10 | d46274.d | 1. | 1011013-04 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 13:55 |
| 11 | 11 | d46275.d | 1. | 1011013-05 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 14:20 |
| 12 | 12 | d46276.d | 1. | 1011013-06 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 14:44 |
| 13 | 13 | d46277.d | 1. | 1011013-07 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 15:09 |
| 14 | 14 | d46278.d | 1. | 1011013-08 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 15:33 |
| 15 | 15 | d46279.d | 1. | 1011013-09 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 15:58 |
| 16 | 16 | d46280.d | 1. | 1011013-10 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 16:22 |
| 17 | 17 | d46281.d | 1. | 1011013-11 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 16:50 |
| 18 | 18 | d46282.d | 1. | 1011013-12 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 17:15 |
| 19 | 19 | d46283.d | 1. | 1011013-13 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 17:39 |
| 20 | 20 | d46284.d | 1. | 1011013-14 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 18:03 |
| 21 | 21 | d46285.d | 1. | 1011013-15 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 18:28 |
| 22 | 22 | d46286.d | 1. | 1011013-16 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 18:52 |
| 23 | 23 | d46287.d | 1. | 1011013-17 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 19:16 |
| 24 | 24 | d46288.d | 1. | 1011013-18 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 19:41 |
| 25 | 25 | d46289.d | 1. | 1011013-19 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 20:05 |
| 26 | 26 | d46290.d | 1. | 1011013-20 1 surr. high | TETRATECH, SOIL HP#P JI | 16 Nov 10 20:29 |
| 27 | 4 | d46291.d | 1. | B046132-BS1 2 surr. high | BKS, TETRATECH, SOIL HP#P JI | 16 Nov 10 20:54 |
| 28 | 27 | d46292.d | 1. | B046055-BS1 1 surr. high | BKS, TETRATECH, WATER HP#P JI | 16 Nov 10 21:18 |
| 29 | 28 | d46293.d | 1. | B046137\B046136-BS1 1 surr. high | BKS, SOIL HP#P JI | 16 Nov 10 21:43 |
| 30 | 29 | d46294.d | 1. | 1011003-02 1 surr. high (ref. 46247) | 10X, TETRATECH, WATER HP#P JI | 16 Nov 10 22:07 |

| Remarks | Standards | Lot# | Volume | Conc | Date Prepared |
|---|---|---|---|---|---|
| 1011013 → B048004 | DFTPP050 | 1979 | 1µL | 50 PPM | 11/03/10 |
| | SSTD001 | 1565 | 4µL | 2.5 ↓ | 05/24/10 |
| S048009 | LLISTD | 1982 | 20µL | 200 PPM | 08/26/10 |
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| Syringe ID: | | | | | |

CENTAURI LABS™

# SW8081A

7210 Corporate Court, Frederick, MD 21703 P:(240) 575-1150 F: (301) 620-0731 www.centaurilabs.com

W0087321BRKDWN

| % BREAKDOWN | SIGNAL 1 RTx-CLP | SIGNAL 2 RTx-CLP2 |
|---|---|---|
| **ENDRIN** | **3.78** | **4.56** |
| **DDT** | **1.35** | **2.68** |

| | RAW RESPONSE | |
|---|---|---|
| ENDRIN KETONE | 9763035.00 | 6881429.00 |
| ENDRIN ALDEHYDE | 1247700.00 | 1486662.00 |
| **ENDRIN** | 279900000.00 | 175000000.00 |
| | | |
| DDE | 0.00 | 0.00 |
| DDD | 3327121.00 | 3745351.00 |
| **DDT** | 242400000.00 | 135900000.00 |

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111010\V0316233.D\ECD1A.CH Vial: 3
Signal #2 : H:\GCDATA\V\111010\V0316233.D\ECD2B.CH
Acq On : 10 Nov 2010 12:39 Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:26 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Nov 10 15:16:18 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Cal. Chlordane

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.67 | 6.46 | 137.3E6 | 210.9E6 | 25.594 | 25.000 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 127.97% | 125.00% |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 82988875 | 130.5E6 | 25.000 | 25.000 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 125.00% |
| Target Compounds | | | | | | |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| 34) L9 Chlordane | 9.34 | 10.38 | 170.0E6 | 328.1E6 | 502.732 | 504.206 |
| 35) L9 Chlordane {2} | 10.59 | 11.96 | 144.5E6 | 230.7E6 | 498.756 | 493.610 |
| 36) L9 Chlordane {3} | 12.56 | 14.07 | 375.8E6 | 662.4E6 | 512.932 | 530.189 |
| 37) L9 Chlordane {4} | 12.99 | 14.57 | 500.4E6 | 562.8E6 | 454.272 | 503.710 |
| 38) L9 Chlordane {5} | 15.49 | 17.60 | 103.4E6 | 188.8E6 | 504.872 | 546.468 |
| Sum Chlordane | | | 1294.2E6 | 1972.7E6 | 2473.564 | 2578.182 |
| Average Chlordane | | | | | 494.713 | 515.636 |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111010\V0316232.D\ECD1A.CH Vial: 2
Signal #2 : H:\GCDATA\V\111010\V0316232.D\ECD2B.CH
Acq On : 10 Nov 2010 12:07 Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:28 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Nov 10 15:16:18 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Cal. Tox

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.70 | 6.47 | 239.1E6 | 357.7E6 | 25.000 | 25.000 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 125.00% | 125.00% |
| 28) S Decachlorobiphen | 22.15 | 24.09 | 142.2E6 | 213.5E6 | 25.000 | 25.000 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 125.00% |
| Target Compounds | | | | | | |
| 29) L8 Toxaphene | 14.53 | 15.60 | 45822342 | 96815464 | 466.409m | 500.000 |
| 30) L8 Toxaphene {2} | 15.66 | 17.38 | 110.4E6 | 154.8E6 | 502.234m | 499.650m |
| 31) L8 Toxaphene {3} | 16.81 | 17.75 | 70668992 | 263.7E6 | 498.131m | 497.089m |
| 32) L8 Toxaphene {4} | 17.55 | 18.78 | 48262374 | 147.0E6 | 500.695m | 468.075m |
| 33) L8 Toxaphene {5} | 18.33 | 20.28 | 83566428 | 138.1E6 | 485.231m | 491.754m |
| Sum Toxaphene | | | 358.7E6 | 800.5E6 | 2452.700 | 2456.569 |
| Average Toxaphene | | | | | 490.540 | 491.314 |
| Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average Chlordane | | | | | 0.000 | 0.000 |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

# INITIAL CALIBRATION STANDARDS

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048004 | Instrument: | GCECD-W |
| Calibration: | 0112301 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001724 | PEST MIX LE-2 | S048004-CAL1 | W0087315.D | 11/16/10 16:24 |
| 0001720 | PEST MIX LE-6 | S048004-CAL5 | W0087316.D | 11/16/10 16:54 |
| 0001721 | PEST MIX LE-5 | S048004-CAL4 | W0087317.D | 11/16/10 17:25 |
| 0001722 | PEST MIX LE-4 | S048004-CAL3 | W0087318.D | 11/16/10 17:55 |
| 0001723 | PEST MIX LE-3 | S048004-CAL2 | W0087319.D | 11/16/10 18:25 |
| 0002066 | PEST LEVEL-4(ICV) | S048004-SCV1 | W0087320.D | 11/16/10 18:55 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 4532295 | 7.67729 | 0.9982816 | | | |
| 4,4'-DDD [2C] | 3481786 | 8.320508 | 0.9979279 | | | |
| 4,4'-DDE | 6044270 | 3.586216 | 0.999878 | | | |
| 4,4'-DDE [2C] | 4508786 | 7.428151 | 0.9975679 | | | |
| 4,4'-DDT | 5058761 | 2.737206 | 0.9983119 | | | |
| 4,4'-DDT [2C] | 3338642 | 7.294406 | 0.9985994 | | | |
| Aldrin | 7055918 | 7.261361 | 0.9999859 | | | |
| Aldrin [2C] | 5325379 | 14.94962 | 0.9996254 | | | |
| alpha-BHC | 7828278 | 10.81308 | 0.9996585 | | | |
| alpha-BHC [2C] | 6158102 | 1.566857 | 0.999735 | | | |
| alpha-Chlordane | 6474838 | 2.895004 | 0.9997601 | | | |
| alpha-Chlordane [2C] | 4667042 | 13.30364 | 0.9975967 | | | |
| beta-BHC | 3094384 | 9.112598 | 0.9992495 | | | |
| beta-BHC [2C] | 2663403 | 13.7245 | 0.9995513 | | | |
| delta-BHC | 6809623 | 12.89578 | 0.9998065 | | | |
| delta-BHC [2C] | 5337919 | 1.497075 | 0.999833 | | | |
| Dieldrin | 6784961 | 1.503941 | 0.9997511 | | | |
| Dieldrin [2C] | 4874974 | 9.051048 | 0.9979017 | | | |
| Endosulfan I | 6415020 | 1.38824 | 0.9999648 | | | |
| Endosulfan I [2C] | 4559152 | 13.03145 | 0.9977191 | | | |
| Endosulfan II | 5738262 | 2.060011 | 0.9989562 | | | |
| Endosulfan II [2C] | 4003027 | 10.42144 | 0.998599 | | | |
| Endosulfan sulfate | 4824299 | 3.541018 | 0.9966205 | | | |
| Endosulfan Sulfate [2C] | 3264486 | 12.64214 | 0.99724 | | | |
| Endrin | 5594840 | 3.364891 | 0.998172 | | | |
| Endrin [2C] | 4026595 | 11.36473 | 0.9970221 | | | |
| Endrin Aldehyde | 3187705 | 8.371873 | 0.9835135 | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Endrin Aldehyde [2C] | 2400751 | 14.81274 | 0.9702603 | | | |
| Endrin ketone | 5747872 | 5.776109 | 0.9967073 | | | |
| Endrin Ketone [2C] | 3864954 | 12.24196 | 0.9973379 | | | |
| gamma-BHC | 7302100 | 9.417334 | 0.9999409 | | | |
| gamma-BHC [2C] | 5576326 | 1.33407 | 0.9998729 | | | |
| gamma-Chlordane | 6649549 | 4.080832 | 0.9997665 | | | |
| gamma-Chlordane [2C] | 4659791 | 12.04857 | 0.9986951 | | | |
| Heptachlor | 7574990 | 2.393061 | 0.9999746 | | | |
| Heptachlor [2C] | 5094481 | 7.918683 | 0.9996381 | | | |
| Heptachlor Epoxide | 6769654 | 4.0722 | 0.9998187 | | | |
| Heptachlor Epoxide [2C] | 4853774 | 10.39192 | 0.9994593 | | | |
| Methoxychlor | 2602677 | 5.362244 | 0.9937125 | | | |
| Methoxychlor [2C] | 1694895 | 16.35445 | 0.9935232 | | | |
| TCMX | 5256855 | 5.374822 | 0.9991765 | | | |
| TCMX [2C] | 4187152 | 8.761541 | 0.9993077 | | | |
| DCB | 4879149 | 10.69193 | 0.9879025 | | | |
| DCB [2C] | 2879656 | 12.31246 | 0.9883868 | | | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 4116284 | 4199528 | 4842524 | 4815184 | 4687955 | |
| 4,4'-DDD [2C] | 3938852 | 3533530 | 3446746 | 3317930 | 3171873 | |
| 4,4'-DDE | 5686578 | 5993728 | 6182376 | 6210032 | 6148637 | |
| 4,4'-DDE [2C] | 5001622 | 4647224 | 4427074 | 4354308 | 4113702 | |
| 4,4'-DDT | 4948028 | 4945208 | 5098848 | 5279248 | 5022475 | |
| 4,4'-DDT [2C] | 3722968 | 3411585 | 3232180 | 3238541 | 3087935 | |
| Aldrin | 6146412 | 7175888 | 7299200 | 7334399 | 7323690 | |
| Aldrin [2C] | 6679428 | 5393544 | 4970978 | 4818391 | 4764556 | |
| alpha-BHC | 6408234 | 7707536 | 8214201 | 8307717 | 8503704 | |
| alpha-BHC [2C] | 6307318 | 6154108 | 6088986 | 6059692 | 6180403 | |
| alpha-Chlordane | 6155466 | 6611988 | 6582489 | 6563929 | 6460317 | |
| alpha-Chlordane [2C] | 5684524 | 4777132 | 4464994 | 4317180 | 4091382 | |
| beta-BHC | 2612170 | 3347384 | 3218884 | 3162957 | 3130524 | |
| beta-BHC [2C] | 3283440 | 2695960 | 2509122 | 2436699 | 2391795 | |
| delta-BHC | 5319988 | 6708808 | 7273230 | 7320047 | 7426045 | |
| delta-BHC [2C] | 5226664 | 5404537 | 5422362 | 5297945 | 5338086 | |
| Dieldrin | 6915122 | 6655204 | 6791108 | 6844185 | 6719188 | |
| Dieldrin [2C] | 5556198 | 5023776 | 4757110 | 4630851 | 4406934 | |
| Endosulfan I | 6284544 | 6534404 | 6434758 | 6413890 | 6407507 | |
| Endosulfan I [2C] | 5531348 | 4663068 | 4382034 | 4210910 | 4008403 | |
| Endosulfan II | 5858602 | 5695737 | 5819106 | 5760128 | 5557737 | |
| Endosulfan II [2C] | 4653234 | 4154916 | 3877402 | 3718204 | 3611379 | |
| Endosulfan sulfate | 4934880 | 4913632 | 4914620 | 4831242 | 4527119 | |
| Endosulfan Sulfate [2C] | 3942524 | 3311841 | 3167368 | 3029444 | 2871252 | |
| Endrin | 5350974 | 5538276 | 5782724 | 5787978 | 5514247 | |
| Endrin [2C] | 4786874 | 4042180 | 3910822 | 3815090 | 3578010 | |
| Endrin Aldehyde | 2956470 | 3282960 | 3564678 | 3227194 | 2907226 | |
| Endrin Aldehyde [2C] | 2839614 | 2388543 | 2660584 | 2128068 | 1986946 | |
| Endrin ketone | 6181336 | 5907792 | 5719040 | 5648964 | 5282227 | |
| Endrin Ketone [2C] | 4641154 | 3932407 | 3725186 | 3615892 | 3410129 | |
| gamma-BHC | 6104392 | 7348840 | 7608202 | 7678524 | 7770544 | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| gamma-BHC [2C] | 5548056 | 5705256 | 5538032 | 5519614 | 5570675 | |
| gamma-Chlordane | 6177938 | 6686900 | 6836314 | 6824375 | 6722220 | |
| gamma-Chlordane [2C] | 5592692 | 4738056 | 4462446 | 4337508 | 4168253 | |
| Heptachlor | 7281087 | 7524505 | 7649350 | 7693789 | 7726220 | |
| Heptachlor [2C] | 5756818 | 5192632 | 4915948 | 4776631 | 4830378 | |
| Heptachlor Epoxide | 6287348 | 6964217 | 6909836 | 6881987 | 6804884 | |
| Heptachlor Epoxide [2C] | 5682242 | 4966460 | 4656076 | 4521867 | 4442223 | |
| Methoxychlor | 2789430 | 2577810 | 2579950 | 2660013 | 2406180 | |
| Methoxychlor [2C] | 2156340 | 1711902 | 1602962 | 1575688 | 1427582 | |
| TCMX | 5695024 | 5291088 | 5283488 | 5029000 | 4985674 | |
| TCMX [2C] | 4758384 | 4330639 | 4065628 | 3909790 | 3871320 | |
| DCB | 5591596 | 5079005 | 4847228 | 4715096 | 4162822 | |
| DCB [2C] | 3386481 | 3022575 | 2813551 | 2747301 | 2428372 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087320.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S048004 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S048004-SCV1 | Injection Time: | 18:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 47.1 | 4532295 | 4269854 | | -5.8 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 43.9 | 3481786 | 3057334 | | -12.2 | 20 |
| 4,4'-DDE | L | 50.0 | 46.3 | 6044270 | 5597174 | | -7.4 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 44.9 | 4508786 | 4051264 | | -10.1 | 20 |
| 4,4'-DDT | L | 50.0 | 46.3 | 5058761 | 4679938 | | -7.5 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 44.9 | 3338642 | 2996604 | | -10.2 | 20 |
| Aldrin | L | 50.0 | 47.0 | 7055918 | 6636408 | | -5.9 | 20 |
| Aldrin [2C] | L | 50.0 | 43.0 | 5325379 | 4579366 | | -14.0 | 20 |
| alpha-BHC | L | 50.0 | 48.4 | 7828278 | 7573498 | | -3.3 | 20 |
| alpha-BHC [2C] | L | 50.0 | 44.9 | 6158102 | 5533540 | | -10.1 | 20 |
| alpha-Chlordane | L | 50.0 | 46.8 | 6474838 | 6059038 | | -6.4 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 43.7 | 4667042 | 4077858 | | -12.6 | 20 |
| beta-BHC | L | 50.0 | 49.6 | 3094384 | 3066300 | | -0.9 | 20 |
| beta-BHC [2C] | L | 50.0 | 45.1 | 2663403 | 2400390 | | -9.9 | 20 |
| delta-BHC | L | 50.0 | 48.8 | 6809623 | 6644978 | | -2.4 | 20 |
| delta-BHC [2C] | L | 50.0 | 45.9 | 5337919 | 4896234 | | -8.3 | 20 |
| Dieldrin | L | 50.0 | 43.8 | 6784961 | 5940962 | | -12.4 | 20 |
| Dieldrin [2C] | L | 50.0 | 43.2 | 4874974 | 4214566 | | -13.5 | 20 |
| Endosulfan I | L | 50.0 | 47.1 | 6415020 | 6040078 | | -5.8 | 20 |
| Endosulfan I [2C] | L | 50.0 | 44.6 | 4559152 | 4068882 | | -10.8 | 20 |
| Endosulfan II | L | 50.0 | 46.0 | 5738262 | 5276372 | | -8.0 | 20 |
| Endosulfan II [2C] | L | 50.0 | 44.4 | 4003027 | 3556984 | | -11.1 | 20 |
| Endosulfan sulfate | L | 50.0 | 46.6 | 4824299 | 4495086 | | -6.8 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 44.0 | 3264486 | 2873940 | | -12.0 | 20 |
| Endrin | L | 50.0 | 46.7 | 5594840 | 5220774 | | -6.7 | 20 |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087320.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S048004 | Injection Date: | 11/16/10 |
| Lab Sample ID: | S048004-SCV1 | Injection Time: | 18:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 43.4 | 4026595 | 3497104 | | -13.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 56.8 | 3187705 | 3623276 | | 13.7 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 51.9 | 2400751 | 2493622 | | 3.9 | 20 |
| Endrin ketone | L | 50.0 | 47.3 | 5747872 | 5435670 | | -5.4 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 45.6 | 3864954 | 3522432 | | -8.9 | 20 |
| gamma-BHC | L | 50.0 | 48.5 | 7302100 | 7083310 | | -3.0 | 20 |
| gamma-BHC [2C] | L | 50.0 | 46.5 | 5576326 | 5181004 | | -7.1 | 20 |
| gamma-Chlordane | L | 50.0 | 47.0 | 6649549 | 6250488 | | -6.0 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 44.3 | 4659791 | 4130078 | | -11.4 | 20 |
| Heptachlor | L | 50.0 | 46.7 | 7574990 | 7069356 | | -6.7 | 20 |
| Heptachlor [2C] | L | 50.0 | 44.4 | 5094481 | 4519782 | | -11.3 | 20 |
| Heptachlor Epoxide | L | 50.0 | 46.2 | 6769654 | 6249360 | | -7.7 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 43.3 | 4853774 | 4207078 | | -13.3 | 20 |
| Methoxychlor | L | 50.0 | 47.6 | 2602677 | 2480530 | | -4.7 | 20 |
| Methoxychlor [2C] | L | 50.0 | 43.6 | 1694895 | 1478898 | | -12.7 | 20 |
| TCMX | L | 25.0 | 29.4 | 5256855 | 6184028 | | 17.6 | 20 |
| TCMX [2C] | L | 25.0 | 29.0 | 4187152 | 4862984 | | 16.2 | 20 |
| DCB | L | 25.0 | 30.0 | 4879149 | 5855408 | | 20.0 | 20 |
| DCB [2C] | L | 25.0 | 29.1 | 2879656 | 3356217 | | 16.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Centauri Labs

Document Control No: CLM_G_002

S049007

## GC ANALYSIS LOG

Instrument ID: HP6890 # W

Reviewed by: [signature] Date: 11/19/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 / |
| Injector Temp (°C): | 180 / 200 / 240 / |
| Detector Temp (°C): | 300 |
| Oven Initial Temp(°C): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (°C/min): | 15-215-2 / 4-250-0.5 / 18-300-7 |
| Final Temp (°C): | 200 / 275 / 300 / |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | | |
|---|---|---|
| Column: | RTX-CLP | 30meter |
| ID: | 0.32 mm | |

**Detector B**

| | | |
|---|---|---|
| Column: | RTX-CLP2 | 30 meter |
| ID: | 0.32 mm | |

ICAL Method: 111610W-m

Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 111810 | W | | | | | |

**Injection Log**

Directory: h:\gcdata\w\111810

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | w0087366.d | 1. | EVAL MIX 2081 | STD 8082 | 18 Nov 10 15:36 |
| 2 | w0087367.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 18 Nov 10 16:11 |
| 3 | w0087368.d | 1. | TOX-3 2006 | STD 8081 | 18 Nov 10 16:56 |
| 4 | w0087369.d | 1. | CHLOR-3 2004 | STD 8081 | 18 Nov 10 17:26 |
| 5 | w0087370.d | 1. | 1011008-02 | SOIL | 18 Nov 10 17:57 |
| 6 | w0087371.d | 1. | 1011014-01 | SOIL | 18 Nov 10 18:27 |
| 7 | w0087372.d | 1. | 1011013-01 | SOIL | 18 Nov 10 18:57 |
| 8 | w0087373.d | 1. | B046110-MS1 | SOIL MS 01 | 18 Nov 10 19:27 |
| 9 | w0087374.d | 1. | B046110-MSD1 | SOIL MSD 01 | 18 Nov 10 19:57 |
| 10 | w0087375.d | 1. | 1011013-02 | SOIL | 18 Nov 10 20:28 |
| 11 | w0087376.d | 1. | 1011013-03 | SOIL | 18 Nov 10 20:58 |
| 12 | w0087377.d | 1. | 1011013-04 | SOIL | 18 Nov 10 21:28 |
| 13 | w0087378.d | 1. | HEXANE | | 18 Nov 10 21:58 |
| 14 | w0087379.d | 1. | SEQ CCV2 PEST-4 1722 | STD 8081 | 18 Nov 10 22:29 * |
| 15 | w0087380.d | 1. | 1011013-05 | SOIL | 18 Nov 10 22:59 |
| 16 | w0087381.d | 1. | 1011013-06 | SOIL | 18 Nov 10 23:29 |
| 17 | w0087382.d | 1. | 1011013-07 | SOIL | 18 Nov 10 23:59 |
| 18 | w0087383.d | 1. | 1011013-08 | SOIL | 19 Nov 10 00:30 |
| 19 | w0087384.d | 1. | 1011013-14 | SOIL | 19 Nov 10 01:00 |
| 20 | w0087385.d | 1. | 1011013-15 | SOIL | 19 Nov 10 01:30 |
| 21 | w0087386.d | 1. | 1011013-17 | SOIL | 19 Nov 10 02:00 |
| 22 | w0087387.d | 1. | 1011013-18 | SOIL | 19 Nov 10 02:30 |
| 13 | w0087388.d | 1. | HEXANE | | 19 Nov 10 03:01 |
| 23 | w0087389.d | 1. | EVAL MIX (missing) | | 19 Nov 10 03:31 |
| 24 | w0087390.d | 1. | SEQ CCV3 PEST-4 1722 | STD 8081 | 19 Nov 10 04:01 |
| 25 | w0087391.d | 1. | 1011013-19 | SOIL | 19 Nov 10 04:31 |
| 26 | w0087392.d | 1. | 1011013-20 | SOIL | 19 Nov 10 05:02 |
| 27 | w0087393.d | 1. | 1011013-09 | SOIL | 19 Nov 10 05:32 |
| 28 | w0087394.d | 1. | 1011013-10 | SOIL | 19 Nov 10 06:02 |
| 29 | w0087395.d | 1. | 1011013-11 | SOIL | 19 Nov 10 06:32 |
| 30 | w0087396.d | 1. | 1011013-12 | SOIL | 19 Nov 10 07:03 |
| 31 | w0087397.d | 1. | 1011013-13 | SOIL | 19 Nov 10 07:33 |
| 32 | w0087398.d | 1. | 1011013-16 | SOIL | 19 Nov 10 08:03 |
| 33 | w0087399.d | 1. | 1011013-21 | SOIL | 19 Nov 10 08:33 |
| 13 | w0087400.d | 1. | HEXANE | | 19 Nov 10 09:03 |
| 34 | w0087401.d | 1. | SEQCCV4 PEST-4 1722 | STD8081 | 19 Nov 10 09:34 * |

RP 11/19/10

Comments:



* CCV a 7206

Supersedes GP_G_110

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087367.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV1 | Injection Time: | 16:11 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 58.3 | 4532295 | 5281692 | | 16.5 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 47.4 | 3481786 | 3301234 | | -5.2 | 20 |
| 4,4'-DDE | L | 50.0 | 52.6 | 6044270 | 6361820 | | 5.3 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 45.2 | 4508786 | 4077920 | | -9.6 | 20 |
| 4,4'-DDT | L | 50.0 | 46.6 | 5058761 | 4711846 | | -6.9 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 40.1 | 3338642 | 2679494 | | -19.7 | 20 |
| Aldrin | L | 50.0 | 51.2 | 7055918 | 7222730 | | 2.4 | 20 |
| Aldrin [2C] | L | 50.0 | 42.4 | 5325379 | 4521748 | | -15.1 | 20 |
| alpha-BHC | L | 50.0 | 51.9 | 7828278 | 8123704 | | 3.8 | 20 |
| alpha-BHC [2C] | L | 50.0 | 44.4 | 6158102 | 5474806 | | -11.1 | 20 |
| alpha-Chlordane | L | 50.0 | 51.3 | 6474838 | 6643830 | | 2.6 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 44.0 | 4667042 | 4102522 | | -12.1 | 20 |
| beta-BHC | L | 50.0 | 51.7 | 3094384 | 3202316 | | 3.5 | 20 |
| beta-BHC [2C] | L | 50.0 | 42.5 | 2663403 | 2264904 | | -15.0 | 20 |
| delta-BHC | L | 50.0 | 53.9 | 6809623 | 7336282 | | 7.7 | 20 |
| delta-BHC [2C] | L | 50.0 | 46.8 | 5337919 | 4997292 | | -6.4 | 20 |
| Dieldrin | L | 50.0 | 51.0 | 6784961 | 6918998 | | 2.0 | 20 |
| Dieldrin [2C] | L | 50.0 | 44.8 | 4874974 | 4364614 | | -10.5 | 20 |
| Endosulfan I | L | 50.0 | 50.8 | 6415020 | 6513296 | | 1.5 | 20 |
| Endosulfan I [2C] | L | 50.0 | 44.3 | 4559152 | 4035354 | | -11.5 | 20 |
| Endosulfan II | L | 50.0 | 51.8 | 5738262 | 5942494 | | 3.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 44.6 | 4003027 | 3566588 | | -10.9 | 20 |
| Endosulfan sulfate | L | 50.0 | 52.4 | 4824299 | 5053346 | | 4.7 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 45.5 | 3264486 | 2968364 | | -9.1 | 20 |
| Endrin | L | 50.0 | 52.3 | 5594840 | 5855560 | | 4.7 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087367.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV1 | Injection Time: | 16:11 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 44.5 | 4026595 | 3583432 | | -11.0 | 20 |
| Endrin Aldehyde | L | 50.0 | 53.2 | 3187705 | 3388826 | | 6.3 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 42.2 | 2400751 | 2028386 | | -15.5 | 20 |
| Endrin ketone | L | 50.0 | 51.3 | 5747872 | 5902342 | | 2.7 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 44.8 | 3864954 | 3462594 | | -10.4 | 20 |
| gamma-BHC | L | 50.0 | 51.7 | 7302100 | 7544996 | | 3.3 | 20 |
| gamma-BHC [2C] | L | 50.0 | 44.9 | 5576326 | 5004318 | | -10.3 | 20 |
| gamma-Chlordane | L | 50.0 | 51.6 | 6649549 | 6861530 | | 3.2 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 44.1 | 4659791 | 4112196 | | -11.8 | 20 |
| Heptachlor | L | 50.0 | 50.9 | 7574990 | 7716932 | | 1.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 45.6 | 5094481 | 4643872 | | -8.8 | 20 |
| Heptachlor Epoxide | L | 50.0 | 51.4 | 6769654 | 6952364 | | 2.7 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 44.3 | 4853774 | 4301864 | | -11.4 | 20 |
| Methoxychlor | L | 50.0 | 47.5 | 2602677 | 2471686 | | -5.0 | 20 |
| Methoxychlor [2C] | L | 50.0 | 40.4 | 1694895 | 1367646 | | -19.3 | 20 |
| TCMX | L | 25.0 | 26.3 | 5256855 | 5522432 | | 5.0 | 20 |
| TCMX [2C] | L | 25.0 | 22.7 | 4187152 | 3806476 | | -9.1 | 20 |
| DCB | L | 25.0 | 25.4 | 4879149 | 4964940 | | 1.8 | 20 |
| DCB [2C] | L | 25.0 | 23.1 | 2879656 | 2660081 | | -7.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087379.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV2 | Injection Time: | 22:29 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4,4'-DDD | L | 50.0 | 68.1 | 4532295 | 6170126 | | 36.1 | 20 | * |
| 4,4'-DDD [2C] | L | 50.0 | 56.4 | 3481786 | 3924176 | | 12.7 | 20 | |
| 4,4'-DDE | L | 50.0 | 55.0 | 6044270 | 6644090 | | 9.9 | 20 | |
| 4,4'-DDE [2C] | L | 50.0 | 46.3 | 4508786 | 4171608 | | -7.5 | 20 | |
| 4,4'-DDT | L | 50.0 | 33.8 | 5058761 | 3421506 | | -32.4 | 20 | * |
| 4,4'-DDT [2C] | L | 50.0 | 28.6 | 3338642 | 1909440 | | -42.8 | 20 | * |
| Aldrin | L | 50.0 | 52.9 | 7055918 | 7459294 | | 5.7 | 20 | |
| Aldrin [2C] | L | 50.0 | 43.0 | 5325379 | 4579032 | | -14.0 | 20 | |
| alpha-BHC | L | 50.0 | 52.5 | 7828278 | 8224936 | | 5.1 | 20 | |
| alpha-BHC [2C] | L | 50.0 | 45.7 | 6158102 | 5624368 | | -8.7 | 20 | |
| alpha-Chlordane | L | 50.0 | 53.0 | 6474838 | 6858024 | | 5.9 | 20 | |
| alpha-Chlordane [2C] | L | 50.0 | 44.6 | 4667042 | 4163658 | | -10.8 | 20 | |
| beta-BHC | L | 50.0 | 54.3 | 3094384 | 3359560 | | 8.6 | 20 | |
| beta-BHC [2C] | L | 50.0 | 44.2 | 2663403 | 2357214 | | -11.5 | 20 | |
| delta-BHC | L | 50.0 | 56.4 | 6809623 | 7682084 | | 12.8 | 20 | |
| delta-BHC [2C] | L | 50.0 | 48.1 | 5337919 | 5139228 | | -3.7 | 20 | |
| Dieldrin | L | 50.0 | 51.7 | 6784961 | 7020388 | | 3.5 | 20 | |
| Dieldrin [2C] | L | 50.0 | 45.4 | 4874974 | 4429976 | | -9.1 | 20 | |
| Endosulfan I | L | 50.0 | 51.9 | 6415020 | 6659270 | | 3.8 | 20 | |
| Endosulfan I [2C] | L | 50.0 | 44.7 | 4559152 | 4071944 | | -10.7 | 20 | |
| Endosulfan II | L | 50.0 | 53.6 | 5738262 | 6148570 | | 7.2 | 20 | |
| Endosulfan II [2C] | L | 50.0 | 47.4 | 4003027 | 3794456 | | -5.2 | 20 | |
| Endosulfan sulfate | L | 50.0 | 55.1 | 4824299 | 5320614 | | 10.3 | 20 | |
| Endosulfan Sulfate [2C] | L | 50.0 | 46.8 | 3264486 | 3053886 | | -6.5 | 20 | |
| Endrin | L | 50.0 | 53.6 | 5594840 | 6000474 | | 7.3 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087379.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV2 | Injection Time: | 22:29 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Endrin [2C] | L | 50.0 | 45.2 | 4026595 | 3641390 | | -9.6 | 20 | |
| Endrin Aldehyde | L | 50.0 | 56.2 | 3187705 | 3581456 | | 12.4 | 20 | |
| Endrin Aldehyde [2C] | L | 50.0 | 43.6 | 2400751 | 2091638 | | -12.9 | 20 | |
| Endrin ketone | L | 50.0 | 52.7 | 5747872 | 6057498 | | 5.4 | 20 | |
| Endrin Ketone [2C] | L | 50.0 | 49.7 | 3864954 | 3840414 | | -0.6 | 20 | |
| gamma-BHC | L | 50.0 | 52.9 | 7302100 | 7723176 | | 5.8 | 20 | |
| gamma-BHC [2C] | L | 50.0 | 46.2 | 5576326 | 5150146 | | -7.6 | 20 | |
| gamma-Chlordane | L | 50.0 | 52.6 | 6649549 | 6989332 | | 5.1 | 20 | |
| gamma-Chlordane [2C] | L | 50.0 | 50.9 | 4659791 | 4742890 | | 1.8 | 20 | |
| Heptachlor | L | 50.0 | 50.3 | 7574990 | 7623986 | | 0.6 | 20 | |
| Heptachlor [2C] | L | 50.0 | 46.3 | 5094481 | 4721008 | | -7.3 | 20 | |
| Heptachlor Epoxide | L | 50.0 | 53.0 | 6769654 | 7169668 | | 5.9 | 20 | |
| Heptachlor Epoxide [2C] | L | 50.0 | 44.4 | 4853774 | 4309752 | | -11.2 | 20 | |
| Methoxychlor | L | 50.0 | 39.8 | 2602677 | 2070542 | | -20.4 | 20 | * |
| Methoxychlor [2C] | L | 50.0 | 32.8 | 1694895 | 1110141 | | -34.5 | 20 | * |
| TCMX | L | 25.0 | 26.1 | 5256855 | 5485180 | | 4.4 | 20 | |
| TCMX [2C] | L | 25.0 | 22.6 | 4187152 | 3781157 | | -9.7 | 20 | |
| DCB | L | 25.0 | 27.7 | 4879149 | 5408340 | | 10.8 | 20 | |
| DCB [2C] | L | 25.0 | 24.9 | 2879656 | 2867062 | | -0.4 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087401.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/19/10 |
| Lab Sample ID: | S049007-CCV4 | Injection Time: | 09:34 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 75.4 | 4532295 | 6832122 | | 50.7 | 20 * |
| 4,4'-DDD [2C] | L | 50.0 | 61.5 | 3481786 | 4280408 | | 22.9 | 20 * |
| 4,4'-DDE | L | 50.0 | 57.6 | 6044270 | 6966342 | | 15.3 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.4 | 4508786 | 4457676 | | -1.1 | 20 |
| 4,4'-DDT | L | 50.0 | 31.7 | 5058761 | 3205068 | | -36.6 | 20 * |
| 4,4'-DDT [2C] | L | 50.0 | 27.0 | 3338642 | 1805335 | | -45.9 | 20 * |
| Aldrin | L | 50.0 | 55.9 | 7055918 | 7892660 | | 11.9 | 20 |
| Aldrin [2C] | L | 50.0 | 46.0 | 5325379 | 4902186 | | -7.9 | 20 |
| alpha-BHC | L | 50.0 | 56.6 | 7828278 | 8867350 | | 13.3 | 20 |
| alpha-BHC [2C] | L | 50.0 | 49.1 | 6158102 | 6051110 | | -1.7 | 20 |
| alpha-Chlordane | L | 50.0 | 55.7 | 6474838 | 7210120 | | 11.4 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 47.5 | 4667042 | 4433736 | | -5.0 | 20 |
| beta-BHC | L | 50.0 | 52.3 | 3094384 | 3238660 | | 4.7 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.5 | 2663403 | 2531576 | | -4.9 | 20 |
| delta-BHC | L | 50.0 | 59.4 | 6809623 | 8082428 | | 18.7 | 20 |
| delta-BHC [2C] | L | 50.0 | 52.0 | 5337919 | 5556638 | | 4.1 | 20 |
| Dieldrin | L | 50.0 | 55.1 | 6784961 | 7473976 | | 10.2 | 20 |
| Dieldrin [2C] | L | 50.0 | 48.4 | 4874974 | 4722842 | | -3.1 | 20 |
| Endosulfan I | L | 50.0 | 54.4 | 6415020 | 6982496 | | 8.8 | 20 |
| Endosulfan I [2C] | L | 50.0 | 47.4 | 4559152 | 4320862 | | -5.2 | 20 |
| Endosulfan II | L | 50.0 | 56.3 | 5738262 | 6465458 | | 12.7 | 20 |
| Endosulfan II [2C] | L | 50.0 | 50.0 | 4003027 | 4006748 | | 0.1 | 20 |
| Endosulfan sulfate | L | 50.0 | 57.8 | 4824299 | 5577974 | | 15.6 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 50.0 | 3264486 | 3260964 | | -0.1 | 20 |
| Endrin | L | 50.0 | 56.6 | 5594840 | 6327246 | | 13.1 | 20 |

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087401.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/19/10 |
| Lab Sample ID: | S049007-CCV4 | Injection Time: | 09:34 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Endrin [2C] | L | 50.0 | 48.0 | 4026595 | 3868744 | | -3.9 | 20 | |
| Endrin Aldehyde | L | 50.0 | 57.9 | 3187705 | 3689748 | | 15.7 | 20 | |
| Endrin Aldehyde [2C] | L | 50.0 | 45.7 | 2400751 | 2196166 | | -8.5 | 20 | |
| Endrin ketone | L | 50.0 | 53.8 | 5747872 | 6184590 | | 7.6 | 20 | |
| Endrin Ketone [2C] | L | 50.0 | 46.7 | 3864954 | 3609200 | | -6.6 | 20 | |
| gamma-BHC | L | 50.0 | 53.9 | 7302100 | 7868844 | | 7.8 | 20 | |
| gamma-BHC [2C] | L | 50.0 | 49.9 | 5576326 | 5562918 | | -0.2 | 20 | |
| gamma-Chlordane | L | 50.0 | 56.0 | 6649549 | 7453462 | | 12.1 | 20 | |
| gamma-Chlordane [2C] | L | 50.0 | 56.5 | 4659791 | 5266106 | | 13.0 | 20 | |
| Heptachlor | L | 50.0 | 50.6 | 7574990 | 7671398 | | 1.3 | 20 | |
| Heptachlor [2C] | L | 50.0 | 47.8 | 5094481 | 4874832 | | -4.3 | 20 | |
| Heptachlor Epoxide | L | 50.0 | 55.5 | 6769654 | 7515062 | | 11.0 | 20 | |
| Heptachlor Epoxide [2C] | L | 50.0 | 47.1 | 4853774 | 4568888 | | -5.9 | 20 | |
| Methoxychlor | L | 50.0 | 35.6 | 2602677 | 1852700 | | -28.8 | 20 | * |
| Methoxychlor [2C] | L | 50.0 | 31.7 | 1694895 | 1075648 | | -36.5 | 20 | * |
| TCMX | L | 25.0 | 33.2 | 5256855 | 6989556 | | 33.0 | 20 | * |
| TCMX [2C] | L | 25.0 | 26.6 | 4187152 | 4447088 | | 6.2 | 20 | |
| DCB | L | 25.0 | 28.0 | 4879149 | 5461140 | | 11.9 | 20 | |
| DCB [2C] | L | 25.0 | 25.8 | 2879656 | 2966239 | | 3.0 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046110-BLK1 | Batch: | B046110 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-SO-023-1010 | 1011013-13 | W0087397.D | 07:33 |
| GKHMS-SO-002-1010 | 1011013-02 | W0087375.D | 20:28 |
| GKHMS-SO-003-1010 | 1011013-03 | W0087376.D | 20:58 |
| GKHMS-SO-005-1010 | 1011013-04 | W0087377.D | 21:28 |
| GKHMS-SO-007-1010 | 1011013-05 | W0087380.D | 22:59 |
| GKHMS-SO-011-1010 | 1011013-06 | W0087381.D | 23:29 |
| GKHMS-SO-012-1010 | 1011013-07 | W0087382.D | 23:59 |
| GKHMS-SO-014-1010 | 1011013-08 | W0087383.D | 00:30 |
| GKHMS-SO-017-1010 | 1011013-09 | W0087393.D | 05:32 |
| GKHMS-SO-019-1010 | 1011013-10 | W0087394.D | 06:02 |
| GKHMS-SO-001-1010 | 1011013-01 | W0087374.D | 19:57 |
| GKHMS-SO-022-1010 | 1011013-12 | W0087396.D | 07:03 |
| Matrix Spike Dup | B046110-MSD1 | W0087373.D | 19:27 |
| GKHMS-SO-025-1010 | 1011013-14 | W0087384.D | 01:00 |
| GKHMS-SO-028-1010 | 1011013-15 | W0087385.D | 01:30 |
| GKHMS-SO-030-1010 | 1011013-16 | W0087398.D | 08:03 |
| GKHMS-SO-031-1010 | 1011013-17 | W0087386.D | 02:00 |
| GKHMS-SO-032-1010 | 1011013-18 | W0087387.D | 02:30 |
| GKHMS-SO-034-1010 | 1011013-19 | W0087391.D | 04:31 |
| GKHMS-SO-FD002-1010 | 1011013-20 | W0087392.D | 05:02 |
| LCS | B046110-BS1 | W0087332.D | 18:47 |
| Matrix Spike | B046110-MS1 | W0087372.D | 18:57 |
| GKHMS-SO-021-1010 | 1011013-11 | W0087395.D | 06:32 |

CENTAURI LABS™

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046110-BLK1 | File ID: | W0087331.D |
| Sampled: | | Prepared: | 11/10/10 10:40 | Analyzed: | 11/17/10 18:17 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |

Batch: B046110 Sequence: S047054 Calibration: 0112301 Instrument: GCECD-W

Column: 1

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 1.67 | U |
| 72-55-9 | 4,4'-DDE | 1.67 | U |
| 50-29-3 | 4,4'-DDT | 1.67 | U |
| 309-00-2 | Aldrin | 1.67 | U |
| 319-84-6 | alpha-BHC | 1.67 | U |
| 5103-71-9 | alpha-Chlordane | 1.67 | U |
| 319-85-7 | beta-BHC | 1.67 | U |
| 57-74-9 | Chlordane | 33.0 | U |
| 319-86-8 | delta-BHC | 1.67 | U |
| 60-57-1 | Dieldrin | 1.67 | U |
| 959-98-8 | Endosulfan I | 1.67 | U |
| 33213-65-9 | Endosulfan II | 1.67 | U |
| 1031-07-8 | Endosulfan sulfate | 1.67 | U |
| 72-20-8 | Endrin | 1.67 | U |
| 7421-93-4 | Endrin Aldehyde | 1.67 | U |
| 53494-70-5 | Endrin ketone | 1.67 | U |
| 58-89-9 | gamma-BHC | 1.67 | U |
| 5103-74-2 | gamma-Chlordane | 1.67 | U |
| 76-44-8 | Heptachlor | 1.67 | U |
| 1024-57-3 | Heptachlor Epoxide | 1.67 | U |
| 72-43-5 | Methoxychlor | 1.67 | U |
| 8001-35-2 | Toxaphene | 33.0 | U |
| 143-50-0 | Kepone | 1.67 | U |
| 143-50-0 | Kepone [2C] | 1.67 | U |
| 2385-85-5 | Mirex | 1.67 | U |
| 2385-85-5 | Mirex [2C] | 1.67 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046110-BLK1 | File ID: | W0087331.D |
| Sampled: | | Prepared: | 11/10/10 10:40 | Analyzed: | 11/17/10 18:17 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046110 | Sequence: | S047054 | Calibration: | 0112301 |
| Column: | 2 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD [2C] | 1.67 | U |
| 72-55-9 | 4,4'-DDE [2C] | 1.67 | U |
| 50-29-3 | 4,4'-DDT [2C] | 1.67 | U |
| 309-00-2 | Aldrin [2C] | 1.67 | U |
| 319-84-6 | alpha-BHC [2C] | 1.67 | U |
| 5103-71-9 | alpha-Chlordane [2C] | 1.67 | U |
| 319-85-7 | beta-BHC [2C] | 1.67 | U |
| 57-74-9 | Chlordane [2C] | 33.0 | U |
| 319-86-8 | delta-BHC [2C] | 1.67 | U |
| 60-57-1 | Dieldrin [2C] | 1.67 | U |
| 959-98-8 | Endosulfan I [2C] | 1.67 | U |
| 33213-65-9 | Endosulfan II [2C] | 1.67 | U |
| 1031-07-8 | Endosulfan Sulfate [2C] | 1.67 | U |
| 72-20-8 | Endrin [2C] | 1.67 | U |
| 7421-93-4 | Endrin Aldehyde [2C] | 1.67 | U |
| 53494-70-5 | Endrin Ketone [2C] | 1.67 | U |
| 58-89-9 | gamma-BHC [2C] | 1.67 | U |
| 5103-74-2 | gamma-Chlordane [2C] | 1.67 | U |
| 76-44-8 | Heptachlor [2C] | 1.67 | U |
| 1024-57-3 | Heptachlor Epoxide [2C] | 1.67 | U |
| 72-43-5 | Methoxychlor [2C] | 1.67 | U |
| 8001-35-2 | Toxaphene [2C] | 33.0 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046110 | Laboratory ID: | B046110-BS1 |
| Column: | 1 | Initial/Final: | 30.02 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 16.7 | 19.4 | 116 | 30 - 135 |
| 4,4'-DDE | 16.7 | 18.3 | 110 | 70 - 125 |
| 4,4'-DDT | 16.7 | 17.6 | 106 | 45 - 140 |
| Aldrin | 16.7 | 17.9 | 108 | 45 - 140 |
| alpha-BHC | 16.7 | 18.0 | 108 | 60 - 125 |
| alpha-Chlordane | 16.7 | 17.8 | 107 | 65 - 120 |
| beta-BHC | 16.7 | 18.3 | 110 | 60 - 125 |
| delta-BHC | 16.7 | 17.7 | 106 | 55 - 130 |
| Dieldrin | 16.7 | 17.5 | 105 | 65 - 125 |
| Endosulfan I | 16.7 | 17.4 | 104 | 15 - 135 |
| Endosulfan II | 16.7 | 17.8 | 107 | 35 - 140 |
| Endosulfan sulfate | 16.7 | 18.0 | 108 | 60 - 135 |
| Endrin | 16.7 | 18.5 | 111 | 60 - 135 |
| Endrin Aldehyde | 16.7 | 20.5 | 123 | 35 - 145 |
| Endrin ketone | 16.7 | 17.9 | 108 | 65 - 135 |
| gamma-BHC | 16.7 | 18.1 | 108 | 60 - 125 |
| gamma-Chlordane | 16.7 | 17.9 | 108 | 65 - 125 |
| Heptachlor | 16.7 | 18.0 | 108 | 50 - 140 |
| Heptachlor Epoxide | 16.7 | 17.9 | 107 | 65 - 130 |
| Methoxychlor | 16.7 | 17.8 | 107 | 55 - 145 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046110 | Laboratory ID: | B046110-BS1 |
| Column: | 2 | Initial/Final: | 30.02 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD [2C] | 16.7 | 16.1 | 97 | 30 - 135 |
| 4,4'-DDE [2C] | 16.7 | 15.9 | 96 | 70 - 125 |
| 4,4'-DDT [2C] | 16.7 | 15.4 | 92 | 45 - 140 |
| Aldrin [2C] | 16.7 | 14.8 | 89 | 45 - 140 |
| alpha-BHC [2C] | 16.7 | 15.6 | 94 | 60 - 125 |
| alpha-Chlordane [2C] | 16.7 | 15.3 | 92 | 65 - 120 |
| beta-BHC [2C] | 16.7 | 15.2 | 92 | 60 - 125 |
| delta-BHC [2C] | 16.7 | 15.4 | 92 | 55 - 130 |
| Dieldrin [2C] | 16.7 | 15.6 | 94 | 65 - 125 |
| Endosulfan I [2C] | 16.7 | 15.4 | 92 | 15 - 135 |
| Endosulfan II [2C] | 16.7 | 15.5 | 93 | 35 - 140 |
| Endosulfan Sulfate [2C] | 16.7 | 15.5 | 93 | 60 - 135 |
| Endrin [2C] | 16.7 | 15.8 | 95 | 60 - 135 |
| Endrin Aldehyde [2C] | 16.7 | 21.2 | 127 | 35 - 145 |
| Endrin Ketone [2C] | 16.7 | 16.7 | 100 | 65 - 135 |
| gamma-BHC [2C] | 16.7 | 15.9 | 95 | 60 - 125 |
| gamma-Chlordane [2C] | 16.7 | 15.4 | 92 | 65 - 125 |
| Heptachlor [2C] | 16.7 | 16.9 | 102 | 50 - 140 |
| Heptachlor Epoxide [2C] | 16.7 | 15.4 | 93 | 65 - 130 |
| Methoxychlor [2C] | 16.7 | 15.3 | 92 | 55 - 145 |

# METHOD BLANK SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046105-BLK1 | Batch: | B046105 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-SO-FD001-1010 | 1011013-21 | W0087399.D | 08:33 |
| LCS | B046105-BS1 | W0087327.D | 16:16 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046105-BLK1 | File ID: | W0087326.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/17/10 14:40 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046105 | Sequence: | S047054 | Calibration: | 0112301 |
| Column: | 1 | | | | |

Instrument: GCECD-W

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 1.67 | U |
| 72-55-9 | 4,4'-DDE | 1.67 | U |
| 50-29-3 | 4,4'-DDT | 1.67 | U |
| 309-00-2 | Aldrin | 1.67 | U |
| 319-84-6 | alpha-BHC | 1.67 | U |
| 5103-71-9 | alpha-Chlordane | 1.67 | U |
| 319-85-7 | beta-BHC | 1.67 | U |
| 57-74-9 | Chlordane | 33.0 | U |
| 319-86-8 | delta-BHC | 1.67 | U |
| 60-57-1 | Dieldrin | 1.67 | U |
| 959-98-8 | Endosulfan I | 1.67 | U |
| 33213-65-9 | Endosulfan II | 1.67 | U |
| 1031-07-8 | Endosulfan sulfate | 1.67 | U |
| 72-20-8 | Endrin | 1.67 | U |
| 7421-93-4 | Endrin Aldehyde | 1.67 | U |
| 53494-70-5 | Endrin ketone | 1.67 | U |
| 58-89-9 | gamma-BHC | 1.67 | U |
| 5103-74-2 | gamma-Chlordane | 1.67 | U |
| 76-44-8 | Heptachlor | 1.67 | U |
| 1024-57-3 | Heptachlor Epoxide | 1.67 | U |
| 72-43-5 | Methoxychlor | 1.67 | U |
| 8001-35-2 | Toxaphene | 33.0 | U |
| 143-50-0 | Kepone | 1.67 | U |
| 143-50-0 | Kepone [2C] | 1.67 | U |
| 2385-85-5 | Mirex | 1.67 | U |
| 2385-85-5 | Mirex [2C] | 1.67 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046105-BLK1 | File ID: | W0087326.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/17/10 14:40 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046105 | Sequence: | S047054 | Calibration: | 0112301 |
| Column: | 2 | | | | |

Instrument: GCECD-W

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD [2C] | 1.67 | U |
| 72-55-9 | 4,4'-DDE [2C] | 1.67 | U |
| 50-29-3 | 4,4'-DDT [2C] | 1.67 | U |
| 309-00-2 | Aldrin [2C] | 1.67 | U |
| 319-84-6 | alpha-BHC [2C] | 1.67 | U |
| 5103-71-9 | alpha-Chlordane [2C] | 1.67 | U |
| 319-85-7 | beta-BHC [2C] | 1.67 | U |
| 57-74-9 | Chlordane [2C] | 33.0 | U |
| 319-86-8 | delta-BHC [2C] | 1.67 | U |
| 60-57-1 | Dieldrin [2C] | 1.67 | U |
| 959-98-8 | Endosulfan I [2C] | 1.67 | U |
| 33213-65-9 | Endosulfan II [2C] | 1.67 | U |
| 1031-07-8 | Endosulfan Sulfate [2C] | 1.67 | U |
| 72-20-8 | Endrin [2C] | 1.67 | U |
| 7421-93-4 | Endrin Aldehyde [2C] | 1.67 | U |
| 53494-70-5 | Endrin Ketone [2C] | 1.67 | U |
| 58-89-9 | gamma-BHC [2C] | 1.67 | U |
| 5103-74-2 | gamma-Chlordane [2C] | 1.67 | U |
| 76-44-8 | Heptachlor [2C] | 1.67 | U |
| 1024-57-3 | Heptachlor Epoxide [2C] | 1.67 | U |
| 72-43-5 | Methoxychlor [2C] | 1.67 | U |
| 8001-35-2 | Toxaphene [2C] | 33.0 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046105 | Laboratory ID: | B046105-BS1 |
| Column: | 1 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 16.7 | 18.4 | 111 | 30 - 135 |
| 4,4'-DDE | 16.7 | 17.4 | 104 | 70 - 125 |
| 4,4'-DDT | 16.7 | 17.0 | 102 | 45 - 140 |
| Aldrin | 16.7 | 17.4 | 104 | 45 - 140 |
| alpha-BHC | 16.7 | 17.6 | 106 | 60 - 125 |
| alpha-Chlordane | 16.7 | 17.1 | 102 | 65 - 120 |
| beta-BHC | 16.7 | 16.9 | 101 | 60 - 125 |
| delta-BHC | 16.7 | 16.9 | 101 | 55 - 130 |
| Dieldrin | 16.7 | 16.9 | 101 | 65 - 125 |
| Endosulfan I | 16.7 | 16.9 | 101 | 15 - 135 |
| Endosulfan II | 16.7 | 17.1 | 103 | 35 - 140 |
| Endosulfan sulfate | 16.7 | 17.1 | 103 | 60 - 135 |
| Endrin | 16.7 | 17.7 | 106 | 60 - 135 |
| Endrin Aldehyde | 16.7 | 18.9 | 114 | 35 - 145 |
| Endrin ketone | 16.7 | 16.9 | 101 | 65 - 135 |
| gamma-BHC | 16.7 | 17.4 | 104 | 60 - 125 |
| gamma-Chlordane | 16.7 | 17.0 | 102 | 65 - 125 |
| Heptachlor | 16.7 | 17.3 | 104 | 50 - 140 |
| Heptachlor Epoxide | 16.7 | 17.2 | 103 | 65 - 130 |
| Methoxychlor | 16.7 | 16.8 | 101 | 55 - 145 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046105 | Laboratory ID: | B046105-BS1 |
| Column: | 2 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD [2C] | 16.7 | 15.1 | 90 | 30 - 135 |
| 4,4'-DDE [2C] | 16.7 | 15.1 | 91 | 70 - 125 |
| 4,4'-DDT [2C] | 16.7 | 14.7 | 88 | 45 - 140 |
| Aldrin [2C] | 16.7 | 14.5 | 87 | 45 - 140 |
| alpha-BHC [2C] | 16.7 | 15.1 | 91 | 60 - 125 |
| alpha-Chlordane [2C] | 16.7 | 14.7 | 88 | 65 - 120 |
| beta-BHC [2C] | 16.7 | 14.5 | 87 | 60 - 125 |
| delta-BHC [2C] | 16.7 | 14.9 | 89 | 55 - 130 |
| Dieldrin [2C] | 16.7 | 15.0 | 90 | 65 - 125 |
| Endosulfan I [2C] | 16.7 | 14.7 | 88 | 15 - 135 |
| Endosulfan II [2C] | 16.7 | 14.7 | 88 | 35 - 140 |
| Endosulfan Sulfate [2C] | 16.7 | 14.7 | 88 | 60 - 135 |
| Endrin [2C] | 16.7 | 15.2 | 91 | 60 - 135 |
| Endrin Aldehyde [2C] | 16.7 | 15.3 | 92 | 35 - 145 |
| Endrin Ketone [2C] | 16.7 | 14.9 | 89 | 65 - 135 |
| gamma-BHC [2C] | 16.7 | 15.4 | 93 | 60 - 125 |
| gamma-Chlordane [2C] | 16.7 | 14.8 | 89 | 65 - 125 |
| Heptachlor [2C] | 16.7 | 16.5 | 99 | 50 - 140 |
| Heptachlor Epoxide [2C] | 16.7 | 14.8 | 89 | 65 - 130 |
| Methoxychlor [2C] | 16.7 | 14.4 | 86 | 55 - 145 |

CENTAURI LABS™

# SURROGATE SUMMARY SHEET

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCECD-W |

| | DCB [2C] (55 - 130) | DCB (55 - 130) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| 1011013-01 | 141* | 134* | 101 | 145* |
| 1011013-02 | 92 | 107 | 79 | 121 |
| 1011013-03 | 120 | 127 | 94 | 145* |
| 1011013-04 | 118 | 104 | 91 | 142* |
| 1011013-05 | 128 | 138* | 104 | 155* |
| 1011013-06 | 121 | 110 | 86 | 127* |
| 1011013-07 | 118 | 125 | 89 | 120 |
| 1011013-08 | 116 | 105 | 91 | 122 |
| 1011013-09 | 134* | 138* | 102 | 146* |
| 1011013-10 | 115 | 125 | 88 | 142* |
| 1011013-11 | 93 | 103 | 73 | 105 |
| 1011013-12 | 171* | 187* | 134* | 183* |
| 1011013-13 | 109 | 118 | 91 | 160* |
| 1011013-14 | 62 | 67 | 52* | 82 |
| 1011013-15 | 97 | 106 | 73 | 116 |
| 1011013-16 | 100 | 104 | 81 | 104 |
| 1011013-17 | 121 | 110 | 96 | 144* |
| 1011013-18 | 118 | 93 | 87 | 140* |
| 1011013-19 | 103 | 123 | 80 | 162* |
| 1011013-20 | 138* | 149* | 112 | 146* |
| B046110-BLK1 | 101 | 110 | 93 | 105 |
| B046110-BS1 | 107 | 118 | 98 | 108 |
| B046110-MS1 | 152* | 134* | 106 | 145* |

| | DCB [2C] (55 - 130) | DCB (55 - 130) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| B046110-MSD1 | 135* | 121 | 94 | 116 |

CENTAURI LABS™

# SURROGATE SUMMARY SHEET

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCECD-W |

| | DCB [2C] (55 - 130) | DCB (55 - 130) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| 1011013-21 | 120 | 126 | 98 | 143* |
| B046105-BLK1 | 103 | 114 | 100 | * |
| B046105-BS1 | 100 | 110 | 94 | 106 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8081A |
| Batch: | B046110 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B046110-MS1 |
| Column: | 1 | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 19.4 | 1.94 U | 35.4 | 183 | * | 30 - 135 |
| 4,4'-DDE | 19.4 | 1.94 U | 35.3 | 183 | * | 70 - 125 |
| 4,4'-DDT | 19.4 | 1.94 U | 40.5 | 209 | * | 45 - 140 |
| Aldrin | 19.4 | 1.94 U | 32.2 | 166 | * | 45 - 140 |
| alpha-BHC | 19.4 | 1.94 U | 33.5 | 173 | * | 60 - 125 |
| alpha-Chlordane | 19.4 | 1.94 U | 31.5 | 163 | * | 65 - 120 |
| beta-BHC | 19.4 | 1.94 U | 33.3 | 172 | * | 60 - 125 |
| delta-BHC | 19.4 | 1.94 U | 35.9 | 185 | * | 55 - 130 |
| Dieldrin | 19.4 | 1.94 U | 32.2 | 166 | * | 65 - 125 |
| Endosulfan I | 19.4 | 1.94 U | 31.6 | 163 | * | 15 - 135 |
| Endosulfan II | 19.4 | 1.94 U | 31.3 | 162 | * | 35 - 140 |
| Endosulfan sulfate | 19.4 | 1.94 U | 32.2 | 166 | * | 60 - 135 |
| Endrin | 19.4 | 1.94 U | 35.6 | 184 | * | 60 - 135 |
| Endrin Aldehyde | 19.4 | 1.94 U | 28.9 | 150 | * | 35 - 145 |
| Endrin ketone | 19.4 | 1.94 U | 32.9 | 170 | * | 65 - 135 |
| gamma-BHC | 19.4 | 1.94 U | 33.8 | 175 | * | 60 - 125 |
| gamma-Chlordane | 19.4 | 1.62 | 34.1 | 168 | * | 65 - 125 |
| Heptachlor | 19.4 | 1.94 U | 33.7 | 174 | * | 50 - 140 |
| Heptachlor Epoxide | 19.4 | 1.94 U | 33.7 | 174 | * | 65 - 130 |
| Methoxychlor | 19.4 | 1.94 U | 35.3 | 182 | * | 55 - 145 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8081A |
| Batch: | B046110 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B046110-MSD1 |
| Column: | 1 | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. | # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 19.4 | 30.4 | 157 | * | 15 | 30 | 30 - 135 |
| 4,4'-DDE | 19.4 | 30.7 | 159 | * | 14 | 30 | 70 - 125 |
| 4,4'-DDT | 19.4 | 35.9 | 186 | * | 12 | 30 | 45 - 140 |
| Aldrin | 19.4 | 28.1 | 145 | * | 14 | 30 | 45 - 140 |
| alpha-BHC | 19.4 | 1.94 U | 0 | * | | 30 | 60 - 125 |
| alpha-Chlordane | 19.4 | 27.7 | 143 | * | 13 | 30 | 65 - 120 |
| beta-BHC | 19.4 | 30.2 | 156 | * | 10 | 30 | 60 - 125 |
| delta-BHC | 19.4 | 32.3 | 167 | * | 10 | 30 | 55 - 130 |
| Dieldrin | 19.4 | 28.3 | 146 | * | 13 | 30 | 65 - 125 |
| Endosulfan I | 19.4 | 27.8 | 144 | * | 13 | 30 | 15 - 135 |
| Endosulfan II | 19.4 | 27.6 | 143 | * | 13 | 30 | 35 - 140 |
| Endosulfan sulfate | 19.4 | 30.8 | 159 | * | 5 | 30 | 60 - 135 |
| Endrin | 19.4 | 31.4 | 162 | * | 12 | 30 | 60 - 135 |
| Endrin Aldehyde | 19.4 | 28.4 | 147 | * | 2 | 30 | 35 - 145 |
| Endrin ketone | 19.4 | 29.5 | 152 | * | 11 | 30 | 65 - 135 |
| gamma-BHC | 19.4 | 30.1 | 155 | * | 12 | 30 | 60 - 125 |
| gamma-Chlordane | 19.4 | 30.8 | 151 | * | 10 | 30 | 65 - 125 |
| Heptachlor | 19.4 | 30.0 | 155 | * | 12 | 30 | 50 - 140 |
| Heptachlor Epoxide | 19.4 | 30.5 | 158 | * | 10 | 30 | 65 - 130 |
| Methoxychlor | 19.4 | 32.1 | 166 | * | 9 | 30 | 55 - 145 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8081A |
| Batch: | B046110 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B046110-MSD1 |
| Column: | 2 | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD [2C] | 19.4 | 27.2 | 140 * | 12 | 30 | 30 - 135 |
| 4,4'-DDE [2C] | 19.4 | 27.2 | 141 * | 10 | 30 | 70 - 125 |
| 4,4'-DDT [2C] | 19.4 | 30.7 | 159 * | 14 | 30 | 45 - 140 |
| Aldrin [2C] | 19.4 | 24.3 | 125 | 9 | 30 | 45 - 140 |
| alpha-BHC [2C] | 19.4 | 25.7 | 133 * | 10 | 30 | 60 - 125 |
| alpha-Chlordane [2C] | 19.4 | 23.7 | 122 * | 10 | 30 | 65 - 120 |
| beta-BHC [2C] | 19.4 | 22.3 | 115 | 9 | 30 | 60 - 125 |
| delta-BHC [2C] | 19.4 | 26.4 | 136 * | 10 | 30 | 55 - 130 |
| Dieldrin [2C] | 19.4 | 26.1 | 135 * | 10 | 30 | 65 - 125 |
| Endosulfan I [2C] | 19.4 | 23.9 | 123 | 10 | 30 | 15 - 135 |
| Endosulfan II [2C] | 19.4 | 26.1 | 135 | 12 | 30 | 35 - 140 |
| Endosulfan Sulfate [2C] | 19.4 | 26.3 | 136 * | 16 | 30 | 60 - 135 |
| Endrin [2C] | 19.4 | 26.0 | 134 | 12 | 30 | 60 - 135 |
| Endrin Aldehyde [2C] | 19.4 | 24.9 | 128 | 34 * | 30 | 35 - 145 |
| Endrin Ketone [2C] | 19.4 | 24.7 | 128 | 10 | 30 | 65 - 135 |
| gamma-BHC [2C] | 19.4 | 26.0 | 134 * | 10 | 30 | 60 - 125 |
| gamma-Chlordane [2C] | 19.4 | 24.4 | 113 | 10 | 30 | 65 - 125 |
| Heptachlor [2C] | 19.4 | 26.2 | 135 | 11 | 30 | 50 - 140 |
| Heptachlor Epoxide [2C] | 19.4 | 24.5 | 127 | 10 | 30 | 65 - 130 |
| Methoxychlor [2C] | 19.4 | 26.0 | 134 | 33 * | 30 | 55 - 145 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8081A |
| Batch: | B046110 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B046110-MS1 |
| Column: | 2 | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD [2C] | 19.4 | 1.94 U | 30.5 | 158 | * | 30 - 135 |
| 4,4'-DDE [2C] | 19.4 | 1.94 U | 30.0 | 155 | * | 70 - 125 |
| 4,4'-DDT [2C] | 19.4 | 1.94 U | 35.5 | 183 | * | 45 - 140 |
| Aldrin [2C] | 19.4 | 1.94 U | 26.7 | 138 | | 45 - 140 |
| alpha-BHC [2C] | 19.4 | 1.94 U | 28.5 | 147 | * | 60 - 125 |
| alpha-Chlordane [2C] | 19.4 | 1.94 U | 26.1 | 135 | * | 65 - 120 |
| beta-BHC [2C] | 19.4 | 1.94 U | 24.4 | 126 | * | 60 - 125 |
| delta-BHC [2C] | 19.4 | 1.94 U | 29.3 | 151 | * | 55 - 130 |
| Dieldrin [2C] | 19.4 | 1.94 U | 29.0 | 150 | * | 65 - 125 |
| Endosulfan I [2C] | 19.4 | 1.94 U | 26.3 | 136 | * | 15 - 135 |
| Endosulfan II [2C] | 19.4 | 1.94 U | 29.5 | 153 | * | 35 - 140 |
| Endosulfan Sulfate [2C] | 19.4 | 1.94 U | 30.8 | 159 | * | 60 - 135 |
| Endrin [2C] | 19.4 | 1.94 U | 29.2 | 151 | * | 60 - 135 |
| Endrin Aldehyde [2C] | 19.4 | 1.94 U | 35.2 | 182 | * | 35 - 145 |
| Endrin Ketone [2C] | 19.4 | 1.94 U | 27.2 | 141 | * | 65 - 135 |
| gamma-BHC [2C] | 19.4 | 1.94 U | 28.7 | 149 | * | 60 - 125 |
| gamma-Chlordane [2C] | 19.4 | 2.45 | 26.9 | 127 | * | 65 - 125 |
| Heptachlor [2C] | 19.4 | 1.94 U | 29.3 | 151 | * | 50 - 140 |
| Heptachlor Epoxide [2C] | 19.4 | 1.94 U | 27.1 | 140 | * | 65 - 130 |
| Methoxychlor [2C] | 19.4 | 1.94 U | 36.1 | 187 | * | 55 - 145 |

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-01 | File ID: | W0087374.D |
| Sampled: | 11/02/10 08:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/18/10 19:57 |
| Solids: | 86.10 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 27889040 | 1.62 | 51.1 |
| gamma-Chlordane | | 2 | 14.33 | 14.32 | 0.01 | 29532500 | 2.45 | 51.5 |
| TCMX | * | 1 | 6.41 | 6.394 | 0.016 | 152635000 | 11.2 | 43.4 |
| TCMX | | 2 | 7.27 | 7.25 | 0.02 | 84830140 | 7.84 | 42.8 |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 130496000 | 10.4 | 5.29 |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 81283300 | 10.9 | 5.05 |

RPD 40.8

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-02 | File ID: | W0087375.D |
| Sampled: | 11/02/10 08:20 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/18/10 20:28 |
| Solids: | 87.50 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 29794160 | 1.70 | 2.06 |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 20474580 | 1.67 | 1.79 |
| TCMX | * | 1 | 6.39 | 6.394 | 0.004 | 126857400 | 9.18 | 53.5 |
| TCMX | | 2 | 7.24 | 7.25 | 0.01 | 65813900 | 5.98 | 53.5 |
| DCB | * | 1 | 21.35 | 21.356 | 0.006 | 104488100 | 8.15 | 16.4 |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 52977840 | 7.00 | 16.4 |

RPD

* Column used for quantitation

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-03 | File ID: | W0087376.D |
| Sampled: | 11/02/10 08:40 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/18/10 20:58 |
| Solids: | 86.60 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D (RPD) |
|---|---|---|---|---|---|---|---|---|
| Chlordane | | 2 | 14.34 | | | 24151670 | 17.9 | |
| gamma-Chlordane | * | 1 | 12.77 | 12.84 | 0.07 | 105099400 | 6.08 | 24.1 |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 91433460 | 7.55 | 24.1 21.6% |
| TCMX | * | 1 | 6.42 | 6.394 | 0.026 | 152652900 | 11.2 | 54.1 |
| TCMX | | 2 | 7.28 | 7.25 | 0.03 | 78966540 | 7.25 | 54.4 |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 123683400 | 9.75 | 5.76 |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 69021790 | 9.22 | 5.75 |

* Column used for quantitation

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-04 | File ID: | W0087377.D |
| Sampled: | 11/02/10 09:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/18/10 21:28 |
| Solids: | 85.70 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| Chlordane | | 2 | 14.34 | | | 11731970 | 8.78 | |
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 80324200 | 4.69 | 1.72 |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 55299800 | 4.61 | 1.79 |
| TCMX | * | 1 | 6.4 | 6.394 | 0.006 | 148787300 | 11.0 | 55.4 |
| TCMX | | 2 | 7.27 | 7.25 | 0.02 | 76283820 | 7.07 | 55.5 |
| DCB | * | 1 | 21.35 | 21.356 | 0.006 | 101050100 | 8.04 | 13.8 |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 67866620 | 9.15 | 13.8 |

RPD

1.7%

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-05 | File ID: | W0087380.D |
| Sampled: | 11/02/10 09:20 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/18/10 22:59 |
| Solids: | 87.80 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 25838260 | 1.48 | 0.992 | |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 18323570 | 1.49 | 0.712 | 0.7% |
| TCMX | * | 1 | 6.39 | 6.394 | 0.004 | 163332200 | 11.8 | 49.2 | |
| TCMX | | 2 | 7.26 | 7.25 | 0.01 | 87188150 | 7.90 | 49.4 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 135069400 | 10.5 | 7.9 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 73857740 | 9.73 | 7.93 | |

* Column used for quantitation

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-06 | File ID: | W0087381.D |
| Sampled: | 11/02/10 09:40 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/18/10 23:29 |
| Solids: | 80.40 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | * | 1 | 16.15 | 16.17 | 0.02 | 25553720 | 2.09 | 836 | 161% |
| 4,4'-DDT | | 2 | 18.06 | 18.04 | 0.02 | 157725800 | 19.6 | 837 | |
| Chlordane | * | 1 | 11.21 | | | 34189420 | 53.7 | 247 | 110% |
| Chlordane | | 2 | 17.64 | | | 80056090 | 186 | 246 | |
| Endrin Aldehyde | * | 1 | 17.07 | 17.08 | 0.01 | 476414400 | 62.0 | 20.6 | 18.7% |
| Endrin Aldehyde | | 2 | 18.34 | 18.356 | 0.016 | 297553700 | 51.4 | 20.6 | |
| TCMX | * | 1 | 6.39 | 6.394 | 0.004 | 133207400 | 10.5 | 47.8 | |
| TCMX | | 2 | 7.25 | 7.25 | 0 | 71781060 | 7.11 | 47.7 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 107503600 | 9.14 | 9.45 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 69772460 | 10.0 | 9.94 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-07 | File ID: | W0087382.D |
| Sampled: | 11/02/10 12:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/18/10 23:59 |
| Solids: | 83.60 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | * | 1 | 15.2 | 15.21 | 0.01 | 22434800 | 1.97 | 7.52 | 7.3% |
| 4,4'-DDD | | 2 | 17.17 | 17.174 | 0.004 | 18541830 | 2.12 | 7.77 | |
| 4,4'-DDE | * | 1 | 13.4 | 13.41 | 0.01 | 186836600 | 12.3 | 31.7 | 27.3% |
| 4,4'-DDE | | 2 | 15.27 | 15.28 | 0.01 | 105836000 | 9.35 | 31.6 | |
| 4,4'-DDT | * | 1 | 16.16 | 16.17 | 0.01 | 126896000 | 9.99 | 0.1 | 0.1% |
| 4,4'-DDT | | 2 | 18.03 | 18.04 | 0.01 | 83668020 | 9.98 | 0.0797 | |
| Chlordane | * | 1 | 11.24 | | | 4680725 | 7.06 | 20.9 | 100% |
| Chlordane | | 2 | 17.64 | | | 23511970 | 21.8 | 20.9 | |
| Endrin Aldehyde | * | 1 | 17.09 | 17.08 | 0.01 | 14315830 | 1.79 | 11.3 | 10.6% |
| Endrin Aldehyde | | 2 | 18.34 | 18.356 | 0.016 | 12002170 | 1.99 | 11.3 | |
| TCMX | * | 1 | 6.4 | 6.394 | 0.006 | 125809000 | 9.53 | 34.3 | |
| TCMX | | 2 | 7.27 | 7.25 | 0.02 | 74623750 | 7.10 | 34.3 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 121584300 | 9.93 | 5.49 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 68021900 | 9.41 | 5.54 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-08 | File ID: | W0087383.D |
| Sampled: | 11/02/10 14:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 00:30 |
| Solids: | 85.40 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 53110370 | 3.12 | 10.3 | 9.8% |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 41113700 | 3.44 | 10.4 | |
| TCMX | * | 1 | 6.38 | 6.394 | 0.014 | 128361700 | 9.53 | 33.9 | |
| TCMX | | 2 | 7.3 | 7.25 | 0.05 | 76339940 | 7.12 | 33.9 | |
| DCB | * | 1 | 21.35 | 21.356 | 0.006 | 102045600 | 8.16 | 11.1 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 66920420 | 9.07 | 11.2 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-09 | File ID: | W0087393.D |
| Sampled: | 11/02/10 10:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 05:32 |
| Solids: | 87.80 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | * | 1 | 16.07 | 16.17 | 0.1 | 19875840 | 1.49 | 31.8 | 27.5% |
| 4,4'-DDT | | 2 | 18.05 | 18.04 | 0.01 | 9953098 | 1.13 | 32 | |
| TCMX | * | 1 | 6.47 | 6.394 | 0.076 | 153592400 | 11.1 | 43.6 | |
| TCMX | | 2 | 7.3 | 7.25 | 0.05 | 85169550 | 7.71 | 44 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 134877200 | 10.5 | 3.69 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 77072550 | 10.1 | 3.56 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-10 | File ID: | W0087394.D |
| Sampled: | 11/02/10 10:20 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 06:02 |
| Solids: | 86.70 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.77 | 12.84 | 0.07 | 43423930 | 2.51 | 15.1 | |
| gamma-Chlordane | | 2 | 14.35 | 14.32 | 0.03 | 26482330 | 2.18 | 15 | 14.1% |
| TCMX | * | 1 | 6.47 | 6.394 | 0.076 | 149731200 | 10.9 | 62.6 | |
| TCMX | | 2 | 7.31 | 7.25 | 0.06 | 73260660 | 6.73 | 62.1 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 122093600 | 9.62 | 8.53 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 66396810 | 8.86 | 8.54 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

SW8081A

GKHMS-30-021-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-11 | File ID: | W0087395.D |
| Sampled: | 11/02/10 10:40 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 06:32 |
| Solids: | 87.00 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | * | 1 | 16.07 | 16.17 | 0.1 | 48996580 | 3.71 | 9.52 | |
| 4,4'-DDT | | 2 | 18.04 | 18.04 | 0 | 29538030 | 3.39 | 9.41 | 9.0% |
| Chlordane | * | 1 | 15.53 | | | 3578500 | 6.62 ? | | |
| Toxaphene | * | 1 | 17.99 | | | 10887510 | 25.5 ? | | |
| TCMX | * | 1 | 6.45 | 6.394 | 0.056 | 110324300 | 8.04 | 44.6 | |
| TCMX | | 2 | 7.3 | 7.25 | 0.05 | 60771690 | 5.56 | 44.6 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 100476300 | 7.89 | 10.3 | |
| DCB | | 2 | 23.75 | 23.77 | 0.02 | 53704160 | 7.15 | 10.4 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-15 | File ID: | W0087385.D |
| Sampled: | 11/02/10 13:20 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 01:30 |
| Solids: | 85.70 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 29951780 | 1.75 | 10.1 | 9.6% |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 19034450 | 1.59 | 10.3 | |
| TCMX | * | 1 | 6.39 | 6.394 | 0.004 | 122031700 | 9.03 | 59.8 | |
| TCMX | | 2 | 7.26 | 7.25 | 0.01 | 60842300 | 5.65 | 59.8 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 103832500 | 8.28 | 9.48 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 55989490 | 7.56 | 9.51 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-17 | File ID: | W0087386.D |
| Sampled: | 11/02/10 11:40 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 02:00 |
| Solids: | 87.90 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 19376100 | 1.10 | 7.07 |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 12663140 | 1.03 | 6.71 |
| TCMX | * | 1 | 6.4 | 6.394 | 0.006 | 151725500 | 10.9 | 51.1 |
| TCMX | | 2 | 7.27 | 7.25 | 0.02 | 80029000 | 7.24 | 50.5 |
| DCB | * | 1 | 21.35 | 21.356 | 0.006 | 107466300 | 8.35 | 9.72 |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 69639420 | 9.16 | 9.74 |

RPD 6.6%

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-19 | File ID: | W0087391.D |
| Sampled: | 11/02/10 13:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 04:31 |
| Solids: | 85.80 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.76 | 12.84 | 0.08 | 18953740 | 1.11 | 23.4 |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 10741180 | 0.896 | 23.9 |
| TCMX | * | 1 | 6.38 | 6.394 | 0.014 | 170149700 | 12.6 | 103 |
| TCMX | | 2 | 7.25 | 7.25 | 0 | 66897060 | 6.20 | 103 |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 119671700 | 9.52 | 19 |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 59378240 | 8.00 | 19 |

RPD 21.32

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-20 | File ID: | W0087392.D |
| Sampled: | 11/02/10 00:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/19/10 05:02 |
| Solids: | 87.70 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046110 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

RPD

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | * | 1 | 12.77 | 12.84 | 0.07 | 30218970 | 1.73 | 5.86 |
| gamma-Chlordane | | 2 | 14.34 | 14.32 | 0.02 | 20012440 | 1.63 | 6.1 |
| TCMX | * | 1 | 6.42 | 6.394 | 0.026 | 153633000 | 11.1 | 30.9 |
| TCMX | | 2 | 7.28 | 7.25 | 0.03 | 93566420 | 8.49 | 30.7 |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 145529000 | 11.3 | 7.98 |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 79776900 | 10.5 | 7.38 |

5.96%

* Column used for quantitation

CENTAURI LABS™

# SW8082

7210 Corporate Court, Frederick, MD 21703 P:(240) 575-1150 F: (301) 620-0731 www.centaurilabs.com

# INITIAL CALIBRATION STANDARDS

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046049 | Instrument: | GCECD-U |
| Calibration: | 0111107 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002118 | AR1660 LE-3 | S046049-CAL9 | U0324426.D | 11/09/10 15:59 |
| 0002136 | AR2154 LE-3 | S046049-CAL8 | U0324427.D | 11/09/10 16:31 |
| 0002112 | AR1248 LE-3 | S046049-CAL7 | U0324428.D | 11/09/10 17:04 |
| 0002130 | AR1232 LE-3 | S046049-CAL6 | U0324429.D | 11/09/10 17:36 |
| 0002122 | AR1242 LE-5 | S046049-CAL5 | U0324430.D | 11/09/10 18:08 |
| 0002123 | AR1242 LE-4 | S046049-CAL4 | U0324431.D | 11/09/10 18:40 |
| 0002124 | AR1242 LE-3 | S046049-CAL3 | U0324432.D | 11/09/10 19:12 |
| 0002125 | AR1242 LE-2 | S046049-CAL2 | U0324433.D | 11/09/10 19:44 |
| 0002126 | AR1242 LE-1 | S046049-CAL1 | U0324434.D | 11/09/10 20:16 |
| 0002148 | AR1242 LE-3 ICV(ACCU) | S046049-SCV1 | U0324435.D | 11/09/10 20:48 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111107 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 3:59:30PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| PCB-1016 | | | | | 20 | |
| PCB-1016 [2C] | | | | | 20 | |
| PCB-1221 | | | | | 20 | |
| PCB-1221 [2C] | | | | | 20 | |
| PCB-1232 | | | | | 20 | |
| PCB-1232 [2C] | | | | | 20 | |
| PCB-1242 | 171589.2 | 3.47812 | | | 20 | |
| PCB-1242 [2C] | 93341.45 | 7.601439 | | | 20 | |
| PCB-1248 | | | | | 20 | |
| PCB-1248 [2C] | | | | | 20 | |
| PCB-1254 | | | | | 20 | |
| PCB-1254 [2C] | | | | | 20 | |
| PCB-1260 | | | | | 20 | |
| PCB-1260 [2C] | | | | | 20 | |
| TCMX | 1.640339E+07 | 6.750665 | | | 20 | |
| TCMX [2C] | 6591016 | 5.579828 | | | 20 | |
| DCB | 1.803116E+07 | 8.485352 | | | 20 | |
| DCB [2C] | 5214881 | 12.84059 | | | 20 | |

# INITIAL CALIBRATION DATA

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111107 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 3:59:30PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| PCB-1016 | 314787 | | | | | |
| PCB-1016 [2C] | 107697.3 | | | | | |
| PCB-1221 | | 197625.4 | | | | |
| PCB-1221 [2C] | | 79770.24 | | | | |
| PCB-1232 | | | | 91681.24 | | |
| PCB-1232 [2C] | | | | 43622.74 | | |
| PCB-1242 | | | | | 161892.2 | 175646.4 |
| PCB-1242 [2C] | | | | | 83675.01 | 88695.32 |
| PCB-1248 | | | 230049.4 | | | |
| PCB-1248 [2C] | | | 119263.5 | | | |
| PCB-1254 | | 687906.2 | | | | |
| PCB-1254 [2C] | | 227642.2 | | | | |
| PCB-1260 | ~~1104338~~ | | | | | |
| PCB-1260 [2C] | ~~320310~~ | | | | | |
| TCMX | ~~1.504915E+07~~ | ~~1.56086E+07~~ | ~~1.61545E+07~~ | ~~1.310008E+07~~ | 1.654164E+07 | 1.690341E+07 |
| TCMX [2C] | ~~5761428~~ | ~~5916512~~ | ~~6452680~~ | ~~5180952~~ | 6087738 | 6394011 |
| DCB | ~~1.263843E+07~~ | ~~1.351067E+07~~ | ~~1.524092E+07~~ | ~~1.347876E+07~~ | 1.618943E+07 | 1.690179E+07 |
| DCB [2C] | ~~3885587~~ | ~~3911015~~ | ~~4607108~~ | ~~4144532~~ | 4344458 | 5045760 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111107 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 3:59:30PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| PCB-1016 | | | | | | |
| PCB-1016 [2C] | | | | | | |
| PCB-1221 | | | | | | |
| PCB-1221 [2C] | | | | | | |
| PCB-1232 | | | | | | |
| PCB-1232 [2C] | | | | | | |
| PCB-1242 | 175475.4 | 175235.4 | 169696.7 | | | |
| PCB-1242 [2C] | 94694.08 | 100339.4 | 99303.43 | | | |
| PCB-1248 | | | | | | |
| PCB-1248 [2C] | | | | | | |
| PCB-1254 | | | | | | |
| PCB-1254 [2C] | | | | | | |
| PCB-1260 | | | | | | |
| PCB-1260 [2C] | | | | | | |
| TCMX | 1.753514E+07 | 1.6464E+07 | 1.457278E+07 | | | |
| TCMX [2C] | 6853892 | 7014836 | 6604606 | | | |
| DCB | 1.889464E+07 | 1.815504E+07 | 2.001492E+07 | | | |
| DCB [2C] | 4930416 | 5718907 | 6034864 | | | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324435.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S046049 | Injection Date: | 11/09/10 |
| Lab Sample ID: | S046049-SCV1 | Injection Time: | 20:48 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 514 | 171589.2 | 175499 | | 2.3 | 20 |
| PCB-1242 [2C] | A | 500 | 533 | 93341.45 | 99374.44 | | 6.5 | 20 |
| TCMX | A | 25.0 | 27.8 | 1.640339E+07 | 1.824154E+07 | | 11.2 | 20 |
| TCMX [2C] | A | 25.0 | 27.1 | 6591016 | 7150932 | | 8.5 | 20 |
| DCB | A | 25.0 | 26.3 | 1.803116E+07 | 1.896397E+07 | | 5.2 | 20 |
| DCB [2C] | A | 25.0 | 26.4 | 5214881 | 5516664 | | 5.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: _____ Date: 11/17/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | ~~180~~ / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 15-300-7 |
| Final Temp(oC): | ~~200~~ / 275 / 300 / |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 1109100-M Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 111210 | U | | | | | |
| | U | Directory: h:\gcdata\u\111210 | | | | |
| | U | | | | | |

**Injection Log**

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | u0324454.d | 1. | SEQ CCV 1AR1242-3 2124 | STD | 12 Nov 10 08:38 |
| 2 | u0324455.d | 1. | ~~B046108-BLK1~~ | BLK,S | 12 Nov 10 09:27 |
| 3 | u0324456.d | 1. | B046108-BS1 | BS,S | 12 Nov 10 09:59 |
| 4 | u0324457.d | 1. | 1011008-01 | SOIL | 12 Nov 10 10:31 |
| 5 | u0324458.d | 1. | 1011008-02 | SOIL | 12 Nov 10 11:03 |
| 6 | u0324459.d | 1. | B046108-MS1 | SOIL MS 02 | 12 Nov 10 11:35 |
| 7 | u0324460.d | 1. | B046108-MSD1 | SOIL MSD 02 | 12 Nov 10 12:07 |
| 8 | u0324461.d | 1. | 1011013-21 | SOIL | 12 Nov 10 12:40 |
| 9 | u0324462.d | 1. | 1011014-01 | SOIL | 12 Nov 10 13:12 |
| 10 | u0324463.d | 1. | B046150-BLK1 | BLK,S | 12 Nov 10 13:44 |
| 11 | u0324464.d | 1. | B046150-BS1 | BKS,S | 12 Nov 10 14:16 |
| 12 | u0324465.d | 1. | SEQ CCV2 AR1242-3 2124 | STD 8082 | ~~12 Nov 10 14:48~~ |
| 13 | u0324466.d | 1. | 1011013-01 * | SOIL | 12 Nov 10 15:20 |
| 14 | u0324467.d | 1. | B046150-MS1 | SOIL MS 01 | 12 Nov 10 15:52 |
| 15 | u0324468.d | 1. | B046150-MSD1 | SOIL MSD 01 | 12 Nov 10 16:24 |
| 16 | u0324469.d | 1. | 1011013-02 | SOIL | 12 Nov 10 16:57 |
| 17 | u0324470.d | 1. | 1011013-03 | SOIL | 12 Nov 10 17:29 |
| 18 | u0324471.d | 1. | 1011013-04 | SOIL | 12 Nov 10 18:01 |
| 19 | u0324472.d | 1. | 1011013-05 | SOIL | 12 Nov 10 18:33 |
| 20 | u0324473.d | 1. | 1011013-06 | SOIL | 12 Nov 10 19:05 |
| 21 | u0324474.d | 1. | 1011013-07 | SOIL | 12 Nov 10 19:37 |
| 22 | u0324475.d | 1. | 1011013-08 | SOIL | 12 Nov 10 20:09 |
| 23 | u0324476.d | 1. | HEXANE | | ~~12 Nov 10 20:41~~ |
| 24 | u0324477.d | 1. | SEQ CCV3 AR1242-3 2124 * | STD 8082 | ~~12 Nov 10 21:13~~ |
| 25 | u0324478.d | 1. | 1011013-09 | SOIL | 12 Nov 10 21:46 |
| 26 | u0324479.d | 1. | 1011013-10 | SOIL | 12 Nov 10 22:18 |
| 27 | u0324480.d | 1. | 1011013-11 | SOIL | 12 Nov 10 22:50 |
| 28 | u0324481.d | 1. | 1011013-12 | SOIL | 12 Nov 10 23:22 |
| 29 | u0324482.d | 1. | 1011013-13 * | SOIL | 12 Nov 10 23:54 |
| 30 | u0324483.d | 1. | 1011013-14 | SOIL | 13 Nov 10 00:26 |
| 31 | u0324484.d | 1. | 1011013-15 | SOIL | 13 Nov 10 00:58 |
| 32 | u0324485.d | 1. | 1011013-16 | SOIL | 13 Nov 10 01:30 |
| 33 | u0324486.d | 1. | 1011013-17 | SOIL | 13 Nov 10 02:03 |
| 34 | u0324487.d | 1. | 1011013-18 | SOIL | 13 Nov 10 02:35 |
| 23 | u0324488.d | 1. | HEXANE | | 13 Nov 10 03:07 |
| 35 | u0324489.d | 1. | SEQ CCV4 AR1242-3 2124 * | STD 8082 | ~~13 Nov 10 03:39~~ |
| 36 | u0324490.d | 1. | 1011013-19 | SOIL | 13 Nov 10 04:11 |
| 37 | u0324491.d | 1. | 1011013-20 | SOIL | 13 Nov 10 04:43 |
| 23 | u0324492.d | 1. | HEXANE | SOIL | 13 Nov 10 05:15 |
| 38 | u0324493.d | 1. | SEQ CCV4 AR1242-3 2124 | STD 8082 | 13 Nov 10 05:47 |

RP 11/18/10

Comments: 504052

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324454.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047052 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047052-CCV1 | Injection Time: | 08:38 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 493 | 171589.2 | 166384.1 | | -3.0 | 20 |
| PCB-1242 [2C] | A | 500 | 477 | 93341.45 | 88916.52 | | -4.7 | 20 |
| TCMX | A | 25.0 | 24.5 | 1.640339E+07 | 1.607285E+07 | | -2.0 | 20 |
| TCMX [2C] | A | 25.0 | 23.5 | 6591016 | 6187984 | | -6.1 | 20 |
| DCB | A | 25.0 | 20.8 | 1.803116E+07 | 1.499109E+07 | | -16.9 | 20 |
| DCB [2C] | A | 25.0 | 20.4 | 5214881 | 4257348 | | -18.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324465.D | Calibration Date: | 11/~~11/10~~ 15:59 |
| Sequence: | S047052 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047052-CCV2 | Injection Time: | 14:48 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 487 | 171589.2 | 169025 | | -1.5 | 20 |
| PCB-1242 [2C] | A | 500 | 471 | 93341.45 | 87734.66 | | -6.0 | 20 |
| TCMX | A | 25.0 | 24.8 | 1.640339E+07 | 1.629995E+07 | | -0.6 | 20 |
| TCMX [2C] | A | 25.0 | 23.6 | 6591016 | 6225044 | | -5.6 | 20 |
| DCB | A | 25.0 | 20.9 | 1.803116E+07 | 1.510427E+07 | | -16.2 | 20 |
| DCB [2C] | A | 25.0 | 20.2 | 5214881 | 4220460 | | -19.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324477.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047052 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047052-CCV3 | Injection Time: | 21:13 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 511 | 171589.2 | 200486.8 | | 16.8 | 20 |
| PCB-1242 [2C] | A | 500 | 481 | 93341.45 | 89821.56 | | -3.8 | 20 |
| TCMX | A | 25.0 | 24.9 | 1.640339E+07 | 1.631021E+07 | | -0.6 | 20 |
| TCMX [2C] | A | 25.0 | 23.8 | 6591016 | 6287072 | | -4.6 | 20 |
| DCB | A | 25.0 | 25.0 | 1.803116E+07 | 1.802296E+07 | | -0.05 | 20 |
| DCB [2C] | A | 25.0 | 21.2 | 5214881 | 4432420 | | -15.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324489.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047052 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047052-CCV4 | Injection Time: | 03:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| PCB-1242 | A | 500 | 621 | 171589.2 | 223527.8 | | 30.3 | 20 | * |
| PCB-1242 [2C] | A | 500 | 492 | 93341.45 | 91768.26 | | -1.7 | 20 | |
| TCMX | A | 25.0 | 26.2 | 1.640339E+07 | 1.716563E+07 | | 4.6 | 20 | |
| TCMX [2C] | A | 25.0 | 25.0 | 6591016 | 6584804 | | -0.09 | 20 | |
| DCB | A | 25.0 | 23.0 | 1.803116E+07 | 1.662819E+07 | | -7.8 | 20 | |
| DCB [2C] | A | 25.0 | 20.7 | 5214881 | 4311228 | | -17.3 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

*aboratories, LLC*

## GC ANALYSIS LOG

Reviewed by: _____ Date: 11/18/10

ıent ID: HP6890 # U

| | |
|---|---|
| Acquisition Method: | Pest32 / PCB32 / Herb32 |
| or Temp (oC): | 180 / 200 / 240 / |
| ;tor Temp(oC): | 300 |
| Initial Temp(oC): | 60 / 150 / |
| Time (min): | 0.0 / 0.50 / 1.0 / |
| p Rate (oC/min) : | 10 200-4 / 11 250-4 / 18-300 |
| Temp(oC): | 200 / 275 / 300 / |
| tion Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | | |
|---|---|---|
| Column: | RTX-CLP | 30meter |
| ID: | 0.32 mm | |

**Detector B**

| | | |
|---|---|---|
| Column: | RTX-CLP2 | 30 meter |
| ID: | 0.32 mm | |

Analyst: RP

. Method: 110410U.m

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 510 | U | | | | | |
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**Injection Log**

Directory: h:\gcdata\u\111510

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | u0324494.d | 1. | SEQ CCV 1AR1242-3 | STD | 15 Nov 10 12:10 |
| 2 | u0324495.d | 1. | 1011013-19 | SOIL | 15 Nov 10 13:08 |
| 3 | u0324496.d | 1. | SEQ CCV2 AR1242-3 | STD | 15 Nov 10 13:40 |

RP 11/15/10

Comments: _____

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324494.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S049005 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049005-CCV1 | Injection Time: | 12:10 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 551 | 171589.2 | 184101.3 | | 7.3 | 20 |
| PCB-1242 [2C] | A | 500 | 462 | 93341.45 | 85709.4 | | -8.2 | 20 |
| TCMX | A | 25.0 | 25.5 | 1.640339E+07 | 1.671457E+07 | | 1.9 | 20 |
| TCMX [2C] | A | 25.0 | 23.5 | 6591016 | 6192448 | | -6.0 | 20 |
| DCB | A | 25.0 | 21.3 | 1.803116E+07 | 1.535069E+07 | | -14.9 | 20 |
| DCB [2C] | A | 25.0 | 21.7 | 5214881 | 4528256 | | -13.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324496.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S049005 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049005-CCV2 | Injection Time: | 13:40 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 481 | 171589.2 | 166265.6 | | -3.1 | 20 |
| PCB-1242 [2C] | A | 500 | 483 | 93341.45 | 90363.32 | | -3.2 | 20 |
| TCMX | A | 25.0 | 25.3 | 1.640339E+07 | 1.658415E+07 | | 1.1 | 20 |
| TCMX [2C] | A | 25.0 | 23.7 | 6591016 | 6248560 | | -5.2 | 20 |
| DCB | A | 25.0 | 25.7 | 1.803116E+07 | 1.853004E+07 | | 2.8 | 20 |
| DCB [2C] | A | 25.0 | 22.6 | 5214881 | 4711172 | | -9.7 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046108-BLK1 | Batch: | B046108 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B046108-MSD1 | U0324460.D | 12:07 |
| Matrix Spike | B046108-MS1 | U0324459.D | 11:35 |
| LCS | B046108-BS1 | U0324456.D | 09:59 |
| GKHMS-SO-FD001-1010 | 1011013-21 | U0324461.D | 12:40 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046108-BLK1 | File ID: | U0324455.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/12/10 09:27 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046108 | Sequence: | S047052 | Calibration: | 0111107 |
| Column: | 1 | | | | |

Instrument: GCECD-U

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 33.3 | U |
| 11104-28-2 | PCB-1221 | 33.3 | U |
| 11141-16-5 | PCB-1232 | 33.3 | U |
| 53469-21-9 | PCB-1242 | 33.3 | U |
| 12672-29-6 | PCB-1248 | 33.3 | U |
| 11097-69-1 | PCB-1254 | 33.3 | U |
| 11096-82-5 | PCB-1260 | 33.3 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046108 | Laboratory ID: | B046108-BS1 |
| Column: | 1 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 | 167 | 163 | 98 | 40 - 140 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046108 | Laboratory ID: | B046108-BS1 |
| Column: | 2 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 [2C] | 167 | 156 | 94 | 40 - 140 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046108-BLK1 | File ID: | U0324455.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/12/10 09:27 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046108 | Sequence: | S047052 | Calibration: | 0111107 |
| Column: | 2 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 [2C] | 33.3 | U |
| 11104-28-2 | PCB-1221 [2C] | 33.3 | U |
| 11141-16-5 | PCB-1232 [2C] | 33.3 | U |
| 53469-21-9 | PCB-1242 [2C] | 33.3 | U |
| 12672-29-6 | PCB-1248 [2C] | 33.3 | U |
| 11097-69-1 | PCB-1254 [2C] | 33.3 | U |
| 11096-82-5 | PCB-1260 [2C] | 33.3 | U |

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# METHOD BLANK SUMMARY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046150-BLK1 | Batch: | B046150 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-SO-023-1010 | 1011013-13 | U0324482.D | 23:54 |
| GKHMS-SO-002-1010 | 1011013-02 | U0324469.D | 16:57 |
| GKHMS-SO-003-1010 | 1011013-03 | U0324470.D | 17:29 |
| GKHMS-SO-005-1010 | 1011013-04 | U0324471.D | 18:01 |
| GKHMS-SO-007-1010 | 1011013-05 | U0324472.D | 18:33 |
| GKHMS-SO-011-1010 | 1011013-06 | U0324473.D | 19:05 |
| GKHMS-SO-012-1010 | 1011013-07 | U0324474.D | 19:37 |
| GKHMS-SO-014-1010 | 1011013-08 | U0324475.D | 20:09 |
| GKHMS-SO-017-1010 | 1011013-09 | U0324478.D | 21:46 |
| GKHMS-SO-019-1010 | 1011013-10 | U0324479.D | 22:18 |
| GKHMS-SO-001-1010 | 1011013-01 | U0324466.D | 15:20 |
| GKHMS-SO-022-1010 | 1011013-12 | U0324481.D | 23:22 |
| Matrix Spike Dup | B046150-MSD1 | U0324468.D | 16:24 |
| GKHMS-SO-025-1010 | 1011013-14 | U0324483.D | 00:26 |
| GKHMS-SO-028-1010 | 1011013-15 | U0324484.D | 00:58 |
| GKHMS-SO-030-1010 | 1011013-16 | U0324485.D | 01:30 |
| GKHMS-SO-031-1010 | 1011013-17 | U0324486.D | 02:03 |
| GKHMS-SO-032-1010 | 1011013-18 | U0324487.D | 02:35 |
| GKHMS-SO-034-1010 | 1011013-19 | U0324495.D | 13:08 |
| GKHMS-SO-FD002-1010 | 1011013-20 | U0324491.D | 04:43 |
| LCS | B046150-BS1 | U0324464.D | 14:16 |
| Matrix Spike | B046150-MS1 | U0324467.D | 15:52 |
| GKHMS-SO-021-1010 | 1011013-11 | U0324480.D | 22:50 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046150-BLK1 | File ID: | U0324463.D |
| Sampled: | | Prepared: | 11/10/10 10:40 | Analyzed: | 11/12/10 13:44 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046150 | Sequence: | S047052 | Calibration: | 0111107 |
| Column: | 1 | | | | |

Instrument: GCECD-U

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 33.3 | U |
| 11104-28-2 | PCB-1221 | 33.3 | U |
| 11141-16-5 | PCB-1232 | 33.3 | U |
| 53469-21-9 | PCB-1242 | 33.3 | U |
| 12672-29-6 | PCB-1248 | 33.3 | U |
| 11097-69-1 | PCB-1254 | 33.3 | U |
| 11096-82-5 | PCB-1260 | 33.3 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Solid | Laboratory ID: | B046150-BLK1 | File ID: | U0324463.D | | |
| Sampled: | | Prepared: | 11/10/10 10:40 | Analyzed: | 11/12/10 13:44 | | |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | | | |
| Batch: | B046150 | Sequence: | S047052 | Calibration: | 0111107 | Instrument: | GCECD-U |
| Column: | 2 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 [2C] | 33.3 | U |
| 11104-28-2 | PCB-1221 [2C] | 33.3 | U |
| 11141-16-5 | PCB-1232 [2C] | 33.3 | U |
| 53469-21-9 | PCB-1242 [2C] | 33.3 | U |
| 12672-29-6 | PCB-1248 [2C] | 33.3 | U |
| 11097-69-1 | PCB-1254 [2C] | 33.3 | U |
| 11096-82-5 | PCB-1260 [2C] | 33.3 | U |

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# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046150 | Laboratory ID: | B046150-BS1 |
| Column: | 1 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 | 167 | 170 | 102 | 40 - 140 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046150 | Laboratory ID: | B046150-BS1 |
| Column: | 2 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 [2C] | 167 | 162 | 97 | 40 - 140 |

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# SURROGATE SUMMARY SHEET

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCECD-U |

| | DCB [2C] (60 - 125) | DCB (60 - 125) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| 1011013-01 | 50* | 62 | 47* | 43* |
| 1011013-02 | 92 | 91 | 90 | 87 |
| 1011013-03 | 72 | 69 | 70 | 65* |
| 1011013-04 | 70 | 68 | 78 | 74 |
| 1011013-05 | 96 | 94 | 91 | 90 |
| 1011013-06 | 82 | 82 | 77 | 76 |
| 1011013-07 | 85 | 83 | 80 | 74 |
| 1011013-08 | 78 | 76 | 80 | 77 |
| 1011013-09 | 88 | 86 | 88 | 85 |
| 1011013-10 | 86 | 84 | 83 | 78 |
| 1011013-11 | 76 | 71 | 76 | 68* |
| 1011013-12 | 119 | 116 | 128* | 126* |
| 1011013-13 | 81 | 79 | 89 | 86 |
| 1011013-14 | 42* | 40* | 47* | 43* |
| 1011013-15 | 69 | 67 | 69* | 64* |
| 1011013-16 | 88 | 85 | 85 | 80 |
| 1011013-17 | 66 | 63 | 70 | 67* |
| 1011013-18 | 73 | 72 | 77 | 73 |
| 1011013-19 | 115 | 131* | 123 | 126* |
| 1011013-20 | 102 | 102 | 102 | 98 |
| B046150-BLK1 | 77 | 75 | 77 | 78 |
| B046150-BS1 | 75 | 73 | 72 | 77 |
| B046150-MS1 | 95 | 99 | 92 | 94 |

| | DCB [2C] (60 - 125) | DCB (60 - 125) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| B046150-MSD1 | 97 | 92 | 92 | 94 |

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# SURROGATE SUMMARY SHEET

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCECD-U |

| | DCB [2C] (60 - 125) | DCB (60 - 125) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| 1011013-21 | 99 | 77 | 81 | 71 |
| B046108-BLK1 | 87 | 82 | 84 | 87 |
| B046108-BS1 | 66 | 68 | 69* | 78 |
| B046108-MS1 | 69 | 59* | 66* | 66* |
| B046108-MSD1 | 97 | 77 | 82 | 84 |

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# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8082 |
| Batch: | B046150 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B046150-MS1 |
| Column: | 1 | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 | 193 | 10.7 | 337 | 169 | * | 40 - 140 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| PCB-1242 | 193 | 345 | 173 | * | 2 | 30 | 40 - 140 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## GKHMS-SO-001-1010

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8082 |
| Batch: | B046150 | Preparation: | 3550B Sonic. |
| % Solids: | 86.10 | Laboratory ID: | B046150-MS1 |
| Column: | 2 | Sample Lab ID: | 1011013-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| PCB-1242 [2C] | 193 | 9.01 | 236 | 117 | 40 - 140 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 [2C] | 193 | 244 | 122 | 4 | 30 | 40 - 140 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8082 |
| Batch: | B046108 | Preparation: | 3550B Sonic. |
| % Solids: | 91.00 | Laboratory ID: | B046108-MS1 |
| Column: | 1 | Sample Lab ID: | 1011008-02 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| PCB-1242 | 183 | | 181 | 99 | 40 - 140 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 | 183 | 198 | 108 | 9 | 30 | 40 - 140 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8082 |
| Batch: | B046108 | Preparation: | 3550B Sonic. |
| % Solids: | 91.00 | Laboratory ID: | B046108-MS1 |
| Column: | 2 | Sample Lab ID: | 1011008-02 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| PCB-1242 [2C] | 183 | | 158 | 86 | 40 - 140 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| PCB-1242 [2C] | 183 | 232 | 127 | 38 | * | 30 | 40 - 140 |

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# DUAL COLUMN CONFIRMATION SUMMARY

## SW8082

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-01 | File ID: | U0324466.D |
| Sampled: | 11/02/10 08:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/12/10 15:20 |
| Solids: | 86.10 | Preparation: | 3550B Sonic. | Instrument: | GCECD-U |
| Batch: | B046150 | Sequence: | S047052 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1242 | * | 1 | 12.8 | 14.596 | 1.8 | 2512150 | 10.7 | 18.3 | 17.1% |
| PCB-1242 | | 2 | 15.16 | 16.08 | 0.92 | 1580511 | 9.01 | 18.8 | |
| PCB-1248 | * | 1 | 15.32 | | | 9852954 | 17.5 | 11.2 | 71.7% |
| PCB-1248 | | 2 | 18.15 | | | 1981503 | 8.26 | 11.2 | |
| PCB-1254 | * | 1 | 16.57 | | | 28763030 | 15.3 | 3.8 | 3.8% |
| PCB-1254 | | 2 | 19.87 | | | 12368280 | 15.9 | 4.12 | |
| PCB-1260 | * | 1 | 16.57 | | | 17406490 | 5.35 | ? | |
| TCMX | * | 1 | 5.91 | 5.918 | 0.008 | 140758700 | 3.32 | 9.92 | |
| TCMX | | 2 | 7.62 | 7.622 | 0.002 | 62190740 | 3.65 | 10 | |
| DCB | * | 1 | 22.16 | 22.16 | 0 | 223926800 | 4.81 | 23.6 | |
| DCB | | 2 | 25.27 | 25.27 | 0 | 52363300 | 3.89 | 23.8 | |

* Column used for quantitation

CENTAURI LABS™

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8082

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011013 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011013-09 | File ID: | U0324478.D |
| Sampled: | 11/02/10 10:00 | Prepared: | 11/10/10 10:40 | Analyzed: | 11/12/10 21:46 |
| Solids: | 87.80 | Preparation: | 3550B Sonic. | Instrument: | GCECD-U |
| Batch: | B046150 | Sequence: | S047052 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | * | 1 | 12.87 | | | 8572261 | 13.0 | 135 | 80.3% |
| PCB-1016 | | 2 | 13.6 | | | 1258030 | 5.55 | 134 | |
| PCB-1232 | * | 1 | 13.02 | | | 4872354 | 20.7 | 33.7 | 28.7% |
| PCB-1232 | | 2 | 15.42 | | | 2789559 | 15.5 | 33.3 | |
| PCB-1242 | | 2 | 15.42 | 16.08 | 0.66 | 4047589 | 14.6 | | |
| PCB-1248 | * | 1 | 15.32 | | | 60175530 | 90.1 | 34.5 | 29.4% |
| PCB-1248 | | 2 | 19.35 | | | 18014740 | 67.0 | 34.5 | |
| PCB-1254 | * | 1 | 16.57 | | | 61704490 | 35.8 | 19 | 17.3% |
| PCB-1254 | | 2 | 19.88 | | | 18052590 | 30.1 | 18.8 | |
| PCB-1260 | * | 1 | 16.57 | | | 19719520 | 6.17 | 5.21 | 5.2% |
| PCB-1260 | | 2 | 18.78 | | | 4888560 | 5.86 | 5.32 | |
| TCMX | * | 1 | 5.91 | 5.918 | 0.008 | 277525200 | 6.41 | 3.57 | |
| TCMX | | 2 | 7.62 | 7.622 | 0.002 | 115533400 | 6.64 | 3.62 | |
| DCB | * | 1 | 22.16 | 22.16 | 0 | 309084400 | 6.49 | 2.09 | |
| DCB | | 2 | 25.27 | 25.27 | 0 | 91337460 | 6.63 | 2.23 | |

* Column used for quantitation

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: February 14, 2011**

**FROM:** **MEGAN CARSON** **COPIES:** **DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – Mercury**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – 1011013**

**SAMPLES:** 21/Soil/

| | |
|---|---|
| GKHMS-SO-001-1010-111910 | GKHMS-SO-002-1010-111910 |
| GKHMS-SO-003-1010-111910 | GKHMS-SO-005-1010-111910 |
| GKHMS-SO-007-1010-111910 | GKHMS-SO-011-1010-111910 |
| GKHMS-SO-012-1010-111910 | GKHMS-SO-014-1010-111910 |
| GKHMS-SO-017-1010-111910 | GKHMS-SO-019-1010-111910 |
| GKHMS-SO-021-1010-111910 | GKHMS-SO-022-1010-111910 |
| GKHMS-SO-023-1010-111910 | GKHMS-SO-025-1010-111910 |
| GKHMS-SO-028-1010-111910 | GKHMS-SO-030-1010-111910 |
| GKHMS-SO-031-1010-111910 | GKHMS-SO-032-1010-111910 |
| GKHMS-SO-034-1010-111910 | GKHMS-SO-FD001-1010-111910 |
| GKHMS-SO-FD002-1010-111910 | |

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011013, consists of twenty one (21) soil environmental samples. This SDG contained two field duplicate pairs: GKHMS-SO-FD001-1010-111910/GKHMS-SO-021-1010-111910 and GKHMS-SO-FD002-1010-111910/GKHMS-SO-031-1010-111910.

All samples were analyzed for mercury. The samples were collected by Tetra Tech NUS on November 2nd, 2010 and analyzed by Centuri Laboratories and submitted/amended by Chemtech under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Mercury analyses were conducted using SW-846 method 7471B.

These data were evaluated based on the following parameters:

- Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
* • Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Control Sample Recoveries
* • ICP Serial Dilution Results
* • Field Duplicate Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

**MERCURY:**

All sample results were within quality control limits.

Notes:

The ending -111910 was added to all samples to distinguish the IDs from mercury samples with the same IDs reported by Empirical Labs (SDG CTOKWJM16-004).

The data package that was submitted from Centuri Laboratories was missing all the quality control data. Chemtech was able to recover the data and submit a data package which included quality control criteria.

Executive Summary

**Laboratory Performance:** None.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

| | | |
|---|---|---|
| A | = | Lab Blank Contamination |
| B | = | Field Blank Contamination |
| C | = | Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.) |
| C01 | = | GC/MS Tuning Noncompliance |
| D | = | MS/MSD Recovery Noncompliance |
| E | = | LCS/LCSD Recovery Noncompliance |
| F | = | Lab Duplicate Imprecision |
| G | = | Field Duplicate Imprecision |
| H | = | Holding Time Exceedance |
| I | = | ICP Serial Dilution Noncompliance |
| J | = | GFAA PDS - GFAA MSA's $r < 0.995$ |
| K | = | ICP Interference - includes ICS % R Noncompliance |
| L | = | Instrument Calibration Range Exceedance |
| M | = | Sample Preservation Noncompliance |
| N | = | Internal Standard Noncompliance |
| N01 | = | Internal Standard Recovery Noncompliance Dioxins |
| N02 | = | Recovery Standard Noncompliance Dioxins |
| N03 | = | Clean-up Standard Noncompliance Dioxins |
| O | = | Poor Instrument Performance (e.g. base-line drifting) |
| P | = | Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics) |
| Q | = | Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.) |
| R | = | Surrogates Recovery Noncompliance |
| S | = | Pesticide/PCB Resolution |
| T | = | % Breakdown Noncompliance for DDT and Endrin |
| U | = | % Difference between columns/detectors >25% for positive results determined via GC/HPLC |
| V | = | Non-linear calibrations; correlation coefficient $r < 0.995$ |
| W | = | EMPC result |
| X | = | Signal to noise response drop |
| Y | = | Percent solids <30% |
| Z | = | Uncertainty at 2 sigma deviation is greater than sample activity |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010-111910 | | | GKHMS-SO-002-1010-111910 | | | GKHMS-SO-003-1010-111910 | | | GKHMS-SO-005-1010-111910 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-01 | | | 1011013-02 | | | 1011013-03 | | | 1011013-04 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 86.0 | | | 88.0 | | | 87.0 | | | 86.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.0696 | | | 0.00271 | U | | 0.0182 | J | P | 0.00327 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010-111910 | | | GKHMS-SO-011-1010-111910 | | | GKHMS-SO-012-1010-111910 | | | GKHMS-SO-014-1010-111910 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-05 | | | 1011013-06 | | | 1011013-07 | | | 1011013-08 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 88.0 | | | 80.0 | | | 84.0 | | | 85.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.00501 | J | P | 0.00306 | U | | 0.00692 | J | P | 0.00281 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010-111910 | | | GKHMS-SO-019-1010-111910 | | | GKHMS-SO-021-1010-111910 | | | GKHMS-SO-022-1010-111910 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-09 | | | 1011013-10 | | | 1011013-11 | | | 1011013-12 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 88.0 | | | 87.0 | | | 87.0 | | | 85.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.0137 | J | P | 0.00413 | J | P | 0.0027 | U | | 0.0174 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010-111910 | | | GKHMS-SO-025-1010-111910 | | | GKHMS-SO-028-1010-111910 | | | GKHMS-SO-030-1010-111910 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-13 | | | 1011013-14 | | | 1011013-15 | | | 1011013-16 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 88.0 | | | 84.0 | | | 86.0 | | | 88.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.00282 | U | | 0.00295 | U | | 0.00276 | U | | 0.0027 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010-111910 | | | GKHMS-SO-032-1010-111910 | | | GKHMS-SO-034-1010-111910 | | | GKHMS-SO-FD001-1010-111910 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011013 | LAB_ID | 1011013-17 | | | 1011013-18 | | | 1011013-19 | | | 1011013-21 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 88.0 | | | 82.0 | | | 86.0 | | | 80.0 | | |
| | DUP_OF | | | | | | | | | | GKHMS-SO-021-1010-111910 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.0499 | | | 0.00684 | J | P | 0.00272 | U | | 0.0113 | J | P |

| | | | | |
|---|---|---|---|---|
| **PROJ_NO: 02607** | NSAMPLE | GKHMS-SO-FD002-1010-111910 | | |
| **SDG: 1011013** | LAB_ID | 1011013-20 | | |
| **FRACTION: M** | SAMP_DATE | 11/2/2010 | | |
| **MEDIA: SOIL** | QC_TYPE | NM | | |
| | UNITS | MG/KG | | |
| | PCT_SOLIDS | 88.0 | | |
| | DUP_OF | GKHMS-SO-031-1010-111910 | | |
| PARAMETER | | RESULT | VQL | QLCD |
| MERCURY | | 0.00489 | J | P |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-001-1010
Sample Date/Time: 11/02/10 08:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-01
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0696 | | 0.00285 | 0.0376 | 1 | mg/Kg dry | 11/19/10 9:34 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-002-1010
Sample Date/Time: 11/02/10 08:20
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-02
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00271 | 0.0358 | 1 | mg/Kg dry | 11/19/10 9:43 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-003-1010
Sample Date/Time: 11/02/10 08:40
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-03
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0182 | J | 0.00281 | 0.0371 | 1 | mg/Kg dry | 11/19/10 9:46 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-005-1010
Sample Date/Time: 11/02/10 09:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-04
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.00327 | J | 0.00273 | 0.0360 | 1 | mg/Kg dry | 11/19/10 9:49 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-007-1010
Sample Date/Time: 11/02/10 09:20
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-05
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.00501 | J | 0.00278 | 0.0367 | 1 | mg/Kg dry | 11/19/10 9:52 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-011-1010
Sample Date/Time: 11/02/10 09:40
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-06
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00306 | 0.0404 | 1 | mg/Kg dry | 11/19/10 9:55 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-012-1010
Sample Date/Time: 11/02/10 12:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-07
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.00692 | J | 0.00288 | 0.0381 | 1 | mg/Kg dry | 11/19/10 10:04 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-014-1010
Sample Date/Time: 11/02/10 14:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-08
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00281 | 0.0371 | 1 | mg/Kg dry | 11/19/10 10:07 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-017-1010
Sample Date/Time: 11/02/10 10:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-09
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0137 | J | 0.00274 | 0.0362 | 1 | mg/Kg dry | 11/19/10 10:10 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-019-1010
Sample Date/Time: 11/02/10 10:20
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-10
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.00413 | J | 0.00269 | 0.0356 | 1 | mg/Kg dry | 11/19/10 10:13 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-021-1010
Sample Date/Time: 11/02/10 10:40
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-11
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00270 | 0.0357 | 1 | mg/Kg dry | 11/19/10 10:16 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-022-1010
Sample Date/Time: 11/02/10 11:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-12
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0174 | J | 0.00280 | 0.0370 | 1 | mg/Kg dry | 11/19/10 10:19 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-023-1010
Sample Date/Time: 11/02/10 13:40
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-13
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00282 | 0.0372 | 1 | mg/Kg dry | 11/19/10 10:22 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-025-1010
Sample Date/Time: 11/02/10 11:20
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-14
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00295 | 0.0389 | 1 | mg/Kg dry | 11/19/10 10:26 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-028-1010
Sample Date/Time: 11/02/10 13:20
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-15
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00276 | 0.0364 | 1 | mg/Kg dry | 11/19/10 10:28 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-030-1010
Sample Date/Time: 11/02/10 12:40
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-16
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00270 | 0.0356 | 1 | mg/Kg dry | 11/19/10 10:31 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-031-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-17
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0499 | | 0.00269 | 0.0355 | 1 | mg/Kg dry | 11/19/10 10:40 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-032-1010
Sample Date/Time: 11/02/10 12:20
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-18
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.00684 | J | 0.00302 | 0.0398 | 1 | mg/Kg dry | 11/19/10 10:43 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-034-1010
Sample Date/Time: 11/02/10 13:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-19
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.00272 | 0.0359 | 1 | mg/Kg dry | 11/19/10 10:46 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD001-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-21
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0113 | J | 0.00308 | 0.0407 | 1 | mg/Kg dry | 11/19/10 9:00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-FD002-1010
Sample Date/Time: 11/02/10 00:00
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011013-20
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.00489 | J | 0.00282 | 0.0373 | 1 | mg/Kg dry | 11/19/10 10:48 |

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011013

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.
Several compounds had their average response factor updated for the calibration curve after the quant reports had been printed. Only samples GKHMS-SO-21-1010, GKHMS-SO-022-1010, and GKHMS-SO-FD001-1010 had compounds detected above the MDL that were reported from the incorrect calibration. A corrected Form 7, and report pages, Form 1's and analytical spectra are provided for those samples affected.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

PCBs

Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Mercury

Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director 2/4/2011
Chemtech

# APPENDIX C

## SUPPORT DOCUMENTATION

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-7

WO# 1011013

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8260B** | GKHMS-SO001 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO001 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8260B** | GKHMS-SO002 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO002 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8260B** | GKHMS-SO003 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO003 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8260B** | GKHMS-SO005 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO005 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8260B** | GKHMS-SO007 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO007 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8260B** | GKHMS-SO011 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO011 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-012-1010 | 12:00 | **SW846 8260B** | GKHMS-SO012 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-012- | 12:00 | **SW846** | GKHMS- | SO | SVOCs/SIM | 4°C | 1 | Glass - | 16 oz. wide-mouth | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | 8720D/8270DSIM/8082A/8081B/6010C | SO012 | | PAHs/PCBs/Pesticides/Metals | | | Clear | w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8260B | GKHMS-SO014 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO014 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8260B | GKHMS-SO017 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO017 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8260B | GKHMS-SO019 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO019 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8260B | GKHMS-SO021 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO021 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8260B | GKHMS-SO022 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO022 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8260B | GKHMS-SO023 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO023 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8260B | GKHMS-SO025 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO025 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8260B | GKHMS-SO028 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO028 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8260B | GKHMS-SO030 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO030 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8260B | GKHMS-SO031 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO031 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8260B | GKHMS-SO032 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO032 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8260B | GKHMS-SO034 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO034 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-FD002-1010 | 00:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO- | 00:00 | SW846 8260B | QC | SO | VOCs | 4°C/MeOH+DI | 3 | Glass - | 40 mL vial (pre- | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | FD002-1010 | | | | | | Combo | | Clear | tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8260B** | QC | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/03/2010 | 15:08 | **Federal Express** | 11/03/2010 | 16:08 |

| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| | | | | | |

| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| | | | | 11/4/10 | 12:50pm |

Comments:

Not 1011013

# Field Duplicates, SDG 1011013

| | GKHMS-SO-FD001-1010-111910 | | GKHMS-SO-021-1010-111910 | | RPD | %D |
|---|---|---|---|---|---|---|
| Mercury | 0.0113 | J | 0.0027 | U | 122.8571 | **0.0086** |

| | GKHMS-SO-FD002-1010-111910 | | GKHMS-SO-031-1010-111910 | | RPD | %D |
|---|---|---|---|---|---|---|
| Mercury | 0.00489 | J | 0.0499 | | -164.3 | **-0.04501** |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-7

wo# 1011013

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8260B** | GKHMS-SO001 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO001 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8260B** | GKHMS-SO002 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO002 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8260B** | GKHMS-SO003 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO003 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8260B** | GKHMS-SO005 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO005 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8260B** | GKHMS-SO007 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO007 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8260B** | GKHMS-SO011 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO011 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-012-1010 | 12:00 | **SW846 8260B** | GKHMS-SO012 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-012- | 12:00 | **SW846** | GKHMS- | SO | SVOCs/SIM | 4°C | 1 | Glass - | 16 oz. wide-mouth | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | 8720D/8270DSIM/8082A/8081B/6010C | SO012 | | PAHs/PCBs/Pesticides/Metals | | | Clear | w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8260B | GKHMS-SO014 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO014 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8260B | GKHMS-SO017 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO017 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8260B | GKHMS-SO019 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO019 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8260B | GKHMS-SO021 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO021 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8260B | GKHMS-SO022 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO022 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8260B | GKHMS-SO023 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO023 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8260B | GKHMS-SO025 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO025 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8260B | GKHMS-SO028 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO028 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8260B | GKHMS-SO030 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO030 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8260B | GKHMS-SO031 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO031 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8260B | GKHMS-SO032 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO032 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8260B | GKHMS-SO034 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO034 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-FD002-1010 | 00:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO- | 00:00 | SW846 8260B | QC | SO | VOCs | 4°C/MeOH+DI | 3 | Glass - | 40 mL vial (pre- | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | FD002-1010 | | | | | | Combo | | Clear | tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8260B** | QC | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| 1. Relinquished By: **Gary Braganza** | Date: 11/03/2010 | Time: 15:08 | Received By: **Federal Express** | Date: 11/03/2010 | Time: 16:08 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: 11/4/10 | Time: 12:50pm |

Comments:

Work 1011013

**SDG** 1011013

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/K | GKHMS-SO-025-1010 | 1011013-14 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-003-1010 | 1011013-03 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-007-1010 | 1011013-05 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | | | |
| HG | MG/K | GKHMS-SO-011-1010 | 1011013-06 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-012-1010 | 1011013-07 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | | | |
| HG | MG/K | GKHMS-SO-014-1010 | 1011013-08 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-017-1010 | 1011013-09 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | | | |
| HG | MG/K | GKHMS-SO-019-1010 | 1011013-10 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-021-1010 | 1011013-11 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-023-1010 | 1011013-13 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-002-1010 | 1011013-02 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-028-1010 | 1011013-15 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-030-1010 | 1011013-16 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-031-1010 | 1011013-17 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-032-1010 | 1011013-18 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/K | GKHMS-SO-034-1010 | 1011013-19 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-FD001-1010 | 1011013-21 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-FD002-1010 | 1011013-20 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-001-1010 | 1011013-01 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| HG | MG/K | GKHMS-SO-022-1010 | 1011013-12 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | | | |
| HG | MG/KG | GKHMS-SO-005-1010 | 1011013-04 | NM | 11/02/2010 | 11/18/2010 | 11/18/2010 | 8 | 8 | 16 |
| PCS | % | GKHMS-SO-021-1010 | 1011013-11 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-002-1010 | 1011013-02 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-003-1010 | 1011013-03 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-005-1010 | 1011013-04 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-007-1010 | 1011013-05 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-011-1010 | 1011013-06 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-012-1010 | 1011013-07 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-014-1010 | 1011013-08 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-FD001-1010 | 1011013-21 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-019-1010 | 1011013-10 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-034-1010 | 1011013-19 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| PCS | % | GKHMS-SO-022-1010 | 1011013-12 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |

# Mercury Digestion Log

lb.047064

Method: 7470A (7471A) 245.1 / ILM05.3 / ILM05.4

Batch No: 1 of 2

Digestion Date: 11-18-2010. Analyst: D.J.

Reviewed By / Date: Spike Witness: PRM

| Centauri Labs Workorder | Frac | Client ID | Matrix | SIZE (mL) / (g) | VOL (mL) | Spk.A. (mL) | KMnO4 (mL) |
|---|---|---|---|---|---|---|---|
| | | S.0.0 ICB CCB | Water | 10 | 100 | — | 15 |
| | | S.0.2 CRA | | | | 0.2 | |
| | | S.0.5 | | | | 0.5 | |
| | | S.1.0 | | | | 1.0 | |
| | | S.5.0 (ccr) | | | | 5.0 | |
| | | S.10.0 | | | | 10.0 | |
| | | ICV | ↓ | ↓ | | 3.0 | |
| | | BLK.B047064 | B.Chip | 0.60 | | — | |
| | | BKS B.047064 | ↓ | 0.60 | | 3.0 | |
| 101103-01 | 01-A | | Soil | 0.612 | | — | |
| | | MS | | 0.632 | | 3.0 | |
| | ↓ | MSD | | 0.621 | | 3.0 | |
| -02 | 02-A | | | 0.632 | | — | |
| -03 | 03-A | | | 0.616 | | | |
| -04 | 04-A | | | 0.642 | | | |
| -05 | 05-A | | | 0.614 | | | |
| -06 | 06-A | | | 0.610 | | | |
| -07 | 07-A | | | 0.622 | | | |
| -08 | 08-A | | | 0.625 | | | |
| -09 | 09-A | | | 0.623 | | | |
| -10 | 10-A | | | 0.642 | | | |
| -11 | 11-A | | | 0.638 | | | |
| -12 | 012-D | | | 0.627 | | | |
| -13 | 013-D | | | 0.618 | | | |
| -14 | 014-D | | | 0.605 | | | |
| ↓ -15 | 015-D | | ↓ | 0.635 | ↓ | ↓ | ↓ |

50% Aqua regia: 1860 KMnO4: 1939 Spiking Solution Conc: 0.1 PPM Hg

HNO3: — K2S2O8: — Std/CRA/BKS/Spk: 1564 (02244)

H2SO4: — NH2OH*HCl: (2nd source) ICV: 1126 (02245)

Pipette ID: M-06 | M-017 | M-023. H2O Bath Temp: 95c In Time: 12.00 PM

Balance ID: M-11 Boiling Chip ID: 1853 H2O Bath Temp: 95c Out Time: 12-02 P.M

Thermometer ID: M-02 H2O Bath Temp: 95c In Time: 1.20 P.M

Comments: H2O Bath Temp: 95c Out Time: 1.50 P.M

Filter Paper # 1852

# Mercury Digestion Log

Method: 7470A (7471A) 245.1 / ILM05.3 / ILM05.4

D.047064

Batch No: 2 of 2

Digestion Date: 11-18-2010 Analyst: D.S.S.

Reviewed By / Date: Spike Witness: PLM

| Centauri Labs Workorder | Frac | Client ID | Matrix | SIZE mL / g | VOL (mL) | Spk.A. (mL) | KMnO4 (mL) |
|---|---|---|---|---|---|---|---|
| 1011013-016 | 16-D | | SOIL | 0.632 | 100 | — | 15 |
| -017 | 17-D | | | 0.634 | | | |
| -018 | 18-D | | | 0.610 | | | |
| -019 | 19-D | | | 0.642 | | | |
| -020 | 20-D | | | 0.606 | | | |

D.S.S. 11-18-2010

| | | | | | |
|---|---|---|---|---|---|
| 50% Aqua regia: | 1860 | KMnO4: | 1939 | Spiking Solution Conc: | 0.1 PPM Hg |
| HNO3: | — | K2S2O8: | — | Std/CRA/BKS/Spk: | 1564 ( 2244 ) |
| H2SO4: | — | NH2OH*HCl: | | (2nd source) ICV: | 1426 ( 2245 ) |
| Pipette ID: | M-06 \| M-12 \| M-23 | | | H2O Bath Temp: 95°C In Time: | 12.00 P.M |
| Balance ID: | M-11 | Boiling Chip ID: | 1853 | H2O Bath Temp: 95°C Out Time: | 12.02 P.M |
| Thermometer ID: | M-07 | | | H2O Bath Temp: 95°C In Time: | 1.20 P.M |
| Comments: | | | | H2O Bath Temp: 95°C Out Time: | 1.50 P.M |

For Lipids #1853

# Mercury Digestion Log

B 047065

Method: 7470A (7471A) / 245.1 / ILM05.3 / ILM05.4

Batch No: 1 of 1

Digestion Date: 11-18-2010 Analyst: D-S-J

Reviewed By / Date: Spike Witness: DSJ

| Centauri Labs Workorder | Frac | Client ID | Matrix | SIZE mL / g | VOL (mL) | Spk.A. (mL) | KMnO4 (mL) |
|---|---|---|---|---|---|---|---|
| | | BLK-B047065 | Solid/Chip | 0.6 | 100 | — | 1.5 |
| | | BKS B047065 | B chip | 0.60 | | 3.0 | |
| 10110 13 = 21 | 21-D | | Soil | 0.605 | | — | |
| ↓ | ↓ | MS | | 0.628 | | 3.0 | |
| ↓ | ↓ | MSD | | 0.629 | | 3.0 | |
| 10110 14 = 01 | 01-D | | | 0.628 | | — | |
| 10110 15 = 01 | 01-B | | | 0.634 | | | |
| 10110 08 = 01 | 01-B | | | 0.650 | | | |
| ↓ | 02-B | | | 0.614 | | | |
| E 10110 16 = 01 | 01-A | | ↓ | 0.611 | ↓ | ↓ | ↓ |

D S J - 11-18-2010

| | | | | | |
|---|---|---|---|---|---|
| 50% Aqua regia: | 1860 | KMnO4: | 1939 | Spiking Solution Conc: | 0.1 PPM Hg |
| HNO3: | — | K2S2O8: | — | Std/CRA/BKS/Spk: | 1564 ( 2244 ) |
| H2SO4: | — | NH2OH*HCl: | | (2nd source) ICV: | 1126 ( 2245 ) |
| Pipette ID: | M-06 \| M-17 \| M-23 | | | H2O Bath Temp: 95°C | In Time: 12.00 P.M |
| Balance ID: | M-11 | Boiling Chip ID: | 1853 | H2O Bath Temp: 95°C | Out Time: 12.02 P.M. |
| Thermometer ID: | M-02 | | | H2O Bath Temp: 95°C | In Time: 1.20 P.M |
| Comments: | | | | H2O Bath Temp: 95°C | Out Time: 1.50 P.M |

filter Paper # 1852

# Metals
## - 10 -
## METHOD DETECTION LIMITS

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

| Analyte | Wave- length (nm) | MDL ug/L | CRQL ug/L | Date: |
|---|---|---|---|---|
| Mercury | 253.70 | 0.0114 | 0.2000 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Method:** CV

**Case No.:** _____ **SAS No.:** _____

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(g) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047064 | | | | | | |
| B047064B1 | PBS1 | MB | SOIL | | 0.60 | 100.0 | 100.00 |
| B047064BS1 | LCSS1 | LCS | SOIL | | 0.60 | 100.0 | 100.00 |
| 1011013-01 | GKHMS-SO-001-1010 | SAM | SOIL | | 0.61 | 100.0 | 86.00 |
| 1011013-01S | GKHMS-SO-001-1010S | MS | SOIL | | 0.63 | 100.0 | 86.00 |
| 1011013-01SD | GKHMS-SO-001-1010SD | MSD | SOIL | | 0.62 | 100.0 | 86.00 |
| 1011013-02 | GKHMS-SO-002-1010 | SAM | SOIL | | 0.63 | 100.0 | 88.00 |
| 1011013-03 | GKHMS-SO-003-1010 | SAM | SOIL | | 0.62 | 100.0 | 87.00 |
| 1011013-04 | GKHMS-SO-005-1010 | SAM | SOIL | | 0.64 | 100.0 | 86.00 |
| 1011013-05 | GKHMS-SO-007-1010 | SAM | SOIL | | 0.61 | 100.0 | 88.00 |
| 1011013-06 | GKHMS-SO-011-1010 | SAM | SOIL | | 0.61 | 100.0 | 80.00 |
| 1011013-07 | GKHMS-SO-012-1010 | SAM | SOIL | | 0.62 | 100.0 | 84.00 |
| 1011013-08 | GKHMS-SO-014-1010 | SAM | SOIL | | 0.63 | 100.0 | 85.00 |
| 1011013-09 | GKHMS-SO-017-1010 | SAM | SOIL | | 0.62 | 100.0 | 88.00 |
| 1011013-10 | GKHMS-SO-019-1010 | SAM | SOIL | | 0.64 | 100.0 | 87.00 |
| 1011013-11 | GKHMS-SO-021-1010 | SAM | SOIL | | 0.64 | 100.0 | 87.00 |
| 1011013-12 | GKHMS-SO-022-1010 | SAM | SOIL | | 0.63 | 100.0 | 85.00 |
| 1011013-13 | GKHMS-SO-023-1010 | SAM | SOIL | | 0.62 | 100.0 | 86.00 |
| 1011013-14 | GKHMS-SO-025-1010 | SAM | SOIL | | 0.61 | 100.0 | 84.00 |
| 1011013-15 | GKHMS-SO-028-1010 | SAM | SOIL | | 0.63 | 100.0 | 86.00 |
| 1011013-16 | GKHMS-SO-030-1010 | SAM | SOIL | | 0.63 | 100.0 | 88.00 |
| 1011013-17 | GKHMS-SO-031-1010 | SAM | SOIL | | 0.63 | 100.0 | 88.00 |
| 1011013-18 | GKHMS-SO-032-1010 | SAM | SOIL | | 0.61 | 100.0 | 82.00 |
| 1011013-19 | GKHMS-SO-034-1010 | SAM | SOIL | | 0.64 | 100.0 | 86.00 |
| 1011013-20 | GKHMS-SO-FD002-1010 | SAM | SOIL | | 0.61 | 100.0 | 88.00 |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Method:** CV

**Case No.:** _____ **SAS No.:** _____

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(g) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047065 | | | | | | |
| B047065B1 | PBS1 | MB | SOIL | | 0.60 | 100.0 | 100.00 |
| B047065-BS1 | LCSS1 | LCS | SOIL | | 0.60 | 100.0 | 100.00 |
| 1011013-21 | GKHMS-SO-FD001-1010 | SAM | SOIL | | 0.61 | 100.0 | 80.00 |
| 1011013-21S | GKHMS-SO-FD001-1010S | MS | SOIL | | 0.63 | 100.0 | 80.00 |
| 1011013-21SD | GKHMS-SO-FD001-1010SD | MSD | SOIL | | 0.63 | 100.0 | 80.00 |
| 1011014-01 | GKHMS-SO-018-1010 | SAM | SOIL | | 0.63 | 100.0 | 86.00 |

# Metals
## - 3b -
## PREPARATION BLANK SUMMARY

**Client:** **SDG No.:** Chemtech MD

**Instrument:** CV5

| Sample ID | Analyte | Result (mg/Kg) | Acceptance Limit | Conc Qual | MDL mg/Kg | CRQL mg/Kg | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **B047064B1** | | **SOIL** | | **Batch Number:** | **B047064** | | | **Prep Date:** | | |
| | Mercury | 0.005 | <0.030 | U | 0.005 | 0.030 | CV | 11/19/2010 | 09:29 | HG101119 |
| **B047065B1** | | **SOIL** | | **Batch Number:** | **B047065** | | | **Prep Date:** | | |
| | Mercury | 0.005 | <0.030 | U | 0.005 | 0.030 | CV | 11/19/2010 | 08:54 | HG101119 |

## Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Aqueous LCS Source:** **Solid LCS Source:** PLASMA-PURE

| Sample ID | Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|---|
| B047064BS1 | | | | | | | | |
| | Mercury | mg/Kg | 0.500 | 0.503 | | 100.6 | 80.0 - 120.0 | CV |

## Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Aqueous LCS Source:** **Solid LCS Source:** PLASMA-PURE

| Sample ID | Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|---|
| B047065-BS1 | | | | | | | | |
| | Mercury | mg/Kg | 0.500 | 0.517 | | 103.4 | 80.0 - 120.0 | CV |

# Metals
## - 5a -
## MATRIX SPIKE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-01 **Client ID:** GKHMS-SO-001-1010S

**Percent Solids for Sample:** 86.00 **Spiked ID:** 1011013-01S **Percent Solids for Spike Sample:** 86.00

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | 75 - 125 | 0.6531 | | 0.0697 | | 0.74 | 78.8 | | CV |

## Metals
- 5a -
## MATRIX SPIKE DUPLICATE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-01 **Client ID:** GKHMS-SO-001-1010SD

**Percent Solids for Sample:** 86.00 **Spiked ID:** 1011013-01SD **Percent Solids for Spike Sample:** 86.00

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | 75 - 125 | 0.6366 | | 0.0697 | | 0.75 | 75.6 | | CV |

# Metals
## - 5a -
## MATRIX SPIKE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-21 **Client ID:** GKHMS-SO-FD001-1010S

**Percent Solids for Sample:** 80.00 **Spiked ID:** 1011013-21S **Percent Solids for Spike Sample:** 80.00

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | 75 - 125 | 0.6031 | | 0.0188 | U | 0.80 | 75.4 | | CV |

# Metals
## - 5a -
## MATRIX SPIKE DUPLICATE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-21 **Client ID:** GKHMS-SO-FD001-1010SD

**Percent Solids for Sample:** 80.00 **Spiked ID:** 1011013-21SD **Percent Solids for Spike Sample:** 80.00

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | 75 - 125 | 0.6081 | | 0.0188 | U | 0.79 | 77.0 | | CV |

# Metals
- 6 -
## DUPLICATE SAMPLE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-01S **Client ID:** GKHMS-SO-001-1010SD

**Percent Solids for Sample:** 86.00 **Duplicate ID:** 1011013-01SD **Percent Solids for Duplicate:** 86.00

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | | 0.6531 | | 0.6366 | | 2.6 | | CV |

# Metals
- 6 -
## DUPLICATE SAMPLE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-21S **Client ID:** GKHMS-SO-FD001-1010SD

**Percent Solids for Sample:** 80.00 **Duplicate ID:** 1011013-21SD **Percent Solids for Duplicate:** 80.00

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | | 0.6031 | | 0.6081 | | 0.8 | | CV |

# Metals

14

## ANALYSIS RUN LOG

Client: _____ Contract: _____

Lab Code: CHEM Case No.: _____ SAS No.: _____ SDG No.: Chemtech MD

Instrument ID Number: CV5 Method: CV Run Number: HG101119

Start Date: 11/19/2010 End Date: 11/19/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| SEQ-CAL1 | 1.00 | 0816 | | | | | | | | | | | | | | | | X | | | | | | | | |
| SEQ-CAL2 | 1.00 | 0819 | | | | | | | | | | | | | | | | X | | | | | | | | |
| SEQ-CAL3 | 1.00 | 0822 | | | | | | | | | | | | | | | | X | | | | | | | | |
| SEQ-CAL4 | 1.00 | 0825 | | | | | | | | | | | | | | | | X | | | | | | | | |
| SEQ-CAL5 | 1.00 | 0828 | | | | | | | | | | | | | | | | X | | | | | | | | |
| SEQ-CAL6 | 1.00 | 0831 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICV01 | 1.00 | 0839 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICB01 | 1.00 | 0843 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CRI01 | 1.00 | 0846 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV01 | 1.00 | 0849 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB01 | 1.00 | 0851 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBS1 | 1.00 | 0854 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSS1 | 1.00 | 0857 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-FD001-1010 | 1.00 | 0900 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-FD001-1010 | 1.00 | 0903 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-FD001-1010 | 1.00 | 0905 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-018-1010 | 1.00 | 0908 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 0911 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 0914 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 0917 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 0920 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV02 | 1.00 | 0923 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB02 | 1.00 | 0926 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBS1 | 1.00 | 0929 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSS1 | 1.00 | 0931 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-001-1010 | 1.00 | 0934 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-001-1010S | 1.00 | 0937 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-001-1010SD | 1.00 | 0940 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-002-1010 | 1.00 | 0943 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-003-1010 | 1.00 | 0946 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-005-1010 | 1.00 | 0949 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-007-1010 | 1.00 | 0952 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-011-1010 | 1.00 | 0955 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV03 | 1.00 | 0958 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB03 | 1.00 | 1001 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-012-1010 | 1.00 | 1004 | | | | | | | | | | | | | | | | X | | | | | | | | |

# Metals

14

## ANALYSIS RUN LOG

Client: _____ Contract: _____

Lab Code: CHEM Case No.: _____ SAS No.: _____ SDG No.: Chemtech MD

Instrument ID Number: CV5 Method: CV Run Number: HG101119

Start Date: 11/19/2010 End Date: 11/19/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| GKHMS-SO-014-1010 | 1.00 | 1007 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-017-1010 | 1.00 | 1010 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-019-1010 | 1.00 | 1013 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-021-1010 | 1.00 | 1016 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-022-1010 | 1.00 | 1019 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-023-1010 | 1.00 | 1022 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-025-1010 | 1.00 | 1026 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-028-1010 | 1.00 | 1028 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-030-1010 | 1.00 | 1031 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV04 | 1.00 | 1034 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB04 | 1.00 | 1037 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-031-1010 | 1.00 | 1040 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-032-1010 | 1.00 | 1043 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-034-1010 | 1.00 | 1046 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-SO-FD002-1010 | 1.00 | 1048 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV05 | 1.00 | 1051 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB05 | 1.00 | 1054 | | | | | | | | | | | | | | | | X | | | | | | | | |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICV01** | Mercury | 29.80 | 30.000 | 99.3 | 90.0 - 110.0 | CV | 11/19/2010 | 08:39 | HG101119 |
| **CCV01** | Mercury | 50.50 | 50.000 | 101.0 | 90.0 - 110.0 | CV | 11/19/2010 | 08:49 | HG101119 |
| **CCV02** | Mercury | 45.30 | 50.000 | 90.6 | 90.0 - 110.0 | CV | 11/19/2010 | 09:23 | HG101119 |
| **CCV03** | Mercury | 50.50 | 50.000 | 101.0 | 90.0 - 110.0 | CV | 11/19/2010 | 09:58 | HG101119 |
| **CCV04** | Mercury | 51.40 | 50.000 | 102.8 | 90.0 - 110.0 | CV | 11/19/2010 | 10:34 | HG101119 |
| **CCV05** | Mercury | 50.70 | 50.000 | 101.4 | 90.0 - 110.0 | CV | 11/19/2010 | 10:51 | HG101119 |

# Metals

## - 2b -

## CRDL STANDARD FOR AA & ICP

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**AA CRDL Standard Source:** PLASMA-PURE

**ICP CRDL Standard Source:** _____

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Advisory Limits (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CRI01** | | | | | | | | | |
| | Mercury | 2.20 | 2.0 | 110.0 | 70 - 130 | CV | 11/19/20 | 08:46 | HG101119 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | MDL | CRQL | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **ICB01** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 08:43 | HG101119 |
| **CCB01** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 08:51 | HG101119 |
| **CCB02** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 09:26 | HG101119 |
| **CCB03** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 10:01 | HG101119 |
| **CCB04** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 10:37 | HG101119 |
| **CCB05** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 10:54 | HG101119 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – VOC / PAH / PEST / PCB**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – 1011014**

**SAMPLES:** 1 / Soil / VOC / PAH / PEST / PCB

GKHMS-SO-018-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011014 consisted of one (1) soil environmental sample. The sample was analyzed for volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PAH), organochloride pesticides (PEST), and polychlorinated biphenyls (PCB) as indicated above. No field duplicate sample pairs were included in the Sample Delivery Group (SDG).

The samples were collected by Tetra Tech NUS on November 2, 2010 and analyzed by Centauri Labs. The analysis was conducted in accordance with SW-846 Method 8260B, 8270C SIM, 8081A and 8082 analytical and reporting protocols. The data contained in this SDG were fully validated with regard to the following parameters:

- Data Completeness
* • Holding Times
- Initial and Continuing Calibration
* • Laboratory Blank Analyses
- Blank Spike/Blank Spike Duplicate Results
- System Monitoring Compound/Surrogate Recovery
- Internal Standard Recovery
- Compound Quantitation
- Compound Identification
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. ChemTech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not reported by the laboratory. In the VOC fraction 1,4-dioxane was one of these analytes. This is further discussed in the additional problems section. There were a number of issues with the initial calibration data provided by Centauri for VOCs. ChemTech was contacted and they provided some revised forms for this package. A comparison of the revised initial

calibration form with the original initial calibration forms revealed some data inconsistencies which were not able to be resolved. As a result of these inconsistencies the following non-detected VOC analytes were qualified estimated, (UJ), unless rejected for other reasons: bromomethane, chloroethane, methyl acetate, vinyl acetate, methyl methacrylate, methacrylonitrile, trichloroethene, n-butylbenzene, and 1,2,3-trichlorobenzene. The revised initial calibration data did not indicate for a number of analytes if a linear or quadratic calibration curve was applied for the analytes that had relative standard deviations (RSDs) >15%. If the analyte relative retention factors (RRF) and the RSDs were the same for the revised calibration forms as the initial calibration forms, it was assumed that the linear or quadratic calibration curve was applied as in the initial calibration data and no action was taken for those analytes with RSDs >15%.

The initial calibration and continuing calibration relative response factors (RRFs) for 1,2-dibromo-3-chloropropane, 2-butanone, acetone, acetonitrile, acrylonitrile, bromomethane, methyl acetate, methyl acrylonitrile, and propionitrile were less than the 0.05 quality control limit on instrument GCMS-B on 11/11/10 and on 11/15/10 @ 09:49. The non-detected 1,2-dibromo-3-chloropropane, 2-butanone, acetone, acetonitrile, acrylonitrile, bromomethane, methyl acetate, methyl acrylonitrile, and propionitrile results in all samples were qualified as rejected (UR).

The initial calibration r factor for the linear calibration was less than the 0.995 quality control limit for methylene chloride, and as the revised r factor was not available for chloroethane the original r factor was used which was also less than 0.995. The non-detected chloroethane results in all samples were qualified as estimated, (UJ). The methylene chloride sample results were rejected for all samples for another reason and no action was taken for this quality control limit non-compliance.

The continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control limit for 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 4-methyl-2-pentanone, bromomethane, chloroethane, cis-1,3-dichloropropene, methylene chloride, naphthalene, n-butyl benzene, vinyl chloride, and trichloroethene for instrument GCMS-B on 11/15/10 @ 09:49 affecting sample GKHMS-SO-018-1010. The non-detected aforementioned analytes for the aforementioned samples were qualified estimated, (UJ), unless rejected for other issues.

The laboratory control sample (LCS) percent recoveries (%Rs) were less than the lower quality control limit and <10% for methyl iodide and methylene chloride for batch B048008 affecting sample GKHMS-SO-018-1010. The non-detected results for methyl iodide and methylene chloride were qualified rejected, (UR).

The laboratory control sample (LCS) percent recoveries (%Rs) were less than the lower quality control limit (and >10%) for vinyl acetate and methyl acetate for batch B048008 affecting sample GKHMS-SO-018-1010. The non-detected vinyl acetate result for the aforementioned sample was qualified estimated, (UJ). The non-detected methyl acetate sample result was previously qualified rejected and no further action was taken.

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PAH

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The retention time and response factor for 1-methylnaphthalene are very similar to 2-methylnaphthalene. The non-detected 1-methylnaphthalene result was qualified as estimated (UJ). The laboratory reported the 1-methylnaphthalene result to the reporting limit only.

The LCS %Rs were greater than the quality control limit for 2-methylnaphthalene, benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene for batch B046136 affecting sample GKHMS-SO-018-1010. The positive result for benzo(b)fluoranthene was qualified estimated, (J), for the aforementioned samples, and the non-detected 2-methylnaphthalene, benzo(a)pyrene, and benzo(b)fluoranthene results were not qualified.

The surrogate %R was greater than the quality control limit for terphenyl-d14 for sample GKHMS-SO-018-1010. The non-detected results for the aforementioned samples were not qualified. The positive results for benzo(b)fluoranthene, fluoranthene, and pyrene for the affected sample was qualified estimated, (J).

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PEST

The initial calibration linear calibration r value was less than the 0.995 quality control limit for both columns for the PEST analytes endrin aldehyde and methoxychlor. The sample GKHMS-SO-018-1010 had non-detected results for methoxychlor and endrin aldehyde results which were qualified estimated, (UJ).

The CCV percent difference (%D) was greater than the 20% quality control limit for 4,4"-DDT for both the RTX-CLP and RTX-CLP2 columns for instrument GCECD-W on 11/18/10 @ 22:29 affecting sample GKHMS-SO-018-1010. The SDG positive 4,4'-DDT sample result was reported from the RTX-CLP column and was qualified estimated, (J).

The CCV percent difference (%D) was greater than the 20% quality control limit for 4,4'-DDD, for the RTX-CLP column, and methoxychlor, for both the RTX-CLP and RTX-CLP2 columns, for instrument GCECD-W on 11/18/10 @ 22:29 affecting sample GKHMS-SO-018-1010. As both the analytical column CCVs were greater than the 20% quality control limit for methoxychlor, the non-detected result was qualified estimated, (UJ). The 4,4'-DDD sample GKHMS-SO-018-1010 non-detected result was not qualified as the alternate column CV %D was within the quality control limits.

The PEST surrogate %Rs were greater than the quality control limit for both analytical columns for tetrachloro-m-xylene for sample GKHMS-SO-018-1010. The non-detected PEST results for the affected samples were not qualified. The positive PEST results for sample GKHMS-SO-018-1010 were reported from the affected RTX-CLP column and were qualified estimated, (J).

The relative percent difference (RPD) between the two analytical column results was greater than the 40% quality control limit for 4,4'-DDT for sample GKHMS-SO-018-1010. The RPD was manually calculated by the data validation chemist as the laboratory had calculated %D between columns. The 4,4'-DDT result with the RPD which the exceeded the 40% quality control limit was qualified estimated, (J).

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PCB

The laboratory provided the missing chromatograms which indicated the absence of positive results for Aroclor-1262 and Aroclor-1268. As the laboratory did not calibrate for these PCBs, the non-detected Aroclor-1262 and Aroclor-1268 sample results were not added to the database and no further action is being taken on this issue.

A multi-level initial calibration resulting in an average response factor was performed only for Aroclor-1242. All other Aroclors detected were quantified using a single calibration level response factor for the Aroclor. Additionally, there were only CCVs performed by the laboratory for Aroclor-1242. No action was taken for this issue as an Aroclor could be identified, if present, and the laboratory satisfied at least on type of initial calibration requirement.

Additional Comments

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. ChemTech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not originally reported by the Centauri laboratory. Also, the continuing calibration data for pesticides chlordane and toxaphene were missing and all quality control data was not received for the PCB fraction. A toxaphene result was not reported for this sample. The following tables outline the discrepancies between the compounds reported/not reported initially by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC |
| 1-methylnaphthalene | PAH |
| Aroclor-1262 | PCB |
| Aroclor-1268 | PCB |
| Toxaphene | PEST |

The VOC analyte 1,4-dioxane was not originally analyzed for by the Centauri Laboratory as was required by the Sample Analysis Plan. The laboratory data from this SDG was forwarded to Chemtech Laboratory after the Centauri Laboratory closed for a re-examination of the VOC raw data from this SDG. Chemtech has reported that all sample data files were scanned for the presence of the 1,4-dioxane's major ions (28, 88, 58, and 29) and none were detected. No 1,4-dioxane result was included in this report and no further action is being taken on this issue.

The laboratory provided the missing chromatograms which indicated the absence of positive results for Aroclor-1262 and Aroclor-1268. As the laboratory did not calibrate for these PCBs, the non-detected Aroclor-1262 and Aroclor-1268 sample results were not added to the database and no further action is being taken on this issue.

It was noted that no initial calibration information was provided for toxaphene and chlordane in the initial calibration and the continuing calibration verification data was missing. The laboratory was contacted to provide the missing calibration data. The laboratory did not provide either the initial calibration nor the continuing calibration data necessary for the evaluation of the CCVs.

| Compounds Reported by the Lab not listed in the SAP in the Pesticide Fraction |
|---|
| Chlordane |
| Kepone |
| mirex |

Naphthalene was reported in both the VOC and PAH fractions in this SDG.

The following compounds were reported by the laboratory but were not required per the SAP.

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |
| 1,2,3-trichloropropane |
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Isobutanol |
| Methacrylonitrile |
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

The VOC LCS %Rs were greater than the higher quality control limit for acetone and naphthalene for batch B048008 affecting batch sample GKHMS-SO-018-1010. The sample results for acetone and naphthalene were non-detected and were not qualified.

The VOC matrix spike (MS) and the MS duplicate (MSD) results included in this SDG where from a sample from SDG 1011013, therefore, the quality control limit non-compliances were not used to qualify sample GKHMS-SO-018-1010.

The PAH MS/MSD for batch B046136 had %Rs greater than a number of PAH analytes. No action was taken as the sample spiked was not from this SDG.

All PEST positive results were reported by the laboratory from the RTX-CLP column regardless if they were the highest or the lowest of the two analytical column results.

The Aroclor MS/MSD provided with this SDG was for a spiked sample from another SDG. The MS/MSD RPD for Aroclor-1242 was greater than the 30% quality control limit. No action was taken for this non-compliance.

## Executive Summary

**Laboratory Performance:** VOC initial and continuing calibration RRFs less than the quality control limit resulted in rejection of some non-detected VOC analytes. VOC initial calibration RSDs and CCV %Ds greater than the quality control limit resulted in qualification of VOC analytes. VOC LCS/LCSD %Rs less than the quality control limit resulted in the qualification and rejection of VOC analytes.

1-Methylnaphthalene results were calculated based on the 2-methylnaphthalene CF from the associated calibration and all positive and non-detected 1-methylnaphthalene results were qualified. PAH LCS %Rs greater than the quality control limit resulted in qualification of positive PAH results. PAH results were qualified due to surrogate %R quality control limit exceedances.

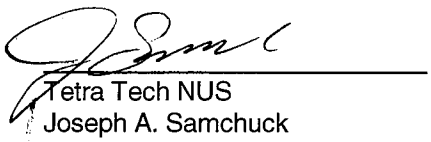
A PEST toxaphene result was not reported by the laboratory. No PEST chlordane and toxaphene calibration data was provided by the laboratory and the non-detected chlordane result was rejected. PEST endrin aldehyde and methoxychlor initial calibration quality control limit non-compliances resulted in PEST data qualifications for the analytes. PEST continuing calibration verification %Ds quality control limit non-compliances resulted in the qualification of pesticide positive and non-detected results. PEST results were qualified due to surrogate %R quality control limit exceedances.

Aroclor 1262 and 1268 results were not reported by the laboratory.

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J). The RPD quality control limit exceedance between analytical column results resulted in a data qualification for the positive 4,4'-DDT sample PEST result.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site Sample Analysis Plan (SAP), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator



Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

**Appendix A**

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-018-1010 |
|---|---|---|
| SDG: 1011014 | LAB_ID | 1011014-01 |
| FRACTION: OV | SAMP_DATE | 11/2/2010 |
| MEDIA: SOIL | QC_TYPE | NM |
| | UNITS | UG/KG |
| | PCT_SOLIDS | 86.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 1,1,1,2-TETRACHLOROETHANE | 0.231 | U | |
| 1,1,1-TRICHLOROETHANE | 0.289 | U | |
| 1,1,2,2-TETRACHLOROETHANE | 0.382 | U | |
| 1,1,2-TRICHLOROETHANE | 0.277 | U | |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | 5.78 | U | |
| 1,1-DICHLOROETHANE | 0.208 | U | |
| 1,1-DICHLOROETHENE | 0.324 | U | |
| 1,1-DICHLOROPROPENE | 0.393 | U | |
| 1,2,3-TRICHLOROBENZENE | 0.566 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | 0.416 | U | |
| 1,2,4-TRICHLOROBENZENE | 0.555 | UJ | C |
| 1,2,4-TRIMETHYLBENZENE | 0.497 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 0.682 | UR | C |
| 1,2-DIBROMOETHANE | 0.243 | U | |
| 1,2-DICHLOROBENZENE | 0.347 | U | |
| 1,2-DICHLOROETHANE | 0.59 | U | |
| 1,2-DICHLOROPROPANE | 0.22 | U | |
| 1,3,5-TRIMETHYLBENZENE | 0.52 | U | |
| 1,3-DICHLOROBENZENE | 0.509 | U | |
| 1,3-DICHLOROPROPANE | 0.266 | U | |
| 1,4-DICHLOROBENZENE | 0.497 | U | |
| 2,2-DICHLOROPROPANE | 0.243 | U | |
| 2-BUTANONE | 0.405 | UR | C |
| 2-CHLOROTOLUENE | 0.439 | U | |
| 2-HEXANONE | 0.358 | U | |
| 4-CHLOROTOLUENE | 0.462 | U | |
| 4-ISOPROPYLTOLUENE | 0.636 | U | |
| 4-METHYL-2-PENTANONE | 0.266 | UJ | C |
| ACETONE | 0.925 | UR | C |
| ACETONITRILE | 5.78 | UR | C |
| ACRYLONITRILE | 5.78 | UR | C |
| BENZENE | 0.243 | U | |
| BROMOBENZENE | 0.358 | U | |
| BROMOCHLOROMETHANE | 0.277 | U | |
| BROMODICHLOROMETHANE | 0.22 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-018-1010 |
|---|---|---|
| SDG: 1011014 | LAB_ID | 1011014-01 |
| FRACTION: OV | SAMP_DATE | 11/2/2010 |
| MEDIA: SOIL | QC_TYPE | NM |
| | UNITS | UG/KG |
| | PCT_SOLIDS | 86.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| BROMOFORM | 0.277 | U | |
| BROMOMETHANE | 0.451 | UR | C |
| CARBON DISULFIDE | 0.335 | U | |
| CARBON TETRACHLORIDE | 0.301 | U | |
| CHLOROBENZENE | 0.277 | U | |
| CHLORODIBROMOMETHANE | 0.301 | U | |
| CHLOROETHANE | 0.266 | UJ | C |
| CHLOROFORM | 0.208 | U | |
| CHLOROMETHANE | 0.913 | U | |
| CIS-1,2-DICHLOROETHENE | 0.231 | U | |
| CIS-1,3-DICHLOROPROPENE | 0.243 | UJ | C |
| CYCLOHEXANE | 5.78 | U | |
| DIBROMOMETHANE | 0.301 | U | |
| DICHLORODIFLUOROMETHANE | 0.486 | U | |
| ETHYL METHACRYLATE | 5.78 | U | |
| ETHYLBENZENE | 0.324 | U | |
| HEXACHLOROBUTADIENE | 0.671 | U | |
| ISOPROPYLBENZENE | 0.428 | U | |
| M+P-XYLENES | 0.775 | U | |
| METHACRYLONITRILE | 5.78 | UR | C |
| METHYL ACETATE | 5.78 | UR | C |
| METHYL CYCLOHEXANE | 5.78 | U | |
| METHYL IODIDE | 5.78 | UR | E |
| METHYL METHACRYLATE | 5.78 | UJ | C |
| METHYL TERT-BUTYL ETHER | 0.289 | U | |
| METHYLENE CHLORIDE | 0.197 | UR | E |
| NAPHTHALENE | 0.624 | UJ | C |
| N-BUTYLBENZENE | 0.624 | UJ | C |
| N-PROPYLBENZENE | 0.509 | U | |
| O-XYLENE | 0.335 | U | |
| PROPIONITRILE | 5.78 | UR | C |
| SEC-BUTYLBENZENE | 0.578 | U | |
| STYRENE | 0.416 | U | |
| TERT-BUTYLBENZENE | 0.486 | U | |
| TETRACHLOROETHENE | 0.439 | U | |

| | | | | |
|---|---|---|---|---|
| **PROJ_NO: 02607** | NSAMPLE | GKHMS-SO-018-1010 | | |
| **SDG: 1011014** | LAB_ID | 1011014-01 | | |
| **FRACTION: OV** | SAMP_DATE | 11/2/2010 | | |
| **MEDIA: SOIL** | QC_TYPE | NM | | |
| | UNITS | UG/KG | | |
| | PCT_SOLIDS | 86.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| TOLUENE | | 0.312 | U | |
| TOTAL XYLENES | | 1.16 | U | |
| TRANS-1,2-DICHLOROETHENE | | 0.277 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 0.254 | U | |
| TRICHLOROETHENE | | 0.347 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 0.405 | U | |
| VINYL ACETATE | | 5.78 | UJ | CE |
| VINYL CHLORIDE | | 0.277 | UJ | C |

| | | |
|---|---|---|
| **PROJ_NO: 02607** | NSAMPLE | GKHMS-SO-018-1010 |
| **SDG: 1011014** | LAB_ID | 1011014-01 |
| **FRACTION: PAH** | SAMP_DATE | 11/2/2010 |
| **MEDIA: SOIL** | QC_TYPE | NM |
| | UNITS | UG/KG |
| | PCT_SOLIDS | 86.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 1-METHYLNAPHTHALENE | 1.93 | UJ | Q |
| 2-METHYLNAPHTHALENE | 0.642 | U | |
| ACENAPHTHENE | 0.642 | U | |
| ACENAPHTHYLENE | 0.642 | U | |
| ANTHRACENE | 0.642 | U | |
| BENZO(A)ANTHRACENE | 0.642 | U | |
| BENZO(A)PYRENE | 0.642 | U | |
| BENZO(B)FLUORANTHENE | 0.733 | J | EPR |
| BENZO(G,H,I)PERYLENE | 0.642 | U | |
| BENZO(K)FLUORANTHENE | 0.642 | U | |
| CHRYSENE | 0.642 | U | |
| DIBENZO(A,H)ANTHRACENE | 0.642 | U | |
| FLUORANTHENE | 0.785 | J | PR |
| FLUORENE | 0.642 | U | |
| INDENO(1,2,3-CD)PYRENE | 0.642 | U | |
| NAPHTHALENE | 0.642 | U | |
| PHENANTHRENE | 0.642 | U | |
| PYRENE | 0.765 | J | PR |

| | | | | |
|---|---|---|---|---|
| **PROJ_NO: 02607** | NSAMPLE | GKHMS-SO-018-1010 | | |
| **SDG: 1011014** | LAB_ID | 1011014-01 | | |
| **FRACTION: PEST/PCB** | SAMP_DATE | 11/2/2010 | | |
| **MEDIA: SOIL** | QC_TYPE | NM | | |
| | UNITS | UG/KG | | |
| | PCT_SOLIDS | 86.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| AROCLOR-1016 | | 5.78 | U | |
| AROCLOR-1221 | | 10.1 | U | |
| AROCLOR-1232 | | 6.59 | U | |
| AROCLOR-1242 | | 8.21 | U | |
| AROCLOR-1248 | | 3.58 | U | |
| AROCLOR-1254 | | 7.98 | U | |
| AROCLOR-1260 | | 3.24 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-018-1010 | | | GKHMS-SO-018-1010-111810 | | |
|---|---|---|---|---|---|---|---|
| SDG: 1011014 | LAB_ID | 1011014-01 | | | 1011014-01 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | 86.0 | | | 86.0 | | |
| | DUP_OF | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | | | | 0.067 | U | |
| 4,4'-DDE | | | | | 0.825 | J | PR |
| 4,4'-DDT | | | | | 1.6 | J | CPRU |
| ALDRIN | | | | | 0.055 | U | |
| ALPHA-BHC | | | | | 0.087 | U | |
| ALPHA-CHLORDANE | | | | | 0.112 | U | |
| AROCLOR-1016 | | 5.78 | U | | | | |
| AROCLOR-1221 | | 10.1 | U | | | | |
| AROCLOR-1232 | | 6.59 | U | | | | |
| AROCLOR-1242 | | 8.21 | U | | | | |
| AROCLOR-1248 | | 3.58 | U | | | | |
| AROCLOR-1254 | | 7.98 | U | | | | |
| AROCLOR-1260 | | 3.24 | U | | | | |
| BETA-BHC | | | | | 0.096 | U | |
| CHLORDANE | | | | | 6.24 | U | |
| DELTA-BHC | | | | | 0.127 | U | |
| DIELDRIN | | | | | 0.162 | U | |
| ENDOSULFAN I | | | | | 0.102 | U | |
| ENDOSULFAN II | | | | | 0.108 | U | |
| ENDOSULFAN SULFATE | | | | | 0.173 | U | |
| ENDRIN | | | | | 0.127 | U | |
| ENDRIN ALDEHYDE | | | | | 0.185 | UJ | C |
| ENDRIN KETONE | | | | | 0.116 | U | |
| GAMMA-BHC (LINDANE) | | | | | 0.094 | U | |
| GAMMA-CHLORDANE | | | | | 0.116 | U | |
| HEPTACHLOR | | | | | 0.082 | U | |
| HEPTACHLOR EPOXIDE | | | | | 0.099 | U | |
| KEPONE | | | | | 0.642 | U | |
| METHOXYCHLOR | | | | | 0.092 | UJ | C |
| MIREX | | | | | 0.642 | U | |

## Appendix B

Results as Reported by the Laboratory

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-018-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011014-01
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 16:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.231 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.289 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.382 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.277 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.208 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.324 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.393 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.566 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.416 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.555 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.497 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.682 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.243 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.347 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.590 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.220 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.520 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.509 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.266 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 0.497 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.243 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 2-Butanone | 78-93-3 | BQL | U | 0.405 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.439 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.358 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.462 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.266 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Acetone | 67-64-1 | BQL | U | 0.925 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Acetonitrile | 75-05-8 | BQL | U | 5.78 | 57.8 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.78 | 28.9 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Benzene | 71-43-2 | BQL | U | 0.243 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Bromobenzene | 108-86-1 | BQL | U | 0.358 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.277 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.220 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Bromoform | 75-25-2 | BQL | U | 0.277 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Bromomethane | 74-83-9 | BQL | U | 0.451 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-018-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011014-01
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 16:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.335 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.301 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.277 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.301 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Chloroethane | 75-00-3 | BQL | U | 0.266 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Chloroform | 67-66-3 | BQL | U | 0.208 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Chloromethane | 74-87-3 | BQL | U | 0.913 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.231 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.243 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Cyclohexane | 110-82-7 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Dibromomethane | 74-95-3 | BQL | U | 0.301 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.486 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.324 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Freon 113 | 76-13-1 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.671 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Iodomethane | 74-88-4 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.428 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| m,p-Xylenes | | BQL | U | 0.775 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Methyl Acetate | 76-20-9 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.289 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Methylcyclohexane | 108-87-2 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.197 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Naphthalene | 91-20-3 | BQL | U | 0.624 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.624 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.509 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| o-Xylene | 95-47-6 | BQL | U | 0.335 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.636 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Propionitrile | 107-12-0 | BQL | U | 5.78 | 57.8 | 1 | ug/Kg dry | 11/15/10 16:07 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.578 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Styrene | 100-42-5 | BQL | U | 0.416 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.486 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Tetrachloroethene | 127-18-4 | BQL | U | 0.439 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-018-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8260B

Sample Matrix: Solid
Sample ID: 1011014-01
Percent solids:
Preparation Method: EPA 5035
Prepared Date/Time: 11/15/10 16:07

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | BQL | U | 0.312 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.277 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.254 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Trichloroethene | 79-01-6 | BQL | U | 0.347 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.405 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Vinyl acetate | 108-05-4 | BQL | U | 5.78 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.277 | 11.6 | 1 | ug/Kg dry | 11/15/10 16:07 |
| Xylene (Total) | 1330-20-7 | BQL | U | 1.16 | 5.78 | 1 | ug/Kg dry | 11/15/10 16:07 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99 % | 70-120 | 1 | 11/15/10 16:07 |
| 4-Bromofluorobenzene | 460-00-4 | 96 % | 85-120 | 1 | 11/15/10 16:07 |
| Dibromofluoromethane | 1868-53-7 | 86 % | 85-115 | 1 | 11/15/10 16:07 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-115 | 1 | 11/15/10 16:07 |

ADDENDUM VOLATILES PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-018-1010

Sample Date/Time: 11/02/10 11:40

File ID: B02890392.D

Analytical Method: SW8260B

Sample Matrix: Soil

Sample ID: 1011014-01

Percent solids: 86.50

Preparation Method: EPA 5030B

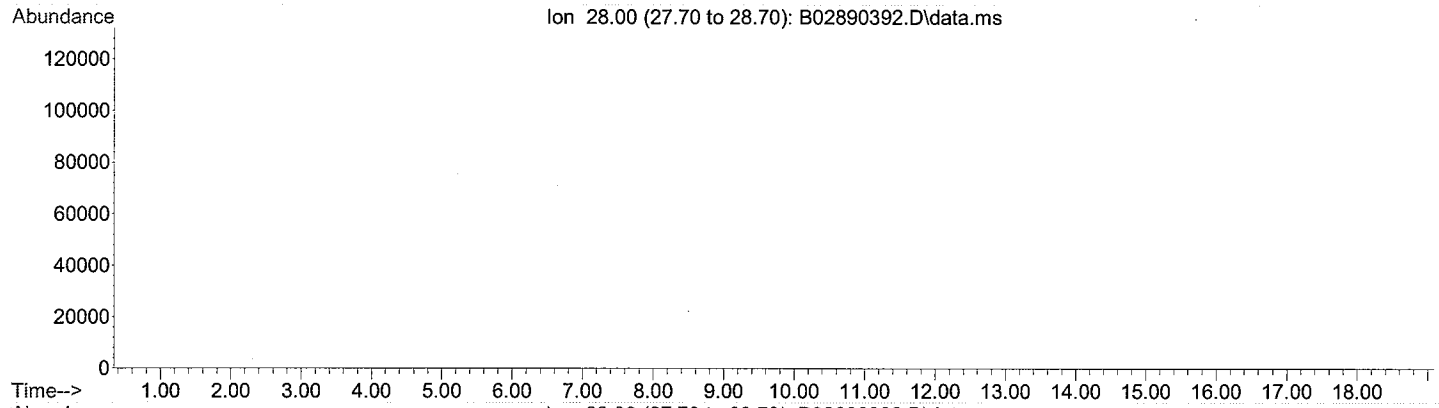
Prepared Date/Time: 11/15/10 16:07

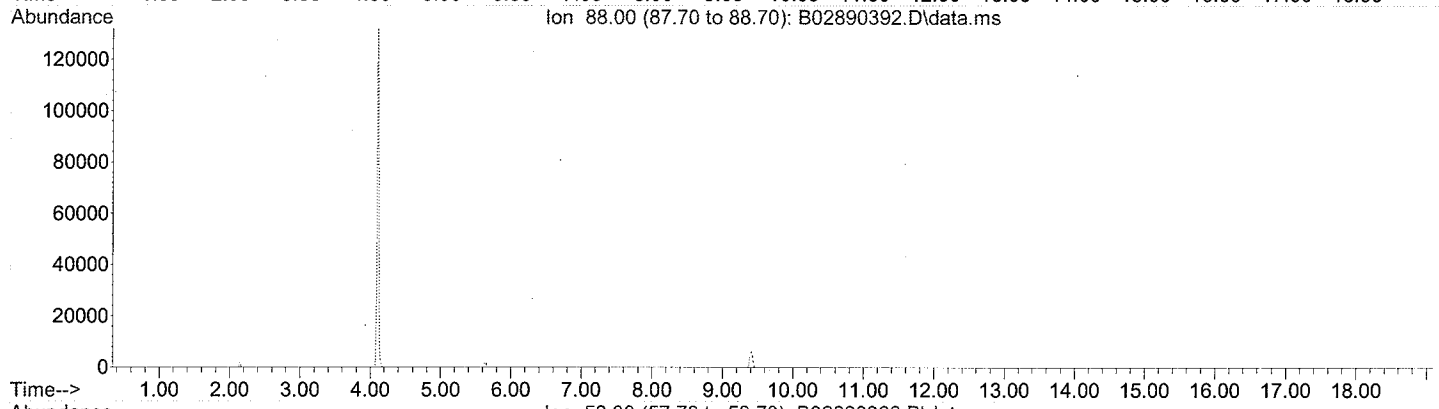
Analyzed Date/Time: 11/15/10 16:07

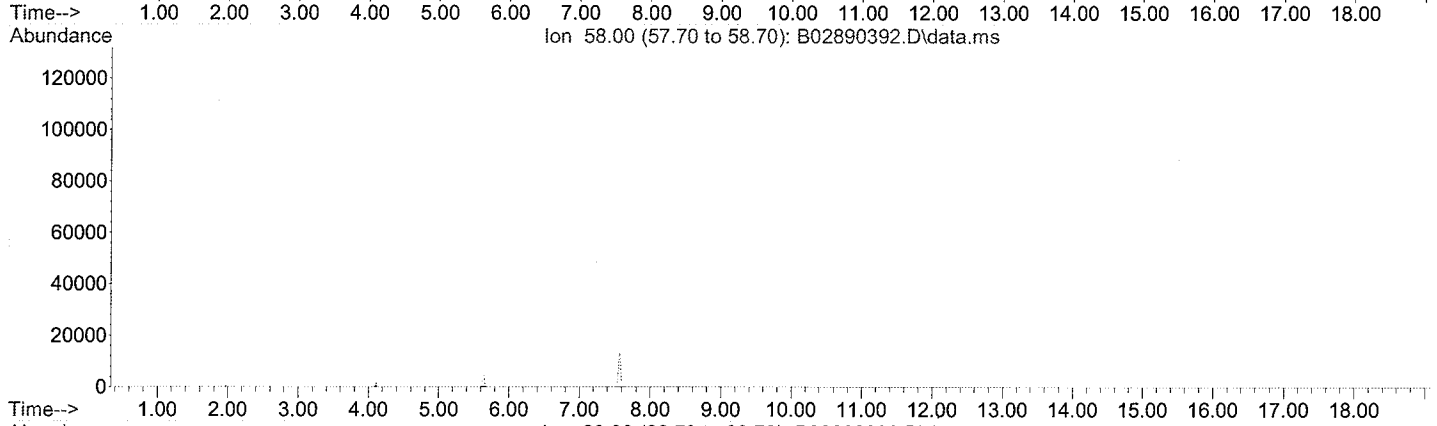
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 57.8 | 1 | ug/L |

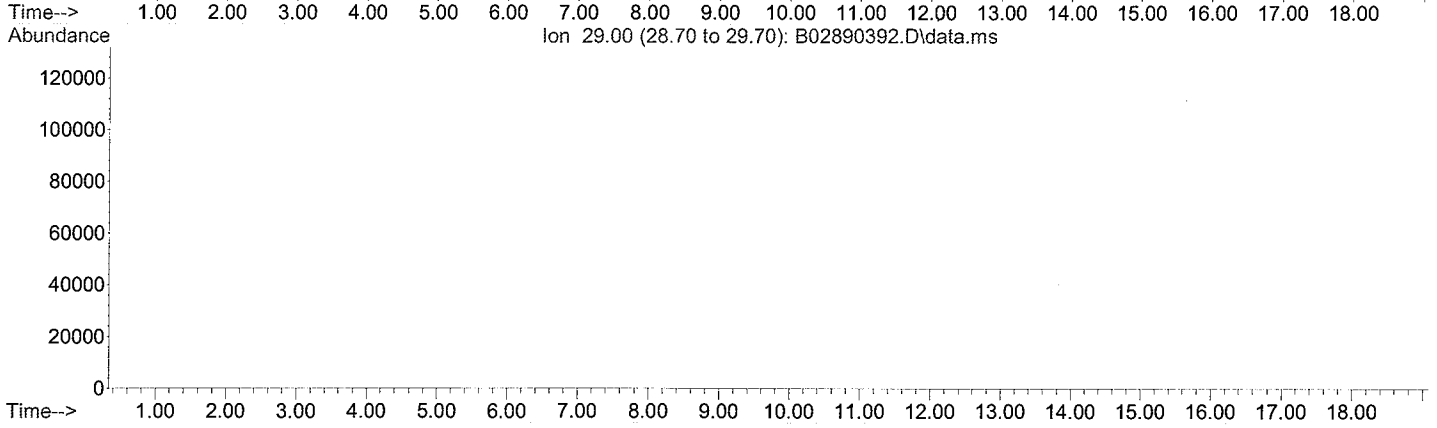
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111510\B02890392.D
Operator : MP
Acquired : 15 Nov 2010 4:07 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011014-01
Misc Info : 5.0 GM. TETRA TECH, SOIL
Vial Number: 15



Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-018-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8270C SIM

Sample Matrix: Solid
Sample ID: 1011014-01
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/11/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Acenaphthene | 83-32-9 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Acenaphthylene | 208-96-8 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Anthracene | 120-12-7 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Benzo[b]fluoranthene | 205-99-2 | 0.733 | J | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Chrysene | 218-01-9 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Fluoranthene | 206-44-0 | 0.785 | J | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Fluorene | 86-73-7 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Naphthalene | 91-20-3 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Phenanthrene | 85-01-8 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |
| Pyrene | 129-00-0 | 0.765 | J | 0.642 | 1.93 | 1 | ug/Kg dry | 11/16/10 0:57 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 94 % | 45-105 | 1 | 11/16/10 0:57 |
| Nitrobenzene-d5 | 4165-60-0 | 92 % | 35-100 | 1 | 11/16/10 0:57 |
| Terphenyl-d14 | 1718-51-0 | 137 % | 30-125 | 1 | 11/16/10 0:57 |

ADDENDUM PAH PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-018-1010

Sample Date/Time: 11/2/10 11:40

File ID: D46264.D

Analytical Method: SW8270C SIM

Sample Matrix: Solid

Sample ID: 1011014-01

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/11/10 11:55

Analyzed Date/Time: 11/16/10 00:57

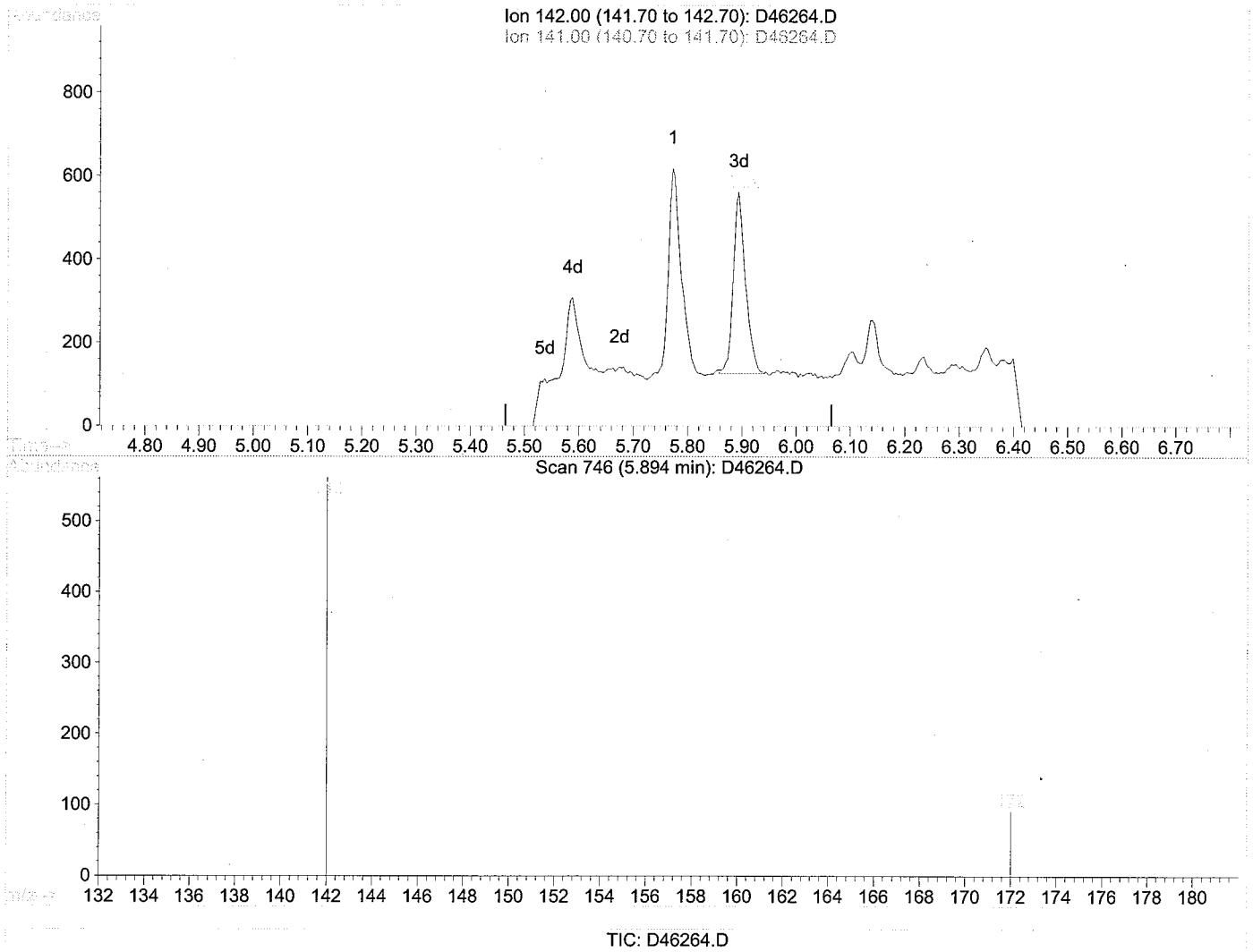
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 1.93 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46264.D Vial: 24
Acq On : 16 Nov 2010 00:57 Operator: JI
Sample : 1011014-01 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:53 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46264.D

(5) 2-Methylnaphthalene (T)

5.89min 4.84ug/L m

response 685

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-018-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8081A

Sample Matrix: Solid
Sample ID: 1011014-01
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 15:46

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.067 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| 4,4'-DDE | 72-55-9 | 0.825 | JP | 0.173 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| 4,4'-DDT | 50-29-3 | 1.60 | JP | 0.127 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Aldrin | 309-00-2 | BQL | U | 0.055 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| alpha-BHC | 319-84-6 | BQL | U | 0.087 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.112 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| beta-BHC | 319-85-7 | BQL | U | 0.096 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Chlordane | 57-74-9 | BQL | U | 6.24 | 38.2 | 1 | ug/Kg dry | 11/18/10 18:27 |
| delta-BHC | 319-86-8 | BQL | U | 0.127 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Dieldrin | 60-57-1 | BQL | U | 0.162 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Endosulfan I | 959-98-8 | BQL | U | 0.102 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.108 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.173 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Endrin | 72-20-8 | BQL | U | 0.127 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.185 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.116 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| gamma-BHC | 58-89-9 | BQL | U | 0.094 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.116 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Heptachlor | 76-44-8 | BQL | U | 0.082 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.099 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Methoxychlor | 72-43-5 | BQL | U | 0.092 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Kepone | 143-50-0 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |
| Mirex | 2385-85-5 | BQL | U | 0.642 | 1.93 | 1 | ug/Kg dry | 11/18/10 18:27 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 68 % | 70-125 | 1 | 11/18/10 18:27 |
| DCB | 2051-24-3 | 61 % | 55-130 | 1 | 11/18/10 18:27 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-018-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW8082

Sample Matrix: Solid
Sample ID: 1011014-01
Percent solids:
Preparation Method: 3550B Sonic.
Prepared Date/Time: 11/10/10 11:40

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 5.78 | 38.5 | 1 | ug/Kg dry | 11/12/10 13:12 |
| PCB-1221 | 11104-28-2 | BQL | U | 10.1 | 38.5 | 1 | ug/Kg dry | 11/12/10 13:12 |
| PCB-1232 | 11141-16-5 | BQL | U | 6.59 | 38.5 | 1 | ug/Kg dry | 11/12/10 13:12 |
| PCB-1242 | 53469-21-9 | BQL | U | 8.21 | 38.5 | 1 | ug/Kg dry | 11/12/10 13:12 |
| PCB-1248 | 12672-29-6 | BQL | U | 3.58 | 38.5 | 1 | ug/Kg dry | 11/12/10 13:12 |
| PCB-1254 | 11097-69-1 | BQL | U | 7.98 | 38.5 | 1 | ug/Kg dry | 11/12/10 13:12 |
| PCB-1260 | 11096-82-5 | BQL | U | 3.24 | 38.5 | 1 | ug/Kg dry | 11/12/10 13:12 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 80 % | 70-125 | 1 | 11/12/10 13:12 |
| DCB | 2051-24-3 | 74 % | 60-125 | 1 | 11/12/10 13:12 |

ADDENDUM PCB PACKAGE

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-SO-018-1010

Sample Date/Time: 11/2/10 11:40

File ID: U0324462.D

Analytical Method: SW8082

Sample Matrix: Solid

Sample ID: 1011014-01

Percent solids: 86%

Preparation Method: SW 3550B

Prepared Date/Time: 11/10/10 11:40

Analyzed Date/Time: 11/12/10 13:12

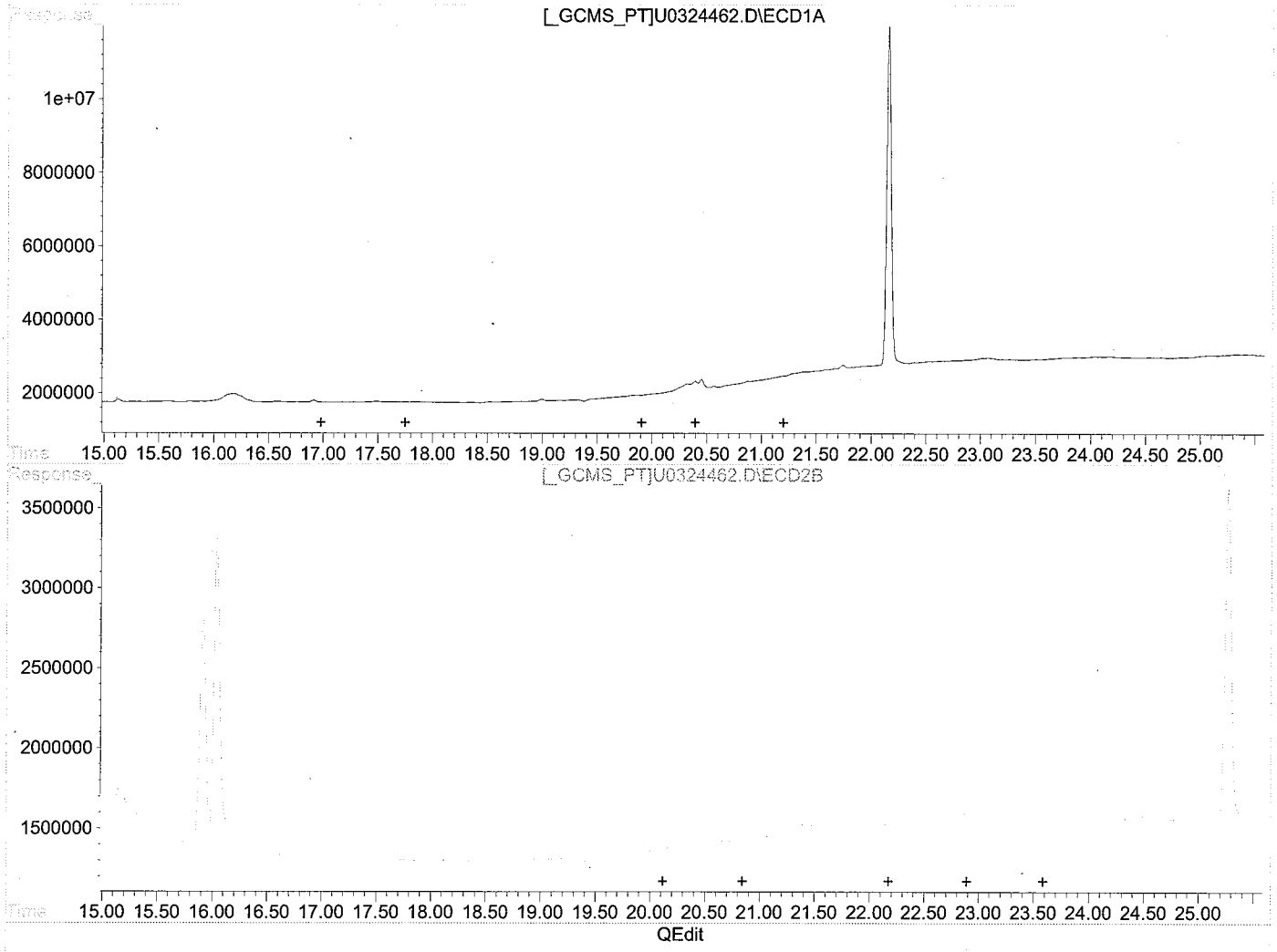
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| Ar-1262 | 37324-23-5 | BQL | U | 38.7 | 1 | ug/Kg |
| Ar-1268 | 11100-14-4 | BQL | U | 38.7 | 1 | ug/Kg |

The analysis was performed by Centauri Labs.

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324462.D\ECD1A.CH Vial: 9
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324462.D\ECD2B.CH
Acq On : 11-12-2010 13:12:11 Operator: RP
Sample : 1011014-01 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 19 14:12 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(36) AR1268 (L8)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(36) AR1268 #2 (L8)

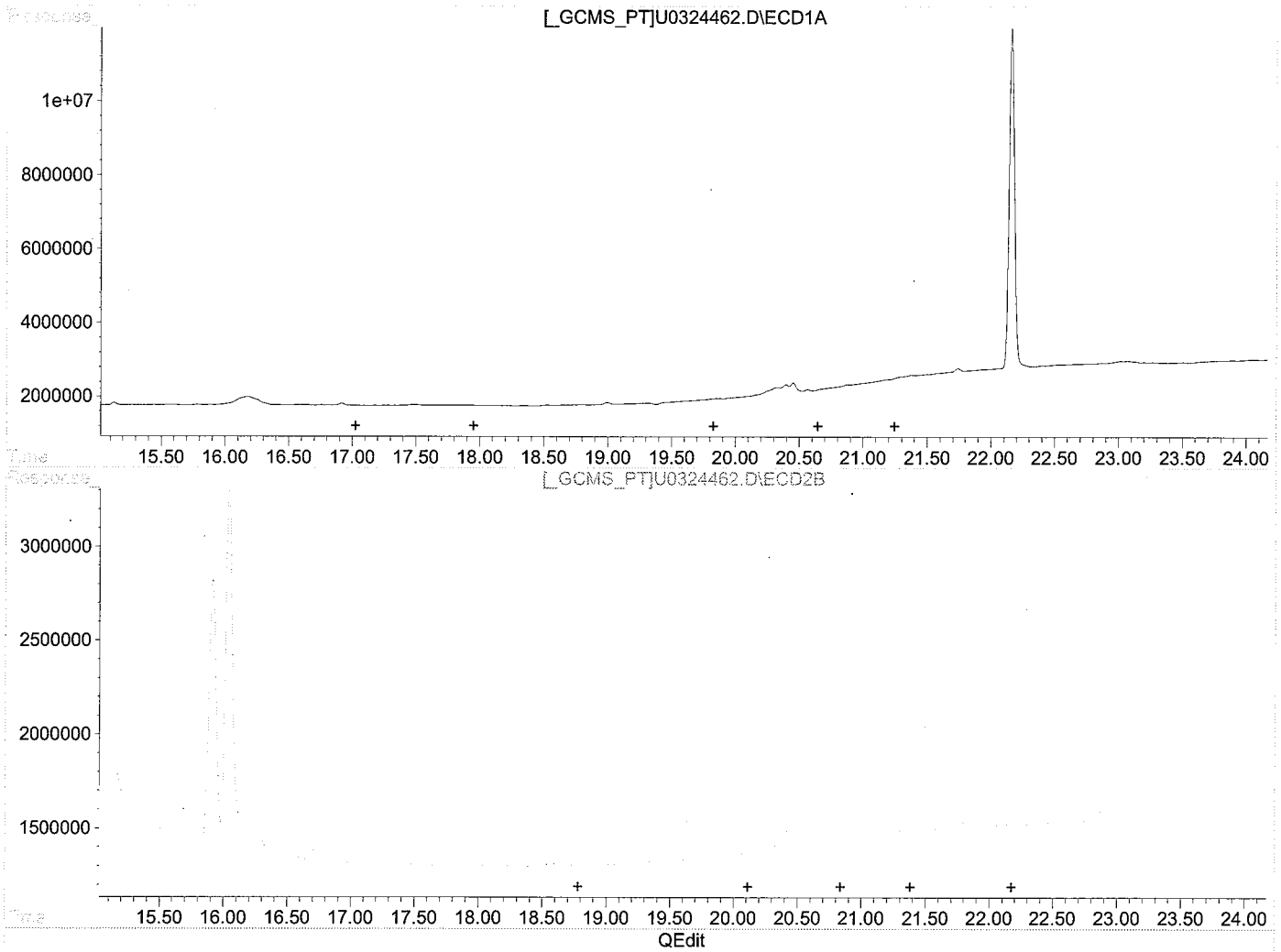
| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

Quantitation Report

Signal #1 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324462.D\ECD1A.CH Vial: 9
Signal #2 : H:\VOL1\GCDATA\U\ARCHIVE\111210\U0324462.D\ECD2B.CH
Acq On : 11-12-2010 13:12:11 Operator: RP
Sample : 1011014-01 Inst : GCECD-U
Misc : SOIL Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 19 14:12 2010 Quant Results File: 110910U.RES

Method : H:\VOL1\GCDATA\METHODS\U ICAL\110910U.M (Chemstation Integrator)
Title : 8082 PCB Method / 608 PCB
Last Update : Wed Nov 10 09:13:50 2010
Response via : Multiple Level Calibration




(41) AR1262 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(41) AR1262 #2 (L9)

| R.T. | Response | Conc |
|---|---|---|
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |
| 0.00 | 0 | 0.00 |

(+) = Expected Retention Time

## Appendix C

Support Documentation

HOLD TIME

**SDG** 1011014

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| M | MG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/08/2010 | 11/08/2010 | 6 | 0 | 6 |
| PCS | | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| OV | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/15/2010 | 11/15/2010 | 13 | 0 | 13 |
| SIM | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| PCB | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PEST | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-9

WO# 1011014

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8260B** | GKHMS-SO018 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO018 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| 1. Relinquished By: **Gary Braganza** | Date: 11/03/2010 | Time: 15:14 | Received By: **Federal Express** | Date: 11/03/2010 | Time: 16:14 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: 11/4/10 | Time: 12:50 pm |

Comments:

**SAMPLE RECIEPT**

One solid sample was received on 11/04/2010. The sample arrived by Fed Ex. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/02/2010.

**8260**

One soil samples was analyzed for volatile organic compounds by the SW846 Method 8260B..
The sample was analyzed within the holding time.

All surrogate recoveries and internal standard responses were within the QC limits.

A matrix spike and matrix spike duplicate were performed on a sample from a separate Tetra Tech workorder. Fifteen analytes were outside QC limits in the MS and sixteen in the MSD. The % RPD for six compounds was above the QC limits for the pair.

In batch B048008, recovery of two compounds in the LCS were above the QC limits. Because no compounds were detected above the reporting limit in the associated client sample, there is no effect on the results reported.
Recovery of four compounds in the LCS was below QC limits. Because none of the compounds were detected above the method detection limit in the associated client sample, there is no effect on the results reported.

In sequence S048008, the response for four compounds was above QC limits and two compounds were below the QC limits in the daily CCV.
The compounds were not detected above the method detection limit in the associated client sample.

All of the remaining QC was within QC limits.

**SW8270LL-PAH SIM**

One soil sample was extracted by method 3550B. The sample extract was analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
Samples GKHMS-SO-018-1010 had one surrogate recovery above the QC limits. All other surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were shared with work order 1011008. Six spike recoveries were

above the QC limits.
A laboratory control sample was extracted and analyzed with this batch. Four spike recoveries were above the QC limits.

**PCBs**

One soil sample was extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead, a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

**PESTICIDES**

Two water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. All recoveries were within the QC limits.
Some of the CCV responses for 4,4-DDT were below QC limits. Because that analyte was found in the sample GKHMS-SO-018-1010, the data may be biased low.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1011014 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 11/5/2010 10:43:00AM |
| Date Received: | 11/4/2010 12:50:00PM | Logged In By: | Chino Ortiz |
| Received By: | Chino Ortiz | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

| | |
|---|---|
| Shipping Container in good condition? | Y |
| Custody seals present on shipping container? | Y |
| Condition: *Intact-signed and dated* | |
| Chain-of-Custody present? | Y |
| COC agrees with sample labels? | Y |
| COC signed? | Y |
| Packing present in shipping container? | Y |
| Custody seals present on sample bottles? | N |
| Condition: *Intact* | |
| Samples intact? | Y |
| Sufficient volume for requested tests? | Y |
| Preservation confirmed? | Y |
| Are there Volatiles samples present? | N |
| Has Zero Headspace? | N/A |
| Total number of bottles: | |
| Total number of samples: | 1 |

Comments:

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-SO-018-1010 | 1011014-01 | Solids, Dry Weight | Solid | 11/2/2010 | 11/4/2010 |
| | | SW6010C | | | |
| | | SW7471B | | | |
| | | SW8081A | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011014

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.

Several compounds had their average response factor updated for the calibration curve after the quant reports had been printed. None of the affected compounds were detected above the MDL in the sample in this SDG. A corrected Form 7 is provided.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

PCBs

The complete original PCB data package is provided.

Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Mercury

Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director
Chemtech

2/4/2011

# SW8260B

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890285.D | Injection Date: | 11/11/10 |
| Instrument ID: | GCMS-B | Injection Time: | 08:22 |
| Sequence: | S047034 | Lab Sample ID: | S047034-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.3 | PASS |
| 75 | 30 - 60% of 95 | 45.5 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.8 | PASS |
| 175 | 5 - 9% of 174 | 7.16 | PASS |
| 176 | 95 - 101% of 174 | 97.5 | PASS |
| 177 | 5 - 9% of 176 | 6.47 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047034-CAL5 | B02890286.D | 11/11/2010 | 9:37:00 |
| Cal Standard | S047034-CAL3 | B02890287.D | 11/11/2010 | 10:06:00 |
| Cal Standard | S047034-CAL2 | B02890288.D | 11/11/2010 | 10:33:00 |
| Cal Standard | S047034-CAL1 | B02890289.D | 11/11/2010 | 11:00:00 |
| Cal Standard | S047034-CAL4 | B02890290.D | 11/11/2010 | 11:27:00 |
| Cal Standard | S047034-CAL6 | B02890291.D | 11/11/2010 | 11:54:00 |
| Cal Standard | S047034-CAL7 | B02890292.D | 11/11/2010 | 12:20:00 |
| Cal Standard | S047034-CAL8 | B02890293.D | 11/11/2010 | 12:47:00 |
| Secondary Cal Check | S047034-SCV1 | B02890299.D | 11/11/2010 | 16:39:00 |

# INITIAL CALIBRATION STANDARDS

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047034 | Instrument: | GCMS-B |
| Calibration: | 0111803 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002260 | VOA ICAL 40.0 PPB ELEMENT | S047034-CAL7 | | |
| 0002261 | VOA ICAL 50.0 PPB ELEMENT | S047034-CAL8 | | |
| 0001918 | VOA Tune (GC/MS-B) | S047034-TUN1 | B02890285.D | 11/11/10 08:22 |
| 0002258 | VOA ICAL 10.0 PPB ELEMENT | S047034-CAL5 | B02890286.D | 11/11/10 09:37 |
| 0002256 | VOA ICAL 2.0 PPB ELEMENT | S047034-CAL3 | B02890287.D | 11/11/10 10:06 |
| 0002255 | VOA ICAL 1.0 PPB ELEMENT | S047034-CAL2 | B02890288.D | 11/11/10 10:33 |
| 0002254 | VOA ICAL 0.5 PPB ELEMENT | S047034-CAL1 | B02890289.D | 11/11/10 11:00 |
| 0002257 | VOA ICAL 5.0 PPB ELEMENT | S047034-CAL4 | B02890290.D | 11/11/10 11:27 |
| 0002259 | VOA ICAL 20.0 PPB ELEMENT | S047034-CAL6 | B02890291.D | 11/11/10 11:54 |
| 0002260 | VOA ICAL 40.0 PPB ELEMENT | S047034-CAL7 | B02890292.D | 11/11/10 12:20 |
| 0002261 | VOA ICAL 50.0 PPB ELEMENT | S047034-CAL8 | B02890293.D | 11/11/10 12:47 |
| 0002266 | VOA MIX SECOND SOURCE ELEMENT | S047034-SCV1 | B02890299.D | 11/11/10 16:39 |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9449965 | 2.996188 | | | 15 | |
| 1,1,1-Trichloroethane | 0.5659896 | 4.560913 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.4579836 | 6.241163 | | | 15 | |
| 1,1,2-Trichloroethane | 9.655389E-02 | 5.136963 | | | 15 | |
| 1,1-Dichloroethane | 0.5886556 | 5.340725 | | | 15 | |
| 1,1-Dichloroethene | 0.2945645 | 6.971788 | | | 15 | |
| 1,1-Dichloropropene | 0.4516883 | 6.89683 | | | 15 | |
| 1,2,3-Trichlorobenzene | 0.18017 | 37.97393 | | 0.9992497 | | |
| 1,2,3-Trichloropropane | 0.3987978 | 2.309246 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.2303203 | 37.55557 | | 0.9995881 | | |
| 1,2,4-Trimethylbenzene | 4.709513 | 9.55917 | | | 15 | |
| 1,2-Dibromo-3-chloropropane | 1.701376E-02 | 10.41317 | | | 15 | |
| 1,2-Dibromoethane | 0.4184844 | 2.192751 | | | 15 | |
| 1,2-Dichlorobenzene | 0.7312224 | 14.16362 | | | 15 | |
| 1,2-Dichloroethane | 0.2037538 | 12.07758 | | | 15 | |
| 1,2-Dichloroethene (total) | | | | | 15 | |
| 1,2-Dichloropropane | 0.2268516 | 3.229273 | | | 15 | |
| 1,3,5-Trimethylbenzene | 5.136773 | 4.363395 | | | 15 | |
| 1,3-Dichlorobenzene | 2.429237 | 4.866861 | | | 15 | |
| 1,3-Dichloropropane | 0.9832992 | 3.286307 | | | 15 | |
| 1,4-Dichlorobenzene | 2.361546 | 3.090043 | | | 15 | |
| 2,2-Dichloropropane | 0.3046553 | 5.396329 | | | 15 | |
| 2-Butanone | 2.988406E-02 | 5.864186 | | | 15 | |
| 2-Chloroethylvinyl Ether | 5.040849E-03 | 40.08566 | | 0.9790865 | | |
| 2-Chlorotoluene | 4.262763 | 2.473932 | | | 15 | |
| 2-Hexanone | 0.1678354 | 12.05372 | | | 15 | |
| 4-Chlorotoluene | 4.45775 | 3.06895 | | | 15 | |

CENTAURI LABS ™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | | |
|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS |
| Calibration: | 0111803 | | Instrument: | GCMS-B |
| | | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.2832524 | 14.19025 | | | 15 | |
| Acetone | 3.530808E-02 | 60.72747 | | 0.999617 | | |
| Acetonitrile | 9.62937E-03 | 13.39067 | | | 15 | |
| Acrylonitrile | 2.462373E-02 | 8.722332 | | | 15 | |
| Benzene | 1.192023 | 7.986526 | | | 15 | |
| Bromobenzene | 1.15273 | 2.492457 | | | 15 | |
| Bromochloromethane | 0.1177031 | 7.751624 | | | 15 | |
| Bromodichloromethane | 0.2596342 | 3.823348 | | | 15 | |
| Bromoform | 0.290434 | 12.84001 | | | 15 | |
| Bromomethane | 2.574268E-02 | 41.48754 | | 0.9991388 | | |
| Carbon disulfide | 0.9743583 | 7.835565 | | | 15 | |
| Carbon tetrachloride | 0.8946293 | 63.11922 | 0.9984195 | | | |
| Chlorobenzene | 3.33925 | 7.36761 | | | 15 | |
| Chlorodibromomethane | 0.5999869 | 6.15232 | | | 15 | |
| Chloroethane | 0.5391721 | 54.15445 | 0.9722477 | | | |
| Chloroform | 0.5666822 | 5.796015 | | | 15 | |
| Chloromethane | 0.24454 | 16.79022 | | 0.9931096 | | |
| cis-1,2-Dichloroethene | 0.3797202 | 6.232311 | | | 15 | |
| cis-1,3-Dichloropropene | 0.2602865 | 13.76286 | | | 15 | |
| Cyclohexane | 0.7628433 | 5.840917 | | | 15 | |
| Dibromomethane | 7.125834E-02 | 3.732625 | | | 15 | |
| Dichlorodifluoromethane | 0.3660774 | 10.70454 | | | 15 | |
| Ethyl methacrylate | 0.1602354 | 14.89641 | | | 15 | |
| Ethylbenzene | 6.517445 | 5.849966 | | | 15 | |
| Freon 113 | 0.8352537 | 5.798705 | | | 15 | |
| Hexachlorobutadiene | 0.4443176 | 14.47997 | | | 15 | |
| Iodomethane | 1.948717 | 7.835569 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 4974.099 | 4.738612 | | | 15 | |
| Isopropylbenzene | 6.236763 | 3.048825 | | | 15 | |
| m,p-Xylenes | 2.521251 | 9.628999 | | | 15 | |
| Methacrylonitrile | 4.057835E-02 | 5.161016 | | | 15 | |
| Methyl Acetate | 2.018245E-02 | 5.767039 | | | 15 | |
| Methyl tert-Butyl Ether | 0.354677 | 7.568475 | | | 15 | |
| Methylcyclohexane | 0.6187942 | 5.720732 | | | 15 | |
| Methylene Chloride | 0.8416174 | 84.28984 | 0.9310435 | | | |
| Methylmethacrylate | 492250.2 | 8.694056 | | | 15 | |
| Naphthalene | 0.1996723 | 32.92434 | | 0.9980256 | | |
| n-Butylbenzene | 4.521909 | 23.51799 | | | 15 | * |
| n-Propylbenzene | 7.637786 | 4.068436 | | | 15 | |
| o-Xylene | 2.238511 | 2.784486 | | | 15 | |
| p-Isopropyltoluene | 5.899351 | 9.677282 | | | 15 | |
| Propionitrile | 0.0113396 | 12.53996 | | | 15 | |
| sec-Butylbenzene | 7.313888 | 5.611493 | | | 15 | |
| Styrene | 3.406218 | 3.688098 | | | 15 | |
| tert-Butylbenzene | 4.832452 | 5.305811 | | | 15 | |
| Tetrachloroethene | 1.669076 | 4.675657 | | | 15 | |
| Toluene | 0.7629039 | 7.140552 | | | 15 | |
| trans-1,2-Dichloroethene | 0.473488 | 5.608299 | | | 15 | |
| trans-1,3-Dichloropropene | 0.171221 | 22.33747 | 0.9971556 | | | |
| Trichloroethene | 0.3581557 | 37.41458 | | | 15 | * |
| Trichlorofluoromethane | 0.6463387 | 10.35389 | | | 15 | |
| Vinyl acetate | 190045.8 | 9.269583 | | | 15 | |
| Vinyl chloride | 0.3381399 | 16.17694 | 0.9962687 | | | |
| Xylene (Total) | | | | | 15 | |

Response Factor Report GCMS-B

Method Path : H:\VOL1\GCMSDATA\B\METHODS\
Method File : 8260_111110.M
Title :
Last Update : Wed Nov 17 19:08:22 2010
Response Via : Initial Calibration

Revised Forms

Calibration Files
0.5 =B02890289.D 1.0 =B02890288.D 2.0 =B02890287.D 5.0 =B02890290.D 10 =B02890286.D 20 =B
50 =B02890293.D

| | | Compound | 0.5 | 1.0 | 2.0 | 5.0 | 10 | 20 | 40 | 50 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | ~~Pentafluoro~~benzene | ----------ISTD---------- | | | | | | | | | |
| 2) | T | Dichlorodifluo... | 0.360 | 0.326 | 0.320 | 0.444 | 0.392 | 0.355 | 0.356 | 0.376 | 0.366 | 10.70 Same |
| 3) | T | Chloromethane | 0.289 | 0.255 | 0.222 | 0.281 | 0.167 | 0.242 | 0.256 | | 0.245 | 16.79 Same |
| 4) | T | Vinyl chloride | 0.291 | 0.281 | 0.284 | 0.410 | 0.299 | 0.385 | 0.363 | 0.393 | 0.338 | 16.18 Same |
| 5) | T | Bromomethane | 0.039 | 0.035 | 0.031 | 0.021 | 0.016 | 0.017 | 0.018 | 0.021 | 0.025 | 35.98 different |
| 6) | T | Chloroethane | 0.824 | 0.511 | 0.375 | 0.323 | 0.275 | | | | 0.461 | 47.87 different |
| 7) | T | Trichlorofluor... | 0.662 | 0.599 | 0.600 | 0.788 | 0.675 | 0.649 | 0.623 | 0.574 | 0.646 | 10.35 $ |
| 8) | T | Freon 113 | 0.447 | 0.406 | 0.410 | 0.443 | 0.446 | 0.384 | 0.398 | 0.408 | 0.418 | 5.80 $ |
| 9) | T | 1,1-Dichloroethene | 0.327 | 0.295 | 0.298 | 0.310 | 0.305 | 0.265 | 0.273 | 0.282 | 0.295 | 6.97 $ |
| 10) | T | Methylene chlo... | | 2.119 | 1.006 | 0.984 | 0.316 | 0.323 | 0.302 | | 0.842 | 84.29 Same |
| 11) | T | Methyl Acetate | 0.017 | 0.019 | 0.019 | 0.021 | 0.019 | 0.019 | 0.021 | 0.022 | 0.020 | 8.11 different |
| 12) | T | Iodomethane | 2.217 | 1.968 | 1.991 | 2.040 | 1.992 | 1.735 | 1.795 | 1.851 | 1.949 | 7.84 $ |
| 13) | T | Trans-1,2-dich... | 0.516 | 0.473 | 0.482 | 0.496 | 0.479 | 0.431 | 0.451 | 0.459 | 0.473 | 5.61 $ |
| 14) | T | 1,1-Dichloroethene | 0.650 | 0.588 | 0.588 | 0.596 | 0.588 | 0.535 | 0.574 | 0.591 | 0.589 | 5.34 $ |
| 15) | T | Acetone | 0.083 | 0.047 | 0.033 | 0.033 | 0.025 | 0.023 | 0.020 | 0.019 | 0.035 | 60.73 Same |
| 16) | T | MTBE | 0.409 | 0.363 | 0.336 | 0.368 | 0.355 | 0.320 | 0.337 | 0.349 | 0.355 | 7.57 $ |
| 17) | T | Acrylonitrile | 0.024 | 0.022 | 0.022 | 0.028 | 0.023 | 0.024 | 0.026 | 0.027 | 0.025 | 8.72 Same |
| 18) | T | Acetonitrile | | | 0.010 | 0.012 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 13.39 Same |
| 19) | T | Carbon disulfide | 1.109 | 0.984 | 0.995 | 1.020 | 0.996 | 0.868 | 0.897 | 0.926 | 0.974 | 7.84 $ |
| 20) | T | Vinyl Acetate | 0.147 | 0.141 | 0.137 | 0.153 | 0.136 | 0.146 | 0.161 | 0.168 | 0.149 | 7.68 diff |
| 21) | T | Propionitrile | | | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.013 | 0.011 | 12.54 Same |
| 22) | | 2,2-Dichloropr... | 0.305 | 0.294 | 0.279 | 0.318 | 0.321 | 0.288 | 0.306 | 0.325 | 0.305 | 5.40 $ |
| 23) | T | cis-1,2-Dichlo... | 0.417 | 0.382 | 0.385 | 0.393 | 0.397 | 0.347 | 0.355 | 0.363 | 0.380 | 6.23 $ |
| 24) | T | Bromochloromet... | 0.139 | 0.117 | 0.113 | 0.121 | 0.113 | 0.109 | 0.115 | 0.115 | 0.118 | 7.75 $ |
| 25) | T | Chloroform | 0.635 | 0.567 | 0.558 | 0.561 | 0.565 | 0.516 | 0.556 | 0.574 | 0.567 | 5.80 $ |
| 26) | T | 1,1,1-Trichlor... | 0.572 | 0.526 | 0.545 | 0.585 | 0.584 | 0.539 | 0.580 | 0.597 | 0.566 | 4.56 $ |
| 27) | T | Cychlohexane | 0.800 | 0.723 | 0.740 | 0.816 | 0.829 | 0.723 | 0.730 | 0.741 | 0.763 | 5.84 $ |
| ~~28)~~ | ~~S~~ | ~~Dibromofluorom...~~ | ~~0.296~~ | ~~0.306~~ | ~~0.296~~ | ~~0.313~~ | ~~0.315~~ | ~~0.319~~ | ~~0.322~~ | ~~0.333~~ | ~~0.312~~ | ~~4.11~~ |
| 29) | T | Carbon tetrach... | 2.138 | 1.278 | 0.880 | 0.687 | 0.581 | 0.514 | 0.533 | 0.546 | 0.895 | 63.12 Same |
| 30) | T | Methyl Methacr... | 0.405 | 0.368 | 0.374 | 0.417 | 0.411 | 0.363 | 0.368 | 0.375 | 0.385 | 5.73 diff |
| 31) | T | Methacrylonitrile | 0.037 | 0.038 | 0.037 | 0.042 | 0.042 | 0.040 | 0.042 | 0.043 | 0.040 | 5.96 different |
| 32) | T | Ethyl Methacry... | 0.137 | 0.130 | 0.138 | 0.162 | 0.163 | 0.171 | 0.184 | 0.197 | 0.160 | 14.90 $ |
| ~~33)~~ | ~~S~~ | ~~1,2-Dichloroet...~~ | ~~0.216~~ | ~~0.221~~ | ~~0.211~~ | ~~0.229~~ | ~~0.220~~ | ~~0.221~~ | ~~0.225~~ | ~~0.237~~ | ~~0.222~~ | ~~3.64~~ |
| 34) | T | Isobutyl Alcohol | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 5.68 diff |
| 35) | I | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 36) | T | 2-Butanone | 0.034 | 0.030 | 0.028 | 0.031 | 0.029 | 0.029 | 0.028 | 0.030 | 0.030 | 5.86 Same |
| ~~37)~~ | T | ~~2-Chloroethylv...~~ | | | | ~~0.002~~ | ~~0.006~~ | ~~0.004~~ | ~~0.006~~ | ~~0.007~~ | ~~0.005~~ | ~~40.09~~ |
| 38) | T | 1.1-Dichloropr... | 0.509 | 0.457 | 0.461 | 0.473 | 0.450 | 0.410 | 0.426 | 0.429 | 0.452 | 6.90 $ |
| 39) | T | Benzene | 1.354 | 1.229 | 1.237 | 1.249 | 1.192 | 1.086 | 1.097 | 1.092 | 1.192 | 7.99 $ |
| 40) | T | 1,2-Dchloroethane | 0.257 | 0.218 | 0.204 | 0.203 | 0.187 | 0.181 | 0.188 | 0.192 | 0.204 | 12.08 $ |
| 41) | T | Trichloroethene | | 0.315 | 0.322 | 0.320 | 0.317 | 0.292 | 0.303 | 0.307 | 0.311 | 3.52 diff |
| 42) | T | Methylcyclohexane | 0.609 | 0.567 | 0.595 | 0.673 | 0.667 | 0.609 | 0.615 | 0.617 | 0.619 | 5.72 $ |
| 43) | T | 1,2-Dchloropro... | | | 0.230 | 0.237 | 0.230 | 0.216 | 0.223 | 0.226 | 0.227 | 3.23 $ |
| 44) | T | Dibromomethane | 0.073 | 0.067 | 0.068 | 0.073 | 0.072 | 0.071 | 0.073 | 0.074 | 0.071 | 3.73 $ |
| 45) | T | Bromodichlorom... | 0.264 | 0.245 | 0.250 | 0.261 | 0.261 | 0.252 | 0.268 | 0.275 | 0.260 | 3.82 $ |
| 46) | T | cis-1,3-Dichlo... | 0.215 | 0.216 | 0.233 | 0.261 | 0.280 | 0.270 | 0.297 | 0.309 | 0.260 | 13.76 $ |
| ~~47)~~ | ~~S~~ | ~~Toluene-d8~~ | ~~1.001~~ | ~~0.983~~ | ~~1.001~~ | ~~1.014~~ | ~~1.035~~ | ~~1.052~~ | ~~1.056~~ | ~~1.064~~ | ~~1.026~~ | ~~2.95~~ |
| 48) | T | Toluene | 0.859 | 0.779 | 0.798 | 0.787 | 0.761 | 0.702 | 0.708 | 0.710 | 0.763 | 7.14 $ |
| 49) | T | trans-1,3-Dich... | 0.119 | 0.129 | 0.141 | 0.172 | 0.184 | 0.189 | 0.212 | 0.223 | 0.171 | 22.34 Same |
| 50) | T | 1,1,2-Trichlor... | 0.107 | 0.093 | 0.094 | 0.100 | 0.097 | 0.095 | 0.093 | 0.093 | 0.097 | 5.14 $ |
| 51) | I | Chlorobenzene-d5 | ----------ISTD---------- | | | | | | | | | |
| 52) | T | 4-Methyl-2-Pen... | | 0.370 | 0.288 | 0.274 | 0.251 | 0.254 | 0.270 | 0.277 | 0.283 | 14.19 $ |
| 53) | T | 2-Hexanone | 0.138 | 0.146 | 0.159 | 0.173 | 0.164 | 0.176 | 0.191 | 0.195 | 0.168 | 12.05 $ |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54) | T | Tetrachloroethene | 1.783 | 1.681 | 1.722 | 1.726 | 1.690 | 1.561 | 1.608 | 1.582 | 1.669 | 4.68 |
| 55) | T | 1,3-Dichloropr... | 1.047 | 0.997 | 0.984 | 0.983 | 0.961 | 0.933 | 0.978 | 0.984 | 0.983 | 3.29 |
| 56) | T | Dibromochlorom... | 0.565 | 0.565 | 0.563 | 0.603 | 0.600 | 0.597 | 0.648 | 0.658 | 0.600 | 6.15 |
| 57) | T | 1,2-Dibromomet... | 0.417 | 0.410 | 0.410 | 0.419 | 0.425 | 0.408 | 0.431 | 0.429 | 0.418 | 2.19 |
| 58) | T | Chlorobenzene | 3.780 | 3.515 | 3.503 | 3.342 | 3.235 | 3.045 | 3.161 | 3.133 | 3.339 | 7.37 |
| 59) | T | 1,1,1,2-Tetrac... | 0.966 | 0.938 | 0.960 | 0.991 | 0.954 | 0.914 | 0.930 | 0.907 | 0.945 | 3.00 |
| 60) | T | Ethylbenzene | 6.950 | 6.686 | 6.853 | 6.807 | 6.612 | 6.108 | 6.144 | 5.979 | 6.517 | 5.85 |
| 61) | T | m,p-xylene | 2.746 | 2.656 | 2.739 | 2.726 | 2.571 | 2.350 | 2.239 | 2.143 | 2.521 | 9.63 |
| 62) | T | o-xylene | 2.258 | 2.221 | 2.282 | 2.331 | 2.286 | 2.144 | 2.214 | 2.173 | 2.239 | 2.78 |
| 63) | T | Styrene | 3.226 | 3.282 | 3.434 | 3.625 | 3.439 | 3.328 | 3.482 | 3.434 | 3.406 | 3.69 |
| 64) | T | Bromoform | 0.243 | 0.249 | 0.263 | 0.293 | 0.292 | 0.307 | 0.336 | 0.341 | 0.290 | 12.84 |
| 65) | T | Isopropylbenzene | 6.000 | 6.015 | 6.238 | 6.468 | 6.504 | 6.133 | 6.339 | 6.197 | 6.237 | 3.05 |
| ~~66)~~ | ~~S~~ | ~~4-Bromofluorob...~~ | ~~1.391~~ | ~~1.380~~ | ~~1.409~~ | ~~1.478~~ | ~~1.489~~ | ~~1.554~~ | ~~1.570~~ | ~~1.575~~ | ~~1.481~~ | ~~5.45~~ |
| 67) | T | Bromobenzene | 1.198 | 1.149 | 1.135 | 1.162 | 1.130 | 1.106 | 1.172 | 1.170 | 1.153 | 2.49 |
| 68) | T | 1,1,2,2-Tetrac... | 0.499 | 0.468 | 0.479 | 0.480 | 0.447 | 0.447 | 0.430 | 0.413 | 0.458 | 6.24 |
| 69) | T | 1,2,3-Trichlor... | 0.409 | 0.394 | 0.394 | 0.411 | 0.384 | 0.393 | 0.404 | 0.402 | 0.399 | 2.31 |
| 70) | T | N-propylbenzene | 7.250 | 7.235 | 7.599 | 8.023 | 8.079 | 7.616 | 7.743 | 7.557 | 7.638 | 4.07 |
| 71) | T | 2-Chlorotoluene | 4.451 | 4.274 | 4.235 | 4.345 | 4.287 | 4.102 | 4.231 | 4.177 | 4.263 | 2.47 |
| 72) | T | 4-Chlorotoluene | 4.519 | 4.395 | 4.531 | 4.690 | 4.542 | 4.344 | 4.378 | 4.264 | 4.458 | 3.07 |
| 73) | T | 1,3,5-Trimethy... | | 4.903 | 5.157 | 5.490 | 5.369 | 5.075 | 5.073 | 4.891 | 5.137 | 4.36 |
| 74) | T | Tert-butylbenzene | 4.443 | 4.486 | 4.733 | 5.017 | 5.119 | 4.854 | 5.045 | 4.962 | 4.832 | 5.31 |
| 75) | T | 1,2,4-Trimethy... | 3.905 | 4.219 | 4.510 | 4.981 | 4.990 | 4.863 | 5.144 | 5.065 | 4.710 | 9.56 |
| 76) | T | Sec-butylbenzene | | 6.608 | 6.963 | 7.670 | 7.761 | 7.303 | 7.562 | 7.331 | 7.314 | 5.61 |
| 77) | T | 1,3-Dichlorobe... | 2.294 | 2.296 | 2.287 | 2.498 | 2.508 | 2.444 | 2.560 | 2.546 | 2.429 | 4.87 |
| 78) | T | 4-Isopropyltol... | | 4.853 | 5.347 | 6.261 | 6.319 | 6.087 | 6.303 | 6.125 | 5.899 | 9.68 |
| 79) | T | 1,4-Dichlorobe... | 2.294 | 2.287 | 2.300 | 2.481 | 2.367 | 2.320 | 2.429 | 2.414 | 2.362 | 3.09 |
| 80) | I | 1,4-Dichlorobenzen... | ---------- | ISTD | ---------- | | | | | | | |
| 81) | T | 1,2-Dichlorobe... | 0.832 | 0.860 | 0.802 | 0.734 | 0.719 | 0.617 | 0.558 | 0.728 | 0.731 | 14.16 |
| 82) | T | n-Butylbenzene | | 1.334 | 1.623 | 1.881 | 1.975 | 1.718 | 1.574 | 2.074 | 1.740 | 14.70 diff |
| 83) | T | 1,2-Dibromo-3-... | | | 0.014 | 0.017 | 0.018 | 0.019 | 0.017 | | 0.017 | 10.41 Same |
| 84) | T | 1,2,4-Trichlor... | 0.144 | 0.159 | 0.146 | 0.224 | 0.270 | 0.304 | 0.365 | | 0.230 | 37.56 Same |
| 85) | T | Hexachlorobuta... | 0.323 | 0.433 | 0.446 | 0.441 | 0.482 | 0.460 | 0.418 | 0.552 | 0.444 | 14.48 |
| 86) | T | Naphthalene | 0.161 | 0.170 | 0.156 | 0.149 | 0.188 | 0.244 | 0.330 | | 0.200 | 32.92 Same |
| 87) | T | 1,2,3-Trichlor... | 0.103 | 0.115 | 0.111 | 0.143 | 0.202 | 0.230 | 0.280 | | 0.169 | 40.73 diff. |

(#) = Out of Range

8260_111110.M Fri Feb 04 13:40:47 2011

CENTAURI LABS™

# INITIAL CALIBRATION DATA

## SW8260B

| | | | | |
|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS |
| Calibration: | 0111803 | | Instrument: | GCMS-B |
| | | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9661999 | 0.938158 | 0.9598089 | 0.9913526 | 0.9540768 | 0.9140259 |
| 1,1,1-Trichloroethane | 0.5716372 | 0.5260339 | 0.5448277 | 0.5851371 | 0.5837521 | 0.5389697 |
| 1,1,2,2-Tetrachloroethane | 0.4991332 | 0.4678964 | 0.4789108 | 0.4800518 | 0.4474796 | 0.4470107 |
| 1,1,2-Trichloroethane | 0.1071959 | 9.324399E-02 | 9.380141E-02 | 0.1001158 | 9.701462E-02 | 9.500757E-02 |
| 1,1-Dichloroethane | 0.649798 | 0.5882044 | 0.5879825 | 0.5956452 | 0.5884075 | 0.534779 |
| 1,1-Dichloroethene | 0.3273262 | 0.2950931 | 0.2983486 | 0.3104462 | 0.3054459 | 0.2651381 |
| 1,1-Dichloropropene | 0.5093143 | 0.4565944 | 0.4605008 | 0.4725697 | 0.4498223 | 0.4098715 |
| 1,2,3-Trichlorobenzene | | 0.114735 | 0.1106954 | 0.1432215 | 0.2024936 | 0.2299118 |
| 1,2,3-Trichloropropane | 0.4090994 | 0.3943578 | 0.3939365 | 0.4106789 | 0.3835681 | 0.3928662 |
| 1,2,4-Trichlorobenzene | 0.14378 | 0.1591681 | 0.1457298 | 0.2244915 | 0.2702248 | 0.3037425 |
| 1,2,4-Trimethylbenzene | 3.904644 | 4.219085 | 4.510162 | 4.981189 | 4.990102 | 4.862537 |
| 1,2-Dibromo-3-chloropropane | | | 1.419877E-02 | 1.714451E-02 | 1.845253E-02 | 1.857679E-02 |
| 1,2-Dibromoethane | 0.4173095 | 0.4097333 | 0.4095069 | 0.4186066 | 0.4252138 | 0.4075379 |
| 1,2-Dichlorobenzene | 0.8323534 | 0.8597073 | 0.8020552 | 0.7343178 | 0.7189839 | 0.6165872 |
| 1,2-Dichloroethane | 0.2572232 | 0.2177472 | 0.2036481 | 0.2032915 | 0.1866651 | 0.1808935 |
| 1,2-Dichloroethene (total) | | | | | | |
| 1,2-Dichloropropane | | ~~0.1241845~~ | 0.2298079 | 0.2371826 | 0.2298952 | 0.2156876 |
| 1,3,5-Trimethylbenzene | ~~4.787505~~ | 4.903282 | 5.156683 | 5.489605 | 5.36881 | 5.075123 |
| 1,3-Dichlorobenzene | 2.294399 | 2.296009 | 2.287492 | 2.498121 | 2.507999 | 2.444228 |
| 1,3-Dichloropropane | 1.046708 | 0.9969618 | 0.9844731 | 0.98262 | 0.960785 | 0.9326723 |
| 1,4-Dichlorobenzene | 2.294373 | 2.286968 | 2.299539 | 2.481075 | 2.367444 | 2.32001 |
| 2,2-Dichloropropane | 0.3053055 | 0.2943166 | 0.2791844 | 0.3179525 | 0.320566 | 0.2881492 |
| 2-Butanone | 3.379595E-02 | 2.968932E-02 | 2.846133E-02 | 3.071546E-02 | 2.943599E-02 | 2.878061E-02 |
| 2-Chloroethylvinyl Ether | | | | 2.202396E-03 | 5.937742E-03 | 3.667766E-03 |
| 2-Chlorotoluene | 4.450536 | 4.274091 | 4.234549 | 4.345189 | 4.28737 | 4.101524 |
| 2-Hexanone | 0.1375177 | 0.1464787 | 0.1594265 | 0.1729784 | 0.1635128 | 0.1761758 |
| 4-Chlorotoluene | 4.518525 | 4.394811 | 4.531095 | 4.689819 | 4.542225 | 4.343801 |
| 4-Methyl-2-pentanone | ~~0.4791755~~ | 0.3695585 | 0.2882822 | 0.2736929 | 0.2507166 | 0.2542846 |
| Acetone | 8.309848E-02 | 0.047196 | 3.338935E-02 | 3.268382E-02 | 2.485234E-02 | 2.262677E-02 |
| Acetonitrile | ~~2.018391E-02~~ | ~~6.639723E-03~~ | 1.043236E-02 | 1.191338E-02 | 8.887109E-03 | 8.677949E-03 |
| Acrylonitrile | 2.429409E-02 | 2.242279E-02 | 2.211917E-02 | 2.834626E-02 | 2.332459E-02 | 2.419232E-02 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Benzene | 1.354317 | 1.228835 | 1.237473 | 1.249095 | 1.192221 | 1.085697 |
| Bromobenzene | 1.197837 | 1.149164 | 1.134679 | 1.162135 | 1.130194 | 1.106302 |
| Bromochloromethane | 0.1386507 | 0.1172922 | 0.1127188 | 0.1208019 | 0.1129928 | 0.1092236 |
| Bromodichloromethane | 0.2639263 | 0.24504 | 0.2503774 | 0.2612257 | 0.2608899 | 0.2523614 |
| Bromoform | 0.2427173 | 0.248688 | 0.2626604 | 0.2931309 | 0.2922784 | 0.3065906 |
| Bromomethane | 4.607583E-02 | 3.528978E-02 | 3.081432E-02 | 0.0214595 | 0.0162045 | 1.680047E-02 |
| Carbon disulfide | 1.108554 | 0.984223 | 0.9953507 | 1.020147 | 0.9959798 | 0.8676915 |
| Carbon tetrachloride | 2.137978 | 1.278169 | 0.8802421 | 0.686505 | 0.5814422 | 0.5136549 |
| Chlorobenzene | 3.779919 | 3.515188 | 3.503233 | 3.341518 | 3.235002 | 3.04529 |
| Chlorodibromomethane | 0.564885 | 0.5653688 | 0.5630434 | 0.6027943 | 0.6002471 | 0.597042 |
| Chloroethane | 0.8235289 | 0.8877947 | 0.3745473 | 0.3353815 | 0.2746081 | ~~8.904902E-02~~ |
| Chloroform | 0.6353806 | 0.5672441 | 0.5581153 | 0.5607959 | 0.565272 | 0.5160746 |
| Chloromethane | 0.2889733 | 0.2551 | 0.2219589 | 0.2812103 | 0.1667933 | 0.2420746 |
| cis-1,2-Dichloroethene | 0.4174071 | 0.3815376 | 0.3846656 | 0.3931812 | 0.3966853 | 0.3466856 |
| cis-1,3-Dichloropropene | 0.2150437 | 0.2164152 | 0.2326314 | 0.2614359 | 0.2798653 | 0.2704006 |
| Cyclohexane | 0.7999126 | 0.7227084 | 0.7397237 | 0.816483 | 0.8291821 | 0.7232401 |
| Dibromomethane | 7.250767E-02 | 6.702767E-02 | 6.770604E-02 | 7.336583E-02 | 7.176191E-02 | 7.054501E-02 |
| Dichlorodifluoromethane | 0.3603113 | 0.3259786 | 0.3203894 | 0.4438325 | 0.3917254 | 0.3548379 |
| Ethyl methacrylate | 0.1371765 | 0.1299339 | 0.1382099 | 0.1616313 | 0.1629551 | 0.1707297 |
| Ethylbenzene | 6.949865 | 6.685956 | 6.852572 | 6.80743 | 6.612465 | 6.107955 |
| Freon 113 | 0.8939477 | 0.8128159 | 0.8197047 | 0.8858423 | 0.891281 | 0.767886 |
| Hexachlorobutadiene | 0.3226116 | 0.4330054 | 0.4459612 | 0.441418 | 0.4818242 | 0.4598152 |
| Iodomethane | 2.217108 | 1.968446 | 1.990701 | 2.040294 | 1.99196 | 1.735383 |
| Isobutyl alcohol | | 4611.55 | 4878.875 | 5197.4 | 5286.265 | 4810.8 |
| Isopropylbenzene | 6.000104 | 6.014735 | 6.238216 | 6.468397 | 6.503671 | 6.132555 |
| m,p-Xylenes | 2.745616 | 2.656072 | 2.739383 | 2.726084 | 2.570926 | 2.349657 |
| Methacrylonitrile | | 3.836895E-02 | 3.716805E-02 | 4.166184E-02 | 4.209348E-02 | 4.032259E-02 |
| Methyl Acetate | | 0.0192473 | 1.931544E-02 | 2.090567E-02 | 1.924052E-02 | 1.938094E-02 |
| Methyl tert-Butyl Ether | 0.4090424 | 0.3625357 | 0.3362333 | 0.3683095 | 0.3545392 | 0.3204985 |
| Methylcyclohexane | 0.6087532 | 0.5665355 | 0.5948937 | 0.6726231 | 0.6672519 | 0.6085483 |
| Methylene Chloride | ~~4.398411~~ | 2.119454 | 1.005618 | 0.9835308 | 0.3160566 | 0.3232213 |

CENTAURI LABS™

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Methylmethacrylate | 466518 | 439231 | 495394 | 544349.2 | 566605.9 | 462965.6 |
| Naphthalene | 0.161446 | 0.1699645 | 0.1559003 | 0.1486942 | 0.1879901 | 0.2436457 |
| n-Butylbenzene | ~~1.904706~~ | 2.623383 | 3.422787 | 4.790123 | 5.131009 | 5.093937 |
| n-Propylbenzene | 7.249518 | 7.23528 | 7.598912 | 8.023235 | 8.079361 | 7.615503 |
| o-Xylene | 2.257541 | 2.22104 | 2.281944 | 2.330894 | 2.286187 | 2.144324 |
| p-Isopropyltoluene | ~~4.354749~~ | 4.853078 | 5.347195 | 6.260868 | 6.318688 | 6.087148 |
| Propionitrile | | ~~7.041204E-03~~ | 8.733931E-03 | 1.101073E-02 | 1.147258E-02 | 1.173797E-02 |
| sec-Butylbenzene | ~~6.234999~~ | 6.607846 | 6.962683 | 7.670025 | 7.761215 | 7.302712 |
| Styrene | 3.226224 | 3.28174 | 3.433672 | 3.6254 | 3.439261 | 3.327536 |
| tert-Butylbenzene | 4.443203 | 4.486326 | 4.732752 | 5.017155 | 5.119426 | 4.853839 |
| Tetrachloroethene | 1.783438 | 1.68053 | 1.72214 | 1.725551 | 1.689709 | 1.560537 |
| Toluene | 0.8586267 | 0.7792881 | 0.7980623 | 0.786509 | 0.760969 | 0.7020673 |
| trans-1,2-Dichloroethene | 0.5159202 | 0.4727767 | 0.4820972 | 0.4963073 | 0.479277 | 0.430957 |
| trans-1,3-Dichloropropene | 0.1191728 | 0.1291264 | 0.1409263 | 0.1717877 | 0.1844577 | 0.1893872 |
| Trichloroethene | 0.6888442 | 0.3154824 | 0.3224835 | 0.3195452 | 0.3172878 | 0.2915877 |
| Trichlorofluoromethane | 0.6618447 | 0.5994312 | 0.5999676 | 0.788383 | 0.674507 | 0.6493505 |
| Vinyl acetate | 169074 | 168848 | 182227.8 | 199568.3 | 187861.8 | 185777.8 |
| Vinyl chloride | 0.2913112 | 0.2808113 | 0.283743 | 0.4098663 | 0.2985892 | 0.3845848 |
| Xylene (Total) | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9297198 | 0.9066298 | | | | |
| 1,1,1-Trichloroethane | 0.580488 | 0.5970709 | | | | |
| 1,1,2,2-Tetrachloroethane | 0.4299956 | 0.4133906 | | | | |
| 1,1,2-Trichloroethane | 9.268048E-02 | 9.337135E-02 | | | | |
| 1,1-Dichloroethane | 0.5736988 | 0.5907297 | | | | |
| 1,1-Dichloroethene | 0.2731361 | 0.2815821 | | | | |
| 1,1-Dichloropropene | 0.4259392 | 0.4288945 | | | | |
| 1,2,3-Trichlorobenzene | 0.2799629 | ~~0.3925256~~ | | | | |
| 1,2,3-Trichloropropane | 0.403843 | 0.4020327 | | | | |
| 1,2,4-Trichlorobenzene | 0.3651051 | ~~0.5110207~~ | | | | |
| 1,2,4-Trimethylbenzene | 5.143735 | 5.06465 | | | | |
| 1,2-Dibromo-3-chloropropane | 0.0166962 | ~~2.300326E-02~~ | | | | |
| 1,2-Dibromoethane | 0.4307833 | 0.4291841 | | | | |
| 1,2-Dichlorobenzene | 0.5579643 | 0.7278097 | | | | |
| 1,2-Dichloroethane | 0.1884956 | 0.1920658 | | | | |
| 1,2-Dichloroethene (total) | | | | | | |
| 1,2-Dichloropropane | 0.2225932 | 0.2259433 | | | | |
| 1,3,5-Trimethylbenzene | 5.072618 | 4.891289 | | | | |
| 1,3-Dichlorobenzene | 2.559945 | 2.545702 | | | | |
| 1,3-Dichloropropane | 0.977883 | 0.9842906 | | | | |
| 1,4-Dichlorobenzene | 2.429367 | 2.413593 | | | | |
| 2,2-Dichloropropane | 0.3063628 | 0.3254052 | | | | |
| 2-Butanone | 2.847084E-02 | 0.029723 | | | | |
| 2-Chloroethylvinyl Ether | 6.483452E-03 | 6.912889E-03 | | | | |
| 2-Chlorotoluene | 4.231436 | 4.177407 | | | | |
| 2-Hexanone | 0.1913384 | 0.1952547 | | | | |
| 4-Chlorotoluene | 4.377985 | 4.26374 | | | | |
| 4-Methyl-2-pentanone | 0.2695934 | 0.2766388 | | | | |
| Acetone | 1.971482E-02 | 1.890304E-02 | | | | |
| Acetonitrile | 8.821065E-03 | 9.044358E-03 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Acrylonitrile | 2.555238E-02 | 2.673821E-02 | | | | |
| Benzene | 1.096578 | 1.09197 | | | | |
| Bromobenzene | 1.171928 | 1.169604 | | | | |
| Bromochloromethane | 0.1145832 | 0.1153619 | | | | |
| Bromodichloromethane | 0.2678817 | 0.2753713 | | | | |
| Bromoform | 0.3362345 | 0.341172 | | | | |
| Bromomethane | 1.813708E-02 | 2.115997E-02 | | | | |
| Carbon disulfide | 0.8973035 | 0.9256172 | | | | |
| Carbon tetrachloride | 0.5325763 | 0.5464664 | | | | |
| Chlorobenzene | 3.161003 | 3.132851 | | | | |
| Chlorodibromomethane | 0.6482285 | 0.6582862 | | | | |
| Chloroethane | ~~4.028737E-02~~ | ~~4.203815E-02~~ | | | | |
| Chloroform | 0.5564346 | 0.5741406 | | | | |
| Chloromethane | 0.2556699 | ~~0.3016193~~ | | | | |
| cis-1,2-Dichloroethene | 0.3545202 | 0.3630787 | | | | |
| cis-1,3-Dichloropropene | 0.2974244 | 0.3090755 | | | | |
| Cyclohexane | 0.7301316 | 0.7413651 | | | | |
| Dibromomethane | 7.271194E-02 | 7.444064E-02 | | | | |
| Dichlorodifluoromethane | 0.3560107 | 0.3755334 | | | | |
| Ethyl methacrylate | 0.1840324 | 0.1972141 | | | | |
| Ethylbenzene | 6.144073 | 5.979243 | | | | |
| Freon 113 | 0.7953603 | 0.8151915 | | | | |
| Hexachlorobutadiene | 0.4175951 | 0.55231 | | | | |
| Iodomethane | 1.794607 | 1.851234 | | | | |
| Isobutyl alcohol | 4929.766 | 5104.037 | | | | |
| Isopropylbenzene | 6.339132 | 6.19729 | | | | |
| m,p-Xylenes | 2.239335 | 2.142936 | | | | |
| Methacrylonitrile | 4.154591E-02 | 4.288763E-02 | | | | |
| Methyl Acetate | 2.111068E-02 | 2.207662E-02 | | | | |
| Methyl tert-Butyl Ether | 0.337393 | 0.3488646 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Methylcyclohexane | 0.6151213 | 0.6166269 | | | | |
| Methylene Chloride | 0.3018239 | ~~0.2360642~~ | | | | |
| Methylmethacrylate | 482983.8 | 479954.4 | | | | |
| Naphthalene | 0.3300656 | ~~0.4809107~~ | | | | |
| n-Butylbenzene | 5.343307 | 5.248814 | | | | |
| n-Propylbenzene | 7.743135 | 7.557342 | | | | |
| o-Xylene | 2.213517 | 2.172644 | | | | |
| p-Isopropyltoluene | 6.303304 | 6.125174 | | | | |
| Propionitrile | 1.226879E-02 | 1.281361E-02 | | | | |
| sec-Butylbenzene | 7.561813 | 7.330924 | | | | |
| Styrene | 3.481905 | 3.434006 | | | | |
| tert-Butylbenzene | 5.04541 | 4.961506 | | | | |
| Tetrachloroethene | 1.60839 | 1.582312 | | | | |
| Toluene | 0.7081545 | 0.7095543 | | | | |
| trans-1,2-Dichloroethene | 0.451097 | 0.4594715 | | | | |
| trans-1,3-Dichloropropene | 0.2119729 | 0.2229369 | | | | |
| Trichloroethene | 0.3032111 | 0.3068037 | | | | |
| Trichlorofluoromethane | 0.6233459 | 0.5738795 | | | | |
| Vinyl acetate | 211525 | 215483.4 | | | | |
| Vinyl chloride | 0.3631753 | 0.3930379 | | | | |
| Xylene (Total) | | | | | | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 12.1 | 0.9449965 | 1.143058 | | 21.0 | 20 | * |
| 1,1,1-Trichloroethane | A | 10.0 | 12.3 | 0.5659896 | 0.6984901 | | 23.4 | 20 | * |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 11.6 | 0.4579836 | 0.5304432 | | 15.8 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 12.4 | 9.655389E-02 | 0.1192967 | | 23.6 | 20 | * |
| 1,1-Dichloroethane | A | 10.0 | 11.1 | 0.5886556 | 0.6540047 | | 11.1 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 12.0 | 0.2945645 | 0.3537672 | | 20.1 | 20 | * |
| 1,1-Dichloropropene | A | 10.0 | 12.5 | 0.4516883 | 0.5631303 | | 24.7 | 20 | * |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 13.1 | 0.18017 | 0.2720309 | | 30.7 | 20 | * |
| 1,2,3-Trichloropropane | A | 10.0 | 11.6 | 0.3987978 | 0.4622272 | | 15.9 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 12.9 | 0.2303203 | 0.3597177 | | 29.2 | 20 | * |
| 1,2,4-Trimethylbenzene | A | 10.0 | 13.3 | 4.709513 | 6.266435 | | 33.1 | 20 | * |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 11.9 | 1.701376E-02 | 0.0202829 | | 19.2 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 11.4 | 0.4184844 | 0.4791551 | | 14.5 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 10.9 | 0.7312224 | 0.7975494 | | 9.1 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 11.0 | 0.2037538 | 0.223912 | | 9.9 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 12.1 | 0.2268516 | 0.2746665 | | 21.1 | 20 | * |
| 1,3,5-Trimethylbenzene | A | 10.0 | 13.0 | 5.136773 | 6.686592 | | 30.2 | 20 | * |
| 1,3-Dichlorobenzene | A | 10.0 | 13.0 | 2.429237 | 3.16753 | | 30.4 | 20 | * |
| 1,3-Dichloropropane | A | 10.0 | 11.2 | 0.9832992 | 1.097714 | | 11.6 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 12.8 | 2.361546 | 3.016576 | | 27.7 | 20 | * |
| 2,2-Dichloropropane | A | 10.0 | 12.5 | 0.3046553 | 0.3802807 | | 24.8 | 20 | * |
| 2-Chloroethylvinyl Ether | Q | 20.0 | 8.81 | 5.040849E-03 | 1.738484E-03 | | -56.0 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 12.5 | 4.262763 | 5.312579 | | 24.6 | 20 | * |
| 2-Hexanone | A | 10.0 | 16.6 | 0.1678354 | 0.2784265 | | 65.9 | 20 | * |
| 4-Chlorotoluene | A | 10.0 | 12.6 | 4.45775 | 5.61065 | | 25.9 | 20 | * |

CENTAURI LABS™

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 10.0 | 13.2 | 0.2832524 | 0.3750909 | | 32.4 | 20 | * |
| Acetone | Q | 10.0 | 25.2 | 3.530808E-02 | 6.091001E-02 | | 152 | 20 | * |
| Acetonitrile | A | 100 | 103 | 9.62937E-03 | 9.937543E-03 | | 3.2 | 20 | |
| Acrylonitrile | A | 10.0 | 9.80 | 2.462373E-02 | 2.412543E-02 | | -2.0 | 20 | |
| Benzene | A | 10.0 | 11.7 | 1.192023 | 1.393949 | | 16.9 | 20 | |
| Bromobenzene | A | 10.0 | 11.8 | 1.15273 | 1.360163 | | 18.0 | 20 | |
| Bromochloromethane | A | 10.0 | 10.8 | 0.1177031 | 0.1276156 | | 8.4 | 20 | |
| Bromodichloromethane | A | 10.0 | 11.4 | 0.2596342 | 0.2958412 | | 13.9 | 20 | |
| Bromoform | A | 10.0 | 11.8 | 0.290434 | 0.34224 | | 17.8 | 20 | |
| Bromomethane | Q | 10.0 | 14.7 | 2.574268E-02 | 2.292744E-02 | | 46.7 | 20 | * |
| Carbon disulfide | A | 10.0 | 12.1 | 0.9743583 | 1.175792 | | 20.7 | 20 | * |
| Carbon tetrachloride | L | 10.0 | 12.0 | 0.8946293 | 0.6902278 | | 20.0 | 20 | |
| Chlorobenzene | A | 10.0 | 11.8 | 3.33925 | 3.923561 | | 17.5 | 20 | |
| Chlorodibromomethane | A | 10.0 | 11.6 | 0.5999869 | 0.6940801 | | 15.7 | 20 | |
| Chloroethane | L | 10.0 | 8.58 | 0.5391721 | 0.2425101 | | -14.2 | 20 | |
| Chloroform | A | 10.0 | 11.6 | 0.5666822 | 0.6561524 | | 15.8 | 20 | |
| Chloromethane | Q | 10.0 | 11.8 | 0.24454 | 0.2585695 | | 17.6 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 13.1 | 0.3797202 | 0.4990148 | | 31.4 | 20 | * |
| cis-1,3-Dichloropropene | A | 10.0 | 12.4 | 0.2602865 | 0.3238695 | | 24.4 | 20 | * |
| Cyclohexane | A | 10.0 | 11.4 | 0.7628433 | 0.8707884 | | 14.2 | 20 | |
| Dibromomethane | A | 10.0 | 11.6 | 7.125834E-02 | 8.293521E-02 | | 16.4 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 4.89 | 0.3660774 | 0.1788952 | | -51.1 | 20 | * |
| Ethyl methacrylate | A | 10.0 | 12.0 | 0.1602354 | 0.1926121 | | 20.2 | 20 | * |
| Ethylbenzene | A | 10.0 | 12.1 | 6.517445 | 7.907933 | | 21.3 | 20 | * |
| Freon 113 | A | 10.0 | 9.06 | 0.8352537 | 0.3784777 | | -54.7 | 20 | * |

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# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 12.2 | 0.4443176 | 0.5428986 | | 22.2 | 20 | * |
| Iodomethane | A | 10.0 | 6.03 | 1.948717 | 1.175792 | | -39.7 | 20 | * |
| Isobutyl alcohol | A | 100 | 180 | 4974.099 | 8154.36 | | 63.9 | 20 | * |
| Isopropylbenzene | A | 10.0 | 13.5 | 6.236763 | 8.413115 | | 34.9 | 20 | * |
| m,p-Xylenes | A | 20.0 | 24.4 | 2.521251 | 3.072141 | | 21.8 | 20 | * |
| Methacrylonitrile | A | 10.0 | 11.7 | 4.057835E-02 | 4.702336E-02 | | 15.9 | 20 | |
| Methyl Acetate | A | 10.0 | 8.05 | 2.018245E-02 | 1.591496E-02 | | -21.1 | 20 | * |
| Methyl tert-Butyl Ether | A | 10.0 | 9.99 | 0.354677 | 0.3544708 | | -0.06 | 20 | |
| Methylcyclohexane | A | 10.0 | 12.5 | 0.6187942 | 0.7761396 | | 25.4 | 20 | * |
| Methylene Chloride | L | 10.0 | 5.20 | 0.8416174 | 0.3204574 | | -48.0 | 20 | * |
| Methylmethacrylate | A | 10.0 | 11.3 | 492250.2 | 506313.7 | | 2.9 | 20 | |
| Naphthalene | Q | 10.0 | 12.2 | 0.1996723 | 0.2491216 | | 22.1 | 20 | * |
| n-Butylbenzene | A | 10.0 | 13.6 | 4.521909 | 6.951643 | | 53.7 | 20 | * |
| n-Propylbenzene | A | 10.0 | 12.3 | 7.637786 | 9.415693 | | 23.3 | 20 | * |
| o-Xylene | A | 10.0 | 12.2 | 2.238511 | 2.735001 | | 22.2 | 20 | * |
| p-Isopropyltoluene | A | 10.0 | 13.8 | 5.899351 | 8.120284 | | 37.6 | 20 | * |
| Propionitrile | A | 10.0 | 11.3 | 0.0113396 | 1.282738E-02 | | 13.1 | 20 | |
| sec-Butylbenzene | A | 10.0 | 13.2 | 7.313888 | 9.653285 | | 32.0 | 20 | * |
| Styrene | A | 10.0 | 11.8 | 3.406218 | 4.025902 | | 18.2 | 20 | |
| tert-Butylbenzene | A | 10.0 | 13.6 | 4.832452 | 6.564499 | | 35.8 | 20 | * |
| Tetrachloroethene | A | 10.0 | 18.4 | 1.669076 | 3.073396 | | 84.1 | 20 | * |
| Toluene | A | 10.0 | 11.9 | 0.7629039 | 0.9052618 | | 18.7 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 10.7 | 0.473488 | 0.5062932 | | 6.9 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 10.9 | 0.171221 | 0.2176188 | | 8.9 | 20 | |
| Trichloroethene | A | 10.0 | 12.3 | 0.3581557 | 0.3827633 | | 6.9 | 20 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Trichlorofluoromethane | A | 10.0 | 9.35 | 0.6463387 | 0.6042435 | | -6.5 | 20 | |
| Vinyl acetate | A | 20.0 | 15.1 | 190045.8 | 129972.9 | | -31.6 | 20 | * |
| Vinyl chloride | L | 10.0 | 10.1 | 0.3381399 | 0.3690015 | | 1.1 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890378.D | Injection Date: | 11/15/10 |
| Instrument ID: | GCMS-B | Injection Time: | 09:23 |
| Sequence: | S048008 | Lab Sample ID: | S048008-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.5 | PASS |
| 75 | 30 - 60% of 95 | 46.4 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.55 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.3 | PASS |
| 175 | 5 - 9% of 174 | 7.06 | PASS |
| 176 | 95 - 101% of 174 | 97.7 | PASS |
| 177 | 5 - 9% of 176 | 6.63 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S048008-CCV1 | B02890379.D | 11/15/2010 | 9:49:00 |
| Blank | B048008-BLK1 | B02890386.D | 11/15/2010 | 12:59:00 |
| LCS | B048008-BS1 | B02890387.D | 11/15/2010 | 13:26:00 |
| GKHMS-SO-018-1010 | 1011014-01 | B02890392.D | 11/15/2010 | 16:07:00 |
| Matrix Spike | B048008-MS1 | B02890393.D | 11/15/2010 | 16:34:00 |
| Matrix Spike Dup | B048008-MSD1 | B02890394.D | 11/15/2010 | 17:24:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 10.0 | 0.9449965 | 0.9491511 | | 0.4 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.2 | 0.5659896 | 0.5779784 | | 2.1 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 10.7 | 0.4579836 | 0.4903044 | | 7.1 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 9.85 | 9.655389E-02 | 9.510526E-02 | | -1.5 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 9.37 | 0.5886556 | 0.5517367 | | -6.3 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 9.71 | 0.2945645 | 0.2858931 | | -2.9 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 9.35 | 0.4516883 | 0.4223942 | | -6.5 | 20 | |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 12.5 | 0.18017 | 0.2590719 | | 25.4 | 20 | * |
| 1,2,3-Trichloropropane | A | 10.0 | 10.6 | 0.3987978 | 0.4218935 | | 5.8 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 11.7 | 0.2303203 | 0.3213208 | | 17.3 | 20 | |
| 1,2,4-Trimethylbenzene | A | 10.0 | 11.2 | 4.709513 | 5.297978 | | 12.5 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 9.53 | 1.701376E-02 | 1.621781E-02 | | -4.7 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 9.74 | 0.4184844 | 0.4074317 | | -2.6 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 8.70 | 0.7312224 | 0.6361926 | | -13.0 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 9.30 | 0.2037538 | 0.189547 | | -7.0 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 9.45 | 0.2268516 | 0.2143169 | | -5.5 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 10.9 | 5.136773 | 5.577743 | | 8.6 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 11.0 | 2.429237 | 2.67406 | | 10.1 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 9.15 | 0.9832992 | 0.9001943 | | -8.5 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 10.8 | 2.361546 | 2.547879 | | 7.9 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 9.38 | 0.3046553 | 0.2859123 | | -6.2 | 20 | |
| 2-Butanone | A | 20.0 | 17.9 | 2.988406E-02 | 2.678289E-02 | | -10.4 | 20 | |
| 2-Chlorotoluene | A | 10.0 | 10.4 | 4.262763 | 4.454226 | | 4.5 | 20 | |
| 2-Hexanone | A | 20.0 | 18.6 | 0.1678354 | 0.1559188 | | -7.1 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 10.8 | 4.45775 | 4.836953 | | 8.5 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 20.0 | 16.3 | 0.2832524 | 0.2311587 | | -18.4 | 20 | |
| Acetone | Q | 20.0 | 18.0 | 3.530808E-02 | 2.293622E-02 | | -10.0 | 20 | |
| Acetonitrile | A | 100 | 87.1 | 9.62937E-03 | 8.386615E-03 | | -12.9 | 20 | |
| Acrylonitrile | A | 50.0 | 46.1 | 2.462373E-02 | 2.270745E-02 | | -7.8 | 20 | |
| Benzene | A | 10.0 | 9.28 | 1.192023 | 1.106421 | | -7.2 | 20 | |
| Bromobenzene | A | 10.0 | 10.4 | 1.15273 | 1.19706 | | 3.8 | 20 | |
| Bromochloromethane | A | 10.0 | 8.68 | 0.1177031 | 0.1022244 | | -13.2 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.87 | 0.2596342 | 0.2562424 | | -1.3 | 20 | |
| Bromoform | A | 10.0 | 10.8 | 0.290434 | 0.3140696 | | 8.1 | 20 | |
| Bromomethane | Q | 10.0 | 3.54 | 2.574268E-02 | 8.303776E-03 | | -64.6 | 20 | * |
| Carbon disulfide | A | 20.0 | 19.0 | 0.9743583 | 0.9271374 | | -4.8 | 20 | |
| Carbon tetrachloride | L | 10.0 | 9.99 | 0.8946293 | 0.5851107 | | -0.1 | 20 | |
| Chlorobenzene | A | 10.0 | 9.32 | 3.33925 | 3.112225 | | -6.8 | 20 | |
| Chlorodibromomethane | A | 10.0 | 9.71 | 0.5999869 | 0.5824614 | | -2.9 | 20 | |
| Chloroethane | L | 10.0 | 12.3 | 0.5391721 | 0.3287941 | | 23.3 | 20 | * |
| Chloroform | A | 10.0 | 9.43 | 0.5666822 | 0.5342691 | | -5.7 | 20 | |
| Chloromethane | Q | 10.0 | 11.3 | 0.24454 | 0.2475351 | | 12.8 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 9.44 | 0.3797202 | 0.3583891 | | -5.6 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 9.24 | 0.2602865 | 0.1812066 | | -30.4 | 20 | * |
| Cyclohexane | A | 10.0 | 9.43 | 0.7628433 | 0.7189971 | | -5.7 | 20 | |
| Dibromomethane | A | 10.0 | 10.1 | 7.125834E-02 | 7.186451E-02 | | 0.9 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 9.13 | 0.3660774 | 0.3344005 | | -8.7 | 20 | |
| Ethyl methacrylate | A | 10.0 | 9.78 | 0.1602354 | 0.1567041 | | -2.2 | 20 | |
| Ethylbenzene | A | 10.0 | 9.79 | 6.517445 | 6.379796 | | -2.1 | 20 | |
| Freon 113 | A | 5.00 | 10.3 | 0.8352537 | 0.8568153 | | 2.6 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 9.59 | 0.4443176 | 0.4261461 | | -4.1 | 20 | |
| Iodomethane | A | 10.0 | 9.52 | 1.948717 | 1.854275 | | -4.8 | 20 | |
| Isopropylbenzene | A | 10.0 | 10.4 | 6.236763 | 6.485165 | | 4.0 | 20 | |
| m,p-Xylenes | A | 20.0 | 19.9 | 2.521251 | 2.504389 | | -0.7 | 20 | |
| Methacrylonitrile | A | 10.0 | 9.31 | 4.057835E-02 | 3.734427E-02 | | -8.0 | 20 | |
| Methyl Acetate | A | 10.0 | 9.61 | 2.018245E-02 | 1.898982E-02 | | -5.9 | 20 | |
| Methyl tert-Butyl Ether | A | 10.0 | 9.20 | 0.354677 | 0.3261366 | | -8.0 | 20 | |
| Methylcyclohexane | A | 10.0 | 9.90 | 0.6187942 | 0.6126558 | | -1.0 | 20 | |
| Methylene Chloride | L | 10.0 | 1.01 | 0.8416174 | 0.2436185 | | -89.9 | 20 | * |
| Methylmethacrylate | A | 10.0 | 9.46 | 492250.2 | 429827.4 | | -12.7 | 20 | |
| Naphthalene | Q | 10.0 | 13.0 | 0.1996723 | 0.269702 | | 29.9 | 20 | * |
| n-Butylbenzene | A | 10.0 | 11.1 | 4.521909 | 5.683387 | | 25.7 | 20 | * |
| n-Propylbenzene | A | 10.0 | 10.8 | 7.637786 | 8.233208 | | 7.8 | 20 | |
| o-Xylene | A | 10.0 | 9.94 | 2.238511 | 2.226065 | | -0.6 | 20 | |
| p-Isopropyltoluene | A | 10.0 | 11.5 | 5.899351 | 6.784484 | | 15.0 | 20 | |
| Propionitrile | A | 10.0 | 9.47 | 0.0113396 | 1.073394E-02 | | -5.3 | 20 | |
| sec-Butylbenzene | A | 10.0 | 11.2 | 7.313888 | 8.206134 | | 12.2 | 20 | |
| Styrene | A | 10.0 | 10.2 | 3.406218 | 3.475528 | | 2.0 | 20 | |
| tert-Butylbenzene | A | 10.0 | 11.1 | 4.832452 | 5.37384 | | 11.2 | 20 | |
| Tetrachloroethene | A | 10.0 | 9.58 | 1.669076 | 1.599099 | | -4.2 | 20 | |
| Toluene | A | 10.0 | 9.64 | 0.7629039 | 0.7350667 | | -3.6 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 9.42 | 0.473488 | 0.4459864 | | -5.8 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 9.24 | 0.171221 | 0.1812066 | | -7.6 | 20 | |
| Trichloroethene | A | 10.0 | 9.54 | 0.3581557 | 0.296764 | | -17.1 | 20 | |
| Trichlorofluoromethane | A | 10.0 | 11.1 | 0.6463387 | 0.7163621 | | 10.8 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Vinyl acetate | A | 20.0 | 18.4 | 190045.8 | 161470.9 | | -15.0 | 20 |
| Vinyl chloride | L | 10.0 | 8.20 | 0.3381399 | 0.295515 | | -18.0 | 20 |
| Xylene (Total) | A | 30.0 | 29.8 | | 2.411614 | | | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048008-BLK1 | Batch: | B048008 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B048008-MSD1 | B02890394.D | 17:24 |
| Matrix Spike | B048008-MS1 | B02890393.D | 16:34 |
| GKHMS-SO-018-1010 | 1011014-01 | B02890392.D | 16:07 |
| LCS | B048008-BS1 | B02890387.D | 13:26 |

CENTAURI LABS™

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Solid | Laboratory ID: | B048008-BLK1 | File ID: | B02890386.D | | |
| Sampled: | | Prepared: | 11/15/10 12:59 | Analyzed: | 11/15/10 12:59 | | |
| Solids: | | Preparation: | EPA 5035 | Dilution: | | | |
| Batch: | B048008 | Sequence: | S048008 | Calibration: | 0111803 | Instrument: | GCMS-B |
| Column: | 1 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 5.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 5.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 5.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 5.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.00 | U |
| 78-93-3 | 2-Butanone | 10.0 | U |
| 95-49-8 | 2-Chlorotoluene | 5.00 | U |
| 591-78-6 | 2-Hexanone | 10.0 | U |
| 106-43-4 | 4-Chlorotoluene | 5.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 10.0 | U |

CENTAURI LABS™

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B048008-BLK1 | File ID: | B02890386.D |
| Sampled: | | Prepared: | 11/15/10 12:59 | Analyzed: | 11/15/10 12:59 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B048008 | Sequence: | S048008 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 10.0 | U |
| 75-05-8 | Acetonitrile | 50.0 | U |
| 107-13-1 | Acrylonitrile | 25.0 | U |
| 71-43-2 | Benzene | 5.00 | U |
| 108-86-1 | Bromobenzene | 5.00 | U |
| 74-97-5 | Bromochloromethane | 5.00 | U |
| 75-27-4 | Bromodichloromethane | 5.00 | U |
| 75-25-2 | Bromoform | 5.00 | U |
| 74-83-9 | Bromomethane | 10.0 | U |
| 75-15-0 | Carbon disulfide | 5.00 | U |
| 56-23-5 | Carbon tetrachloride | 5.00 | U |
| 108-90-7 | Chlorobenzene | 10.0 | U |
| 124-48-1 | Chlorodibromomethane | 5.00 | U |
| 75-00-3 | Chloroethane | 10.0 | U |
| 67-66-3 | Chloroform | 5.00 | U |
| 74-87-3 | Chloromethane | 10.0 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 5.00 | U |
| 110-82-7 | Cyclohexane | 5.00 | U |
| 74-95-3 | Dibromomethane | 5.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 10.0 | U |
| 97-63-2 | Ethyl methacrylate | 5.00 | U |
| 100-41-4 | Ethylbenzene | 5.00 | U |
| 76-13-1 | Freon 113 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | 5.00 | U |
| 74-88-4 | Iodomethane | 5.00 | U |

CENTAURI LABS™

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B048008-BLK1 | File ID: | B02890386.D |
| Sampled: | | Prepared: | 11/15/10 12:59 | Analyzed: | 11/15/10 12:59 |
| Solids: | | Preparation: | EPA 5035 | Dilution: | |
| Batch: | B048008 | Sequence: | S048008 | Calibration: | 0111803 |
| Instrument: | GCMS-B | | | | |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 98-82-8 | Isopropylbenzene | 5.00 | U |
| | m,p-Xylenes | 5.00 | U |
| 126-98-7 | Methacrylonitrile | 5.00 | U |
| 76-20-9 | Methyl Acetate | 5.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 5.00 | U |
| 108-87-2 | Methylcyclohexane | 5.00 | U |
| 75-09-2 | Methylene Chloride | 5.00 | U |
| 80-62-6 | Methylmethacrylate | 5.00 | U |
| 91-20-3 | Naphthalene | 5.00 | U |
| 104-51-8 | n-Butylbenzene | 5.00 | U |
| 103-65-1 | n-Propylbenzene | 5.00 | U |
| 95-47-6 | o-Xylene | 5.00 | U |
| 99-87-6 | p-Isopropyltoluene | 5.00 | U |
| 107-12-0 | Propionitrile | 50.0 | U |
| 135-98-8 | sec-Butylbenzene | 5.00 | U |
| 100-42-5 | Styrene | 5.00 | U |
| 98-06-6 | tert-Butylbenzene | 5.00 | U |
| 127-18-4 | Tetrachloroethene | 5.00 | U |
| 108-88-3 | Toluene | 5.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 5.00 | U |
| 79-01-6 | Trichloroethene | 5.00 | U |
| 75-69-4 | Trichlorofluoromethane | 10.0 | U |
| 108-05-4 | Vinyl acetate | 5.00 | U |
| 75-01-4 | Vinyl chloride | 10.0 | U |
| 1330-20-7 | Xylene (Total) | 5.00 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B048008 | Laboratory ID: | B048008-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 10.8 | 108 | 75 - 125 |
| 1,1,1-Trichloroethane | 10.0 | 10.6 | 106 | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.5 | 105 | 55 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.3 | 103 | 60 - 125 |
| 1,1-Dichloroethane | 10.0 | 9.17 | 92 | 75 - 125 |
| 1,1-Dichloroethene | 10.0 | 9.77 | 98 | 65 - 135 |
| 1,1-Dichloropropene | 10.0 | 10.1 | 101 | 70 - 135 |
| 1,2,3-Trichlorobenzene | 10.0 | 12.9 | 129 | 60 - 135 |
| 1,2,3-Trichloropropane | 10.0 | 10.5 | 105 | 65 - 130 |
| 1,2,4-Trichlorobenzene | 10.0 | 12.1 | 121 | 65 - 130 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.1 | 111 | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 11.4 | 114 | 40 - 135 |
| 1,2-Dibromoethane | 10.0 | 10.6 | 106 | 70 - 125 |
| 1,2-Dichlorobenzene | 10.0 | 9.36 | 94 | 75 - 120 |
| 1,2-Dichloroethane | 10.0 | 9.70 | 97 | 70 - 135 |
| 1,2-Dichloropropane | 10.0 | 9.93 | 99 | 70 - 120 |
| 1,3,5-Trimethylbenzene | 10.0 | 10.7 | 107 | 65 - 135 |
| 1,3-Dichlorobenzene | 10.0 | 10.9 | 109 | 70 - 125 |
| 1,3-Dichloropropane | 10.0 | 9.73 | 97 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 10.8 | 108 | 70 - 125 |
| 2,2-Dichloropropane | 10.0 | 10.1 | 101 | 65 - 135 |
| 2-Chlorotoluene | 10.0 | 10.3 | 103 | 70 - 130 |
| 2-Hexanone | 10.0 | 13.5 | 135 | 45 - 145 |
| 4-Chlorotoluene | 10.0 | 10.4 | 104 | 75 - 125 |
| 4-Methyl-2-pentanone | 10.0 | 11.5 | 115 | 45 - 145 |
| Acetone | 10.0 | 17.6 | 176 * | 20 - 160 |
| Acetonitrile | 100 | 82.8 | 83 | 75 - 125 |
| Acrylonitrile | 10.0 | 7.70 | 77 | 75 - 125 |
| Benzene | 10.0 | 9.57 | 96 | 75 - 125 |
| Bromobenzene | 10.0 | 10.1 | 101 | 65 - 120 |
| Bromochloromethane | 10.0 | 8.86 | 89 | 70 - 125 |
| Bromodichloromethane | 10.0 | 9.69 | 97 | 70 - 130 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B048008 | Laboratory ID: | B048008-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 10.1 | 101 | 55 - 135 |
| Bromomethane | 10.0 | 7.57 | 76 | 30 - 160 |
| Carbon disulfide | 10.0 | 9.38 | 94 | 45 - 160 |
| Carbon tetrachloride | 10.0 | 10.0 | 100 | 65 - 135 |
| Chlorobenzene | 10.0 | 9.90 | 99 | 75 - 125 |
| Chlorodibromomethane | 10.0 | 10.2 | 102 | 65 - 130 |
| Chloroethane | 10.0 | 10.4 | 104 | 40 - 155 |
| Chloroform | 10.0 | 9.88 | 99 | 70 - 125 |
| Chloromethane | 10.0 | 12.2 | 122 | 50 - 130 |
| cis-1,2-Dichloroethene | 10.0 | 10.7 | 107 | 65 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 9.42 | 94 | 70 - 125 |
| Cyclohexane | 10.0 | 8.67 | 87 | 75 - 125 |
| Dibromomethane | 10.0 | 10.1 | 101 | 75 - 130 |
| Dichlorodifluoromethane | 10.0 | 7.22 | 72 | 35 - 135 |
| Ethyl methacrylate | 10.0 | 9.74 | 97 | 75 - 125 |
| Ethylbenzene | 10.0 | 10.1 | 101 | 75 - 125 |
| Freon 113 | 10.0 | 7.63 | 76 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 9.13 | 91 | 55 - 140 |
| Iodomethane | 10.0 | 5.00 U | 0 * | 75 - 125 |
| Isopropylbenzene | 10.0 | 11.0 | 110 | 75 - 130 |
| m,p-Xylenes | 20.0 | 20.4 | 102 | 80 - 125 |
| Methacrylonitrile | 10.0 | 9.61 | 96 | 75 - 125 |
| Methyl Acetate | 10.0 | 7.03 | 70 * | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.4 | 104 | 65 - 125 |
| Methylcyclohexane | 10.0 | 9.82 | 98 | 75 - 125 |
| Methylene Chloride | 10.0 | 0.740 | 7 * | 55 - 140 |
| Methylmethacrylate | 10.0 | 8.67 | 87 | 75 - 125 |
| Naphthalene | 10.0 | 13.0 | 130 * | 40 - 125 |
| n-Butylbenzene | 10.0 | 11.1 | 111 | 65 - 140 |
| n-Propylbenzene | 10.0 | 9.79 | 98 | 65 - 135 |
| o-Xylene | 10.0 | 10.2 | 102 | 75 - 125 |
| p-Isopropyltoluene | 10.0 | 10.9 | 109 | 75 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | EPA 5035 |
| Batch: | B048008 | Laboratory ID: | B048008-BS1 |
| Column: | | Initial/Final: | 5 g / 5 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Propionitrile | 10.0 | 9.24 | 92 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 10.5 | 105 | 65 - 130 |
| Styrene | 10.0 | 9.96 | 100 | 75 - 125 |
| tert-Butylbenzene | 10.0 | 11.2 | 112 | 65 - 130 |
| Tetrachloroethene | 10.0 | 13.6 | 136 | 65 - 140 |
| Toluene | 10.0 | 9.58 | 96 | 70 - 125 |
| trans-1,2-Dichloroethene | 10.0 | 8.51 | 85 | 65 - 135 |
| trans-1,3-Dichloropropene | 10.0 | 9.42 | 94 | 65 - 125 |
| Trichloroethene | 10.0 | 10.0 | 100 | 75 - 125 |
| Trichlorofluoromethane | 10.0 | 10.2 | 102 | 25 - 185 |
| Vinyl acetate | 20.0 | 13.2 | 66 * | 75 - 125 |
| Vinyl chloride | 10.0 | 8.79 | 88 | 60 - 125 |
| Xylene (Total) | 30.0 | 30.5 | 102 | 75 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MS1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 12.4 | | 11.8 | 95 | 75 - 125 |
| 1,1,1-Trichloroethane | 12.4 | | 12.5 | 101 | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 12.4 | | 8.28 | 67 | 55 - 130 |
| 1,1,2-Trichloroethane | 12.4 | | 13.9 | 112 | 60 - 125 |
| 1,1-Dichloroethane | 12.4 | | 11.8 | 95 | 75 - 125 |
| 1,1-Dichloroethene | 12.4 | | 11.5 | 92 | 65 - 135 |
| 1,1-Dichloropropene | 12.4 | | 13.2 | 106 | 70 - 135 |
| 1,2,3-Trichlorobenzene | 12.4 | | 22.2 | 179 * | 60 - 135 |
| 1,2,3-Trichloropropane | 12.4 | | 13.1 | 105 | 65 - 130 |
| 1,2,4-Trichlorobenzene | 12.4 | | 21.3 | 172 * | 65 - 130 |
| 1,2,4-Trimethylbenzene | 12.4 | | 14.4 | 116 | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 12.4 | | 12.8 | 103 | 40 - 135 |
| 1,2-Dibromoethane | 12.4 | | 13.3 | 107 | 70 - 125 |
| 1,2-Dichlorobenzene | 12.4 | | 12.4 | 99 | 75 - 120 |
| 1,2-Dichloroethane | 12.4 | | 12.3 | 99 | 70 - 135 |
| 1,2-Dichloropropane | 12.4 | | 13.0 | 105 | 70 - 120 |
| 1,3,5-Trimethylbenzene | 12.4 | | 14.1 | 113 | 65 - 135 |
| 1,3-Dichlorobenzene | 12.4 | | 13.8 | 111 | 70 - 125 |
| 1,3-Dichloropropane | 12.4 | | 12.5 | 100 | 75 - 125 |
| 1,4-Dichlorobenzene | 12.4 | | 13.4 | 108 | 70 - 125 |
| 2,2-Dichloropropane | 12.4 | | 12.0 | 96 | 65 - 135 |
| 2-Chlorotoluene | 12.4 | | 13.4 | 108 | 70 - 130 |
| 2-Hexanone | 12.4 | | 9.91 | 80 | 45 - 145 |
| 4-Chlorotoluene | 12.4 | | 13.8 | 111 | 75 - 125 |
| 4-Methyl-2-pentanone | 12.4 | | 10.3 | 82 | 45 - 145 |
| Acetone | 12.4 | | 23.2 | 187 * | 20 - 160 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MS1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| Acetonitrile | 124 | | 77.9 | 63 * | 75 - 125 |
| Acrylonitrile | 12.4 | | 10.0 | 81 | 75 - 125 |
| Benzene | 12.4 | | 12.7 | 102 | 75 - 125 |
| Bromobenzene | 12.4 | | 13.2 | 106 | 65 - 120 |
| Bromochloromethane | 12.4 | | 11.4 | 92 | 70 - 125 |
| Bromodichloromethane | 12.4 | | 10.5 | 84 | 70 - 130 |
| Bromoform | 12.4 | | 8.43 | 68 | 55 - 135 |
| Bromomethane | 12.4 | | 2.55 | 20 * | 30 - 160 |
| Carbon disulfide | 12.4 | | 11.4 | 91 | 45 - 160 |
| Carbon tetrachloride | 12.4 | | 10.6 | 85 | 65 - 135 |
| Chlorobenzene | 12.4 | | 12.8 | 103 | 75 - 125 |
| Chlorodibromomethane | 12.4 | | 9.81 | 79 | 65 - 130 |
| Chloroethane | 12.4 | | 1.54 | 12 * | 40 - 155 |
| Chloroform | 12.4 | | 12.8 | 103 | 70 - 125 |
| Chloromethane | 12.4 | | 12.8 | 103 | 50 - 130 |
| cis-1,2-Dichloroethene | 12.4 | | 14.2 | 114 | 65 - 125 |
| cis-1,3-Dichloropropene | 12.4 | | 10.9 | 88 | 70 - 125 |
| Cyclohexane | 12.4 | | 11.4 | 92 | 75 - 125 |
| Dibromomethane | 12.4 | | 12.8 | 103 | 75 - 130 |
| Dichlorodifluoromethane | 12.4 | | 7.39 | 59 | 35 - 135 |
| Ethyl methacrylate | 12.4 | | 12.3 | 99 | 75 - 125 |
| Ethylbenzene | 12.4 | | 13.4 | 108 | 75 - 125 |
| Freon 113 | 12.4 | | 6.22 U | 0 * | 75 - 125 |
| Hexachlorobutadiene | 12.4 | | 12.4 | 100 | 55 - 140 |
| Iodomethane | 12.4 | | 6.22 U | 0 * | 75 - 125 |
| Isopropylbenzene | 12.4 | 0.659 | 15.2 | 117 | 75 - 130 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MS1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| m,p-Xylenes | 24.9 | | 26.7 | 107 | | 80 - 125 |
| Methacrylonitrile | 12.4 | | 12.0 | 96 | | 75 - 125 |
| Methyl Acetate | 12.4 | | 12.0 | 97 | | 75 - 125 |
| Methyl tert-Butyl Ether | 12.4 | | 14.0 | 113 | | 65 - 125 |
| Methylcyclohexane | 12.4 | | 12.3 | 99 | | 75 - 125 |
| Methylene Chloride | 12.4 | | 2.23 | 18 | * | 55 - 140 |
| Methylmethacrylate | 12.4 | | 11.5 | 93 | | 75 - 125 |
| Naphthalene | 12.4 | 28.6 | 48.0 | 156 | * | 40 - 125 |
| n-Butylbenzene | 12.4 | 2.26 | 17.8 | 125 | | 65 - 140 |
| n-Propylbenzene | 12.4 | 1.23 | 14.5 | 106 | | 65 - 135 |
| o-Xylene | 12.4 | | 13.5 | 109 | | 75 - 125 |
| p-Isopropyltoluene | 12.4 | | 14.2 | 114 | | 75 - 135 |
| Propionitrile | 12.4 | | 9.33 | 75 | | 75 - 125 |
| sec-Butylbenzene | 12.4 | 1.70 | 15.5 | 111 | | 65 - 130 |
| Styrene | 12.4 | | 12.9 | 104 | | 75 - 125 |
| tert-Butylbenzene | 12.4 | | 14.1 | 114 | | 65 - 130 |
| Tetrachloroethene | 12.4 | | 24.7 | 199 | * | 65 - 140 |
| Toluene | 12.4 | | 12.6 | 102 | | 70 - 125 |
| trans-1,2-Dichloroethene | 12.4 | | 11.1 | 89 | | 65 - 135 |
| trans-1,3-Dichloropropene | 12.4 | | 10.9 | 88 | | 65 - 125 |
| Trichloroethene | 12.4 | | 17.9 | 144 | * | 75 - 125 |
| Trichlorofluoromethane | 12.4 | | 0.933 | 8 | * | 25 - 185 |
| Vinyl acetate | 24.9 | | 6.22 U | 0 | * | 75 - 125 |
| Vinyl chloride | 12.4 | | 6.04 | 49 | * | 60 - 125 |
| Xylene (Total) | 37.3 | | 40.2 | 108 | | 75 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike Dup

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MSD1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 12.4 | 11.4 | 92 | 4 | 30 | 75 - 125 |
| 1,1,1-Trichloroethane | 12.4 | 12.5 | 100 | 0.1 | 30 | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | 12.4 | 7.34 | 59 | 12 | 30 | 55 - 130 |
| 1,1,2-Trichloroethane | 12.4 | 14.4 | 116 | 3 | 30 | 60 - 125 |
| 1,1-Dichloroethane | 12.4 | 12.8 | 103 | 9 | 30 | 75 - 125 |
| 1,1-Dichloroethene | 12.4 | 13.0 | 105 | 13 | 30 | 65 - 135 |
| 1,1-Dichloropropene | 12.4 | 13.0 | 104 | 2 | 30 | 70 - 135 |
| 1,2,3-Trichlorobenzene | 12.4 | 20.6 | 166 * | 7 | 30 | 60 - 135 |
| 1,2,3-Trichloropropane | 12.4 | 12.2 | 98 | 7 | 30 | 65 - 130 |
| 1,2,4-Trichlorobenzene | 12.4 | 19.3 | 155 * | 10 | 30 | 65 - 130 |
| 1,2,4-Trimethylbenzene | 12.4 | 11.4 | 91 | 24 | 30 | 65 - 135 |
| 1,2-Dibromo-3-chloropropane | 12.4 | 10.9 | 87 | 16 | 30 | 40 - 135 |
| 1,2-Dibromoethane | 12.4 | 14.8 | 119 | 11 | 30 | 70 - 125 |
| 1,2-Dichlorobenzene | 12.4 | 12.9 | 104 | 4 | 30 | 75 - 120 |
| 1,2-Dichloroethane | 12.4 | 13.8 | 111 | 11 | 30 | 70 - 135 |
| 1,2-Dichloropropane | 12.4 | 13.8 | 111 | 6 | 30 | 70 - 120 |
| 1,3,5-Trimethylbenzene | 12.4 | 11.4 | 92 | 21 | 30 | 65 - 135 |
| 1,3-Dichlorobenzene | 12.4 | 10.8 | 87 | 25 | 30 | 70 - 125 |
| 1,3-Dichloropropane | 12.4 | 14.2 | 114 | 13 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 12.4 | 10.6 | 85 | 23 | 30 | 70 - 125 |
| 2,2-Dichloropropane | 12.4 | 12.3 | 99 | 3 | 30 | 65 - 135 |
| 2-Chlorotoluene | 12.4 | 11.1 | 89 | 19 | 30 | 70 - 130 |
| 2-Hexanone | 12.4 | 20.0 | 161 * | 67 * | 30 | 45 - 145 |
| 4-Chlorotoluene | 12.4 | 11.2 | 90 | 20 | 30 | 75 - 125 |
| 4-Methyl-2-pentanone | 12.4 | 14.5 | 116 | 34 * | 30 | 45 - 145 |
| Acetone | 12.4 | 35.3 | 284 * | 41 * | 30 | 20 - 160 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike Dup

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MSD1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Acetonitrile | 124 | 129 | 104 | 49 * | 30 | 75 - 125 |
| Acrylonitrile | 12.4 | 12.6 | 102 | 23 | 30 | 75 - 125 |
| Benzene | 12.4 | 13.0 | 105 | 3 | 30 | 75 - 125 |
| Bromobenzene | 12.4 | 11.6 | 93 | 13 | 30 | 65 - 120 |
| Bromochloromethane | 12.4 | 13.3 | 107 | 15 | 30 | 70 - 125 |
| Bromodichloromethane | 12.4 | 11.1 | 89 | 6 | 30 | 70 - 130 |
| Bromoform | 12.4 | 7.56 | 61 | 11 | 30 | 55 - 135 |
| Bromomethane | 12.4 | 5.27 | 42 | 70 * | 30 | 30 - 160 |
| Carbon disulfide | 12.4 | 12.0 | 97 | 6 | 30 | 45 - 160 |
| Carbon tetrachloride | 12.4 | 10.3 | 83 | 2 | 30 | 65 - 135 |
| Chlorobenzene | 12.4 | 12.4 | 99 | 4 | 30 | 75 - 125 |
| Chlorodibromomethane | 12.4 | 10.3 | 83 | 5 | 30 | 65 - 130 |
| Chloroethane | 12.4 | 1.47 | 12 * | 5 | 30 | 40 - 155 |
| Chloroform | 12.4 | 14.2 | 114 | 10 | 30 | 70 - 125 |
| Chloromethane | 12.4 | 13.6 | 110 | 6 | 30 | 50 - 130 |
| cis-1,2-Dichloroethene | 12.4 | 16.0 | 128 * | 11 | 30 | 65 - 125 |
| cis-1,3-Dichloropropene | 12.4 | 10.2 | 82 | 7 | 30 | 70 - 125 |
| Cyclohexane | 12.4 | 11.3 | 91 | 1 | 30 | 75 - 125 |
| Dibromomethane | 12.4 | 14.0 | 112 | 9 | 30 | 75 - 130 |
| Dichlorodifluoromethane | 12.4 | 7.75 | 62 | 5 | 30 | 35 - 135 |
| Ethyl methacrylate | 12.4 | 12.5 | 100 | 1 | 30 | 75 - 125 |
| Ethylbenzene | 12.4 | 12.1 | 98 | 10 | 30 | 75 - 125 |
| Freon 113 | 12.4 | 10.0 | 81 | | 30 | 75 - 125 |
| Hexachlorobutadiene | 12.4 | 9.53 | 77 | 26 | 30 | 55 - 140 |
| Iodomethane | 12.4 | 6.22 U | 0 * | | 30 | 75 - 125 |
| Isopropylbenzene | 12.4 | 12.8 | 98 | 17 | 30 | 75 - 130 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike Dup

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8260B |
| Batch: | B048008 | Preparation: | EPA 5035 |
| % Solids: | 80.40 | Laboratory ID: | B048008-MSD1 |
| Column: | | Sample Lab ID: | 1011013-21 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| m,p-Xylenes | 24.9 | 24.2 | 97 | 10 | 30 | 80 - 125 |
| Methacrylonitrile | 12.4 | 16.3 | 131 * | 31 * | 30 | 75 - 125 |
| Methyl Acetate | 12.4 | 13.8 | 111 | 14 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 12.4 | 17.7 | 142 * | 23 | 30 | 65 - 125 |
| Methylcyclohexane | 12.4 | 10.7 | 86 | 14 | 30 | 75 - 125 |
| Methylene Chloride | 12.4 | 3.25 | 26 * | 37 * | 30 | 55 - 140 |
| Methylmethacrylate | 12.4 | 11.3 | 91 | 2 | 30 | 75 - 125 |
| Naphthalene | 12.4 | 45.9 | 139 * | 5 | 30 | 40 - 125 |
| n-Butylbenzene | 12.4 | 15.6 | 108 | 13 | 30 | 65 - 140 |
| n-Propylbenzene | 12.4 | 11.6 | 83 | 22 | 30 | 65 - 135 |
| o-Xylene | 12.4 | 12.2 | 98 | 10 | 30 | 75 - 125 |
| p-Isopropyltoluene | 12.4 | 10.5 | 84 | 30 * | 30 | 75 - 135 |
| Propionitrile | 12.4 | 12.8 | 103 | 32 * | 30 | 75 - 125 |
| sec-Butylbenzene | 12.4 | 11.7 | 81 | 28 | 30 | 65 - 130 |
| Styrene | 12.4 | 11.4 | 92 | 12 | 30 | 75 - 125 |
| tert-Butylbenzene | 12.4 | 10.9 | 88 | 26 | 30 | 65 - 130 |
| Tetrachloroethene | 12.4 | 23.9 | 192 * | 3 | 30 | 65 - 140 |
| Toluene | 12.4 | 11.6 | 93 | 9 | 30 | 70 - 125 |
| trans-1,2-Dichloroethene | 12.4 | 11.8 | 95 | 7 | 30 | 65 - 135 |
| trans-1,3-Dichloropropene | 12.4 | 10.2 | 82 | 7 | 30 | 65 - 125 |
| Trichloroethene | 12.4 | 17.8 | 143 * | 0.9 | 30 | 75 - 125 |
| Trichlorofluoromethane | 12.4 | 1.09 | 9 * | 16 | 30 | 25 - 185 |
| Vinyl acetate | 24.9 | 6.22 U | 0 * | | 30 | 75 - 125 |
| Vinyl chloride | 12.4 | 6.41 | 52 * | 6 | 30 | 60 - 125 |
| Xylene (Total) | 37.3 | 36.5 | 98 | 10 | 30 | 75 - 125 |

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (85 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 115) |
|---|---|---|---|---|
| 1011014-01 | 99 | 96 | 86 | 100 |
| B048008-BLK1 | 106 | 95 | 102 | 98 |
| B048008-BS1 | 109 | 106 | 108 | 99 |
| B048008-MS1 | 102 | 107 | 90 | 99 |
| B048008-MSD1 | 120 | 95 | 100 | 93 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048008 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048008-CCV1 )** | | | *Lab File ID: B02890379.D* | | | *Analyzed: 11/15/10 09:49* | | | |
| 1,4-Dichlorobenzene-d4 | 10149770 | 11.274 | 7318237 | 11.276 | 139 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Difluorobenzene | 15337070 | 4.12 | 1.714212E+07 | 4.121 | 89 | 50 - 200 | -0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3456145 | 7.577 | 3469404 | 7.576 | 100 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11796320 | 3.483 | 1.32552E+07 | 3.484 | 89 | 50 - 200 | -0.0010 | +/-0.50 | |
| **Blank (B048008-BLK1 )** | | | *Lab File ID: B02890386.D* | | | *Analyzed: 11/15/10 12:59* | | | |
| 1,4-Dichlorobenzene-d4 | 6778793 | 11.277 | 10149770 | 11.274 | 67 | 50 - 200 | 0.0030 | +/-0.50 | |
| 1,4-Difluorobenzene | 16444530 | 4.122 | 15337070 | 4.12 | 107 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3371044 | 7.578 | 3456145 | 7.577 | 98 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 12503460 | 3.484 | 11796320 | 3.483 | 106 | 50 - 200 | 0.0010 | +/-0.50 | |
| **LCS (B048008-BS1 )** | | | *Lab File ID: B02890387.D* | | | *Analyzed: 11/15/10 13:26* | | | |
| 1,4-Dichlorobenzene-d4 | 9365005 | 11.275 | 10149770 | 11.274 | 92 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Difluorobenzene | 15752900 | 4.121 | 15337070 | 4.12 | 103 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3261571 | 7.577 | 3456145 | 7.577 | 94 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 12055060 | 3.484 | 11796320 | 3.483 | 102 | 50 - 200 | 0.0010 | +/-0.50 | |
| **GKHMS-SO-018-1010 (1011014-01 )** | | | *Lab File ID: B02890392.D* | | | *Analyzed: 11/15/10 16:07* | | | |
| 1,4-Dichlorobenzene-d4 | 5907168 | 11.281 | 10149770 | 11.274 | 58 | 50 - 200 | 0.0070 | +/-0.50 | |
| 1,4-Difluorobenzene | 14621020 | 4.108 | 15337070 | 4.12 | 95 | 50 - 200 | -0.0120 | +/-0.50 | |
| Chlorobenzene-d5 | 3120395 | 7.572 | 3456145 | 7.577 | 90 | 50 - 200 | -0.0050 | +/-0.50 | |
| Pentafluorobenzene | 11145560 | 3.468 | 11796320 | 3.483 | 94 | 50 - 200 | -0.0150 | +/-0.50 | |
| **Matrix Spike (B048008-MS1 )** | | | *Lab File ID: B02890393.D* | | | *Analyzed: 11/15/10 16:34* | | | |
| 1,4-Dichlorobenzene-d4 | 7695116 | 11.28 | 10149770 | 11.274 | 76 | 50 - 200 | 0.0060 | +/-0.50 | |
| 1,4-Difluorobenzene | 13348290 | 4.108 | 15337070 | 4.12 | 87 | 50 - 200 | -0.0120 | +/-0.50 | |
| Chlorobenzene-d5 | 2842510 | 7.572 | 3456145 | 7.577 | 82 | 50 - 200 | -0.0050 | +/-0.50 | |
| Pentafluorobenzene | 10284910 | 3.468 | 11796320 | 3.483 | 87 | 50 - 200 | -0.0150 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048008 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B048008-MSD1 )** | | | *Lab File ID: B02890394.D* | | | *Analyzed: 11/15/10 17:24* | | | |
| 1,4-Dichlorobenzene-d4 | 2182558 | 11.274 | 10149770 | 11.274 | 22 | 50 - 200 | 0.0000 | +/-0.50 | * |
| 1,4-Difluorobenzene | 5208133 | 4.111 | 15337070 | 4.12 | 34 | 50 - 200 | -0.0090 | +/-0.50 | * |
| Chlorobenzene-d5 | 1010035 | 7.572 | 3456145 | 7.577 | 29 | 50 - 200 | -0.0050 | +/-0.50 | * |
| Pentafluorobenzene | 3818654 | 3.473 | 11796320 | 3.483 | 32 | 50 - 200 | -0.0100 | +/-0.50 | * |

# SW8270C SIM

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |

# INITIAL CALIBRATION STANDARDS

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046039 | Instrument: | GCMS-D |
| Calibration: | 0111602 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001979 | DFTPP050 WORKING STANDARD | S046039-TUN1 | D46148.D | 11/03/10 11:30 |
| 0001565 | SSTD001 8270LL 1/5ppm | S046039-CAL5 | D46149.D | 11/03/10 11:53 |
| 0001811 | SSTD00.05 8270LL 0.05/0.25ppm | S046039-CAL1 | D46150.D | 11/03/10 12:17 |
| 0001810 | SSTD00.1 8270LL 0.1/0.5ppm | S046039-CAL2 | D46151.D | 11/03/10 12:41 |
| 0001562 | SSTD00.2 8270LL 0.2/1ppm | S046039-CAL3 | D46152.D | 11/03/10 13:06 |
| 0001563 | SSTD00.5 8270LL 0.5/2.5ppm | S046039-CAL4 | D46153.D | 11/03/10 13:30 |
| 0001566 | SSTD02.5 8270LL 2.5/12.5ppm | S046039-CAL6 | D46154.D | 11/03/10 13:54 |
| 0001567 | SSTD005 8270LL 5/25ppm | S046039-CAL7 | D46155.D | 11/03/10 14:19 |
| 0001568 | SSTD010 8270LL 10/50ppm | S046039-CAL8 | D46156.D | 11/03/10 14:43 |
| 0001561 | SSTD020 8270LL 20/100ppm | S046039-CAL9 | D46157.D | 11/03/10 15:07 |
| 0002011 | SSTD02.5ICV 8270LL 2.5 PPM | S046039-SCV1 | D46158.D | 11/03/10 15:49 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# INITIAL CALIBRATION DATA

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6998678 | 0.6928788 | 0.7861832 | 0.7182898 | 0.7454438 | 0.61871 |
| Acenaphthene | 1.35609 | 1.360759 | 1.542331 | 1.393121 | 1.417282 | 1.167548 |
| Acenaphthylene | 2.086527 | 2.173511 | 2.491196 | 2.304639 | 2.469502 | 2.015595 |
| Anthracene | 1.149397 | 1.195438 | 1.414392 | 1.285541 | 1.359337 | 1.083758 |
| Benzo[a]anthracene | 1.729219 | 1.635469 | 1.813508 | 1.628326 | 1.718838 | 1.44421 |
| Benzo[a]pyrene | 2.070213 | 2.152228 | 2.357776 | 2.177479 | 2.432008 | 2.360145 |
| Benzo[b]fluoranthene | 2.246619 | 2.450026 | 2.745016 | 2.563208 | 2.684552 | 2.708263 |
| Benzo[g,h,i]perylene | 1.621029 | 1.623379 | 1.846475 | 1.621483 | 1.867722 | 1.766085 |
| Benzo[k]fluoranthene | 2.554631 | 2.745418 | 2.750892 | 2.509434 | 2.719822 | 2.637611 |
| Carbazole | | | | | | |
| Chrysene | 1.633828 | 1.648224 | 1.866568 | 1.657847 | 1.728138 | 1.451514 |
| Dibenz[a,h]anthracene | 1.483124 | 1.483425 | 1.698972 | 1.573097 | 1.820535 | 1.690607 |
| Fluoranthene | 1.147919 | 1.226292 | 1.417924 | 1.322613 | 1.35443 | 1.086918 |
| Fluorene | 1.312635 | 1.311524 | 1.539282 | 1.413423 | 1.529181 | 1.220159 |
| Indeno[1,2,3-cd]pyrene | 2.025178 | 2.055117 | 2.35135 | 2.143138 | 2.49272 | 2.320363 |
| Naphthalene | 1.206408 | 1.218463 | 1.346238 | 1.232176 | 1.223558 | 1.165698 |
| Phenanthrene | 1.297902 | 1.313994 | 1.460657 | 1.328181 | 1.32559 | 1.074443 |
| Pyrene | 2.116627 | 2.296767 | 2.490596 | 2.333519 | 2.284912 | 2.077411 |
| 2-Fluorobiphenyl | 1.610498 | 1.620703 | 1.860345 | 1.676616 | 1.680071 | 1.416445 |
| Nitrobenzene-d5 | 0.3799167 | 0.3872439 | 0.4331469 | 0.3960707 | 0.4245936 | 0.3431777 |
| Terphenyl-d14 | 0.981781 | 1.066537 | 1.231772 | 1.108824 | 1.08851 | 0.9848726 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6906016 | 0.6715998 | 0.6387307 | | | |
| Acenaphthene | 1.308477 | 1.243833 | 1.133641 | | | |
| Acenaphthylene | 2.290065 | 2.191529 | 1.97907 | | | |
| Anthracene | 1.242426 | 1.185892 | 1.132079 | | | |
| Benzo[a]anthracene | 1.562415 | 1.496959 | 1.418862 | | | |
| Benzo[a]pyrene | 2.31118 | 2.256053 | 2.168264 | | | |
| Benzo[b]fluoranthene | 2.449553 | 2.584195 | 2.489339 | | | |
| Benzo[g,h,i]perylene | 1.715931 | 1.685418 | 1.62047 | | | |
| Benzo[k]fluoranthene | 2.595031 | 2.355483 | 2.209489 | | | |
| Carbazole | | | | | | |
| Chrysene | 1.530943 | 1.447942 | 1.359459 | | | |
| Dibenz[a,h]anthracene | 1.653509 | 1.640184 | 1.593958 | | | |
| Fluoranthene | 1.235483 | 1.171686 | 1.152857 | | | |
| Fluorene | 1.408747 | 1.358794 | 1.264352 | | | |
| Indeno[1,2,3-cd]pyrene | 2.265913 | 2.244316 | 2.162238 | | | |
| Naphthalene | 1.271896 | 1.232873 | 1.173873 | | | |
| Phenanthrene | 1.227056 | 1.161614 | 1.111768 | | | |
| Pyrene | 2.143779 | 1.993386 | 1.77759 | | | |
| 2-Fluorobiphenyl | 1.592496 | 1.52104 | 1.347374 | | | |
| Nitrobenzene-d5 | 0.3923432 | 0.4061396 | 0.4113819 | | | |
| Terphenyl-d14 | 1.036812 | 0.9830102 | 0.8780064 | | | |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46241.D | Injection Date: | 11/15/10 |
| Instrument ID: | GCMS-D | Injection Time: | 15:44 |
| Sequence: | S047051 | Lab Sample ID: | S047051-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.3 | PASS |
| 70 | Less than 2% of 69 | 0.983 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 49.1 | PASS |
| 197 | Less than 1% of 198 | 0.0964 | PASS |
| 199 | 5 - 9% of 198 | 6.29 | PASS |
| 275 | 10 - 30% of 198 | 20.4 | PASS |
| 365 | 1 - 200% of 198 | 2.37 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |
| 441 | Less than 100% of 443 | 76 | PASS |
| 442 | 40 - 200% of 198 | 53.9 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047051-CCV1 | D46242.D | 11/15/2010 | 15:59:00 |
| Blank | B046136-BLK1 | D46257.D | 11/15/2010 | 22:06:00 |
| LCS | B046136-BS1 | D46258.D | 11/15/2010 | 22:30:00 |
| Matrix Spike | B046136-MS1 | D46259.D | 11/15/2010 | 22:54:00 |
| Matrix Spike Dup | B046136-MSD1 | D46260.D | 11/15/2010 | 23:19:00 |
| GKHMS-SO-018-1010 | 1011014-01 | D46264.D | 11/16/2010 | 0:57:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46242.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S047051 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S047051-CCV1 | Injection Time: | 15:59 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1000 | 0.6958117 | 0.6971865 | | 0.2 | 20 |
| Acenaphthene | A | 1000 | 1050 | 1.324787 | 1.391577 | | 5.0 | 20 |
| Acenaphthylene | A | 1000 | 1090 | 2.222404 | 2.428374 | | 9.3 | 20 |
| Anthracene | A | 1000 | 1050 | 1.227584 | 1.293011 | | 5.3 | 20 |
| Benzo[a]anthracene | A | 1000 | 1050 | 1.605312 | 1.692061 | | 5.4 | 20 |
| Benzo[a]pyrene | A | 1000 | 1100 | 2.253927 | 2.469795 | | 9.6 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1040 | 2.546752 | 2.645648 | | 3.9 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 1010 | 1.707555 | 1.731324 | | 1.4 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1170 | 2.564201 | 3.006795 | | 17.3 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.754186 | | 10.2 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 995 | 1.626379 | 1.617862 | | -0.5 | 20 |
| Fluoranthene | A | 1000 | 1020 | 1.235125 | 1.261707 | | 2.2 | 20 |
| Fluorene | A | 1000 | 1040 | 1.373122 | 1.428469 | | 4.0 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 1030 | 2.228926 | 2.291624 | | 2.8 | 20 |
| Naphthalene | A | 1000 | 972 | 1.230131 | 1.19618 | | -2.8 | 20 |
| Phenanthrene | A | 1000 | 999 | 1.255689 | 1.254105 | | -0.1 | 20 |
| Pyrene | A | 1000 | 1030 | 2.168287 | 2.224069 | | 2.6 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1080 | 1.591732 | 1.717497 | | 7.9 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1120 | 0.3971127 | 0.444155 | | 11.8 | 20 |
| Terphenyl-d14 | A | 1000 | 995 | 1.040014 | 1.034785 | | -0.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046136-BLK1 | Batch: | B046136 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B046136-MSD1 | D46260.D | 23:19 |
| Matrix Spike | B046136-MS1 | D46259.D | 22:54 |
| LCS | B046136-BS1 | D46258.D | 22:30 |
| GKHMS-SO-018-1010 | 1011014-01 | D46264.D | 00:57 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046136-BLK1 | File ID: | D46257.D |
| Sampled: | | Prepared: | 11/11/10 11:55 | Analyzed: | 11/15/10 22:06 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046136 | Sequence: | S047051 | Calibration: | 0111602 |
| Column: | 1 | | | | |

Instrument: GCMS-D

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 1.67 | U |
| 83-32-9 | Acenaphthene | 1.67 | U |
| 208-96-8 | Acenaphthylene | 1.67 | U |
| 120-12-7 | Anthracene | 1.67 | U |
| 56-55-3 | Benzo[a]anthracene | 1.67 | U |
| 50-32-8 | Benzo[a]pyrene | 1.67 | U |
| 205-99-2 | Benzo[b]fluoranthene | 1.67 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 1.67 | U |
| 207-08-9 | Benzo[k]fluoranthene | 1.67 | U |
| 218-01-9 | Chrysene | 1.67 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 1.67 | U |
| 206-44-0 | Fluoranthene | 1.67 | U |
| 86-73-7 | Fluorene | 1.67 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 1.67 | U |
| 91-20-3 | Naphthalene | 1.67 | U |
| 85-01-8 | Phenanthrene | 1.67 | U |
| 129-00-0 | Pyrene | 1.67 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046136 | Laboratory ID: | B046136-BS1 |
| Column: | | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 167 | 178 | 107 | * | 45 - 105 |
| Acenaphthene | 167 | 167 | 100 | | 45 - 110 |
| Acenaphthylene | 167 | 149 | 89 | | 45 - 105 |
| Anthracene | 167 | 166 | 99 | | 55 - 105 |
| Benzo[a]anthracene | 167 | 171 | 102 | | 50 - 110 |
| Benzo[a]pyrene | 167 | 203 | 122 | * | 50 - 110 |
| Benzo[b]fluoranthene | 167 | 223 | 134 | * | 45 - 115 |
| Benzo[g,h,i]perylene | 167 | 184 | 111 | | 40 - 125 |
| Benzo[k]fluoranthene | 167 | 221 | 133 | * | 45 - 125 |
| Chrysene | 167 | 172 | 103 | | 55 - 110 |
| Dibenz[a,h]anthracene | 167 | 180 | 108 | | 40 - 125 |
| Fluoranthene | 167 | 166 | 100 | | 55 - 115 |
| Fluorene | 167 | 165 | 99 | | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 167 | 173 | 104 | | 40 - 120 |
| Naphthalene | 167 | 162 | 97 | | 40 - 105 |
| Phenanthrene | 167 | 165 | 99 | | 50 - 110 |
| Pyrene | 167 | 172 | 103 | | 45 - 125 |

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# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike Dup

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8270C SIM |
| Batch: | B046136 | Preparation: | 3550B Sonic. |
| % Solids: | 90.70 | Laboratory ID: | B046136-MSD1 |
| Column: | | Sample Lab ID: | 1011008-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 184 | 184 | 100 | | 6 | 20 | 45 - 105 |
| Acenaphthene | 184 | 175 | 95 | | 6 | 20 | 45 - 110 |
| Acenaphthylene | 184 | 161 | 87 | | 3 | 20 | 45 - 105 |
| Anthracene | 184 | 170 | 93 | | 8 | 20 | 55 - 105 |
| Benzo[a]anthracene | 184 | 182 | 99 | | 8 | 20 | 50 - 110 |
| Benzo[a]pyrene | 184 | 212 | 115 | * | 7 | 20 | 50 - 110 |
| Benzo[b]fluoranthene | 184 | 242 | 132 | * | 5 | 20 | 45 - 115 |
| Benzo[g,h,i]perylene | 184 | 204 | 111 | | 11 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 184 | 227 | 123 | | 9 | 20 | 45 - 125 |
| Chrysene | 184 | 182 | 99 | | 8 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 184 | 196 | 106 | | 10 | 20 | 40 - 125 |
| Fluoranthene | 184 | 172 | 94 | | 7 | 20 | 55 - 115 |
| Fluorene | 184 | 176 | 96 | | 5 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 184 | 188 | 103 | | 10 | 20 | 40 - 120 |
| Naphthalene | 184 | 165 | 90 | | 6 | 20 | 40 - 105 |
| Phenanthrene | 184 | 175 | 95 | | 7 | 20 | 50 - 110 |
| Pyrene | 184 | 171 | 93 | | 13 | 20 | 45 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8270C SIM |
| Batch: | B046136 | Preparation: | 3550B Sonic. |
| % Solids: | 90.70 | Laboratory ID: | B046136-MS1 |
| Column: | | Sample Lab ID: | 1011008-01 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 184 | | 196 | 107 | * | 45 - 105 |
| Acenaphthene | 184 | | 185 | 101 | | 45 - 110 |
| Acenaphthylene | 184 | | 165 | 90 | | 45 - 105 |
| Anthracene | 184 | | 184 | 100 | | 55 - 105 |
| Benzo[a]anthracene | 184 | | 197 | 107 | | 50 - 110 |
| Benzo[a]pyrene | 184 | | 226 | 123 | * | 50 - 110 |
| Benzo[b]fluoranthene | 184 | | 253 | 138 | * | 45 - 115 |
| Benzo[g,h,i]perylene | 184 | | 228 | 124 | | 40 - 125 |
| Benzo[k]fluoranthene | 184 | | 248 | 135 | * | 45 - 125 |
| Chrysene | 184 | | 197 | 107 | | 55 - 110 |
| Dibenz[a,h]anthracene | 184 | | 217 | 118 | | 40 - 125 |
| Fluoranthene | 184 | | 185 | 101 | | 55 - 115 |
| Fluorene | 184 | | 186 | 101 | | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 184 | | 209 | 114 | | 40 - 120 |
| Naphthalene | 184 | | 176 | 96 | | 40 - 105 |
| Phenanthrene | 184 | | 188 | 102 | | 50 - 110 |
| Pyrene | 184 | | 194 | 106 | | 45 - 125 |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCMS-D |

| | 2FBPL (45 - 105) | NB-d5 (35 - 100) | TRPL-D14 (30 - 125) |
|---|---|---|---|
| 1011014-01 | 94 | 92 | 137* |
| B046136-BLK1 | 93 | 86 | 116 |
| B046136-BS1 | 94 | 88 | 109 |
| B046136-MS1 | 90 | 93 | 110 |
| B046136-MSD1 | 93 | 95 | 105 |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047051-CCV1 )** | | | *Lab File ID: D46242.D* | | | *Analyzed: 11/15/10 15:59* | | | |
| 1,4-Dichlorobenzene-d4 | 325841 | 3.77 | 524277 | 3.79 | 62 | 50 - 200 | -0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 464052 | 6.88 | 890160 | 6.91 | 52 | 50 - 200 | -0.0300 | +/-30.00 | |
| Chrysene-d12 | 405437 | 11.32 | 837431 | 11.37 | 48 | 50 - 200 | -0.0500 | +/-30.00 | |
| Naphthalene-d8 | 1103894 | 5.05 | 1909751 | 5.08 | 58 | 50 - 200 | -0.0300 | +/-30.00 | |
| Perylene-d12 | 215613 | 14.04 | 457505 | 14.11 | 47 | 50 - 200 | -0.0700 | +/-30.00 | |
| Phenanthrene-d10 | 703035 | 8.41 | 1402237 | 8.45 | 50 | 50 - 200 | -0.0400 | +/-30.00 | |
| **Blank (B046136-BLK1 )** | | | *Lab File ID: D46257.D* | | | *Analyzed: 11/15/10 22:06* | | | |
| 1,4-Dichlorobenzene-d4 | 218467 | 3.76 | 325841 | 3.77 | 67 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 351242 | 6.89 | 464052 | 6.88 | 76 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 265970 | 11.34 | 405437 | 11.32 | 66 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 777765 | 5.05 | 1103894 | 5.05 | 70 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 125147 | 14.06 | 215613 | 14.04 | 58 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 519961 | 8.42 | 703035 | 8.41 | 74 | 50 - 200 | 0.0100 | +/-30.00 | |
| **LCS (B046136-BS1 )** | | | *Lab File ID: D46258.D* | | | *Analyzed: 11/15/10 22:30* | | | |
| 1,4-Dichlorobenzene-d4 | 210261 | 3.76 | 325841 | 3.77 | 65 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 327728 | 6.89 | 464052 | 6.88 | 71 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 269871 | 11.34 | 405437 | 11.32 | 67 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 736300 | 5.05 | 1103894 | 5.05 | 67 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 126971 | 14.06 | 215613 | 14.04 | 59 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 475376 | 8.42 | 703035 | 8.41 | 68 | 50 - 200 | 0.0100 | +/-30.00 | |
| **Matrix Spike (B046136-MS1 )** | | | *Lab File ID: D46259.D* | | | *Analyzed: 11/15/10 22:54* | | | |
| 1,4-Dichlorobenzene-d4 | 213132 | 3.76 | 325841 | 3.77 | 65 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 343469 | 6.89 | 464052 | 6.88 | 74 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 279724 | 11.34 | 405437 | 11.32 | 69 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 752193 | 5.05 | 1103894 | 5.05 | 68 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 139193 | 14.06 | 215613 | 14.04 | 65 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 494313 | 8.42 | 703035 | 8.41 | 70 | 50 - 200 | 0.0100 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B046136-MSD1 )** | | | *Lab File ID: D46260.D* | | | *Analyzed: 11/15/10 23:19* | | | |
| 1,4-Dichlorobenzene-d4 | 206601 | 3.76 | 325841 | 3.77 | 63 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 327860 | 6.89 | 464052 | 6.88 | 71 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 286499 | 11.34 | 405437 | 11.32 | 71 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 728756 | 5.05 | 1103894 | 5.05 | 66 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 141352 | 14.06 | 215613 | 14.04 | 66 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 479280 | 8.42 | 703035 | 8.41 | 68 | 50 - 200 | 0.0100 | +/-30.00 | |
| **GKHMS-SO-018-1010 (1011014-01 )** | | | *Lab File ID: D46264.D* | | | *Analyzed: 11/16/10 00:57* | | | |
| 1,4-Dichlorobenzene-d4 | 225498 | 3.76 | 325841 | 3.77 | 69 | 50 - 200 | -0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 387744 | 6.89 | 464052 | 6.88 | 84 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 319687 | 11.34 | 405437 | 11.32 | 79 | 50 - 200 | 0.0200 | +/-30.00 | |
| Naphthalene-d8 | 813537 | 5.06 | 1103894 | 5.05 | 74 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 126720 | 14.07 | 215613 | 14.04 | 59 | 50 - 200 | 0.0300 | +/-30.00 | |
| Phenanthrene-d10 | 622690 | 8.42 | 703035 | 8.41 | 89 | 50 - 200 | 0.0100 | +/-30.00 | |

CENTAURI LABS™

# SW8081A

# INITIAL CALIBRATION STANDARDS

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048004 | Instrument: | GCECD-W |
| Calibration: | 0112301 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001724 | PEST MIX LE-2 | S048004-CAL1 | W0087315.D | 11/16/10 16:24 |
| 0001720 | PEST MIX LE-6 | S048004-CAL5 | W0087316.D | 11/16/10 16:54 |
| 0001721 | PEST MIX LE-5 | S048004-CAL4 | W0087317.D | 11/16/10 17:25 |
| 0001722 | PEST MIX LE-4 | S048004-CAL3 | W0087318.D | 11/16/10 17:55 |
| 0001723 | PEST MIX LE-3 | S048004-CAL2 | W0087319.D | 11/16/10 18:25 |
| 0002066 | PEST LEVEL-4(ICV) | S048004-SCV1 | W0087320.D | 11/16/10 18:55 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 4532295 | 7.67729 | 0.9982816 | | | |
| 4,4'-DDD [2C] | 3481786 | 8.320508 | 0.9979279 | | | |
| 4,4'-DDE | 6044270 | 3.586216 | 0.999878 | | | |
| 4,4'-DDE [2C] | 4508786 | 7.428151 | 0.9975679 | | | |
| 4,4'-DDT | 5058761 | 2.737206 | 0.9983119 | | | |
| 4,4'-DDT [2C] | 3338642 | 7.294406 | 0.9985994 | | | |
| Aldrin | 7055918 | 7.261361 | 0.9999859 | | | |
| Aldrin [2C] | 5325379 | 14.94962 | 0.9996254 | | | |
| alpha-BHC | 7828278 | 10.81308 | 0.9996585 | | | |
| alpha-BHC [2C] | 6158102 | 1.566857 | 0.999735 | | | |
| alpha-Chlordane | 6474838 | 2.895004 | 0.9997601 | | | |
| alpha-Chlordane [2C] | 4667042 | 13.30364 | 0.9975967 | | | |
| beta-BHC | 3094384 | 9.112598 | 0.9992495 | | | |
| beta-BHC [2C] | 2663403 | 13.7245 | 0.9995513 | | | |
| delta-BHC | 6809623 | 12.89578 | 0.9998065 | | | |
| delta-BHC [2C] | 5337919 | 1.497075 | 0.999833 | | | |
| Dieldrin | 6784961 | 1.503941 | 0.9997511 | | | |
| Dieldrin [2C] | 4874974 | 9.051048 | 0.9979017 | | | |
| Endosulfan I | 6415020 | 1.38824 | 0.9999648 | | | |
| Endosulfan I [2C] | 4559152 | 13.03145 | 0.9977191 | | | |
| Endosulfan II | 5738262 | 2.060011 | 0.9989562 | | | |
| Endosulfan II [2C] | 4003027 | 10.42144 | 0.998599 | | | |
| Endosulfan sulfate | 4824299 | 3.541018 | 0.9966205 | | | |
| Endosulfan Sulfate [2C] | 3264486 | 12.64214 | 0.99724 | | | |
| Endrin | 5594840 | 3.364891 | 0.998172 | | | |
| Endrin [2C] | 4026595 | 11.36473 | 0.9970221 | | | |
| Endrin Aldehyde | 3187705 | 8.371873 | 0.9835135 | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Endrin Aldehyde [2C] | 2400751 | 14.81274 | 0.9702603 | | | |
| Endrin ketone | 5747872 | 5.776109 | 0.9967073 | | | |
| Endrin Ketone [2C] | 3864954 | 12.24196 | 0.9973379 | | | |
| gamma-BHC | 7302100 | 9.417334 | 0.9999409 | | | |
| gamma-BHC [2C] | 5576326 | 1.33407 | 0.9998729 | | | |
| gamma-Chlordane | 6649549 | 4.080832 | 0.9997665 | | | |
| gamma-Chlordane [2C] | 4659791 | 12.04857 | 0.9986951 | | | |
| Heptachlor | 7574990 | 2.393061 | 0.9999746 | | | |
| Heptachlor [2C] | 5094481 | 7.918683 | 0.9996381 | | | |
| Heptachlor Epoxide | 6769654 | 4.0722 | 0.9998187 | | | |
| Heptachlor Epoxide [2C] | 4853774 | 10.39192 | 0.9994593 | | | |
| Methoxychlor | 2602677 | 5.362244 | 0.9937125 | | | |
| Methoxychlor [2C] | 1694895 | 16.35445 | 0.9935232 | | | |
| TCMX | 5256855 | 5.374822 | 0.9991765 | | | |
| TCMX [2C] | 4187152 | 8.761541 | 0.9993077 | | | |
| DCB | 4879149 | 10.69193 | 0.9879025 | | | |
| DCB [2C] | 2879656 | 12.31246 | 0.9883868 | | | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 4116284 | 4199528 | 4842524 | 4815184 | 4687955 | |
| 4,4'-DDD [2C] | 3938852 | 3533530 | 3446746 | 3317930 | 3171873 | |
| 4,4'-DDE | 5686578 | 5993728 | 6182376 | 6210032 | 6148637 | |
| 4,4'-DDE [2C] | 5001622 | 4647224 | 4427074 | 4354308 | 4113702 | |
| 4,4'-DDT | 4948028 | 4945208 | 5098848 | 5279248 | 5022475 | |
| 4,4'-DDT [2C] | 3722968 | 3411585 | 3232180 | 3238541 | 3087935 | |
| Aldrin | 6146412 | 7175888 | 7299200 | 7334399 | 7323690 | |
| Aldrin [2C] | 6679428 | 5393544 | 4970978 | 4818391 | 4764556 | |
| alpha-BHC | 6408234 | 7707536 | 8214201 | 8307717 | 8503704 | |
| alpha-BHC [2C] | 6307318 | 6154108 | 6088986 | 6059692 | 6180403 | |
| alpha-Chlordane | 6155466 | 6611988 | 6582489 | 6563929 | 6460317 | |
| alpha-Chlordane [2C] | 5684524 | 4777132 | 4464994 | 4317180 | 4091382 | |
| beta-BHC | 2612170 | 3347384 | 3218884 | 3162957 | 3130524 | |
| beta-BHC [2C] | 3283440 | 2695960 | 2509122 | 2436699 | 2391795 | |
| delta-BHC | 5319988 | 6708808 | 7273230 | 7320047 | 7426045 | |
| delta-BHC [2C] | 5226664 | 5404537 | 5422362 | 5297945 | 5338086 | |
| Dieldrin | 6915122 | 6655204 | 6791108 | 6844185 | 6719188 | |
| Dieldrin [2C] | 5556198 | 5023776 | 4757110 | 4630851 | 4406934 | |
| Endosulfan I | 6284544 | 6534404 | 6434758 | 6413890 | 6407507 | |
| Endosulfan I [2C] | 5531348 | 4663068 | 4382034 | 4210910 | 4008403 | |
| Endosulfan II | 5858602 | 5695737 | 5819106 | 5760128 | 5557737 | |
| Endosulfan II [2C] | 4653234 | 4154916 | 3877402 | 3718204 | 3611379 | |
| Endosulfan sulfate | 4934880 | 4913632 | 4914620 | 4831242 | 4527119 | |
| Endosulfan Sulfate [2C] | 3942524 | 3311841 | 3167368 | 3029444 | 2871252 | |
| Endrin | 5350974 | 5538276 | 5782724 | 5787978 | 5514247 | |
| Endrin [2C] | 4786874 | 4042180 | 3910822 | 3815090 | 3578010 | |
| Endrin Aldehyde | 2956470 | 3282960 | 3564678 | 3227194 | 2907226 | |
| Endrin Aldehyde [2C] | 2839614 | 2388543 | 2660584 | 2128068 | 1986946 | |
| Endrin ketone | 6181336 | 5907792 | 5719040 | 5648964 | 5282227 | |
| Endrin Ketone [2C] | 4641154 | 3932407 | 3725186 | 3615892 | 3410129 | |
| gamma-BHC | 6104392 | 7348840 | 7608202 | 7678524 | 7770544 | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0112301 | Instrument: | GCECD-W |
| | | Calibration Date: | 11/16/2010 12:00:24AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| gamma-BHC [2C] | 5548056 | 5705256 | 5538032 | 5519614 | 5570675 | |
| gamma-Chlordane | 6177938 | 6686900 | 6836314 | 6824375 | 6722220 | |
| gamma-Chlordane [2C] | 5592692 | 4738056 | 4462446 | 4337508 | 4168253 | |
| Heptachlor | 7281087 | 7524505 | 7649350 | 7693789 | 7726220 | |
| Heptachlor [2C] | 5756818 | 5192632 | 4915948 | 4776631 | 4830378 | |
| Heptachlor Epoxide | 6287348 | 6964217 | 6909836 | 6881987 | 6804884 | |
| Heptachlor Epoxide [2C] | 5682242 | 4966460 | 4656076 | 4521867 | 4442223 | |
| Methoxychlor | 2789430 | 2577810 | 2579950 | 2660013 | 2406180 | |
| Methoxychlor [2C] | 2156340 | 1711902 | 1602962 | 1575688 | 1427582 | |
| TCMX | 5695024 | 5291088 | 5283488 | 5029000 | 4985674 | |
| TCMX [2C] | 4758384 | 4330639 | 4065628 | 3909790 | 3871320 | |
| DCB | 5591596 | 5079005 | 4847228 | 4715096 | 4162822 | |
| DCB [2C] | 3386481 | 3022575 | 2813551 | 2747301 | 2428372 | |

**Centauri Labs** | *Document Control No: CLM_G_002*

S049007

# GC ANALYSIS LOG

Instrument ID: HP6890 # W

Reviewed by: JK Date: 11/19/10

| | |
|---|---|
| Data Acquisition Method: | (Pest32) / PCB32 / Herb32 / |
| Injector Temp (°C): | 180 / (200) / 240 / |
| Detector Temp (°C): | (300) |
| Oven Initial Temp(°C): | 60 / (150) / |
| Initial Time (min): | 0.0 / 0.50 / (1.0) / |
| Ramp Rate (°C/min): | 15-215-2 / 4-250-0.5 / 18-300-7 |
| Final Temp (°C): | 200 / 275 / (300) / |
| Injection Volume (uL): | (1.0) / 2.0 / 2.5 / |

**Detector A**

| | | |
|---|---|---|
| Column: | RTX-CLP | 30meter |
| ID: | 0.32 mm | |

**Detector B**

| | | |
|---|---|---|
| Column: | RTX-CLP2 | 30 meter |
| ID: | 0.32 mm | |

ICAL Method: 111610W-m

Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 111810 | W | | | | | |

**Injection Log**

Directory: h:\gcdata\w\111810

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | w0087366.d | 1. | EVAL MIX 2081 | STD 8082 | 18 Nov 10 15:36 |
| 2 | w0087367.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 18 Nov 10 16:11 |
| 3 | w0087368.d | 1. | ~~TOX-3~~ 2006 | STD 8081 | 18 Nov 10 16:56 |
| 4 | w0087369.d | 1. | CHLOR-3 2004 | STD 8081 | 18 Nov 10 17:26 |
| 5 | w0087370.d | 1. | 1011008-02 | SOIL | 18 Nov 10 17:57 |
| 6 | w0087371.d | 1. | 1011014-01 | SOIL | 18 Nov 10 18:27 |
| 7 | w0087372.d | 1. | 1011013-01 | SOIL | 18 Nov 10 18:57 |
| 8 | w0087373.d | 1. | B046110-MS1 | SOIL MS 01 | 18 Nov 10 19:27 |
| 9 | w0087374.d | 1. | B046110-MSD1 | SOIL MSD 01 | 18 Nov 10 19:57 |
| 10 | w0087375.d | 1. | 1011013-02 | SOIL | 18 Nov 10 20:28 |
| 11 | w0087376.d | 1. | 1011013-03 | SOIL | 18 Nov 10 20:58 |
| 12 | w0087377.d | 1. | 1011013-04 | SOIL | 18 Nov 10 21:28 |
| 13 | w0087378.d | 1. | HEXANE | | 18 Nov 10 21:58 |
| 14 | w0087379.d | 1. | SEQ CCV2 PEST-4 1722 | STD 8081 | 18 Nov 10 22:29 |
| 15 | w0087380.d | 1. | ~~1011013-05~~ | SOIL | ~~18 Nov 10 22:58~~ |
| 16 | w0087381.d | 1. | 1011013-06 | SOIL | 18 Nov 10 23:29 |
| 17 | w0087382.d | 1. | 1011013-07 | SOIL | 18 Nov 10 23:59 |
| 18 | w0087383.d | 1. | 1011013-08 | SOIL | 19 Nov 10 00:30 |
| 19 | w0087384.d | 1. | 1011013-14 | SOIL | 19 Nov 10 01:00 |
| 20 | w0087385.d | 1. | 1011013-15 | SOIL | 19 Nov 10 01:30 |
| 21 | w0087386.d | 1. | 1011013-17 | SOIL | 19 Nov 10 02:00 |
| 22 | w0087387.d | 1. | 1011013-18 | SOIL | 19 Nov 10 02:30 |
| 13 | w0087388.d | 1. | HEXANE | | 19 Nov 10 03:01 |
| 23 | w0087389.d | 1. | EVAL MIX | | 19 Nov 10 03:31 |
| 24 | w0087390.d | 1. | SEQ CCV3 PEST-4 1722 | STD 8081 | 19 Nov 10 04:01 |
| 25 | w0087391.d | 1. | 1011013-19 | SOIL | 19 Nov 10 04:31 |
| 26 | w0087392.d | 1. | 1011013-20 | SOIL | 19 Nov 10 05:02 |
| 27 | w0087393.d | 1. | 1011013-09 | SOIL | 19 Nov 10 05:32 |
| 28 | w0087394.d | 1. | 1011013-10 | SOIL | 19 Nov 10 06:02 |
| 29 | w0087395.d | 1. | 1011013-11 | SOIL | 19 Nov 10 06:32 |
| 30 | w0087396.d | 1. | 1011013-12 | SOIL | 19 Nov 10 07:03 |
| 31 | w0087397.d | 1. | 1011013-13 | SOIL | 19 Nov 10 07:33 |
| 32 | w0087398.d | 1. | 1011013-16 | SOIL | 19 Nov 10 08:03 |
| 33 | w0087399.d | 1. | 1011013-21 | SOIL | 19 Nov 10 08:33 |
| 13 | w0087400.d | 1. | HEXANE | | 19 Nov 10 09:03 |
| 34 | w0087401.d | 1. | SEQCCV4 PEST-4 1722 | STD8081 | 19 Nov 10 09:34 |

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| | W | | | | | |
| | W | RP 11/19/10 | | | | |
| | W | | | | | |
| | W | | | | | |

Comments:



*Supersedes GP_G_110*

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087367.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV1 | Injection Time: | 16:11 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD OK | L | 50.0 | 58.3 | 4532295 | 5281692 | | 16.5 OK | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 47.4 | 3481786 | 3301234 | | -5.2 | 20 |
| 4,4'-DDE | L | 50.0 | 52.6 | 6044270 | 6361820 | | 5.3 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 45.2 | 4508786 | 4077920 | | -9.6 | 20 |
| 4,4'-DDT | L | 50.0 | 46.6 | 5058761 | 4711846 | | -6.9 | 20 |
| 4,4'-DDT [2C] OK | L | 50.0 | 40.1 | 3338642 | 2679494 | | -19.7 OK | 20 |
| Aldrin | L | 50.0 | 51.2 | 7055918 | 7222730 | | 2.4 | 20 |
| Aldrin [2C] OK | L | 50.0 | 42.4 | 5325379 | 4521748 | | -15.1 OK | 20 |
| alpha-BHC | L | 50.0 | 51.9 | 7828278 | 8123704 | | 3.8 | 20 |
| alpha-BHC [2C] | L | 50.0 | 44.4 | 6158102 | 5474806 | | -11.1 | 20 |
| alpha-Chlordane | L | 50.0 | 51.3 | 6474838 | 6643830 | | 2.6 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 44.0 | 4667042 | 4102522 | | -12.1 | 20 |
| beta-BHC | L | 50.0 | 51.7 | 3094384 | 3202316 | | 3.5 | 20 |
| beta-BHC [2C] | L | 50.0 | 42.5 | 2663403 | 2264904 | | -15.0 | 20 |
| delta-BHC | L | 50.0 | 53.9 | 6809623 | 7336282 | | 7.7 | 20 |
| delta-BHC [2C] | L | 50.0 | 46.8 | 5337919 | 4997292 | | -6.4 | 20 |
| Dieldrin | L | 50.0 | 51.0 | 6784961 | 6918998 | | 2.0 | 20 |
| Dieldrin [2C] | L | 50.0 | 44.8 | 4874974 | 4364614 | | -10.5 | 20 |
| Endosulfan I | L | 50.0 | 50.8 | 6415020 | 6513296 | | 1.5 | 20 |
| Endosulfan I [2C] | L | 50.0 | 44.3 | 4559152 | 4035354 | | -11.5 | 20 |
| Endosulfan II | L | 50.0 | 51.8 | 5738262 | 5942494 | | 3.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 44.6 | 4003027 | 3566588 | | -10.9 | 20 |
| Endosulfan sulfate | L | 50.0 | 52.4 | 4824299 | 5053346 | | 4.7 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 45.5 | 3264486 | 2968364 | | -9.1 | 20 |
| Endrin | L | 50.0 | 52.3 | 5594840 | 5855560 | | 4.7 | 20 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087367.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV1 | Injection Time: | 16:11 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 44.5 | 4026595 | 3583432 | | -11.0 | 20 |
| Endrin Aldehyde | L | 50.0 | 53.2 | 3187705 | 3388826 | | 6.3 | 20 |
| Endrin Aldehyde [2C] OK | L | 50.0 | 42.2 | 2400751 | 2028386 | | -15.5 OK | 20 |
| Endrin ketone | L | 50.0 | 51.3 | 5747872 | 5902342 | | 2.7 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 44.8 | 3864954 | 3462594 | | -10.4 | 20 |
| gamma-BHC | L | 50.0 | 51.7 | 7302100 | 7544996 | | 3.3 | 20 |
| gamma-BHC [2C] | L | 50.0 | 44.9 | 5576326 | 5004318 | | -10.3 | 20 |
| gamma-Chlordane | L | 50.0 | 51.6 | 6649549 | 6861530 | | 3.2 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 44.1 | 4659791 | 4112196 | | -11.8 | 20 |
| Heptachlor | L | 50.0 | 50.9 | 7574990 | 7716932 | | 1.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 45.6 | 5094481 | 4643872 | | -8.8 | 20 |
| Heptachlor Epoxide | L | 50.0 | 51.4 | 6769654 | 6952364 | | 2.7 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 44.3 | 4853774 | 4301864 | | -11.4 | 20 |
| Methoxychlor | L | 50.0 | 47.5 | 2602677 | 2471686 | | -5.0 | 20 |
| Methoxychlor [2C] OK | L | 50.0 | 40.4 | 1694895 | 1367646 | | -19.3 OK | 20 |
| TCMX | L | 25.0 | 26.3 | 5256855 | 5522432 | | 5.0 | 20 |
| TCMX [2C] | L | 25.0 | 22.7 | 4187152 | 3806476 | | -9.1 | 20 |
| DCB | L | 25.0 | 25.4 | 4879149 | 4964940 | | 1.8 | 20 |
| DCB [2C] | L | 25.0 | 23.1 | 2879656 | 2660081 | | -7.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087379.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV2 | Injection Time: | 22:29 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4,4'-DDD | L | 50.0 | 68.1 | 4532295 | 6170126 | | 36.1 | 20 | * |
| 4,4'-DDD [2C] | L | 50.0 | 56.4 | 3481786 | 3924176 | | 12.7 | 20 | |
| 4,4'-DDE | L | 50.0 | 55.0 | 6044270 | 6644090 | | 9.9 | 20 | |
| 4,4'-DDE [2C] | L | 50.0 | 46.3 | 4508786 | 4171608 | | -7.5 | 20 | |
| 4,4'-DDT | L | 50.0 | 33.8 | 5058761 | 3421506 | | -32.4 | 20 | * |
| 4,4'-DDT [2C] | L | 50.0 | 28.6 | 3338642 | 1909440 | | -42.8 | 20 | * |
| Aldrin | L | 50.0 | 52.9 | 7055918 | 7459294 | | 5.7 | 20 | |
| Aldrin [2C] | L | 50.0 | 43.0 | 5325379 | 4579032 | | -14.0 | 20 | |
| alpha-BHC | L | 50.0 | 52.5 | 7828278 | 8224936 | | 5.1 | 20 | |
| alpha-BHC [2C] | L | 50.0 | 45.7 | 6158102 | 5624368 | | -8.7 | 20 | |
| alpha-Chlordane | L | 50.0 | 53.0 | 6474838 | 6858024 | | 5.9 | 20 | |
| alpha-Chlordane [2C] | L | 50.0 | 44.6 | 4667042 | 4163658 | | -10.8 | 20 | |
| beta-BHC | L | 50.0 | 54.3 | 3094384 | 3359560 | | 8.6 | 20 | |
| beta-BHC [2C] | L | 50.0 | 44.2 | 2663403 | 2357214 | | -11.5 | 20 | |
| delta-BHC | L | 50.0 | 56.4 | 6809623 | 7682084 | | 12.8 | 20 | |
| delta-BHC [2C] | L | 50.0 | 48.1 | 5337919 | 5139228 | | -3.7 | 20 | |
| Dieldrin | L | 50.0 | 51.7 | 6784961 | 7020388 | | 3.5 | 20 | |
| Dieldrin [2C] | L | 50.0 | 45.4 | 4874974 | 4429976 | | -9.1 | 20 | |
| Endosulfan I | L | 50.0 | 51.9 | 6415020 | 6659270 | | 3.8 | 20 | |
| Endosulfan I [2C] | L | 50.0 | 44.7 | 4559152 | 4071944 | | -10.7 | 20 | |
| Endosulfan II | L | 50.0 | 53.6 | 5738262 | 6148570 | | 7.2 | 20 | |
| Endosulfan II [2C] | L | 50.0 | 47.4 | 4003027 | 3794456 | | -5.2 | 20 | |
| Endosulfan sulfate | L | 50.0 | 55.1 | 4824299 | 5320614 | | 10.3 | 20 | |
| Endosulfan Sulfate [2C] | L | 50.0 | 46.8 | 3264486 | 3053886 | | -6.5 | 20 | |
| Endrin | L | 50.0 | 53.6 | 5594840 | 6000474 | | 7.3 | 20 | |

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-W | Calibration: | 0112301 |
| Lab File ID: | W0087379.D | Calibration Date: | 11/16/10 00:00 |
| Sequence: | S049007 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S049007-CCV2 | Injection Time: | 22:29 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Endrin [2C] | L | 50.0 | 45.2 | 4026595 | 3641390 | | -9.6 | 20 | |
| Endrin Aldehyde | L | 50.0 | 56.2 | 3187705 | 3581456 | | 12.4 | 20 | |
| Endrin Aldehyde [2C] | L | 50.0 | 43.6 | 2400751 | 2091638 | | -12.9 | 20 | |
| Endrin ketone | L | 50.0 | 52.7 | 5747872 | 6057498 | | 5.4 | 20 | |
| Endrin Ketone [2C] | L | 50.0 | 49.7 | 3864954 | 3840414 | | -0.6 | 20 | |
| gamma-BHC | L | 50.0 | 52.9 | 7302100 | 7723176 | | 5.8 | 20 | |
| gamma-BHC [2C] | L | 50.0 | 46.2 | 5576326 | 5150146 | | -7.6 | 20 | |
| gamma-Chlordane | L | 50.0 | 52.6 | 6649549 | 6989332 | | 5.1 | 20 | |
| gamma-Chlordane [2C] | L | 50.0 | 50.9 | 4659791 | 4742890 | | 1.8 | 20 | |
| Heptachlor | L | 50.0 | 50.3 | 7574990 | 7623986 | | 0.6 | 20 | |
| Heptachlor [2C] | L | 50.0 | 46.3 | 5094481 | 4721008 | | -7.3 | 20 | |
| Heptachlor Epoxide | L | 50.0 | 53.0 | 6769654 | 7169668 | | 5.9 | 20 | |
| Heptachlor Epoxide [2C] | L | 50.0 | 44.4 | 4853774 | 4309752 | | -11.2 | 20 | |
| Methoxychlor | L | 50.0 | 39.8 | 2602677 | 2070542 | | -20.4 | 20 | * |
| Methoxychlor [2C] | L | 50.0 | 32.8 | 1694895 | 1110141 | | -34.5 | 20 | * |
| TCMX | L | 25.0 | 26.1 | 5256855 | 5485180 | | 4.4 | 20 | |
| TCMX [2C] | L | 25.0 | 22.6 | 4187152 | 3781157 | | -9.7 | 20 | |
| DCB | L | 25.0 | 27.7 | 4879149 | 5408340 | | 10.8 | 20 | |
| DCB [2C] | L | 25.0 | 24.9 | 2879656 | 2867062 | | -0.4 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046105-BLK1 | Batch: | B046105 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-SO-018-1010 | 1011014-01 | W0087371.D | 18:27 |
| LCS | B046105-BS1 | W0087327.D | 16:16 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046105-BLK1 | File ID: | W0087326.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/17/10 14:40 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046105 | Sequence: | S047054 | Calibration: | 0112301 |
| Column: | 1 | | | | |

Instrument: GCECD-W

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 1.67 | U |
| 72-55-9 | 4,4'-DDE | 1.67 | U |
| 50-29-3 | 4,4'-DDT | 1.67 | U |
| 309-00-2 | Aldrin | 1.67 | U |
| 319-84-6 | alpha-BHC | 1.67 | U |
| 5103-71-9 | alpha-Chlordane | 1.67 | U |
| 319-85-7 | beta-BHC | 1.67 | U |
| 57-74-9 | Chlordane | 33.0 | U |
| 319-86-8 | delta-BHC | 1.67 | U |
| 60-57-1 | Dieldrin | 1.67 | U |
| 959-98-8 | Endosulfan I | 1.67 | U |
| 33213-65-9 | Endosulfan II | 1.67 | U |
| 1031-07-8 | Endosulfan sulfate | 1.67 | U |
| 72-20-8 | Endrin | 1.67 | U |
| 7421-93-4 | Endrin Aldehyde | 1.67 | U |
| 53494-70-5 | Endrin ketone | 1.67 | U |
| 58-89-9 | gamma-BHC | 1.67 | U |
| 5103-74-2 | gamma-Chlordane | 1.67 | U |
| 76-44-8 | Heptachlor | 1.67 | U |
| 1024-57-3 | Heptachlor Epoxide | 1.67 | U |
| 72-43-5 | Methoxychlor | 1.67 | U |
| 8001-35-2 | Toxaphene | 33.0 | U |
| 143-50-0 | Kepone | 1.67 | U |
| 143-50-0 | Kepone [2C] | 1.67 | U |
| 2385-85-5 | Mirex | 1.67 | U |
| 2385-85-5 | Mirex [2C] | 1.67 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046105-BLK1 | File ID: | W0087326.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/17/10 14:40 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046105 | Sequence: | S047054 | Calibration: | 0112301 |
| Column: | 2 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD [2C] | 1.67 | U |
| 72-55-9 | 4,4'-DDE [2C] | 1.67 | U |
| 50-29-3 | 4,4'-DDT [2C] | 1.67 | U |
| 309-00-2 | Aldrin [2C] | 1.67 | U |
| 319-84-6 | alpha-BHC [2C] | 1.67 | U |
| 5103-71-9 | alpha-Chlordane [2C] | 1.67 | U |
| 319-85-7 | beta-BHC [2C] | 1.67 | U |
| 57-74-9 | Chlordane [2C] | 33.0 | U |
| 319-86-8 | delta-BHC [2C] | 1.67 | U |
| 60-57-1 | Dieldrin [2C] | 1.67 | U |
| 959-98-8 | Endosulfan I [2C] | 1.67 | U |
| 33213-65-9 | Endosulfan II [2C] | 1.67 | U |
| 1031-07-8 | Endosulfan Sulfate [2C] | 1.67 | U |
| 72-20-8 | Endrin [2C] | 1.67 | U |
| 7421-93-4 | Endrin Aldehyde [2C] | 1.67 | U |
| 53494-70-5 | Endrin Ketone [2C] | 1.67 | U |
| 58-89-9 | gamma-BHC [2C] | 1.67 | U |
| 5103-74-2 | gamma-Chlordane [2C] | 1.67 | U |
| 76-44-8 | Heptachlor [2C] | 1.67 | U |
| 1024-57-3 | Heptachlor Epoxide [2C] | 1.67 | U |
| 72-43-5 | Methoxychlor [2C] | 1.67 | U |
| 8001-35-2 | Toxaphene [2C] | 33.0 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046105 | Laboratory ID: | B046105-BS1 |
| Column: | 1 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 16.7 | 18.4 | 111 | 30 - 135 |
| 4,4'-DDE | 16.7 | 17.4 | 104 | 70 - 125 |
| 4,4'-DDT | 16.7 | 17.0 | 102 | 45 - 140 |
| Aldrin | 16.7 | 17.4 | 104 | 45 - 140 |
| alpha-BHC | 16.7 | 17.6 | 106 | 60 - 125 |
| alpha-Chlordane | 16.7 | 17.1 | 102 | 65 - 120 |
| beta-BHC | 16.7 | 16.9 | 101 | 60 - 125 |
| delta-BHC | 16.7 | 16.9 | 101 | 55 - 130 |
| Dieldrin | 16.7 | 16.9 | 101 | 65 - 125 |
| Endosulfan I | 16.7 | 16.9 | 101 | 15 - 135 |
| Endosulfan II | 16.7 | 17.1 | 103 | 35 - 140 |
| Endosulfan sulfate | 16.7 | 17.1 | 103 | 60 - 135 |
| Endrin | 16.7 | 17.7 | 106 | 60 - 135 |
| Endrin Aldehyde | 16.7 | 18.9 | 114 | 35 - 145 |
| Endrin ketone | 16.7 | 16.9 | 101 | 65 - 135 |
| gamma-BHC | 16.7 | 17.4 | 104 | 60 - 125 |
| gamma-Chlordane | 16.7 | 17.0 | 102 | 65 - 125 |
| Heptachlor | 16.7 | 17.3 | 104 | 50 - 140 |
| Heptachlor Epoxide | 16.7 | 17.2 | 103 | 65 - 130 |
| Methoxychlor | 16.7 | 16.8 | 101 | 55 - 145 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046105 | Laboratory ID: | B046105-BS1 |
| Column: | 2 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD [2C] | 16.7 | 15.1 | 90 | 30 - 135 |
| 4,4'-DDE [2C] | 16.7 | 15.1 | 91 | 70 - 125 |
| 4,4'-DDT [2C] | 16.7 | 14.7 | 88 | 45 - 140 |
| Aldrin [2C] | 16.7 | 14.5 | 87 | 45 - 140 |
| alpha-BHC [2C] | 16.7 | 15.1 | 91 | 60 - 125 |
| alpha-Chlordane [2C] | 16.7 | 14.7 | 88 | 65 - 120 |
| beta-BHC [2C] | 16.7 | 14.5 | 87 | 60 - 125 |
| delta-BHC [2C] | 16.7 | 14.9 | 89 | 55 - 130 |
| Dieldrin [2C] | 16.7 | 15.0 | 90 | 65 - 125 |
| Endosulfan I [2C] | 16.7 | 14.7 | 88 | 15 - 135 |
| Endosulfan II [2C] | 16.7 | 14.7 | 88 | 35 - 140 |
| Endosulfan Sulfate [2C] | 16.7 | 14.7 | 88 | 60 - 135 |
| Endrin [2C] | 16.7 | 15.2 | 91 | 60 - 135 |
| Endrin Aldehyde [2C] | 16.7 | 15.3 | 92 | 35 - 145 |
| Endrin Ketone [2C] | 16.7 | 14.9 | 89 | 65 - 135 |
| gamma-BHC [2C] | 16.7 | 15.4 | 93 | 60 - 125 |
| gamma-Chlordane [2C] | 16.7 | 14.8 | 89 | 65 - 125 |
| Heptachlor [2C] | 16.7 | 16.5 | 99 | 50 - 140 |
| Heptachlor Epoxide [2C] | 16.7 | 14.8 | 89 | 65 - 130 |
| Methoxychlor [2C] | 16.7 | 14.4 | 86 | 55 - 145 |

# SURROGATE SUMMARY SHEET

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCECD-W |

| | DCB [2C] (55 - 130) | DCB (55 - 130) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| 1011014-01 | 64 | 61 | 51* | 68* |
| B046105-BLK1 | 103 | 114 | 100 | * |
| B046105-BS1 | 100 | 110 | 94 | 106 |

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081A

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | 1011014-01 | File ID: | W0087371.D |
| Sampled: | 11/02/10 11:40 | Prepared: | 11/10/10 15:46 | Analyzed: | 11/18/10 18:27 |
| Solids: | 86.50 | Preparation: | 3550B Sonic. | Instrument: | GCECD-W |
| Batch: | B046105 | Sequence: | S049007 | | |

GC Column(1): GC Column(2):

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D | RPD |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | * | 1 | 13.4 | 13.41 | 0.01 | 12920760 | 0.825 | 49.7 | 39.8% |
| 4,4'-DDE | | 2 | 15.27 | 15.28 | 0.01 | 6459408 | 0.551 | 49.7 | |
| 4,4'-DDT | * | 1 | 16.15 | 16.17 | 0.02 | 21008540 | 1.60 | 73.2 | 53.5% |
| 4,4'-DDT | | 2 | 18.04 | 18.04 | 0 | 24022100 | 2.77 | 73.4 | |
| TCMX | * | 1 | 6.41 | 6.394 | 0.016 | 71699610 | 5.26 | 34.8 | |
| TCMX | | 2 | 7.27 | 7.25 | 0.02 | 42387860 | 3.90 | 34.9 | |
| DCB | * | 1 | 21.34 | 21.356 | 0.016 | 60015910 | 4.74 | 3.59 | |
| DCB | | 2 | 23.76 | 23.77 | 0.01 | 36672360 | 4.91 | 3.49 | |

* Column used for quantitation

CENTAURI LABS™

Analysis performed by Centauri Labs

# SW8082

## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: JK Date: 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | ~~180~~ / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 18-300-7 |
| Final Temp(oC): | 200 / 275 / 300 / |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 110a10u-m Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 110a10 | U | | | | | |
| ↓ | U | | | | | |
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**Injection Log** CAL

Directory: h:\gcdata\u\110910

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | u0324425.d | 1. | SEQ CCV 1AR1242-3 | STD | 9 Nov 10 15:14 |
| 2 | u0324426.d | 1. | AR1660 LE-3 2 116 | STD 8082 | 9 Nov 10 15:59 |
| 3 | u0324427.d | 1. | AR2154 LE-3 2 129 | STD 8082 | 9 Nov 10 16:31 |
| 4 | u0324428.d | 1. | AR1248 LE-3 2 112 | STD 8082 | 9 Nov 10 17:04 |
| 5 | u0324429.d | 1. | AR1232 LE-3 2 130 | STD 8082 | 9 Nov 10 17:36 |
| 6 | u0324430.d | 1. | AR1242 LE-5 2 122 | STD 8082 | 9 Nov 10 18:08 |
| 7 | u0324431.d | 1. | AR1242 LE-4 2 123 | STD 8082 | 9 Nov 10 18:40 |
| 8 | u0324432.d | 1. | AR1242 LE-3 2 124 | STD 8082 | 9 Nov 10 19:12 |
| 9 | u0324433.d | 1. | AR1242 LE-2 2 125 | STD 8082 | 9 Nov 10 19:44 |
| 10 | u0324434.d | 1. | AR1242 LE-1 2 126 | STD 8082 | 9 Nov 10 20:16 |
| 11 | u0324435.d | 1. | AR1242 LE-3 ICV2 4 6 | STD 8082 | 9 Nov 10 20:48 |

RP 11/16/10

Comments: 5046049 111107 - ICAL

# INITIAL CALIBRATION STANDARDS

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046049 | Instrument: | GCECD-U |
| Calibration: | 0111107 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002118 | AR1660 LE-3 | S046049-CAL9 | U0324426.D | 11/09/10 15:59 |
| 0002136 | AR2154 LE-3 | S046049-CAL8 | U0324427.D | 11/09/10 16:31 |
| 0002112 | AR1248 LE-3 | S046049-CAL7 | U0324428.D | 11/09/10 17:04 |
| 0002130 | AR1232 LE-3 | S046049-CAL6 | U0324429.D | 11/09/10 17:36 |
| 0002122 | AR1242 LE-5 | S046049-CAL5 | U0324430.D | 11/09/10 18:08 |
| 0002123 | AR1242 LE-4 | S046049-CAL4 | U0324431.D | 11/09/10 18:40 |
| 0002124 | AR1242 LE-3 | S046049-CAL3 | U0324432.D | 11/09/10 19:12 |
| 0002125 | AR1242 LE-2 | S046049-CAL2 | U0324433.D | 11/09/10 19:44 |
| 0002126 | AR1242 LE-1 | S046049-CAL1 | U0324434.D | 11/09/10 20:16 |
| 0002148 | AR1242 LE-3 ICV(ACCU) | S046049-SCV1 | U0324435.D | 11/09/10 20:48 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111107 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 3:59:30PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| PCB-1016 | | | | | 20 | |
| PCB-1016 [2C] | | | | | 20 | |
| PCB-1221 | | | | | 20 | |
| PCB-1221 [2C] | | | | | 20 | |
| PCB-1232 | | | | | 20 | |
| PCB-1232 [2C] | | | | | 20 | |
| PCB-1242 | 171589.2 | 3.47812 | | | 20 | |
| PCB-1242 [2C] | 93341.45 | 7.601439 | | | 20 | |
| PCB-1248 | | | | | 20 | |
| PCB-1248 [2C] | | | | | 20 | |
| PCB-1254 | | | | | 20 | |
| PCB-1254 [2C] | | | | | 20 | |
| PCB-1260 | | | | | 20 | |
| PCB-1260 [2C] | | | | | 20 | |
| TCMX | 1.640339E+07 | 6.750665 | | | 20 | |
| TCMX [2C] | 6591016 | 5.579828 | | | 20 | |
| DCB | 1.803116E+07 | 8.485352 | | | 20 | |
| DCB [2C] | 5214881 | 12.84059 | | | 20 | |

# INITIAL CALIBRATION DATA

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111107 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 3:59:30PM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| PCB-1016 | 314787 | | | | | |
| PCB-1016 [2C] | 107697.3 | | | | | |
| PCB-1221 | | 197625.4 | | | | |
| PCB-1221 [2C] | | 79770.24 | | | | |
| PCB-1232 | | | | 91681.24 | | |
| PCB-1232 [2C] | | | | 43622.74 | | |
| PCB-1242 | | | | | 161892.2 | 175646.4 |
| PCB-1242 [2C] | | | | | 83675.01 | 88695.32 |
| PCB-1248 | | | 230049.4 | | | |
| PCB-1248 [2C] | | | 119263.5 | | | |
| PCB-1254 | | 687906.2 | | | | |
| PCB-1254 [2C] | | 227642.2 | | | | |
| PCB-1260 | ~~1104338~~ | | | | | |
| PCB-1260 [2C] | ~~320310~~ | | | | | |
| TCMX | ~~1.504915E+07~~ | ~~1.56086E+07~~ | ~~1.61545E+07~~ | ~~1.310008E+07~~ | 1.654164E+07 | 1.690341E+07 |
| TCMX [2C] | ~~5761428~~ | ~~5916512~~ | ~~6452680~~ | ~~5180952~~ | 6087738 | 6394011 |
| DCB | ~~1.263843E+07~~ | ~~1.351067E+07~~ | ~~1.524092E+07~~ | ~~1.347876E+07~~ | 1.618943E+07 | 1.690179E+07 |
| DCB [2C] | ~~3885587~~ | ~~3911015~~ | ~~4607108~~ | ~~4144532~~ | 4344458 | 5045760 |

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# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111107 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 3:59:30PM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| PCB-1016 | | | | | | |
| PCB-1016 [2C] | | | | | | |
| PCB-1221 | | | | | | |
| PCB-1221 [2C] | | | | | | |
| PCB-1232 | | | | | | |
| PCB-1232 [2C] | | | | | | |
| PCB-1242 | 175475.4 | 175235.4 | 169696.7 | | | |
| PCB-1242 [2C] | 94694.08 | 100339.4 | 99303.43 | | | |
| PCB-1248 | | | | | | |
| PCB-1248 [2C] | | | | | | |
| PCB-1254 | | | | | | |
| PCB-1254 [2C] | | | | | | |
| PCB-1260 | | | | | | |
| PCB-1260 [2C] | | | | | | |
| TCMX | 1.753514E+07 | 1.6464E+07 | 1.457278E+07 | | | |
| TCMX [2C] | 6853892 | 7014836 | 6604606 | | | |
| DCB | 1.889464E+07 | 1.815504E+07 | 2.001492E+07 | | | |
| DCB [2C] | 4930416 | 5718907 | 6034864 | | | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324435.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S046049 | Injection Date: | 11/09/10 |
| Lab Sample ID: | S046049-SCV1 | Injection Time: | 20:48 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 514 | 171589.2 | 175499 | | 2.3 | 20 |
| PCB-1242 [2C] | A | 500 | 533 | 93341.45 | 99374.44 | | 6.5 | 20 |
| TCMX | A | 25.0 | 27.8 | 1.640339E+07 | 1.824154E+07 | | 11.2 | 20 |
| TCMX [2C] | A | 25.0 | 27.1 | 6591016 | 7150932 | | 8.5 | 20 |
| DCB | A | 25.0 | 26.3 | 1.803116E+07 | 1.896397E+07 | | 5.2 | 20 |
| DCB [2C] | A | 25.0 | 26.4 | 5214881 | 5516664 | | 5.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: _____ Date: 11/17/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | ~~180~~ / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 15-300-7 |
| Final Temp(oC): | ~~200~~ / 275 / 300 / |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 110910u.m Analyst: RP

Directory: h:\gcdata\u\111210

**Injection Log**

| Seq. | Vial | File ID | Multiplier | GPL ID | Misc Info | Injected | Comments |
|---|---|---|---|---|---|---|---|
| 111210 | U | | | | | | |
| | U | | | | | | |
| | U | | | | | | |
| | U | 1 u0324454.d | 1. | SEQ CCV 1AR1242-3 2124 | STD | 12 Nov 10 08:38 | |
| | | 2 u0324455.d | 1. | B046108-BLK1 | BLK,S | 12 Nov 10 09:27 | |
| | U | 3 u0324456.d | 1. | B046108-BS1 | BS,S | 12 Nov 10 09:59 | |
| | | 4 u0324457.d | 1. | 1011008-01 | SOIL | 12 Nov 10 10:31 | |
| | | 5 u0324458.d | 1. | 1011008-02 | SOIL | 12 Nov 10 11:03 | |
| | U | 6 u0324459.d | 1. | B046108-MS1 | SOIL MS 02 | 12 Nov 10 11:35 | |
| | | 7 u0324460.d | 1. | B046108-MSD1 | SOIL MSD 02 | 12 Nov 10 12:07 | |
| | | 8 u0324461.d | 1. | 1011013-21 | SOIL | 12 Nov 10 12:40 | |
| | U | 9 u0324462.d | 1. | 1011014-01 | SOIL | 12 Nov 10 13:12 | |
| | | 10 u0324463.d | 1. | B046150-BLK1 | BLK,S | 12 Nov 10 13:44 | |
| | U | 11 u0324464.d | 1. | B046150-BS1 | BKS,S | 12 Nov 10 14:16 | |
| | | 12 u0324465.d | 1. | SEQ CCV2 AR1242-3 2124 | STD 8082 | 12 Nov 10 14:48 | |
| | U | 13 u0324466.d | 1. | 1011013-01 | SOIL | 12 Nov 10 15:20 | |
| | | 14 u0324467.d | 1. | B046150-MS1 | SOIL MS 01 | 12 Nov 10 15:52 | |
| | | 15 u0324468.d | 1. | B046150-MSD1 | SOIL MSD 01 | 12 Nov 10 16:24 | |
| | U | 16 u0324469.d | 1. | 1011013-02 | SOIL | 12 Nov 10 16:57 | |
| | | 17 u0324470.d | 1. | 1011013-03 | SOIL | 12 Nov 10 17:29 | |
| | | 18 u0324471.d | 1. | 1011013-04 | SOIL | 12 Nov 10 18:01 | |
| | U | 19 u0324472.d | 1. | 1011013-05 | SOIL | 12 Nov 10 18:33 | |
| | | 20 u0324473.d | 1. | 1011013-06 | SOIL | 12 Nov 10 19:05 | |
| | | 21 u0324474.d | 1. | 1011013-07 | SOIL | 12 Nov 10 19:37 | |
| | U | 22 u0324475.d | 1. | 1011013-08 | SOIL | 12 Nov 10 20:09 | |
| | | 23 u0324476.d | 1. | HEXANE | | 12 Nov 10 20:41 | |
| | | 24 u0324477.d | 1. | SEQ CCV3 AR1242-3 2124 | STD 8082 | 12 Nov 10 21:13 | |
| | U | 25 u0324478.d | 1. | 1011013-09 | SOIL | 12 Nov 10 21:46 | |
| | | 26 u0324479.d | 1. | 1011013-10 | SOIL | 12 Nov 10 22:18 | |
| | | 27 u0324480.d | 1. | 1011013-11 | SOIL | 12 Nov 10 22:50 | |
| | U | 28 u0324481.d | 1. | 1011013-12 | SOIL | 12 Nov 10 23:22 | |
| | | 29 u0324482.d | 1. | 1011013-13 | SOIL | 12 Nov 10 23:54 | |
| | | 30 u0324483.d | 1. | 1011013-14 | SOIL | 13 Nov 10 00:26 | |
| | U | 31 u0324484.d | 1. | 1011013-15 | SOIL | 13 Nov 10 00:58 | |
| | | 32 u0324485.d | 1. | 1011013-16 | SOIL | 13 Nov 10 01:30 | |
| | | 33 u0324486.d | 1. | 1011013-17 | SOIL | 13 Nov 10 02:03 | |
| | U | 34 u0324487.d | 1. | 1011013-18 | SOIL | 13 Nov 10 02:35 | |
| | | 23 u0324488.d | 1. | HEXANE | | 13 Nov 10 03:07 | |
| | | 35 u0324489.d | 1. | SEQ CCV4 AR1242-3 2124 | STD 8082 | 13 Nov 10 03:39 | |
| | U | 36 u0324490.d | 1. | 1011013-19 4 Run | SOIL | 13 Nov 10 04:11 | |
| | | 37 u0324491.d | 1. | 1011013-20 | SOIL | 13 Nov 10 04:43 | |
| | U | 23 u0324492.d | 1. | HEXANE | SOIL | 13 Nov 10 05:15 | |
| | | 38 u0324493.d | 1. | SEQ CCV4 AR1242-3 2124 | STD 8082 | 13 Nov 10 05:47 | |
| | U | | | | | | |
| | U | | | RP 11/18/10 | | | |

Comments: 504052

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324454.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047052 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047052-CCV1 | Injection Time: | 08:38 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 493 | 171589.2 | 166384.1 | | -3.0 | 20 |
| PCB-1242 [2C] | A | 500 | 477 | 93341.45 | 88916.52 | | -4.7 | 20 |
| TCMX | A | 25.0 | 24.5 | 1.640339E+07 | 1.607285E+07 | | -2.0 | 20 |
| TCMX [2C] | A | 25.0 | 23.5 | 6591016 | 6187984 | | -6.1 | 20 |
| DCB | A | 25.0 | 20.8 | 1.803116E+07 | 1.499109E+07 | | -16.9 | 20 |
| DCB [2C] | A | 25.0 | 20.4 | 5214881 | 4257348 | | -18.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324465.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047052 | Injection Date: | 11/12/10 |
| Lab Sample ID: | S047052-CCV2 | Injection Time: | 14:48 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 487 | 171589.2 | 169025 | | -1.5 | 20 |
| PCB-1242 [2C] | A | 500 | 471 | 93341.45 | 87734.66 | | -6.0 | 20 |
| TCMX | A | 25.0 | 24.8 | 1.640339E+07 | 1.629995E+07 | | -0.6 | 20 |
| TCMX [2C] | A | 25.0 | 23.6 | 6591016 | 6225044 | | -5.6 | 20 |
| DCB | A | 25.0 | 20.9 | 1.803116E+07 | 1.510427E+07 | | -16.2 | 20 |
| DCB [2C] | A | 25.0 | 20.2 | 5214881 | 4220460 | | -19.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046108-BLK1 | Batch: | B046108 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B046108-MSD1 | U0324460.D | 12:07 |
| Matrix Spike | B046108-MS1 | U0324459.D | 11:35 |
| LCS | B046108-BS1 | U0324456.D | 09:59 |
| GKHMS-SO-018-1010 | 1011014-01 | U0324462.D | 13:12 |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011014 | |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS | |
| Matrix: | Solid | Laboratory ID: | B046108-BLK1 | File ID: | U0324455.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/12/10 09:27 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046108 | Sequence: | S047052 | Calibration: | 0111107 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 33.3 | U |
| 11104-28-2 | PCB-1221 | 33.3 | U |
| 11141-16-5 | PCB-1232 | 33.3 | U |
| 53469-21-9 | PCB-1242 | 33.3 | U |
| 12672-29-6 | PCB-1248 | 33.3 | U |
| 11097-69-1 | PCB-1254 | 33.3 | U |
| 11096-82-5 | PCB-1260 | 33.3 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Solid | Laboratory ID: | B046108-BLK1 | File ID: | U0324455.D |
| Sampled: | | Prepared: | 11/10/10 11:40 | Analyzed: | 11/12/10 09:27 |
| Solids: | | Preparation: | 3550B Sonic. | Dilution: | |
| Batch: | B046108 | Sequence: | S047052 | Calibration: | 0111107 |
| Column: | 2 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/Kg wet) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 [2C] | 33.3 | U |
| 11104-28-2 | PCB-1221 [2C] | 33.3 | U |
| 11141-16-5 | PCB-1232 [2C] | 33.3 | U |
| 53469-21-9 | PCB-1242 [2C] | 33.3 | U |
| 12672-29-6 | PCB-1248 [2C] | 33.3 | U |
| 11097-69-1 | PCB-1254 [2C] | 33.3 | U |
| 11096-82-5 | PCB-1260 [2C] | 33.3 | U |

CENTAURI LABS ™

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046108 | Laboratory ID: | B046108-BS1 |
| Column: | 1 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 | 167 | 163 | 98 | 40 - 140 |

7210 Corporate Court, Frederick, MD 21703 P:(240) 575-1150 F: (301) 620-07[illegible]
www.centaurilabs.com

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Preparation: | 3550B Sonic. |
| Batch: | B046108 | Laboratory ID: | B046108-BS1 |
| Column: | 2 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 [2C] | 167 | 156 | 94 | 40 - 140 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8082 |
| Batch: | B046108 | Preparation: | 3550B Sonic. |
| % Solids: | 91.00 | Laboratory ID: | B046108-MS1 |
| Column: | 1 | Sample Lab ID: | 1011008-02 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| PCB-1242 | 183 | | 181 | 99 | 40 - 140 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 | 183 | 198 | 108 | 9 | 30 | 40 - 140 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Analysis: | SW8082 |
| Batch: | B046108 | Preparation: | 3550B Sonic. |
| % Solids: | 91.00 | Laboratory ID: | B046108-MS1 |
| Column: | 2 | Sample Lab ID: | 1011008-02 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| PCB-1242 [2C] | 183 | | 158 | 86 | 40 - 140 |

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| PCB-1242 [2C] | 183 | 232 | 127 | 38 | * | 30 | 40 - 140 |

CENTAURI LABS™

# SURROGATE SUMMARY SHEET

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011014 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Solid | Instrument: | GCECD-U |

| | DCB [2C] (60 - 125) | DCB (60 - 125) | TCMX [2C] (70 - 125) | TCMX (70 - 125) |
|---|---|---|---|---|
| 1011014-01 | 78 | 74 | 86 | 80 |
| B046108-BLK1 | 87 | 82 | 84 | 87 |
| B046108-BS1 | 66 | 68 | 69* | 78 |
| B046108-MS1 | 69 | 59* | 66* | 66* |
| B046108-MSD1 | 97 | 77 | 82 | 84 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: February 14, 2011**

**FROM:** **MEGAN CARSON** **COPIES:** **DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – Mercury**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – 1011014**

**SAMPLES:** 1/Soil/
GKHMS-SO-018-1010-111910

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011014, consists of one (1) soil environmental samples. This SDG contained no field duplicate pairs.

The sample was analyzed for Mercury. The sample was collected by Tetra Tech NUS on November 2nd, 2010 and analyzed by Centuri Laboratories and submitted/amended by Chemtech under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Mercury analyses were conducted using SW-846 method 7471B.

These data were evaluated based on the following parameters:

- Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
* • Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Control Sample Recoveries
* • ICP Serial Dilution Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

**MERCURY:**

All sample results were within quality control limits.

Notes:

The ending -111910 was added to all samples to distinguish the IDs from mercury samples with the same IDs reported by Empirical Labs (SDG CTOKWJM16-003).

The data package that was submitted from Centuri Laboratories was missing all the quality control data. Chemtech was able to recover the data and submit a data package which included quality control criteria.

Executive Summary

**Laboratory Performance:** None.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

| | | |
|---|---|---|
| A | = | Lab Blank Contamination |
| B | = | Field Blank Contamination |
| C | = | Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.) |
| C01 | = | GC/MS Tuning Noncompliance |
| D | = | MS/MSD Recovery Noncompliance |
| E | = | LCS/LCSD Recovery Noncompliance |
| F | = | Lab Duplicate Imprecision |
| G | = | Field Duplicate Imprecision |
| H | = | Holding Time Exceedance |
| I | = | ICP Serial Dilution Noncompliance |
| J | = | GFAA PDS - GFAA MSA's $r < 0.995$ |
| K | = | ICP Interference - includes ICS % R Noncompliance |
| L | = | Instrument Calibration Range Exceedance |
| M | = | Sample Preservation Noncompliance |
| N | = | Internal Standard Noncompliance |
| N01 | = | Internal Standard Recovery Noncompliance Dioxins |
| N02 | = | Recovery Standard Noncompliance Dioxins |
| N03 | = | Clean-up Standard Noncompliance Dioxins |
| O | = | Poor Instrument Performance (e.g. base-line drifting) |
| P | = | Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics) |
| Q | = | Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.) |
| R | = | Surrogates Recovery Noncompliance |
| S | = | Pesticide/PCB Resolution |
| T | = | % Breakdown Noncompliance for DDT and Endrin |
| U | = | % Difference between columns/detectors >25% for positive results determined via GC/HPLC |
| V | = | Non-linear calibrations; correlation coefficient $r < 0.995$ |
| W | = | EMPC result |
| X | = | Signal to noise response drop |
| Y | = | Percent solids <30% |
| Z | = | Uncertainty at 2 sigma deviation is greater than sample activity |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-018-1010-111910 | | |
|---|---|---|---|---|
| SDG: 1011014 | LAB_ID | 1011014-01 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | |
| | UNITS | MG/KG | | |
| | PCT_SOLIDS | 86.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| MERCURY | | 0.0134 | J | P |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-SO-018-1010
Sample Date/Time: 11/02/10 11:40
Analytical Method: SW7471B

Sample Matrix: Solid
Sample ID: 1011014-01
Percent solids:
Preparation Method: 7471B Dig
Prepared Date/Time: 11/18/10 12:00

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0134 | J | 0.00276 | 0.0364 | 1 | mg/Kg dry | 11/19/10 9:08 |

# APPENDIX C

## SUPPORT DOCUMENTATION

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-9

WO# 1011014

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8260B** | GKHMS-SO018 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO018 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| 1. Relinquished By: **Gary Braganza** | Date: 11/03/2010 | Time: 15:14 | Received By: **Federal Express** | Date: 11/03/2010 | Time: 16:14 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: 11/4/10 | Time: 12:50 pm |

Comments:

**SAMPLE RECIEPT**

One solid sample was received on 11/04/2010. The sample arrived by Fed Ex. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/02/2010.

**8260**

One soil samples was analyzed for volatile organic compounds by the SW846 Method 8260B..
The sample was analyzed within the holding time.

All surrogate recoveries and internal standard responses were within the QC limits.

A matrix spike and matrix spike duplicate were performed on a sample from a separate Tetra Tech workorder. Fifteen analytes were outside QC limits in the MS and sixteen in the MSD. The % RPD for six compounds was above the QC limits for the pair.

In batch B048008, recovery of two compounds in the LCS were above the QC limits. Because no compounds were detected above the reporting limit in the associated client sample, there is no effect on the results reported.
Recovery of four compounds in the LCS was below QC limits. Because none of the compounds were detected above the method detection limit in the associated client sample, there is no effect on the results reported.

In sequence S048008, the response for four compounds was above QC limits and two compounds were below the QC limits in the daily CCV.
The compounds were not detected above the method detection limit in the associated client sample.

All of the remaining QC was within QC limits.

**SW8270LL-PAH SIM**

One soil sample was extracted by method 3550B. The sample extract was analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
Samples GKHMS-SO-018-1010 had one surrogate recovery above the QC limits. All other surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were shared with work order 1011008. Six spike recoveries were

above the QC limits.
A laboratory control sample was extracted and analyzed with this batch. Four spike recoveries were above the QC limits.

**PCBs**

One soil sample was extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead, a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

**PESTICIDES**

Two water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. All recoveries were within the QC limits.
Some of the CCV responses for 4,4-DDT were below QC limits. Because that analyte was found in the sample GKHMS-SO-018-1010, the data may be biased low.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011014

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.
Several compounds had their average response factor updated for the calibration curve after the quant reports had been printed. None of the affected compounds were detected above the MDL in the sample in this SDG. A corrected Form 7 is provided.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

PCBs

The complete original PCB data package is provided.
Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Mercury

Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director 2/4/2011
Chemtech

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-9

WO# 1011014

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Centauri Labs**<br>**7210 Corporate Court**<br>**Fredrick, MD 21703** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Chino Ortiz**<br>**301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8260B** | GKHMS-SO018 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO018 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/03/2010 | 15:14 | **Federal Express** | 11/03/2010 | 16:14 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| | | | | | |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| | | | | 11/4/10 | 12:50 pm |

Comments:

HOLD TIME

**SDG** 1011014

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/18/2010 | 11/19/2010 | 16 | 1 | 17 |
| M | MG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/08/2010 | 11/08/2010 | 6 | 0 | 6 |
| PCS | | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/08/2010 | 11/09/2010 | 6 | 1 | 7 |
| OV | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/15/2010 | 11/15/2010 | 13 | 0 | 13 |
| SIM | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| PCB | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/10/2010 | 11/12/2010 | 8 | 2 | 10 |
| PEST | UG/KG | GKHMS-SO-018-1010 | 1011014-01 | NM | 11/02/2010 | 11/10/2010 | 11/18/2010 | 8 | 8 | 16 |

## Metals
- 10 -
## METHOD DETECTION LIMITS

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

| Analyte | Wave- length (nm) | MDL ug/L | CRQL ug/L | Date: |
|---|---|---|---|---|
| Mercury | 253.70 | 0.0114 | 0.2000 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Method:** CV

**Case No.:** _____ **SAS No.:** _____

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(g) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047065 | | | | | | |
| B047065B1 | PBS1 | MB | SOIL | | 0.60 | 100.0 | 100.00 |
| B047065-BS1 | LCSS1 | LCS | SOIL | | 0.60 | 100.0 | 100.00 |
| 1011013-21 | GKHMS-SO-FD001-1010 | SAM | SOIL | | 0.61 | 100.0 | 80.00 |
| 1011013-21S | GKHMS-SO-FD001-1010S | MS | SOIL | | 0.63 | 100.0 | 80.00 |
| 1011013-21SD | GKHMS-SO-FD001-1010SD | MSD | SOIL | | 0.63 | 100.0 | 80.00 |
| 1011014-01 | GKHMS-SO-018-1010 | SAM | SOIL | | 0.63 | 100.0 | 86.00 |

# Metals
## - 3b -
## PREPARATION BLANK SUMMARY

**Client:** **SDG No.:** Chemtech MD

**Instrument:** CV5

| Sample ID | Analyte | Result (mg/Kg) | Acceptance Limit | Conc Qual | MDL mg/Kg | CRQL mg/Kg | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **B047064B1** | | **SOIL** | | **Batch Number:** | **B047064** | | | **Prep Date:** | | |
| | Mercury | 0.005 | <0.030 | U | 0.005 | 0.030 | CV | 11/19/2010 | 09:29 | HG101119 |
| **B047065B1** | | **SOIL** | | **Batch Number:** | **B047065** | | | **Prep Date:** | | |
| | Mercury | 0.005 | <0.030 | U | 0.005 | 0.030 | CV | 11/19/2010 | 08:54 | HG101119 |

# Metals
## - 5a -
## MATRIX SPIKE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-21 **Client ID:** GKHMS-SO-FD001-1010S

**Percent Solids for Sample:** 80.00 **Spiked ID:** 1011013-21S **Percent Solids for Spike Sample:** 80.00

| Analyte | Units | Acceptance Limit %R | Spiked Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | 75 - 125 | 0.6031 | | 0.0188 | U | 0.80 | 75.4 | | CV |

## Metals
- 5a -
## MATRIX SPIKE DUPLICATE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-21 **Client ID:** GKHMS-SO-FD001-1010SD

**Percent Solids for Sample:** 80.00 **Spiked ID:** 1011013-21SD **Percent Solids for Spike Sample:** 80.00

| Analyte | Units | Acceptance Limit %R | MSD Result | C | Sample Result | C | Spike Added | % Recovery | Qual | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | 75 - 125 | 0.6081 | | 0.0188 | U | 0.79 | 77.0 | | CV |

## Metals
- 6 -
### DUPLICATE SAMPLE SUMMARY

**Client:** _____ **Level:** LOW **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Matrix:** SOIL **Sample ID:** 1011013-21S **Client ID:** GKHMS-SO-FD001-1010SD

**Percent Solids for Sample:** 80.00 **Duplicate ID:** 1011013-21SD **Percent Solids for Duplicate:** 80.00

| Analyte | Units | Acceptance Limit | Sample Result | C | Duplicate Result | C | RPD | Qual | M |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/Kg | | 0.6031 | | 0.6081 | | 0.8 | | CV |

## Metals

- 7 -

## LABORATORY CONTROL SAMPLE SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Aqueous LCS Source:** **Solid LCS Source:** PLASMA-PURE

| Sample ID | Analyte | Units | True Value | Result | C | % Recovery | Acceptance Limits | M |
|---|---|---|---|---|---|---|---|---|
| B047065-BS1 | | | | | | | | |
| | Mercury | mg/Kg | 0.500 | 0.517 | | 103.4 | 80.0 - 120.0 | CV |

# Metals
## 14
## ANALYSIS RUN LOG

Client: _____ Contract: _____

Lab Code: CHEM Case No.: _____ SAS No.: _____ SDG No.: Chemtech MD

Instrument ID Number: CV5 Method: CV Run Number: HG101119

Start Date: 11/19/2010 End Date: 11/19/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| SEQ-CAL1 | 1.00 | 0816 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| SEQ-CAL2 | 1.00 | 0819 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| SEQ-CAL3 | 1.00 | 0822 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| SEQ-CAL4 | 1.00 | 0825 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| SEQ-CAL5 | 1.00 | 0828 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| SEQ-CAL6 | 1.00 | 0831 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICV01 | 1.00 | 0839 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ICB01 | 1.00 | 0843 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CRI01 | 1.00 | 0846 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV01 | 1.00 | 0849 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB01 | 1.00 | 0851 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| PBS1 | 1.00 | 0854 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| LCSS1 | 1.00 | 0857 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-FD001-1010 | 1.00 | 0900 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-FD001-1010 | 1.00 | 0903 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-FD001-1010 | 1.00 | 0905 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-018-1010 | 1.00 | 0908 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| ZZZZZZ | 1.00 | 0911 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 0914 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 0917 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 0920 | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV02 | 1.00 | 0923 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB02 | 1.00 | 0926 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| PBS1 | 1.00 | 0929 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| LCSS1 | 1.00 | 0931 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-001-1010 | 1.00 | 0934 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-001-1010S | 1.00 | 0937 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-001-1010SD | 1.00 | 0940 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-002-1010 | 1.00 | 0943 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-003-1010 | 1.00 | 0946 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-005-1010 | 1.00 | 0949 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-007-1010 | 1.00 | 0952 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-011-1010 | 1.00 | 0955 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCV03 | 1.00 | 0958 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| CCB03 | 1.00 | 1001 | | | | | | | | | | | | | | | | X | | | | | | | | | |
| GKHMS-SO-012-1010 | 1.00 | 1004 | | | | | | | | | | | | | | | | X | | | | | | | | | |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICV01** | Mercury | 29.80 | 30.000 | 99.3 | 90.0 - 110.0 | CV | 11/19/2010 | 08:39 | HG101119 |
| **CCV01** | Mercury | 50.50 | 50.000 | 101.0 | 90.0 - 110.0 | CV | 11/19/2010 | 08:49 | HG101119 |
| **CCV02** | Mercury | 45.30 | 50.000 | 90.6 | 90.0 - 110.0 | CV | 11/19/2010 | 09:23 | HG101119 |
| **CCV03** | Mercury | 50.50 | 50.000 | 101.0 | 90.0 - 110.0 | CV | 11/19/2010 | 09:58 | HG101119 |
| **CCV04** | Mercury | 51.40 | 50.000 | 102.8 | 90.0 - 110.0 | CV | 11/19/2010 | 10:34 | HG101119 |
| **CCV05** | Mercury | 50.70 | 50.000 | 101.4 | 90.0 - 110.0 | CV | 11/19/2010 | 10:51 | HG101119 |

# Metals

## - 2b -

## CRDL STANDARD FOR AA & ICP

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

**AA CRDL Standard Source:** PLASMA-PURE

**ICP CRDL Standard Source:** _____

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Advisory Limits (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CRI01** | | | | | | | | | |
| | Mercury | 2.20 | 2.0 | 110.0 | 70 - 130 | CV | 11/19/20 | 08:46 | HG101119 |

# Metals

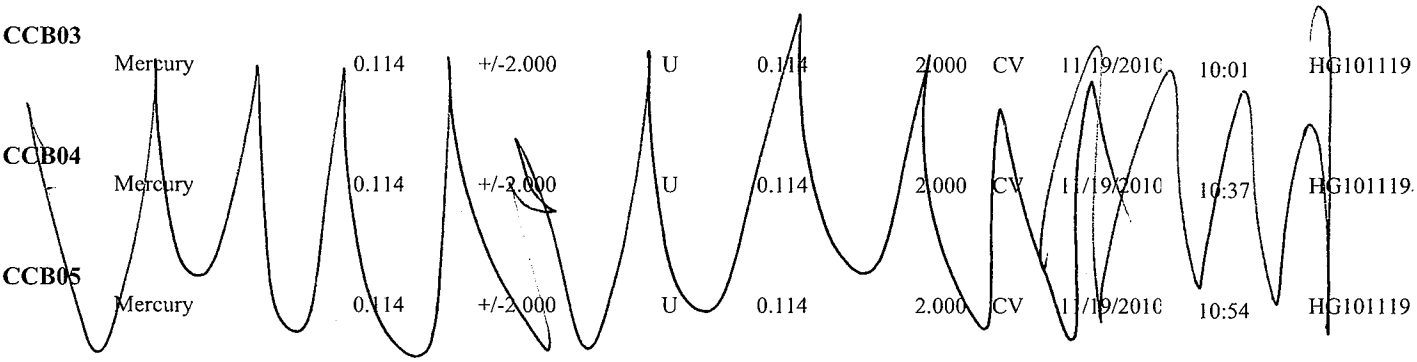
## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** _____ **SDG No.:** Chemtech MD

**Contract:** _____ **Lab Code:** CHEM **Case No.:** _____ **SAS No.:** _____

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | MDL | CRQL | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **ICB01** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 08:43 | HG101119 |
| **CCB01** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 08:51 | HG101119 |
| **CCB02** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 09:26 | HG101119 |
| **CCB03** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 10:01 | HG101119 |
| **CCB04** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 10:37 | HG101119 |
| **CCB05** | Mercury | 0.114 | +/-2.000 | U | 0.114 | 2.000 | CV | 11/19/2010 | 10:54 | HG101119 |



**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **A. COGNETTI** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION: VOC/PAH/PEST/PCB**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) - 1011015**

**SAMPLES:** 4/Aqueous/VOC

GKHMS-GW-06-1010 GKHMS-GW-09-1010 GKHMS-GW-10-1010
GKHMS-TB-04

3/Aqueous/PAH/PEST/PCB

GKHMS-GW-06-1010 GKHMS-GW-09-1010 GKHMS-GW-10-1010

## OVERVIEW

The sample set for NAS Key West, CTO JM16, SDG 1011015 consisted of three (3) aqueous environmental samples and one (1) aqueous trip blank analyzed for volatile organic compounds (VOCs). The environmental samples were also analyzed for polynuclear aromatic hydrocarbons (PAHs), pesticides (PEST) and polychlorinated biphenyls (PCBs). No field duplicate pairs were included in this SDG.

The samples were collected by TetraTech NUS on November 4, 2010 and analyzed by Centauri Laboratories. All analyses were conducted using USEPA SW-846 Methods 8260B, 8270C SIM, 8082 and 8081 analytical and reporting protocols.

The sample data in this SDG were validated with regard to the following list of parameters.

| | |
|---|---|
| | • Data Completeness |
| * | • Holding Times |
| * | • GC/MS Tuning |
| | • Initial and Continuing Calibration |
| * | • Laboratory Blank Analyses |
| * | • Surrogate Recoveries |
| | • Blank Spike/Blank Spike Duplicate Results |
| * | • Matrix Spike/Matrix Spike Duplicate Results |
| * | • Internal Standard Recoveries |
| * | • Compound Identification |
| * | • Detection Limits |

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

## VOC

Discrepancies in the initial calibration mean Response Factor (RF) and RF Relative Standard Deviation (RSD) data were noted by Tetra Tech data validators for the same calibration on November 11, 2010 on instrument

GCMS-B. The discrepancy was brought to the attention of the laboratory. Because the laboratory which provided the analysis closed, Chem Tech, the company that purchased Centauri Laboratories, examined the data. Chem Tech provided the raw data for the initial calibration. The raw data will be used in this SDG for validation purposes. The initial calibration relative response factors (RRF) for several compounds were less than the 0.05 quality control limit on November 11, 2010 on instrument GCMS-B. The compounds were bromomethane, methyl acetate, acetone, acrylonitrile, acetonitrile, propionitirile, methacrylonitrile, isobutanol and 2-butanone. The nondetected results of the aforementioned analytes were qualified as rejected (UR).

The initial calibration relative percent deviation (RSD) was greater than the 15% quality control limit for several target compounds on November 11, 2010 on instrument GCMS-B. The target compounds were chloromethane, vinyl chloride, bromomethane, chloroethane, methylene chloride, acetone, carbon tetrachloride and trans-1,3-dichloropropene. The nondetected results of the aforementioned target compounds were qualified as estimated (UJ).

The continuing calibration RRF for 1,2-dibromo-3-chloropropane, acetone and bromomethane were less than the 0.05 quality control limit on November 13, 2010 @ 10:25 on instrument GCMS-B. The nondetected 1,2-dibromo-3-chloropropane, acetone and bromomethane results in the affected samples were qualified as rejected (UR).

The continuing calibration percent differences (%Ds) for several target compounds were greater than the 20% quality control limit on November 13, 2010 @ 10:25. The target compounds were 1,2-dibromo-3-chloropropane, 2,2-dichloropropane, acetonitrile, acrylonitrile, bromoform, chloromethane, cis-1,3-dichloropropene, ethyl methacrylate, isobutyl alcohol, methacrylonitrile, methyl acetate, methyl tert-butyl ether, methylene chloride and propionitrile. The nondetected results of the aforementioned target compounds were qualified as estimated (UJ).

The laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) percent recoveries (%Rs) of methylene chloride were less than the lower quality control limit in batch B047068. The nondetected methylene chloride results were qualified as estimated (UJ).

**PAH**

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. Because the laboratory which provided the analysis closed, Chem Tech, the company that purchased Centauri Laboratories, provided the data. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The retention time and response factor for 1-methylnaphthalene are very similar to 2-methylnaphthalene. The positive and nondetected 1-methylnaphthalene results were qualified as estimated (J) and (UJ). The nondetected 1-methylnaphthalene results were reported to the reporting limit. The other PAHs in the original package were reported to the method detection limit.

**PEST**

The positive hexachlorobenzene results in samples GKHMS-GW-06-1010 and GKHMS-GW-10-1010 were not confirmed on a second column. The positive hexachlorobenzene results were qualified as rejected (R).

**ADDITIONAL COMMENTS**

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. Chem Tech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several

target compounds identified in the SAP were not reported by the laboratory. Also, the continuing calibration data for pesticides chlordane and toxaphene were missing and all quality control data was not received for the PCB fraction. The following tables outline the discrepancies between the compounds reported/not reported by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC- 8260B |
| 1-methylnaphthalene | PAH- 8270C |
| Aroclor-1262 | PCB- 8082 |
| Aroclor-1268 | PCB- 8082 |

The laboratory was contacted in regards to the compounds listed in the table above. None of the above compounds were calibrated in the associated analytical methods. 1,4-Dioxane in the VOC fraction was searched for as a Tentatively Identified Compound in Method 8260B but the laboratory did not detect 1,4-dioxane. 1,4-Dioxane, Aroclor 1262 and Arcolor 1268 were excluded from the data base due to a lack of instrument calibration.

Naphthalene was reported in both the VOC and PAH fractions in this SDG.

Hexachlorobenzene is listed on the target SVOC analyte list but was analyzed in this SDG in the PEST fraction.

| Compounds Reported by the Lab not listed in the SAP in the Pesticide Fraction |
|---|
| Chlordane |
| Kepone |
| mirex |

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |
| 1,2,3-trichloropropane |
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Isobutanol |
| Methacrylonitrile |
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

The LCS %R and the relative percent difference (RPD) for acetone was greater than the upper quality control limit in batch B047068. No action was taken on the nondeteceted acetone result.

The LCS %Rs of methyl acetate and vinyl acetate were less than the lower quality control limit in batch B047068. The LCSD %Rs and the RPDs were within quality control limits for methyl acetate and vinyl acetate. No action was taken on the nondetected methyl acetate and vinyl acetate results.

The matrix spike/ matrix spike duplicate (MS/MSD) %Rs of benzo(a)pyrene and benzo(b)fluoranthene were greater than the upper quality control limit in sample GKHMS-GW-10-1010. No action was taken on the nondetected benzo(a)pyrene and benzo(b)fluoranthene results in sample GKHMS-GW-10-1010.

The LCS associated with batch B048003 had %Rs of several PAHs greater than the upper quality control limit. The PAHs were benzo(a)pyrene, benzo(fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. No action was taken on the nondetected results of the aforementioned PAHs in the affected samples.

Nondetected results were reported to the method detection limit (MDL).

TO: S. Stotler-Hardy
FROM: A. Cognetti
SDG: 1011015
DATE: February 15, 2011



**EXECUTIVE SUMMARY**

**Laboratory Performance Issues:** VOC initial and continuing calibration relative response factors, %RSDs or %Ds noncompliances resulted in the rejection or qualification of data. The LCS/LCSD %Rs of methylene chloride were less than the lower quality control limit. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The positive hexachlorobenzene results in samples GKHMS-GW-06-1010 and GKHMS-GW-10-1010 were not confirmed on a second column.

**Other factors affecting data quality:** The closing of Centauri Laboratories affected the ability of the data validator to obtain missing data.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October 1999) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-06-1010 | | | G01-MW-09-1010 | | | G01-MW-10-1010 | | | GKHMS-TB-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011015 | LAB_ID | 1011015-01 | | | 1011015-02 | | | 1011015-03 | | | 1011015-04 | | |
| FRACTION: OV | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | 1 | U | | 1 | U | | 1 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | 1.25 | U | | 1.25 | U | | 1.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | 1.65 | U | | 1.65 | U | | 1.65 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | 2.4 | U | | 2.4 | U | | 2.4 | U | | 0.48 | U | |
| 1,1-DICHLOROETHANE | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | 1.4 | U | | 1.4 | U | | 1.4 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | 2.45 | U | | 2.45 | U | | 2.45 | U | | 0.49 | U | |
| 1,2,3-TRICHLOROPROPANE | 1.8 | U | | 1.8 | U | | 1.8 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | 2.4 | U | | 2.4 | U | | 2.4 | U | | 0.48 | U | |
| 1,2,4-TRIMETHYLBENZENE | 2.15 | U | | 2.15 | U | | 2.15 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 2.95 | UR | C | 2.95 | UR | C | 2.95 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | 1.05 | U | | 1.05 | U | | 1.05 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | 1.5 | U | | 1.5 | U | | 1.5 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | 2.55 | UJ | C | 2.55 | UJ | C | 2.55 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | 0.95 | U | | 0.95 | U | | 0.95 | U | | 0.19 | U | |
| 1,3,5-TRIMETHYLBENZENE | 2.25 | U | | 2.25 | U | | 2.25 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | 2.2 | U | | 2.2 | U | | 2.2 | U | | 0.44 | U | |
| 1,3-DICHLOROPROPANE | 1.15 | U | | 1.15 | U | | 1.15 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| 2,2-DICHLOROPROPANE | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| 2-BUTANONE | 1.75 | UR | C | 1.75 | UR | C | 1.75 | UR | C | 0.35 | UR | C |
| 2-CHLOROTOLUENE | 1.9 | U | | 1.9 | U | | 1.9 | U | | 0.38 | U | |
| 2-HEXANONE | 1.55 | U | | 1.55 | U | | 1.55 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | 2 | U | | 2 | U | | 2 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | 2.75 | U | | 2.75 | U | | 2.75 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | 1.15 | U | | 1.15 | U | | 1.15 | U | | 0.23 | U | |
| ACETONE | 4 | UR | C | 4 | UR | C | 4 | UR | C | 0.8 | UR | C |
| ACETONITRILE | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| ACRYLONITRILE | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| BENZENE | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | 1.55 | U | | 1.55 | U | | 1.55 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | 0.95 | UJ | C | 0.95 | UJ | C | 0.95 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-06-1010 | | | G01-MW-09-1010 | | | G01-MW-10-1010 | | | GKHMS-TB-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011015 | LAB_ID | 1011015-01 | | | 1011015-02 | | | 1011015-03 | | | 1011015-04 | | |
| FRACTION: OV | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |
| BROMOMETHANE | | 1.95 | UR | C | 1.95 | UR | C | 1.95 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | | 1.3 | UJ | C | 1.3 | UJ | C | 1.3 | UJ | C | 0.26 | UJ | C |
| CHLOROBENZENE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | | 1.3 | U | | 1.3 | U | | 1.3 | U | | 0.26 | U | |
| CHLOROETHANE | | 1.15 | UJ | C | 1.15 | UJ | C | 1.15 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.18 | U | |
| CHLOROMETHANE | | 3.95 | UJ | C | 3.95 | UJ | C | 3.95 | UJ | C | 0.79 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 1 | U | | 1 | U | | 1 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| DIBROMOMETHANE | | 1.3 | UJ | C | 1.3 | UJ | C | 1.3 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 2.1 | U | | 2.1 | U | | 2.1 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 1.4 | U | | 1.4 | U | | 1.4 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | | 2.9 | UJ | C | 2.9 | UJ | C | 2.9 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| ISOPROPYLBENZENE | | 1.85 | U | | 1.85 | U | | 1.85 | U | | 0.37 | U | |
| M+P-XYLENES | | 3.35 | U | | 3.35 | U | | 3.35 | U | | 0.67 | U | |
| METHACRYLONITRILE | | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| METHYL ACETATE | | 1.35 | UR | C | 1.35 | UR | C | 1.35 | UR | C | 0.27 | UR | C |
| METHYL CYCLOHEXANE | | 2.15 | U | | 2.15 | U | | 2.15 | U | | 0.43 | U | |
| METHYL IODIDE | | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| METHYL METHACRYLATE | | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| METHYL TERT-BUTYL ETHER | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | | 0.85 | UJ | CE | 0.85 | UJ | CE | 0.85 | UJ | CE | 0.17 | UJ | CE |
| NAPHTHALENE | | 2.7 | U | | 2.7 | U | | 2.7 | U | | 0.54 | U | |
| N-BUTYLBENZENE | | 2.7 | UJ | C | 2.7 | UJ | C | 2.7 | UJ | C | 0.54 | UJ | C |
| N-PROPYLBENZENE | | 2.2 | U | | 2.2 | U | | 2.2 | U | | 0.44 | U | |
| O-XYLENE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | U | |
| PROPIONITRILE | | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| SEC-BUTYLBENZENE | | 2.5 | U | | 2.5 | U | | 2.5 | U | | 0.5 | U | |
| STYRENE | | 1.8 | U | | 1.8 | U | | 1.8 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | | 2.1 | U | | 2.1 | U | | 2.1 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-06-1010 | | | G01-MW-09-1010 | | | G01-MW-10-1010 | | | GKHMS-TB-04 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011015 | LAB_ID | 1011015-01 | | | 1011015-02 | | | 1011015-03 | | | 1011015-04 | | |
| FRACTION: OV | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 1.9 | U | | 1.9 | U | | 1.9 | U | | 0.38 | U | |
| TOLUENE | | 1.35 | U | | 1.35 | U | | 1.35 | U | | 0.27 | U | |
| TRANS-1,2-DICHLOROETHENE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 1.1 | UJ | C | 1.1 | UJ | C | 1.1 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 1.5 | UJ | C | 1.5 | UJ | C | 1.5 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 1.75 | U | | 1.75 | U | | 1.75 | U | | 0.35 | U | |
| VINYL ACETATE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | U | |
| VINYL CHLORIDE | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-06-1010 | | | | | | G01-MW-09-1010 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011015 | LAB_ID | 1011015-01 | | | | | | 1011015-02 | | | | | |
| FRACTION: PAH | SAMP_DATE | 11/4/2010 | | | | | | 11/4/2010 | | | | | |
| MEDIA: WATER | QC_TYPE | NM | | | | | | NM | | | | | |
| | UNITS | UG/L | | | | | | UG/L | | | | | |
| | PCT_SOLIDS | | | | 0.0 | | | | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.05 | UJ | Q | | | | 4.5 | J | Q | | | |
| 2-METHYLNAPHTHALENE | | | | | 0.0932 | | | | | | 0.613 | | |
| ACENAPHTHENE | | | | | 3.68 | | | | | | 1.98 | | |
| ACENAPHTHYLENE | | | | | 0.444 | | | | | | 0.156 | | |
| ANTHRACENE | | | | | 0.729 | | | | | | 0.0961 | | |
| BENZO(A)ANTHRACENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(A)PYRENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| CHRYSENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| FLUORANTHENE | | | | | 0.0894 | | | | | | 0.0167 | U | |
| FLUORENE | | | | | 2.1 | | | | | | 0.487 | | |
| INDENO(1,2,3-CD)PYRENE | | | | | 0.0167 | U | | | | | 0.0167 | U | |
| NAPHTHALENE | | | | | 0.428 | | | | | | 2.9 | | |
| PHENANTHRENE | | | | | 0.927 | | | | | | 0.25 | | |
| PYRENE | | | | | 0.187 | | | | | | 0.0528 | | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-10-1010 | | | | | |
|---|---|---|---|---|---|---|---|
| SDG: 1011015 | LAB_ID | 1011015-03 | | | | | |
| FRACTION: PAH | SAMP_DATE | 11/4/2010 | | | | | |
| MEDIA: WATER | QC_TYPE | NM | | | | | |
| | UNITS | UG/L | | | | | |
| | PCT_SOLIDS | | | | 0.0 | | |
| | DUP_OF | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1-METHYLNAPHTHALENE | | 0.12 | J | Q | | | |
| 2-METHYLNAPHTHALENE | | | | | 0.0205 | J | P |
| ACENAPHTHENE | | | | | 0.228 | | |
| ACENAPHTHYLENE | | | | | 0.0324 | J | P |
| ANTHRACENE | | | | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | | | | | 0.0167 | U | |
| BENZO(A)PYRENE | | | | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | | | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | | | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | | | | 0.0167 | U | |
| CHRYSENE | | | | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | | | | 0.0167 | U | |
| FLUORANTHENE | | | | | 0.0167 | U | |
| FLUORENE | | | | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | | | | | 0.0167 | U | |
| NAPHTHALENE | | | | | 0.338 | | |
| PHENANTHRENE | | | | | 0.0167 | U | |
| PYRENE | | | | | 0.0167 | U | |

| PROJ_NO: 02607<br>SDG: 1011015<br>FRACTION: PEST/PCB<br>MEDIA: WATER | NSAMPLE | G01-MW-06-1010 | | | G01-MW-09-1010 | | | G01-MW-10-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1011015-01 | | | 1011015-02 | | | 1011015-03 | | |
| | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| 4,4'-DDE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| 4,4'-DDT | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| ALDRIN | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| ALPHA-BHC | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| ALPHA-CHLORDANE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| AROCLOR-1016 | | 0.094 | U | | 0.094 | U | | 0.094 | U | |
| AROCLOR-1221 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1232 | | 0.18 | U | | 0.18 | U | | 0.18 | U | |
| AROCLOR-1242 | | 0.35 | U | | 0.35 | U | | 0.35 | U | |
| AROCLOR-1248 | | 0.13 | U | | 0.13 | U | | 0.13 | U | |
| AROCLOR-1254 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1260 | | 0.058 | U | | 0.058 | U | | 0.058 | U | |
| BETA-BHC | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| CHLORDANE | | 0.017 | U | | 0.017 | U | | 0.017 | U | |
| DELTA-BHC | | 0.003 | U | | 0.003 | U | | 0.003 | U | |
| DIELDRIN | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN I | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDOSULFAN II | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN SULFATE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| ENDRIN ALDEHYDE | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| ENDRIN KETONE | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| GAMMA-BHC (LINDANE) | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| GAMMA-CHLORDANE | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| HEPTACHLOR | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| HEPTACHLOR EPOXIDE | | 0.004 | U | | 0.004 | U | | 0.004 | U | |
| HEXACHLOROBENZENE | | 0.424 | R | U | 0.01 | U | | 1.03 | R | U |
| KEPONE | | 0.015 | U | | 0.015 | U | | 0.015 | U | |
| METHOXYCHLOR | | 0.007 | U | | 0.007 | U | | 0.007 | U | |
| MIREX | | 0.015 | U | | 0.015 | U | | 0.015 | U | |
| TOXAPHENE | | 0.017 | U | | 0.017 | U | | 0.017 | U | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 12:24

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 12:24 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 12:24 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 12:24 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 12:24 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 12:24 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 12:24 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 12:24 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 12:24

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 12:24 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 12:24 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 12:24 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 12:24

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 12:24 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:24 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 96 % | 70-120 | 1 | 11/13/10 12:24 |
| 4-Bromofluorobenzene | 460-00-4 | 95 % | 75-120 | 1 | 11/13/10 12:24 |
| Dibromofluoromethane | 1868-53-7 | 98 % | 85-115 | 1 | 11/13/10 12:24 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-120 | 1 | 11/13/10 12:24 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 12:51

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 12:51 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 12:51 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 12:51 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 12:51 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 12:51 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 12:51 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 12:51 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 12:51

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 12:51 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 12:51 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 12:51 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 12:51

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 12:51 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 12:51 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99 % | 70-120 | 1 | 11/13/10 12:51 |
| 4-Bromofluorobenzene | 460-00-4 | 92 % | 75-120 | 1 | 11/13/10 12:51 |
| Dibromofluoromethane | 1868-53-7 | 100 % | 85-115 | 1 | 11/13/10 12:51 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/13/10 12:51 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 13:18

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 13:18 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 13:18 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 13:18 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 13:18 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 13:18 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 13:18 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 13:18 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 13:18

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 13:18 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 13:18 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 13:18 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 13:18

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 13:18 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 13:18 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 99 % | 70-120 | 1 | 11/13/10 13:18 |
| 4-Bromofluorobenzene | 460-00-4 | 95 % | 75-120 | 1 | 11/13/10 13:18 |
| Dibromofluoromethane | 1868-53-7 | 101 % | 85-115 | 1 | 11/13/10 13:18 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/13/10 13:18 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-04
Sample Date/Time: 11/04/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 13:44

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/13/10 13:44 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/13/10 13:44 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/13/10 13:44 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/13/10 13:44 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/13/10 13:44 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 13:44 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/13/10 13:44 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-04
Sample Date/Time: 11/04/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 13:44

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/13/10 13:44 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/13/10 13:44 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/13/10 13:44 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-04
Sample Date/Time: 11/04/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011015-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 13:44

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/13/10 13:44 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 13:44 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100 % | 70-120 | 1 | 11/13/10 13:44 |
| 4-Bromofluorobenzene | 460-00-4 | 94 % | 75-120 | 1 | 11/13/10 13:44 |
| Dibromofluoromethane | 1868-53-7 | 100 % | 85-115 | 1 | 11/13/10 13:44 |
| Toluene-d8 | 2037-26-5 | 99 % | 85-120 | 1 | 11/13/10 13:44 |

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1011015 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 11/5/2010 11:03:00AM |
| Date Received: | 11/5/2010 9:40:00AM | Logged In By: | Chino Ortiz |
| Received By: | Travis Roelke | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

| | |
|---|---|
| Shipping Container in good condition? | Y |
| Custody seals present on shipping container? | N |
| Condition: | |
| Chain-of-Custody present? | Y |
| COC agrees with sample labels? | Y |
| COC signed? | Y |
| Packing present in shipping container? | Y |
| Custody seals present on sample bottles? | Y |
| Condition: | |
| Samples intact? | Y |
| Sufficient volume for requested tests? | Y |
| Preservation confirmed? | Y |
| Are there Volatiles samples present? | N |
| Has Zero Headspace? | N/A |
| Total number of bottles: | |
| Total number of samples: | 4 |

Comments:

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-006-1010

Sample Date/Time: 11/04/10 13:45

File ID: B02890363.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011015-01

Percent solids: N/A

Preparation Method: EPA 5030B

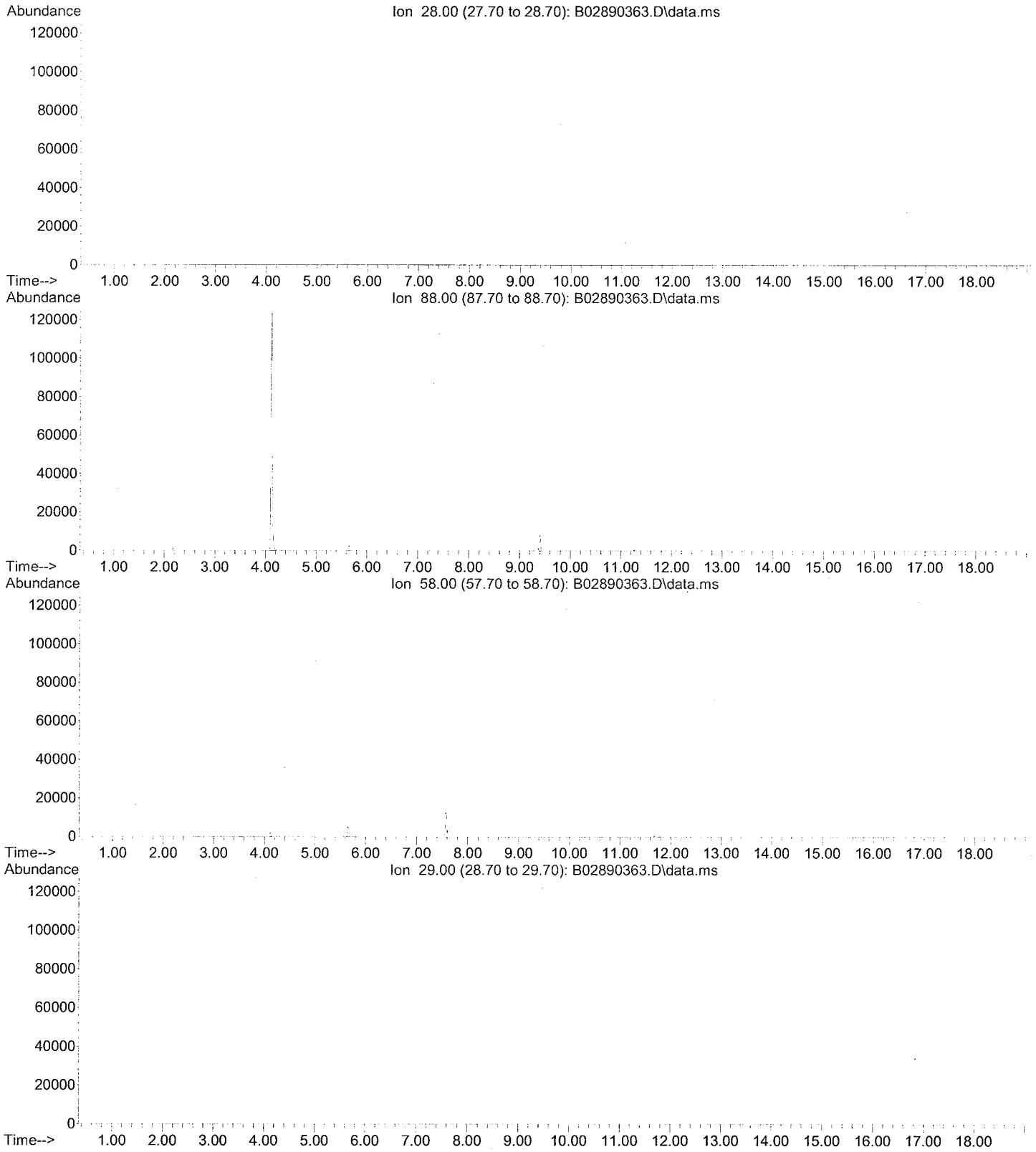
Prepared Date/Time: 11/13/10 12:24

Analyzed Date/Time: 11/13/10 12:24

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890363.D
Operator : MP
Acquired : 13 Nov 2010 12:24 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011015-01
Misc Info : TETRA TECH, WATER
Vial Number: 6



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-09-1010

Sample Date/Time: 11/04/10 12:25

File ID: B02890364.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011015-02

Percent solids: N/A

Preparation Method: EPA 5030B

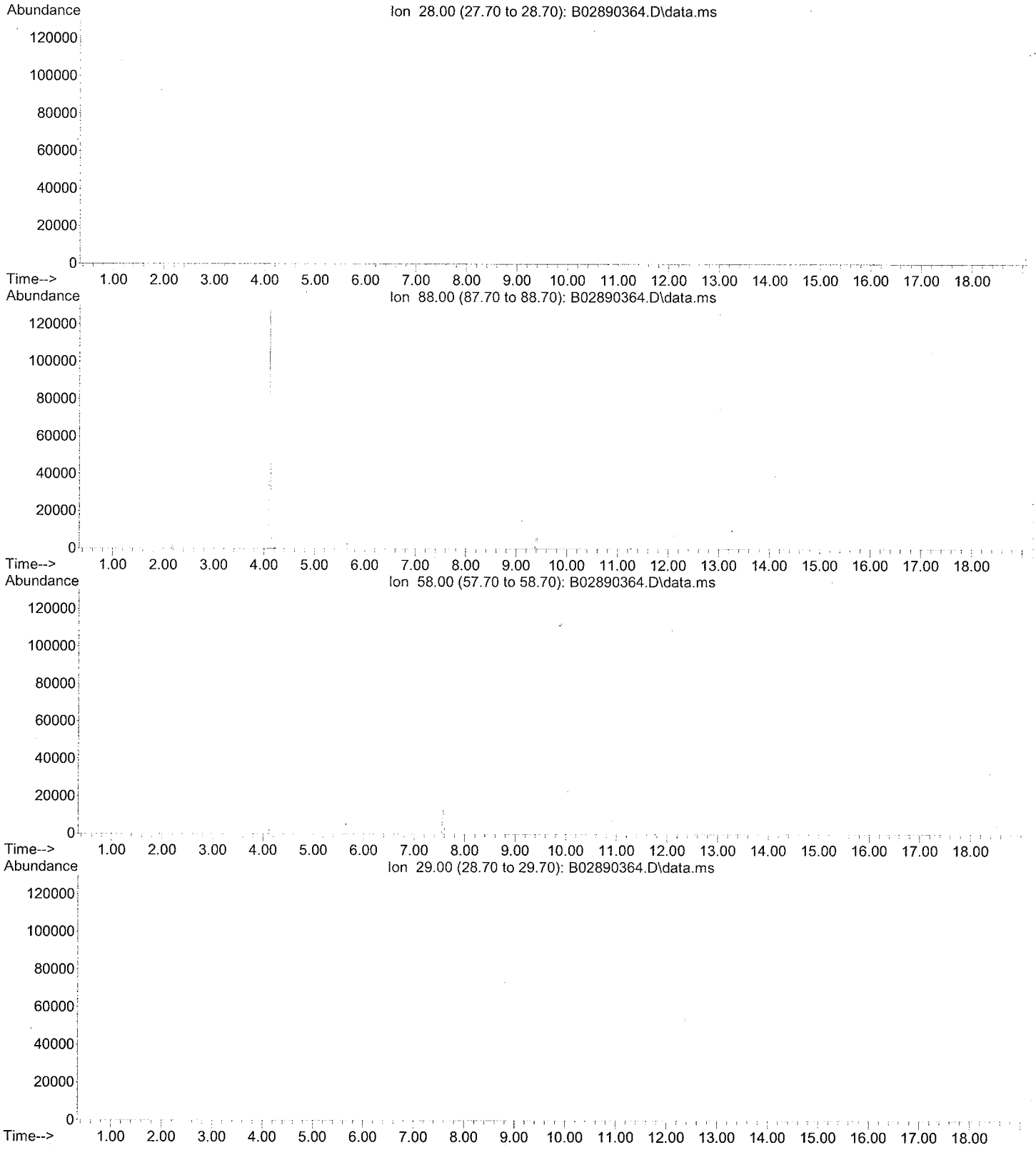
Prepared Date/Time: 11/13/10 12:51

Analyzed Date/Time: 11/13/10 12:51

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890364.D
Operator : MP
Acquired : 13 Nov 2010 12:51 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011015-02
Misc Info : TETRA TECH, WATER
Vial Number: 7



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-10-1010

Sample Date/Time: 11/04/10 11:10

File ID: B02890365.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011015-03

Percent solids: N/A

Preparation Method: EPA 5030B

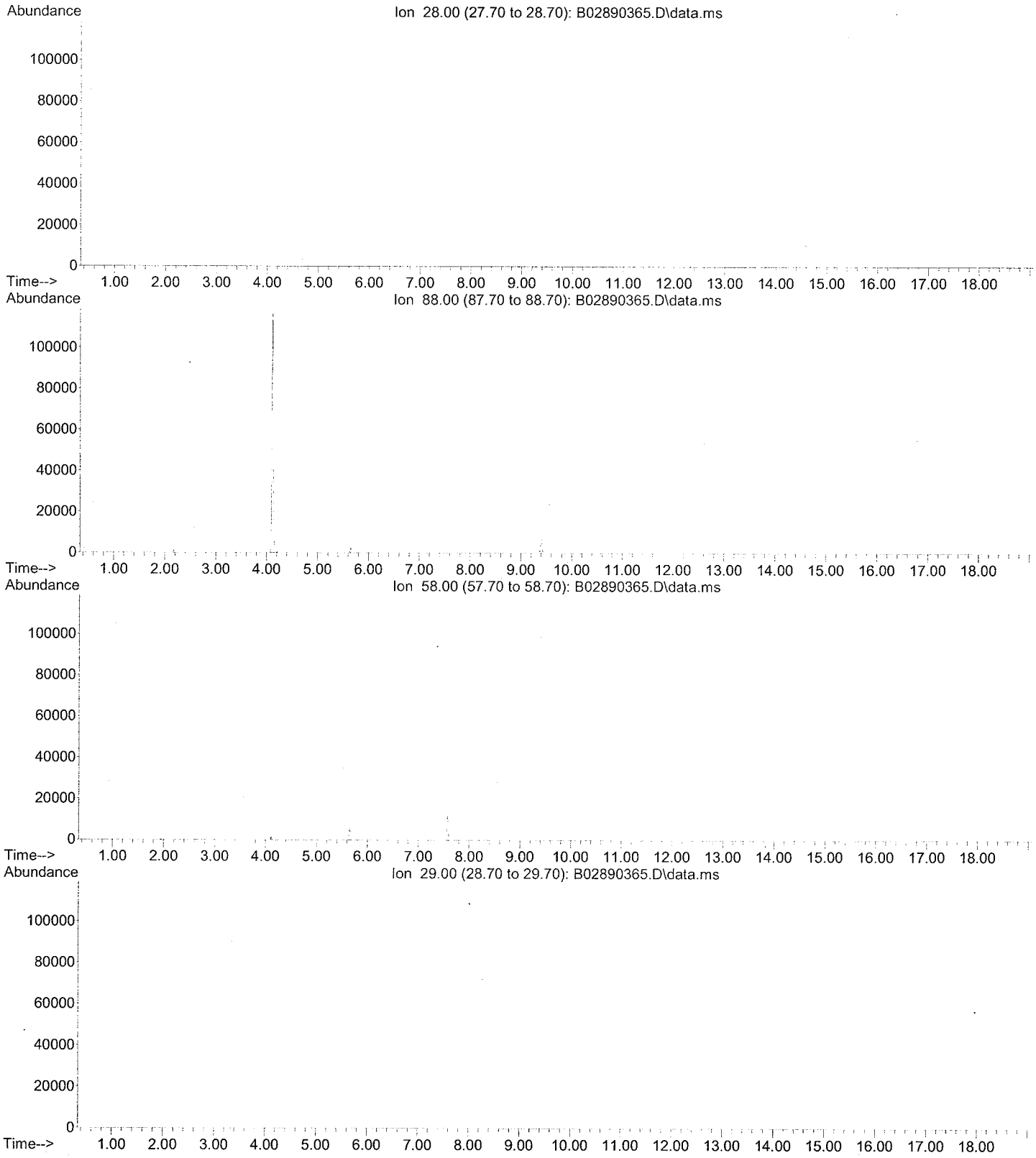
Prepared Date/Time: 11/13/10 13:18

Analyzed Date/Time: 11/13/10 13:18

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890365.D
Operator : MP
Acquired : 13 Nov 2010 1:18 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011015-03
Misc Info : TETRA TECH, WATER
Vial Number: 8



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-TB-04

Sample Date/Time: 11/04/10 00:00

File ID: B02890366.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011015-04

Percent solids: N/A

Preparation Method: EPA 5030B

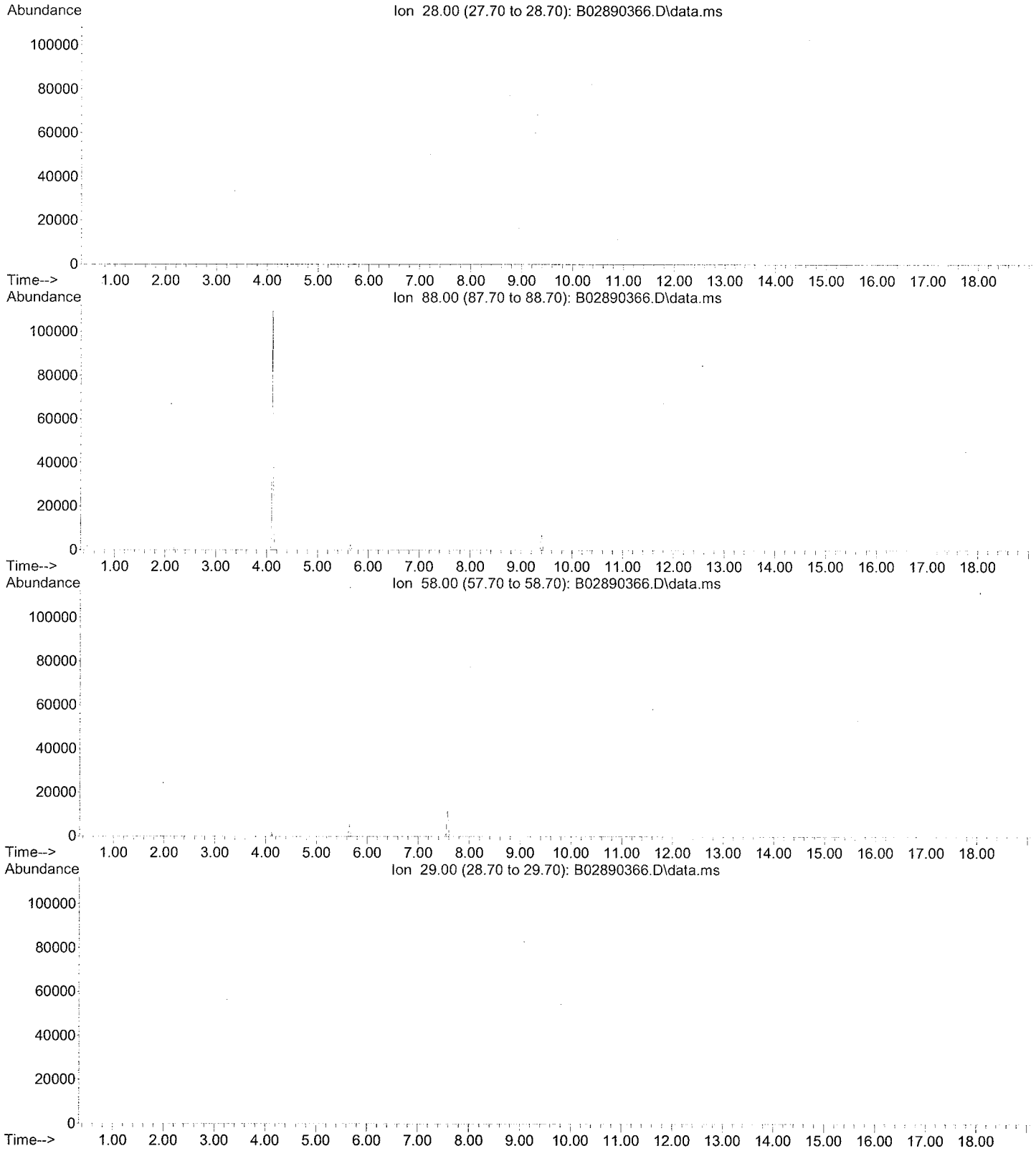
Prepared Date/Time: 11/13/10 13:44

Analyzed Date/Time: 11/13/10 13:44

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890366.D
Operator : MP
Acquired : 13 Nov 2010 1:44 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011015-04
Misc Info : TETRA TECH, WATER
Vial Number: 9



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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 93.2 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Acenaphthene | 83-32-9 | 3680 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Acenaphthylene | 208-96-8 | 444 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Anthracene | 120-12-7 | 729 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Fluoranthene | 206-44-0 | 89.4 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Fluorene | 86-73-7 | 2100 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Naphthalene | 91-20-3 | 428 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Phenanthrene | 85-01-8 | 927 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |
| Pyrene | 129-00-0 | 187 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 20:52 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 97 % | 50-110 | 1 | 11/15/10 20:52 |
| Nitrobenzene-d5 | 4165-60-0 | 93 % | 40-110 | 1 | 11/15/10 20:52 |
| Terphenyl-d14 | 1718-51-0 | 103 % | 50-135 | 1 | 11/15/10 20:52 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 613 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Acenaphthene | 83-32-9 | 1980 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Acenaphthylene | 208-96-8 | 156 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Anthracene | 120-12-7 | 96.1 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Fluorene | 86-73-7 | 487 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Naphthalene | 91-20-3 | 2900 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Phenanthrene | 85-01-8 | 250 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |
| Pyrene | 129-00-0 | 52.8 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:17 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 83 % | 50-110 | 1 | 11/15/10 21:17 |
| Nitrobenzene-d5 | 4165-60-0 | 88 % | 40-110 | 1 | 11/15/10 21:17 |
| Terphenyl-d14 | 1718-51-0 | 95 % | 50-135 | 1 | 11/15/10 21:17 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/09/10 08:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 20.5 | J | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Acenaphthene | 83-32-9 | 228 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Acenaphthylene | 208-96-8 | 32.4 | J | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Naphthalene | 91-20-3 | 338 | | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/15/10 21:41 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 86 % | 50-110 | 1 | 11/15/10 21:41 |
| Nitrobenzene-d5 | 4165-60-0 | 87 % | 40-110 | 1 | 11/15/10 21:41 |
| Terphenyl-d14 | 1718-51-0 | 97 % | 50-135 | 1 | 11/15/10 21:41 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-006-1010

Sample Date/Time: 11/4/10 13:45

File ID: D46254.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011015-01

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 20:52

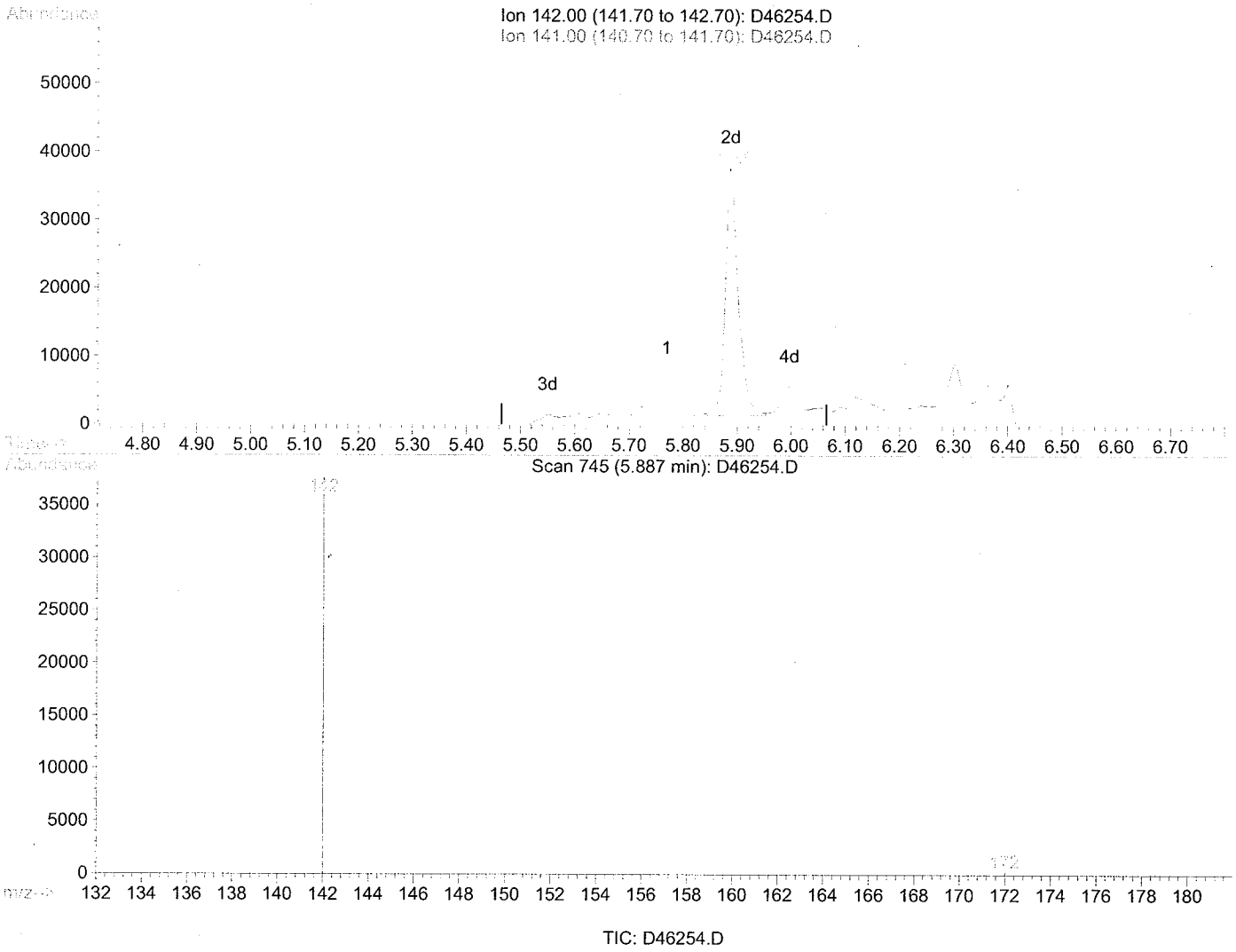
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46254.D Vial: 14
Acq On : 15 Nov 2010 20:52 Operator: JI
Sample : 1011015-01 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:52 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46254.D

(5) 2-Methylnaphthalene (T)

5.89min 507.61ug/L m

response 60011

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-09-1010

Sample Date/Time: 11/4/10 12:25

File ID: D46255.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011015-02

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 21:17

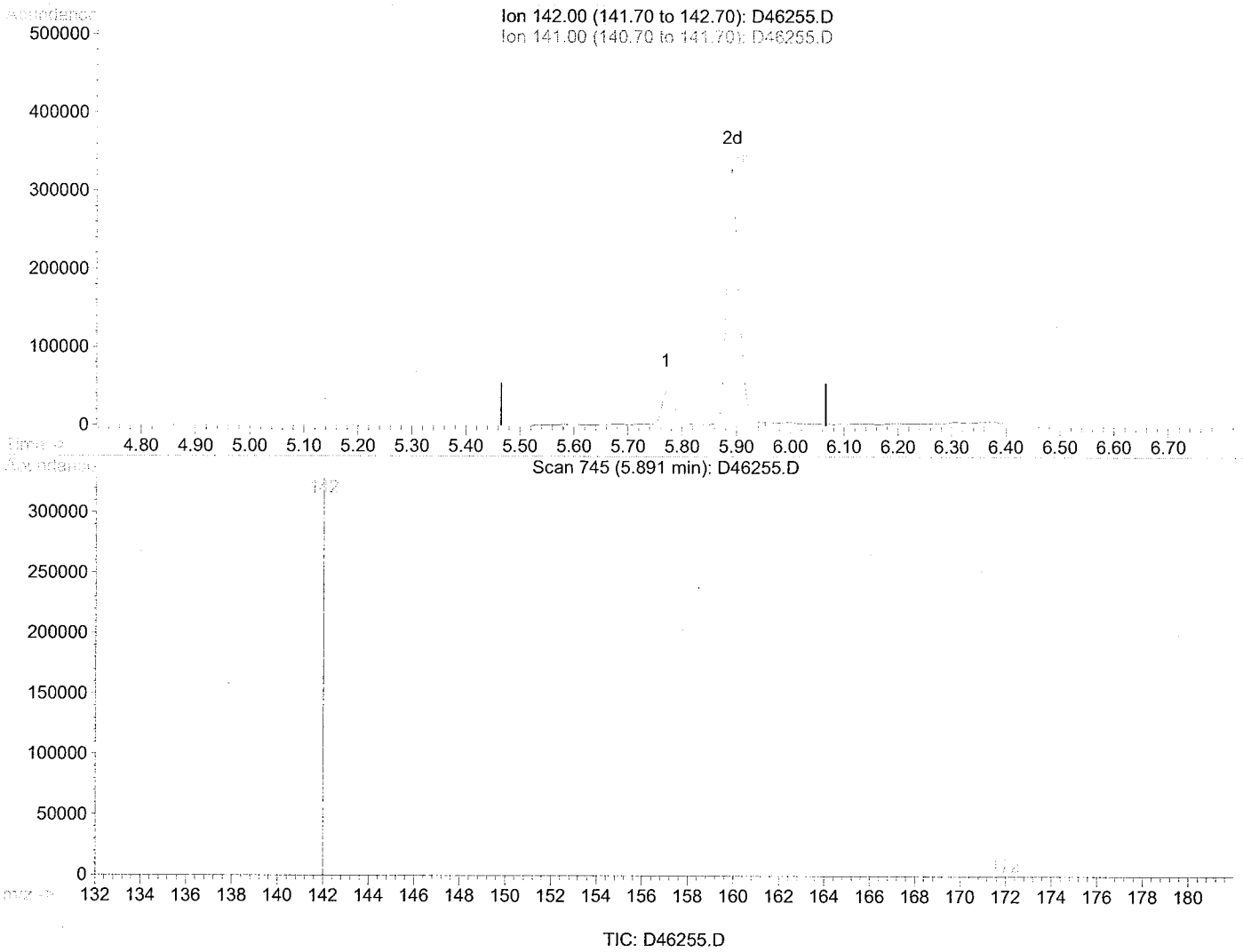
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 4500 | J | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46255.D Vial: 15
Acq On : 15 Nov 2010 21:17 Operator: JI
Sample : 1011015-02 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:52 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46255.D

(5) 2-Methylnaphthalene (T)

5.89min 4467.92ug/L m

response 517353

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-GW-10-1010

Sample Date/Time: 11/4/10 11:10

File ID: D46256.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011015-03

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/9/10 08:30

Analyzed Date/Time: 11/15/10 21:41

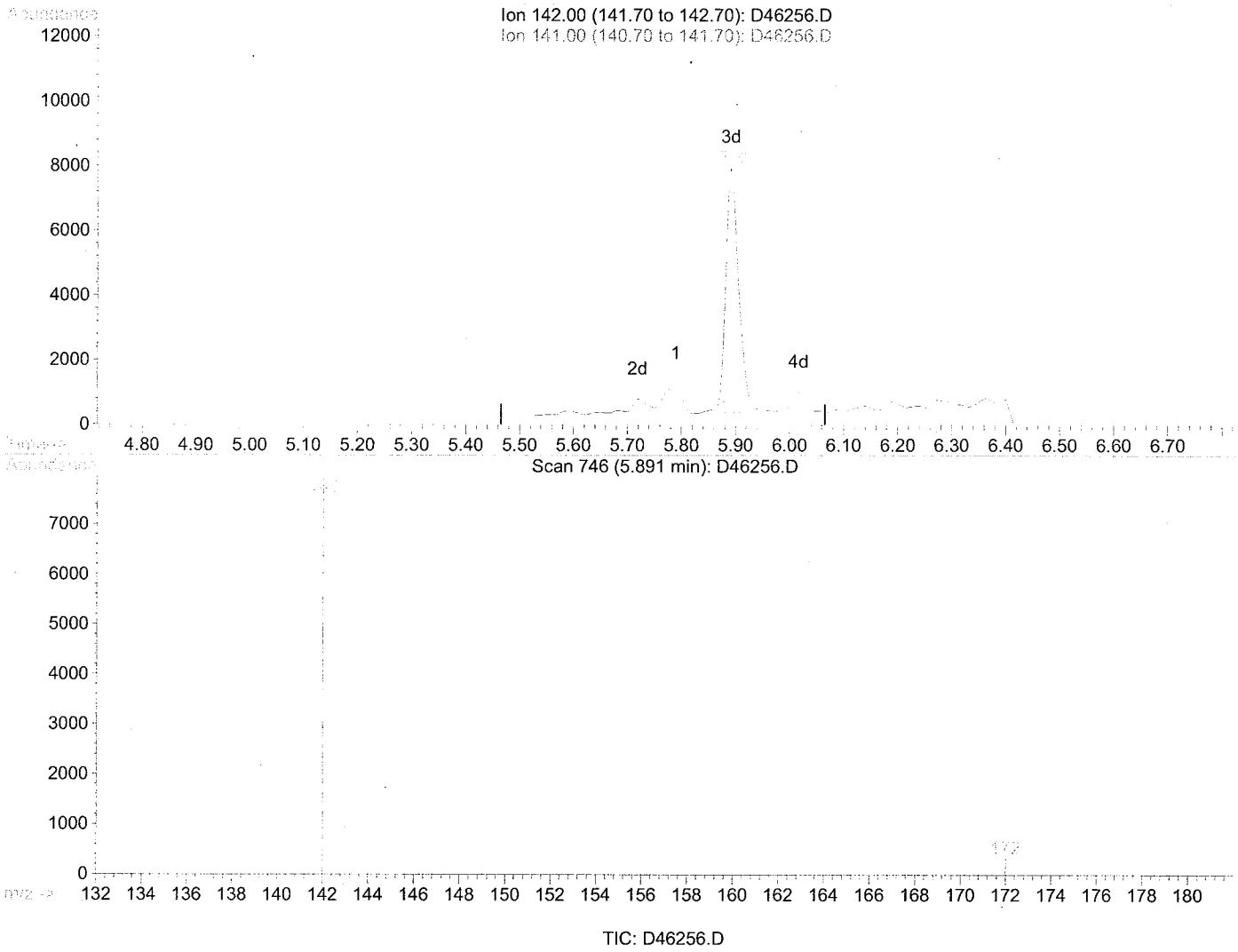
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | 120 | J | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111510\D46256.D Vial: 16
Acq On : 15 Nov 2010 21:41 Operator: JI
Sample : 1011015-03 Inst : GCMS-D
Misc : TETRATECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 10:52 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46256.D

(5) 2-Methylnaphthalene (T)

5.89min 123.74ug/L m

response 12531

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/09/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 14:44 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 14:44 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 14:44 |
| Hexachlorobenzene | 118-74-1 | 0.424 | | 0.010 | 0.050 | 1 | ug/L | 11/15/10 14:44 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 125 % | 25-140 | 1 | 11/15/10 14:44 |
| DCB | 2051-24-3 | 109 % | 30-135 | 1 | 11/15/10 14:44 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/09/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/10/10 19:43 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/10/10 19:43 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/10/10 19:43 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/10/10 19:43 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/10/10 19:43 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/10/10 19:43 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/10/10 19:43 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 76 % | 25-140 | 1 | 11/10/10 19:43 |
| DCB | 2051-24-3 | 86 % | 40-135 | 1 | 11/10/10 19:43 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/09/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 15:16 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 15:16 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 15:16 |
| Hexachlorobenzene | 118-74-1 | BQL | U | 0.010 | 0.050 | 1 | ug/L | 11/15/10 15:16 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 125 % | 25-140 | 1 | 11/15/10 15:16 |
| DCB | 2051-24-3 | 104 % | 30-135 | 1 | 11/15/10 15:16 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/09/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/10/10 20:47 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/10/10 20:47 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/10/10 20:47 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/10/10 20:47 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/10/10 20:47 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/10/10 20:47 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/10/10 20:47 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 71 % | 25-140 | 1 | 11/10/10 20:47 |
| DCB | 2051-24-3 | 61 % | 40-135 | 1 | 11/10/10 20:47 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW8081B

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/09/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | 72-54-8 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| 4,4'-DDE | 72-55-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| 4,4'-DDT | 50-29-3 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Aldrin | 309-00-2 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| alpha-BHC | 319-84-6 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| alpha-Chlordane | 5103-71-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| beta-BHC | 319-85-7 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Chlordane | 57-74-9 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 15:48 |
| delta-BHC | 319-86-8 | BQL | U | 0.003 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Dieldrin | 60-57-1 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Endosulfan I | 959-98-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Endosulfan II | 33213-65-9 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Endosulfan sulfate | 1031-07-8 | BQL | U | 0.005 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Endrin | 72-20-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Endrin Aldehyde | 7421-93-4 | BQL | U | 0.006 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Endrin ketone | 53494-70-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| gamma-BHC | 58-89-9 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| gamma-Chlordane | 5103-74-2 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Heptachlor | 76-44-8 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Heptachlor Epoxide | 1024-57-3 | BQL | U | 0.004 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Methoxychlor | 72-43-5 | BQL | U | 0.007 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Toxaphene | 8001-35-2 | BQL | U | 0.017 | 1.00 | 1 | ug/L | 11/15/10 15:48 |
| Kepone | 143-50-0 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Mirex | 2385-85-5 | BQL | U | 0.015 | 0.050 | 1 | ug/L | 11/15/10 15:48 |
| Hexachlorobenzene | 118-74-1 | 1.03 | | 0.010 | 0.050 | 1 | ug/L | 11/15/10 15:48 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 106 % | 25-140 | 1 | 11/15/10 15:48 |
| DCB | 2051-24-3 | 53 % | 30-135 | 1 | 11/15/10 15:48 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW8082

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: 3510C Sep. Funnel
Prepared Date/Time: 11/09/10 11:55

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| PCB-1016 | 12674-11-2 | BQL | U | 0.094 | 1.00 | 1 | ug/L | 11/10/10 21:19 |
| PCB-1221 | 11104-28-2 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/10/10 21:19 |
| PCB-1232 | 11141-16-5 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/10/10 21:19 |
| PCB-1242 | 53469-21-9 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/10/10 21:19 |
| PCB-1248 | 12672-29-6 | BQL | U | 0.130 | 1.00 | 1 | ug/L | 11/10/10 21:19 |
| PCB-1254 | 11097-69-1 | BQL | U | 0.120 | 1.00 | 1 | ug/L | 11/10/10 21:19 |
| PCB-1260 | 11096-82-5 | BQL | U | 0.058 | 1.00 | 1 | ug/L | 11/10/10 21:19 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| TCMX | 877-09-8 | 77 % | 25-140 | 1 | 11/10/10 21:19 |
| DCB | 2051-24-3 | 49 % | 40-135 | 1 | 11/10/10 21:19 |

# ANALYSIS DATA SHEET

## GKHMS-GW-006-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | SDG: | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011015-01 | File ID: | U0324446.D |
| Sampled: | 11/04/10 13:45 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/10/10 19:43 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | 1 |
| Batch: | B046066 | Sequence: | S047015 | Calibration: | 0111107 |
| Instrument: | GCECD-U | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

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# ANALYSIS DATA SHEET

## GKHMS-GW-09-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | SDG: | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011015-02 | File ID: | U0324448.D |
| Sampled: | 11/04/10 12:25 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/10/10 20:47 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | 1 |
| Batch: | B046066 | Sequence: | S047015 | Calibration: | 0111107 |
| Instrument: | GCECD-U | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

# ANALYSIS DATA SHEET

## GKHMS-GW-10-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | SDG: | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011015-03 | File ID: | U0324449.D |
| Sampled: | 11/04/10 11:10 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/10/10 21:19 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | 1 |
| Batch: | B046066 | Sequence: | S047015 | Calibration: | 0111107 |
| Instrument: | GCECD-U | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 | 1.00 | U |
| 11104-28-2 | PCB-1221 | 1.00 | U |
| 11141-16-5 | PCB-1232 | 1.00 | U |
| 53469-21-9 | PCB-1242 | 1.00 | U |
| 12672-29-6 | PCB-1248 | 1.00 | U |
| 11097-69-1 | PCB-1254 | 1.00 | U |
| 11096-82-5 | PCB-1260 | 1.00 | U |

# APPENDIX C

## SUPPORT DOCUMENTATION

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011015

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.
Several compounds had their average response factor updated for the calibration curve after the quant reports had been printed. None of the affected compounds were detected above the MDL in the any samples in this SDG. A corrected Form 7 is provided.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

Pesticides

Raw data and evaluation reports for Chlordane and Toxaphene daily continuing check standards are provided.

PCBs

Arochlor-1262 and -1268 were not included in the results in the original data package. The chromatograms of all samples were searched for the peak patterns/retention times of these PCBs. Peaks for these compounds were not found in any samples in this SDG. The chromatogram areas for both Arochlors are included in this addendum package.

Mercury

Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director 2/4/2011

## SAMPLE RECIEPT

Four water samples were received on 11/5/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/06/2010.

## VOLATILES

Four water samples were analyzed for volatile organic compounds by the SW846 method 8260B.
The samples were analyzed within the holding time.

All surrogate recoveries and internal standard responses were within the QC limits.

Duplicate laboratory control samples were analyzed along with the batch.

Recovery of one compound in the LCS was above the QC limits.
Because that compound was not detected above the reporting limit in the associated client samples, there is no effect on the results reported. The recoveries of four analytes were below QC limits in the LCS and two analytes in the LCSD. Because those compounds were not detected above the method detection limit in the samples, the data is not affected. The % RPD for one compound was above the QC limits for the pair.

The response for two compounds was above the QC limits in the daily CCV and five was below QC limits. None of the affected compounds were detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

## SW8270LL-PAH SIM

Three water samples were extracted by method 3520C. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
All surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were shared with work order 1011003. Three spike recoveries were slightly above the QC.

A laboratory control sample was extracted and analyzed with this batch. Six spike recoveries were above the QC.

**PCBs**

Three water samples were extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead, a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

**PESTICIDES**

Three water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. One analyte in the LCS and LCSD had recoveries above the QC limits. Because the samples did not contain that analyte, the data is not affected. All remaining recoveries were within the QC limits.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-10

WO # 101015

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8260B** | G01-MW-06 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8720D/8270DSIM** | G01-MW-06 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8082A** | G01-MW-06 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8081B** | G01-MW-06 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 6020A** | G01-MW-06 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8260B** | G01-MW-09 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8720D/8270DSIM** | G01-MW-09 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8082A** | G01-MW-09 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8081B** | G01-MW-09 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 6020A** | G01-MW-09 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8260B** | G01-MW-10 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8720D/8270DSIM** | G01-MW-10 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8082A** | G01-MW-10 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8081B** | G01-MW-10 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 6020A** | G01-MW-10 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | GKHMS-TB-04 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

| 1. Relinquished By: **Gary Braganza** | Date: 11/04/2010 | Time: 15:13 | Received By: **Federal Express** | Date: 11/04/2010 | Time: 16:13 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

**SDG** 1011015

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| HG | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| HG | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| OV | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | GKHMS-TB-04 | 1011015-04 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| SIM | NG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| SIM | NG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| SIM | NG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| PCB | | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PEST | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PEST | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |
| PEST | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890285.D | Injection Date: | 11/11/10 |
| Instrument ID: | GCMS-B | Injection Time: | 08:22 |
| Sequence: | S047034 | Lab Sample ID: | S047034-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.3 | PASS |
| 75 | 30 - 60% of 95 | 45.5 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.8 | PASS |
| 175 | 5 - 9% of 174 | 7.16 | PASS |
| 176 | 95 - 101% of 174 | 97.5 | PASS |
| 177 | 5 - 9% of 176 | 6.47 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047034-CAL5 | B02890286.D | 11/11/2010 | 9:37:00 |
| Cal Standard | S047034-CAL3 | B02890287.D | 11/11/2010 | 10:06:00 |
| Cal Standard | S047034-CAL2 | B02890288.D | 11/11/2010 | 10:33:00 |
| Cal Standard | S047034-CAL1 | B02890289.D | 11/11/2010 | 11:00:00 |
| Cal Standard | S047034-CAL4 | B02890290.D | 11/11/2010 | 11:27:00 |
| Cal Standard | S047034-CAL6 | B02890291.D | 11/11/2010 | 11:54:00 |
| Cal Standard | S047034-CAL7 | B02890292.D | 11/11/2010 | 12:20:00 |
| Cal Standard | S047034-CAL8 | B02890293.D | 11/11/2010 | 12:47:00 |
| Secondary Cal Check | S047034-SCV1 | B02890299.D | 11/11/2010 | 16:39:00 |

# INITIAL CALIBRATION STANDARDS

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047034 | Instrument: | GCMS-B |
| Calibration: | 0111803 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001918 | VOA Tune (GC/MS-B) | S047034-TUN1 | B02890285.D | 11/11/10 08:22 |
| 0002258 | VOA ICAL 10.0 PPB ELEMENT | S047034-CAL5 | B02890286.D | 11/11/10 09:37 |
| 0002256 | VOA ICAL 2.0 PPB ELEMENT | S047034-CAL3 | B02890287.D | 11/11/10 10:06 |
| 0002255 | VOA ICAL 1.0 PPB ELEMENT | S047034-CAL2 | B02890288.D | 11/11/10 10:33 |
| 0002254 | VOA ICAL 0.5 PPB ELEMENT | S047034-CAL1 | B02890289.D | 11/11/10 11:00 |
| 0002257 | VOA ICAL 5.0 PPB ELEMENT | S047034-CAL4 | B02890290.D | 11/11/10 11:27 |
| 0002259 | VOA ICAL 20.0 PPB ELEMENT | S047034-CAL6 | B02890291.D | 11/11/10 11:54 |
| 0002260 | VOA ICAL 40.0 PPB ELEMENT | S047034-CAL7 | B02890292.D | 11/11/10 12:20 |
| 0002261 | VOA ICAL 50.0 PPB ELEMENT | S047034-CAL8 | B02890293.D | 11/11/10 12:47 |
| 0002266 | VOA MIX SECOND SOURCE ELEMENT | S047034-SCV1 | B02890299.D | 11/11/10 16:39 |

Response Factor Report GCMS-B

Method Path : H:\VOL1\GCMSDATA\B\METHODS\
Method File : 8260_111110.M
Title :
Last Update : Wed Nov 17 19:08:22 2010
Response Via : Initial Calibration

Raw data included in the SDG addendum

Calibration Files
0.5 =B02890289.D 1.0 =B02890288.D 2.0 =B02890287.D 5.0 =B02890290.D 10 =B02890286.D 20 =B
50 =B02890293.D

| | | Compound | 0.5 | 1.0 | 2.0 | 5.0 | 10 | 20 | 40 | 50 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 2) | T | Dichlorodifluo... | 0.360 | 0.326 | 0.320 | 0.444 | 0.392 | 0.355 | 0.356 | 0.376 | 0.366 | 10.70 |
| 3) | T | Chloromethane | 0.289 | 0.255 | 0.222 | 0.281 | 0.167 | 0.242 | 0.256 | | 0.245 | 16.79 |
| 4) | T | Vinyl chloride | 0.291 | 0.281 | 0.284 | 0.410 | 0.299 | 0.385 | 0.363 | 0.393 | 0.338 | 16.18 |
| 5) | T | Bromomethane | 0.039 | 0.035 | 0.031 | 0.021 | 0.016 | 0.017 | 0.018 | 0.021 | 0.025 | 35.98 |
| 6) | T | Chloroethane | 0.824 | 0.511 | 0.375 | 0.323 | 0.275 | | | | 0.461 | 47.87 |
| 7) | T | Trichlorofluor... | 0.662 | 0.599 | 0.600 | 0.788 | 0.675 | 0.649 | 0.623 | 0.574 | 0.646 | 10.35 |
| 8) | T | Freon 113 | 0.447 | 0.406 | 0.410 | 0.443 | 0.446 | 0.384 | 0.398 | 0.408 | 0.418 | 5.80 |
| 9) | T | 1,1-Dichloroet... | 0.327 | 0.295 | 0.298 | 0.310 | 0.305 | 0.265 | 0.273 | 0.282 | 0.295 | 6.97 |
| 10) | T | Methylene chlo... | | 2.119 | 1.006 | 0.984 | 0.316 | 0.323 | 0.302 | | 0.842 | 84.29 |
| 11) | T | Methyl Acetate | 0.017 | 0.019 | 0.019 | 0.021 | 0.019 | 0.019 | 0.021 | 0.022 | 0.020 | 8.11 |
| 12) | T | Iodomethane | 2.217 | 1.968 | 1.991 | 2.040 | 1.992 | 1.735 | 1.795 | 1.851 | 1.949 | 7.84 |
| 13) | T | Trans-1,2-dich... | 0.516 | 0.473 | 0.482 | 0.496 | 0.479 | 0.431 | 0.451 | 0.459 | 0.473 | 5.61 |
| 14) | T | 1,1-Dichloroet... | 0.650 | 0.588 | 0.588 | 0.596 | 0.588 | 0.535 | 0.574 | 0.591 | 0.589 | 5.34 |
| 15) | T | Acetone | 0.083 | 0.047 | 0.033 | 0.033 | 0.025 | 0.023 | 0.020 | 0.019 | 0.035 | 60.73 |
| 16) | T | MTBE | 0.409 | 0.363 | 0.336 | 0.368 | 0.355 | 0.320 | 0.337 | 0.349 | 0.355 | 7.57 |
| 17) | T | Acrylonitrile | 0.024 | 0.022 | 0.022 | 0.028 | 0.023 | 0.024 | 0.026 | 0.027 | 0.025 | 8.72 |
| 18) | T | Acetonitrile | | | 0.010 | 0.012 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 13.39 |
| 19) | T | Carbon disulfide | 1.109 | 0.984 | 0.995 | 1.020 | 0.996 | 0.868 | 0.897 | 0.926 | 0.974 | 7.84 |
| 20) | T | Vinyl Acetate | 0.147 | 0.141 | 0.137 | 0.153 | 0.136 | 0.146 | 0.161 | 0.168 | 0.149 | 7.68 |
| 21) | T | Propionitrile | | | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.013 | 0.011 | 12.54 |
| 22) | | 2,2-Dichloropr... | 0.305 | 0.294 | 0.279 | 0.318 | 0.321 | 0.288 | 0.306 | 0.325 | 0.305 | 5.40 |
| 23) | T | cis-1,2-Dichlo... | 0.417 | 0.382 | 0.385 | 0.393 | 0.397 | 0.347 | 0.355 | 0.363 | 0.380 | 6.23 |
| 24) | T | Bromochloromet... | 0.139 | 0.117 | 0.113 | 0.121 | 0.113 | 0.109 | 0.115 | 0.115 | 0.118 | 7.75 |
| 25) | T | Chloroform | 0.635 | 0.567 | 0.558 | 0.561 | 0.565 | 0.516 | 0.556 | 0.574 | 0.567 | 5.80 |
| 26) | T | 1,1,1-Trichlor... | 0.572 | 0.526 | 0.545 | 0.585 | 0.584 | 0.539 | 0.580 | 0.597 | 0.566 | 4.56 |
| 27) | T | Cychlohexane | 0.800 | 0.723 | 0.740 | 0.816 | 0.829 | 0.723 | 0.730 | 0.741 | 0.763 | 5.84 |
| 28) | S | Dibromofluorom... | 0.296 | 0.306 | 0.296 | 0.313 | 0.315 | 0.319 | 0.322 | 0.333 | 0.312 | 4.11 |
| 29) | T | Carbon tetrach... | 2.138 | 1.278 | 0.880 | 0.687 | 0.581 | 0.514 | 0.533 | 0.546 | 0.895 | 63.12 |
| 30) | T | Methyl Methacr... | 0.405 | 0.368 | 0.374 | 0.417 | 0.411 | 0.363 | 0.368 | 0.375 | 0.385 | 5.73 |
| 31) | T | Methacrylonitrile | 0.037 | 0.038 | 0.037 | 0.042 | 0.042 | 0.040 | 0.042 | 0.043 | 0.040 | 5.96 |
| 32) | T | Ethyl Methacry... | 0.137 | 0.130 | 0.138 | 0.162 | 0.163 | 0.171 | 0.184 | 0.197 | 0.160 | 14.90 |
| 33) | S | 1,2-Dichloroet... | 0.216 | 0.221 | 0.211 | 0.229 | 0.220 | 0.221 | 0.225 | 0.237 | 0.222 | 3.64 |
| 34) | T | Isobutyl Alcohol | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 5.68 |
| 35) | I | 1,4-Difluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 36) | T | 2-Butanone | 0.034 | 0.030 | 0.028 | 0.031 | 0.029 | 0.029 | 0.028 | 0.030 | 0.030 | 5.86 |
| 37) | T | 2-Chloroethylv... | | | | 0.002 | 0.006 | 0.004 | 0.006 | 0.007 | 0.005 | 40.09 |
| 38) | T | 1.1-Dichloropr... | 0.509 | 0.457 | 0.461 | 0.473 | 0.450 | 0.410 | 0.426 | 0.429 | 0.452 | 6.90 |
| 39) | T | Benzene | 1.354 | 1.229 | 1.237 | 1.249 | 1.192 | 1.086 | 1.097 | 1.092 | 1.192 | 7.99 |
| 40) | T | 1,2-Dchloroethane | 0.257 | 0.218 | 0.204 | 0.203 | 0.187 | 0.181 | 0.188 | 0.192 | 0.204 | 12.08 |
| 41) | T | Trichloroethene | | 0.315 | 0.322 | 0.320 | 0.317 | 0.292 | 0.303 | 0.307 | 0.311 | 3.52 |
| 42) | T | Methylcyclohexane | 0.609 | 0.567 | 0.595 | 0.673 | 0.667 | 0.609 | 0.615 | 0.617 | 0.619 | 5.72 |
| 43) | T | 1,2-Dchloropro... | | | 0.230 | 0.237 | 0.230 | 0.216 | 0.223 | 0.226 | 0.227 | 3.23 |
| 44) | T | Dibromomethane | 0.073 | 0.067 | 0.068 | 0.073 | 0.072 | 0.071 | 0.073 | 0.074 | 0.071 | 3.73 |
| 45) | T | Bromodichlorom... | 0.264 | 0.245 | 0.250 | 0.261 | 0.261 | 0.252 | 0.268 | 0.275 | 0.260 | 3.82 |
| 46) | T | cis-1,3-Dichlo... | 0.215 | 0.216 | 0.233 | 0.261 | 0.280 | 0.270 | 0.297 | 0.309 | 0.260 | 13.76 |
| 47) | S | Toluene-d8 | 1.001 | 0.983 | 1.001 | 1.014 | 1.035 | 1.052 | 1.056 | 1.064 | 1.026 | 2.95 |
| 48) | T | Toluene | 0.859 | 0.779 | 0.798 | 0.787 | 0.761 | 0.702 | 0.708 | 0.710 | 0.763 | 7.14 |
| 49) | T | trans-1,3-Dich... | 0.119 | 0.129 | 0.141 | 0.172 | 0.184 | 0.189 | 0.212 | 0.223 | 0.171 | 22.34 |
| 50) | T | 1,1,2-Trichlor... | 0.107 | 0.093 | 0.094 | 0.100 | 0.097 | 0.095 | 0.093 | 0.093 | 0.097 | 5.14 |
| 51) | I | Chlorobenzene-d5 | ----------ISTD---------- | | | | | | | | | |
| 52) | T | 4-Methyl-2-Pen... | | 0.370 | 0.288 | 0.274 | 0.251 | 0.254 | 0.270 | 0.277 | 0.283 | 14.19 |
| 53) | T | 2-Hexanone | 0.138 | 0.146 | 0.159 | 0.173 | 0.164 | 0.176 | 0.191 | 0.195 | 0.168 | 12.05 |

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| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54) | T | Tetrachloroethene | 1.783 | 1.681 | 1.722 | 1.726 | 1.690 | 1.561 | 1.608 | 1.582 | 1.669 | 4.68 |
| 55) | T | 1,3-Dichloropr... | 1.047 | 0.997 | 0.984 | 0.983 | 0.961 | 0.933 | 0.978 | 0.984 | 0.983 | 3.29 |
| 56) | T | Dibromochlorom... | 0.565 | 0.565 | 0.563 | 0.603 | 0.600 | 0.597 | 0.648 | 0.658 | 0.600 | 6.15 |
| 57) | T | 1,2-Dibromomet... | 0.417 | 0.410 | 0.410 | 0.419 | 0.425 | 0.408 | 0.431 | 0.429 | 0.418 | 2.19 |
| 58) | T | Chlorobenzene | 3.780 | 3.515 | 3.503 | 3.342 | 3.235 | 3.045 | 3.161 | 3.133 | 3.339 | 7.37 |
| 59) | T | 1,1,1,2-Tetrac... | 0.966 | 0.938 | 0.960 | 0.991 | 0.954 | 0.914 | 0.930 | 0.907 | 0.945 | 3.00 |
| 60) | T | Ethylbenzene | 6.950 | 6.686 | 6.853 | 6.807 | 6.612 | 6.108 | 6.144 | 5.979 | 6.517 | 5.85 |
| 61) | T | m,p-xylene | 2.746 | 2.656 | 2.739 | 2.726 | 2.571 | 2.350 | 2.239 | 2.143 | 2.521 | 9.63 |
| 62) | T | o-xylene | 2.258 | 2.221 | 2.282 | 2.331 | 2.286 | 2.144 | 2.214 | 2.173 | 2.239 | 2.78 |
| 63) | T | Styrene | 3.226 | 3.282 | 3.434 | 3.625 | 3.439 | 3.328 | 3.482 | 3.434 | 3.406 | 3.69 |
| 64) | T | Bromoform | 0.243 | 0.249 | 0.263 | 0.293 | 0.292 | 0.307 | 0.336 | 0.341 | 0.290 | 12.84 |
| 65) | T | Isopropylbenzene | 6.000 | 6.015 | 6.238 | 6.468 | 6.504 | 6.133 | 6.339 | 6.197 | 6.237 | 3.05 |
| 66) | S | 4-Bromofluorob... | 1.391 | 1.380 | 1.409 | 1.478 | 1.489 | 1.554 | 1.570 | 1.575 | 1.481 | 5.45 |
| 67) | T | Bromobenzene | 1.198 | 1.149 | 1.135 | 1.162 | 1.130 | 1.106 | 1.172 | 1.170 | 1.153 | 2.49 |
| 68) | T | 1,1,2,2-Tetrac... | 0.499 | 0.468 | 0.479 | 0.480 | 0.447 | 0.447 | 0.430 | 0.413 | 0.458 | 6.24 |
| 69) | T | 1,2,3-Trichlor... | 0.409 | 0.394 | 0.394 | 0.411 | 0.384 | 0.393 | 0.404 | 0.402 | 0.399 | 2.31 |
| 70) | T | N-propylbenzene | 7.250 | 7.235 | 7.599 | 8.023 | 8.079 | 7.616 | 7.743 | 7.557 | 7.638 | 4.07 |
| 71) | T | 2-Chlorotoluene | 4.451 | 4.274 | 4.235 | 4.345 | 4.287 | 4.102 | 4.231 | 4.177 | 4.263 | 2.47 |
| 72) | T | 4-Chlorotoluene | 4.519 | 4.395 | 4.531 | 4.690 | 4.542 | 4.344 | 4.378 | 4.264 | 4.458 | 3.07 |
| 73) | T | 1,3,5-Trimethy... | | 4.903 | 5.157 | 5.490 | 5.369 | 5.075 | 5.073 | 4.891 | 5.137 | 4.36 |
| 74) | T | Tert-butylbenzene | 4.443 | 4.486 | 4.733 | 5.017 | 5.119 | 4.854 | 5.045 | 4.962 | 4.832 | 5.31 |
| 75) | T | 1,2,4-Trimethy... | 3.905 | 4.219 | 4.510 | 4.981 | 4.990 | 4.863 | 5.144 | 5.065 | 4.710 | 9.56 |
| 76) | T | Sec-butylbenzene | | 6.608 | 6.963 | 7.670 | 7.761 | 7.303 | 7.562 | 7.331 | 7.314 | 5.61 |
| 77) | T | 1,3-Dichlorobe... | 2.294 | 2.296 | 2.287 | 2.498 | 2.508 | 2.444 | 2.560 | 2.546 | 2.429 | 4.87 |
| 78) | T | 4-Isopropyltol... | | 4.853 | 5.347 | 6.261 | 6.319 | 6.087 | 6.303 | 6.125 | 5.899 | 9.68 |
| 79) | T | 1,4-Dichlorobe... | 2.294 | 2.287 | 2.300 | 2.481 | 2.367 | 2.320 | 2.429 | 2.414 | 2.362 | 3.09 |
| 80) | I | 1,4-Dichlorobenzen... | ---------- | ISTD | ---------- | | | | | | | |
| 81) | T | 1,2-Dichlorobe... | 0.832 | 0.860 | 0.802 | 0.734 | 0.719 | 0.617 | 0.558 | 0.728 | 0.731 | 14.16 |
| 82) | T | n-Butylbenzene | | 1.334 | 1.623 | 1.881 | 1.975 | 1.718 | 1.574 | 2.074 | 1.740 | 14.70 |
| 83) | T | 1,2-Dibromo-3-... | | | 0.014 | 0.017 | 0.018 | 0.019 | 0.017 | | 0.017 | 10.41 |
| 84) | T | 1,2,4-Trichlor... | 0.144 | 0.159 | 0.146 | 0.224 | 0.270 | 0.304 | 0.365 | | 0.230 | 37.56 |
| 85) | T | Hexachlorobuta... | 0.323 | 0.433 | 0.446 | 0.441 | 0.482 | 0.460 | 0.418 | 0.552 | 0.444 | 14.48 |
| 86) | T | Naphthalene | 0.161 | 0.170 | 0.156 | 0.149 | 0.188 | 0.244 | 0.330 | | 0.200 | 32.92 |
| 87) | T | 1,2,3-Trichlor... | 0.103 | 0.115 | 0.111 | 0.143 | 0.202 | 0.230 | 0.280 | | 0.169 | 40.73 |

(#) = Out of Range

8260_111110.M Fri Feb 04 13:40:47 2011

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9449965 | 2.996188 | | | 15 | |
| 1,1,1-Trichloroethane | 0.5659896 | 4.560913 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.4579836 | 6.241163 | | | 15 | |
| 1,1,2-Trichloroethane | 0.1883814 | 25.83749 | | | 15 | * |
| 1,1-Dichloroethane | 0.5886556 | 5.340725 | | | 15 | |
| 1,1-Dichloroethene | 0.2945645 | 6.971788 | | | 15 | |
| 1,1-Dichloropropene | 0.8870995 | 28.79643 | | | 15 | * |
| 1,2,3-Trichlorobenzene | 0.1079407 | 60.25025 OK | | 0.9983741 | | |
| 1,2,3-Trichloropropane | 0.3987978 | 2.309246 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.1333765 | 61.8921 OK | | 0.9984971 | | |
| 1,2,4-Trimethylbenzene | 4.709513 | 9.55917 | | | 15 | |
| 1,2-Dibromo-3-chloropropane | 1.013838E-02 | 26.03012 | | | 15 | * |
| 1,2-Dibromoethane | 0.4184844 | 2.192751 | | | 15 | |
| 1,2-Dichlorobenzene | 0.3836902 | 9.931573 | | | 15 | |
| 1,2-Dichloroethane | 0.4037109 | 34.30786 | | | 15 | * |
| 1,2-Dichloroethene (total) | | | | | 15 | |
| 1,2-Dichloropropane | 0.3990268 | 21.50741 CCC OK | | | 15 | * |
| 1,3,5-Trimethylbenzene | 5.136773 | 4.363395 | | | 15 | |
| 1,3-Dichlorobenzene | 2.429237 | 4.866861 | | | 15 | |
| 1,3-Dichloropropane | 0.9832992 | 3.286307 | | | 15 | |
| 1,4-Dichlorobenzene | 2.361546 | 3.090043 | | | 15 | |
| 2,2-Dichloropropane | 0.3046553 | 5.396329 | | | 15 | |
| 2-Butanone | 5.842675E-02 | 26.98709 | | | 15 | * |
| 2-Chloroethylvinyl Ether | 8723.567 | 41.18061 NOT C | | 0.9747346 | | |
| 2-Chlorotoluene | 4.262763 | 2.473932 | | | 15 | |
| 2-Hexanone | 0.1678354 | 12.05372 | | | 15 | |
| 4-Chlorotoluene | 4.45775 | 3.06895 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.2832524 | 14.19025 | | | 15 | |
| Acetone | 3.530808E-02 | 60.72747 OK | | 0.999617 | | |
| Acetonitrile | 12640.95 | 13.55521 | | | 15 | |
| Acrylonitrile | 31482.48 | 10.83697 | | | 15 | |
| Benzene | 2.347493 | 30.06644 | | | 15 | * |
| Bromobenzene | 1.15273 | 2.492457 | | | 15 | |
| Bromochloromethane | 0.1177031 | 7.751624 | | | 15 | |
| Bromodichloromethane | 0.5026204 | 21.74762 | | | 15 | * |
| Bromoform | 0.290434 | 12.84001 | | | 15 | |
| Bromomethane | 2.574268E-02 | 41.48754 OK | | 0.9991388 | | |
| Carbon disulfide | 0.9743583 | 7.835565 | | | 15 | |
| Carbon tetrachloride | 0.8946293 | 63.11922 OK | 0.9984195 | | | |
| Chlorobenzene | 3.33925 | 7.36761 | | | 15 | |
| Chlorodibromomethane | 0.5999869 | 6.15232 | | | 15 | |
| Chloroethane | 0.5391721 | 54.15445 | 0.9722477 | | | |
| Chloroform | 0.5666822 | 5.796015 | | | 15 | |
| Chloromethane | 0.24454 | 16.79022 OK | | 0.9931096 | | |
| cis-1,2-Dichloroethene | 0.3797202 | 6.232311 | | | 15 | |
| cis-1,3-Dichloropropene | 0.4930246 | 12.41325 | | | 15 | |
| Cyclohexane | 975484.5 | 9.121557 | | | 15 | |
| Dibromomethane | 0.1378844 | 21.47163 | | | 15 | * |
| Dichlorodifluoromethane | 0.3660774 | 10.70454 | | | 15 | |
| Ethyl methacrylate | 205471 | 17.74802 | | | 15 | * |
| Ethylbenzene | 6.517445 | 5.849966 | | | 15 | |
| Freon 113 | 1067379 | 8.201786 | | | 15 | |
| Hexachlorobutadiene | 0.2425145 | 29.6656 | | | 15 | * |
| Iodomethane | 2486491 | 7.590871 | | | 15 | |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 4974.099 | 4.738612 | | | 15 | |
| Isopropylbenzene | 6.236763 | 3.048825 | | | 15 | |
| m,p-Xylenes | 2.521251 | 9.628999 | | | 15 | |
| Methacrylonitrile | 52616.51 | 7.754166 | | | 15 | |
| Methyl Acetate | 26152.27 | 7.069333 | | | 15 | |
| Methyl tert-Butyl Ether | 0.354677 | 7.568475 | | | 15 | |
| Methylcyclohexane | 1036101 | 10.22823 | | | 15 | |
| Methylene Chloride | 0.8416174 | 84.28984 ! | 0.9310435 < 0.995 | | | |
| Methylmethacrylate | 492250.2 | 8.694056 | | | 15 | |
| Naphthalene | 0.1136276 | 60.49789 OK | | 0.99588 | | |
| n-Butylbenzene | 4.521909 | 23.51799 | | | 15 | * |
| n-Propylbenzene | 7.637786 | 4.068436 | | | 15 | |
| o-Xylene | 2.238511 | 2.784486 | | | 15 | |
| p-Isopropyltoluene | 5.899351 | 9.677282 | | | 15 | |
| Propionitrile | 14872.44 | 11.96743 | | | 15 | |
| sec-Butylbenzene | 7.313888 | 5.611493 | | | 15 | |
| Styrene | 3.406218 | 3.688098 | | | 15 | |
| tert-Butylbenzene | 4.832452 | 5.305811 | | | 15 | |
| Tetrachloroethene | 1.669076 | 4.675657 | | | 15 | |
| Toluene | 1.500687 | 29.46237 LCC OK | | | 15 | * |
| trans-1,2-Dichloroethene | 0.473488 | 5.608299 | | | 15 | |
| trans-1,3-Dichloropropene | 0.3188505 | 10.53039 | 0.9637676 | | | |
| Trichloroethene | 0.723381 | 57.91742 | | | 15 | * |
| Trichlorofluoromethane | 0.6463387 | 10.35389 | | | 15 | |
| Vinyl acetate | 190045.8 | 9.269583 | | | 15 | |
| Vinyl chloride | 0.3381399 | 16.17694 OK | 0.9962687 | | | |
| Xylene (Total) | | | | | 15 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 12.1 | 0.9449965 | 1.143058 | | 21.0 | 20 | * |
| 1,1,1-Trichloroethane | A | 10.0 | 12.3 | 0.5659896 | 0.6984901 | | 23.4 | 20 | * |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 11.6 | 0.4579836 | 0.5304432 | | 15.8 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 12.4 | 0.1883814 | 0.1855327 | | -1.5 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 11.1 | 0.5886556 | 0.6540047 | | 11.1 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 12.0 | 0.2945645 | 0.3537672 | | 20.1 | 20 | * |
| 1,1-Dichloropropene | A | 10.0 | 12.5 | 0.8870995 | 0.8757924 | | -1.3 | 20 | |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 13.1 | 0.1079407 | 0.1749146 | | 30.7 | 20 | * |
| 1,2,3-Trichloropropane | A | 10.0 | 11.6 | 0.3987978 | 0.4622272 | | 15.9 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 12.9 | 0.1333765 | 0.2312968 | | 29.2 | 20 | * |
| 1,2,4-Trimethylbenzene | A | 10.0 | 13.3 | 4.709513 | 6.266435 | | 33.1 | 20 | * |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 11.9 | 1.013838E-02 | 1.304181E-02 | | 28.6 | 20 | * |
| 1,2-Dibromoethane | A | 10.0 | 11.4 | 0.4184844 | 0.4791551 | | 14.5 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 10.9 | 0.3836902 | 0.5128204 | | 33.7 | 20 | * |
| 1,2-Dichloroethane | A | 10.0 | 11.0 | 0.4037109 | 0.3482327 | | -13.7 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 12.1 | 0.3990268 | 0.4271672 | | 7.1 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 13.0 | 5.136773 | 6.686592 | | 30.2 | 20 | * |
| 1,3-Dichlorobenzene | A | 10.0 | 13.0 | 2.429237 | 3.16753 | | 30.4 | 20 | * |
| 1,3-Dichloropropane | A | 10.0 | 11.2 | 0.9832992 | 1.097714 | | 11.6 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 12.8 | 2.361546 | 3.016576 | | 27.7 | 20 | * |
| 2,2-Dichloropropane | A | 10.0 | 12.5 | 0.3046553 | 0.3802807 | | 24.8 | 20 | * |
| 2-Chloroethylvinyl Ether | Q | 20.0 | 8.81 | 8723.567 | 2664.35 | | -56.0 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 12.5 | 4.262763 | 5.312579 | | 24.6 | 20 | * |
| 2-Hexanone | A | 10.0 | 16.6 | 0.1678354 | 0.2784265 | | 65.9 | 20 | * |
| 4-Chlorotoluene | A | 10.0 | 12.6 | 4.45775 | 5.61065 | | 25.9 | 20 | * |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 10.0 | 13.2 | 0.2832524 | 0.3750909 | | 32.4 | 20 | * |
| Acetone | Q | 10.0 | 25.2 | 3.530808E-02 | 6.091001E-02 | | 152 | 20 | * |
| Acetonitrile | A | 100 | 103 | 12640.95 | 11519.52 | | -8.9 | 20 | |
| Acrylonitrile | A | 10.0 | 9.80 | 31482.48 | 27966 | | -11.2 | 20 | |
| Benzene | A | 10.0 | 11.7 | 2.347493 | 2.1679 | | -7.7 | 20 | |
| Bromobenzene | A | 10.0 | 11.8 | 1.15273 | 1.360163 | | 18.0 | 20 | |
| Bromochloromethane | A | 10.0 | 10.8 | 0.1177031 | 0.1276156 | | 8.4 | 20 | |
| Bromodichloromethane | A | 10.0 | 11.4 | 0.5026204 | 0.4600986 | | -8.5 | 20 | |
| Bromoform | A | 10.0 | 11.8 | 0.290434 | 0.34224 | | 17.8 | 20 | |
| Bromomethane | Q | 10.0 | 14.7 | 2.574268E-02 | 2.292744E-02 | | 46.7 | 20 | * |
| Carbon disulfide | A | 10.0 | 12.1 | 0.9743583 | 1.175792 | | 20.7 | 20 | * |
| Carbon tetrachloride | L | 10.0 | 12.0 | 0.8946293 | 0.6902278 | | 20.0 | 20 | |
| Chlorobenzene | A | 10.0 | 11.8 | 3.33925 | 3.923561 | | 17.5 | 20 | |
| Chlorodibromomethane | A | 10.0 | 11.6 | 0.5999869 | 0.6940801 | | 15.7 | 20 | |
| Chloroethane | L | 10.0 | 8.58 | 0.5391721 | 0.2425101 | | -14.2 | 20 | |
| Chloroform | A | 10.0 | 11.6 | 0.5666822 | 0.6561524 | | 15.8 | 20 | |
| Chloromethane | Q | 10.0 | 11.8 | 0.24454 | 0.2585695 | | 17.6 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 13.1 | 0.3797202 | 0.4990148 | | 31.4 | 20 | * |
| cis-1,3-Dichloropropene | A | 10.0 | 12.4 | 0.4930246 | 0.5036888 | | 2.2 | 20 | |
| Cyclohexane | A | 10.0 | 11.4 | 975484.5 | 1009411 | | 3.5 | 20 | |
| Dibromomethane | A | 10.0 | 11.6 | 0.1378844 | 0.1289826 | | -6.5 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 4.89 | 0.3660774 | 0.1788952 | | -51.1 | 20 | * |
| Ethyl methacrylate | A | 10.0 | 12.0 | 205471 | 223274.4 | | 8.7 | 20 | |
| Ethylbenzene | A | 10.0 | 12.1 | 6.517445 | 7.907933 | | 21.3 | 20 | * |
| Freon 113 | A | 10.0 | 9.06 | 1067379 | 438728.3 | | -58.9 | 20 | * |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 12.2 | 0.2425145 | 0.3490812 | | 43.9 | 20 | * |
| Iodomethane | A | 10.0 | 6.03 | 2486491 | 1362969 | | -45.2 | 20 | * |
| Isobutyl alcohol | A | 100 | 180 | 4974.099 | 8154.36 | | 63.9 | 20 | * |
| Isopropylbenzene | A | 10.0 | 13.5 | 6.236763 | 8.413115 | | 34.9 | 20 | * |
| m,p-Xylenes | A | 20.0 | 24.4 | 2.521251 | 3.072141 | | 21.8 | 20 | * |
| Methacrylonitrile | A | 10.0 | 11.7 | 52616.51 | 54509.1 | | 3.6 | 20 | |
| Methyl Acetate | A | 10.0 | 8.05 | 26152.27 | 18448.5 | | -29.5 | 20 | * |
| Methyl tert-Butyl Ether | A | 10.0 | 9.99 | 0.354677 | 0.3544708 | | -0.06 | 20 | |
| Methylcyclohexane | A | 10.0 | 12.5 | 1036101 | 1189489 | | 14.8 | 20 | |
| Methylene Chloride | L | 10.0 | 5.20 | 0.8416174 | 0.3204574 | | -48.0 | 20 | * |
| Methylmethacrylate | A | 10.0 | 11.3 | 492250.2 | 506313.7 | | 2.9 | 20 | |
| Naphthalene | Q | 10.0 | 12.2 | 0.1136276 | 0.160184 | | 22.1 | 20 | * |
| n-Butylbenzene | A | 10.0 | 13.6 | 4.521909 | 6.951643 | | 53.7 | 20 | * |
| n-Propylbenzene | A | 10.0 | 12.3 | 7.637786 | 9.415693 | | 23.3 | 20 | * |
| o-Xylene | A | 10.0 | 12.2 | 2.238511 | 2.735001 | | 22.2 | 20 | * |
| p-Isopropyltoluene | A | 10.0 | 13.8 | 5.899351 | 8.120284 | | 37.6 | 20 | * |
| Propionitrile | A | 10.0 | 11.3 | 14872.44 | 14869.4 | | -0.02 | 20 | |
| sec-Butylbenzene | A | 10.0 | 13.2 | 7.313888 | 9.653285 | | 32.0 | 20 | * |
| Styrene | A | 10.0 | 11.8 | 3.406218 | 4.025902 | | 18.2 | 20 | |
| tert-Butylbenzene | A | 10.0 | 13.6 | 4.832452 | 6.564499 | | 35.8 | 20 | * |
| Tetrachloroethene | A | 10.0 | 18.4 | 1.669076 | 3.073396 | | 84.1 | 20 | * |
| Toluene | A | 10.0 | 11.9 | 1.500687 | 1.407883 | | -6.2 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 10.7 | 0.473488 | 0.5062932 | | 6.9 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 10.9 | 0.3188505 | 0.3384454 | | 8.9 | 20 | |
| Trichloroethene | A | 10.0 | 12.3 | 0.723381 | 0.5952818 | | -17.7 | 20 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Trichlorofluoromethane | A | 10.0 | 9.35 | 0.6463387 | 0.6042435 | | -6.5 | 20 | |
| Vinyl acetate | A | 20.0 | 15.1 | 190045.8 | 129972.9 | | -31.6 | 20 | * |
| Vinyl chloride | L | 10.0 | 10.1 | 0.3381399 | 0.3690015 | | 1.1 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890358.D | Injection Date: | 11/13/10 |
| Instrument ID: | GCMS-B | Injection Time: | 09:59 |
| Sequence: | S047043 | Lab Sample ID: | S047043-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.6 | PASS |
| 75 | 30 - 60% of 95 | 46.6 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.44 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 90 | PASS |
| 175 | 5 - 9% of 174 | 7.09 | PASS |
| 176 | 95 - 101% of 174 | 97 | PASS |
| 177 | 5 - 9% of 176 | 6.32 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047043-CCV1 | B02890359.D | 11/13/2010 | 10:25:00 |
| Blank | B047068-BLK1 | B02890360.D | 11/13/2010 | 11:04:00 |
| LCS | B047068-BS1 | B02890361.D | 11/13/2010 | 11:30:00 |
| LCS Dup | B047068-BSD1 | B02890362.D | 11/13/2010 | 11:57:00 |
| GKHMS-GW-006-1010 | 1011015-01 | B02890363.D | 11/13/2010 | 12:24:00 |
| GKHMS-GW-09-1010 | 1011015-02 | B02890364.D | 11/13/2010 | 12:51:00 |
| GKHMS-GW-10-1010 | 1011015-03 | B02890365.D | 11/13/2010 | 13:18:00 |
| GKHMS-TB-04 | 1011015-04 | B02890366.D | 11/13/2010 | 13:44:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 10.2 | 0.9449965 | 0.9647971 | | 2.1 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.6 | 0.5659896 | 0.6029627 | | 6.5 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 9.68 | 0.4579836 | 0.4431138 | | -3.2 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 9.75 | 0.1883814 | 0.1848595 | | -1.9 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 9.87 | 0.5886556 | 0.5810381 | | -1.3 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 10.6 | 0.2945645 | 0.3111978 | | 5.6 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 10.2 | 0.8870995 | 0.908979 | | 2.5 | 20 | |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 9.42 | 0.1079407 | 9.390612E-02 | | -5.8 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 9.92 | 0.3987978 | 0.3956187 | | -0.8 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 9.49 | 0.1333765 | 0.127899 | | -5.1 | 20 | |
| 1,2,4-Trimethylbenzene | A | 10.0 | 10.5 | 4.709513 | 4.950406 | | 5.1 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 8.03 | 1.013838E-02 | 6.962589E-03 | | -31.3 | 20 | * |
| 1,2-Dibromoethane | A | 10.0 | 10.1 | 0.4184844 | 0.4216138 | | 0.7 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 9.37 | 0.3836902 | 0.3490381 | | -9.0 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 9.70 | 0.4037109 | 0.3877971 | | -3.9 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 10.0 | 0.3990268 | 0.4475479 | | 12.2 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 10.4 | 5.136773 | 5.35013 | | 4.2 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 10.0 | 2.429237 | 2.442425 | | 0.5 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 10.3 | 0.9832992 | 1.016214 | | 3.3 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 9.95 | 2.361546 | 2.350705 | | -0.5 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 6.11 | 0.3046553 | 0.1862132 | | -38.9 | 20 | * |
| 2-Butanone | A | 20.0 | 17.4 | 5.842675E-02 | 5.101698E-02 | | -12.7 | 20 | |
| 2-Chlorotoluene | A | 10.0 | 9.97 | 4.262763 | 4.24989 | | -0.3 | 20 | |
| 2-Hexanone | A | 20.0 | 17.6 | 0.1678354 | 0.147796 | | -11.9 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 10.1 | 4.45775 | 4.510313 | | 1.2 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 20.0 | 16.4 | 0.2832524 | 0.2322376 | | -18.0 | 20 | |
| Acetone | Q | 20.0 | 23.4 | 3.530808E-02 | 2.865479E-02 | | 17.2 | 20 | |
| Acetonitrile | A | 100 | 75.7 | 12640.95 | 8023.29 | | -36.5 | 20 | * |
| Acrylonitrile | A | 50.0 | 43.9 | 31482.48 | 23767.22 | | -24.5 | 20 | * |
| Benzene | A | 10.0 | 10.0 | 2.347493 | 2.339548 | | -0.3 | 20 | |
| Bromobenzene | A | 10.0 | 9.53 | 1.15273 | 1.099011 | | -4.7 | 20 | |
| Bromochloromethane | A | 10.0 | 8.97 | 0.1177031 | 0.1056288 | | -10.3 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.61 | 0.5026204 | 0.4899405 | | -2.5 | 20 | |
| Bromoform | A | 10.0 | 7.88 | 0.290434 | 0.2287955 | | -21.2 | 20 | * |
| Bromomethane | Q | 10.0 | 8.23 | 2.574268E-02 | 2.053375E-02 | | -17.7 | 20 | |
| Carbon disulfide | A | 20.0 | 18.8 | 0.9743583 | 0.9153649 | | -6.1 | 20 | |
| Carbon tetrachloride | L | 10.0 | 10.1 | 0.8946293 | 0.5928995 | | 1.4 | 20 | |
| Chlorobenzene | A | 10.0 | 9.77 | 3.33925 | 3.263749 | | -2.3 | 20 | |
| Chlorodibromomethane | A | 10.0 | 9.45 | 0.5999869 | 0.5673432 | | -5.4 | 20 | |
| Chloroethane | L | 10.0 | 8.71 | 0.5391721 | 0.2374645 | | -12.9 | 20 | |
| Chloroform | A | 10.0 | 9.90 | 0.5666822 | 0.5612375 | | -1.0 | 20 | |
| Chloromethane | Q | 10.0 | 16.3 | 0.24454 | 0.3662771 | | 62.7 | 20 | * |
| cis-1,2-Dichloroethene | A | 10.0 | 9.61 | 0.3797202 | 0.3648481 | | -3.9 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 8.44 | 0.4930246 | 0.3206827 | | -35.0 | 20 | * |
| Cyclohexane | A | 10.0 | 10.3 | 975484.5 | 864034.7 | | -11.4 | 20 | |
| Dibromomethane | A | 10.0 | 9.69 | 0.1378844 | 0.1354875 | | -1.7 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 9.41 | 0.3660774 | 0.3445141 | | -5.9 | 20 | |
| Ethyl methacrylate | A | 10.0 | 8.46 | 205471 | 149150.4 | | -27.4 | 20 | * |
| Ethylbenzene | A | 10.0 | 10.2 | 6.517445 | 6.666581 | | 2.3 | 20 | |
| Freon 113 | A | 5.00 | 11.3 | 1067379 | 1038242 | | -2.7 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 10.5 | 0.2425145 | 0.238292 | | -1.7 | 20 | |
| Iodomethane | A | 10.0 | 9.39 | 2486491 | 2014255 | | -19.0 | 20 | |
| Isobutyl alcohol | A | 200 | 172 | 4974.099 | 3706.84 | | -25.5 | 20 | * |
| Isopropylbenzene | A | 10.0 | 10.2 | 6.236763 | 6.37656 | | 2.2 | 20 | |
| m,p-Xylenes | A | 20.0 | 20.6 | 2.521251 | 2.593592 | | 2.9 | 20 | |
| Methacrylonitrile | A | 10.0 | 9.05 | 52616.51 | 39943.5 | | -24.1 | 20 | * |
| Methyl Acetate | A | 10.0 | 9.47 | 26152.27 | 20598.2 | | -21.2 | 20 | * |
| Methyl tert-Butyl Ether | A | 10.0 | 1.99 | 0.354677 | 7.067413E-02 | | -80.1 | 20 | * |
| Methylcyclohexane | A | 10.0 | 10.7 | 1036101 | 942537.4 | | -9.0 | 20 | |
| Methylene Chloride | L | 10.0 | 1.62 | 0.8416174 | 0.2541324 | | -83.8 | 20 | * |
| Methylmethacrylate | A | 10.0 | 10.4 | 492250.2 | 438966 | | -10.8 | 20 | |
| Naphthalene | Q | 10.0 | 8.68 | 0.1136276 | 8.272169E-02 | | -13.2 | 20 | |
| n-Butylbenzene | A | 10.0 | 10.8 | 4.521909 | 4.924539 | | 8.9 | 20 | |
| n-Propylbenzene | A | 10.0 | 10.2 | 7.637786 | 7.787941 | | 2.0 | 20 | |
| o-Xylene | A | 10.0 | 9.94 | 2.238511 | 2.224639 | | -0.6 | 20 | |
| p-Isopropyltoluene | A | 10.0 | 10.6 | 5.899351 | 6.264044 | | 6.2 | 20 | |
| Propionitrile | A | 10.0 | 8.13 | 14872.44 | 10140.5 | | -31.8 | 20 | * |
| sec-Butylbenzene | A | 10.0 | 10.4 | 7.313888 | 7.623382 | | 4.2 | 20 | |
| Styrene | A | 10.0 | 9.97 | 3.406218 | 3.395335 | | -0.3 | 20 | |
| tert-Butylbenzene | A | 10.0 | 10.4 | 4.832452 | 5.036201 | | 4.2 | 20 | |
| Tetrachloroethene | A | 10.0 | 11.1 | 1.669076 | 1.856583 | | 11.2 | 20 | |
| Toluene | A | 10.0 | 9.48 | 1.500687 | 1.420266 | | -5.4 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 10.2 | 0.473488 | 0.4803866 | | 1.5 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 8.44 | 0.3188505 | 0.3206827 | | -15.6 | 20 | |
| Trichloroethene | A | 10.0 | 10.1 | 0.723381 | 0.6181457 | | -14.5 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Trichlorofluoromethane | A | 10.0 | 11.5 | 0.6463387 | 0.7426795 | | 14.9 | 20 |
| Vinyl acetate | A | 20.0 | 18.6 | 190045.8 | 152225 | | -19.9 | 20 |
| Vinyl chloride | L | 10.0 | 11.9 | 0.3381399 | 0.4384397 | | 19.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047068-BLK1 | Batch: | B047068 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-TB-04 | 1011015-04 | B02890366.D | 13:44 |
| GKHMS-GW-10-1010 | 1011015-03 | B02890365.D | 13:18 |
| GKHMS-GW-09-1010 | 1011015-02 | B02890364.D | 12:51 |
| GKHMS-GW-006-1010 | 1011015-01 | B02890363.D | 12:24 |
| LCS Dup | B047068-BSD1 | B02890362.D | 11:57 |
| LCS | B047068-BS1 | B02890361.D | 11:30 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | Work Order: | 1011015 | |
| Client: | Tetra Tech NUS, Inc | | Project: | KEY WEST NAS | |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.00 | U |
| 78-93-3 | 2-Butanone | 5.00 | U |
| 95-49-8 | 2-Chlorotoluene | 1.00 | U |
| 591-78-6 | 2-Hexanone | 5.00 | U |
| 106-43-4 | 4-Chlorotoluene | 1.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.00 | U |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D | | |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 | | |
| Solids: | | Preparation: | EPA 5030B | Dilution: | | | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 | Instrument: | GCMS-B |
| Column: | 1 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.00 | U |
| 75-05-8 | Acetonitrile | 10.0 | U |
| 107-13-1 | Acrylonitrile | 5.00 | U |
| 71-43-2 | Benzene | 1.00 | U |
| 108-86-1 | Bromobenzene | 1.00 | U |
| 74-97-5 | Bromochloromethane | 1.00 | U |
| 75-27-4 | Bromodichloromethane | 1.00 | U |
| 75-25-2 | Bromoform | 1.00 | U |
| 74-83-9 | Bromomethane | 1.00 | U |
| 75-15-0 | Carbon disulfide | 1.00 | U |
| 56-23-5 | Carbon tetrachloride | 1.00 | U |
| 108-90-7 | Chlorobenzene | 1.00 | U |
| 124-48-1 | Chlorodibromomethane | 1.00 | U |
| 75-00-3 | Chloroethane | 1.00 | U |
| 67-66-3 | Chloroform | 1.00 | U |
| 74-87-3 | Chloromethane | 1.00 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U |
| 110-82-7 | Cyclohexane | 1.00 | U |
| 74-95-3 | Dibromomethane | 1.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U |
| 97-63-2 | Ethyl methacrylate | 1.00 | U |
| 100-41-4 | Ethylbenzene | 1.00 | U |
| 76-13-1 | Freon 113 | 1.00 | U |
| 87-68-3 | Hexachlorobutadiene | 1.00 | U |
| 74-88-4 | Iodomethane | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 78-83-1 | Isobutyl alcohol | 20.0 | U |
| 98-82-8 | Isopropylbenzene | 1.00 | U |
| | m,p-Xylenes | 1.00 | U |
| 126-98-7 | Methacrylonitrile | 1.00 | U |
| 76-20-9 | Methyl Acetate | 1.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 1.00 | U |
| 108-87-2 | Methylcyclohexane | 1.00 | U |
| 75-09-2 | Methylene Chloride | 1.00 | U |
| 80-62-6 | Methylmethacrylate | 1.00 | U |
| 91-20-3 | Naphthalene | 1.00 | U |
| 104-51-8 | n-Butylbenzene | 1.00 | U |
| 103-65-1 | n-Propylbenzene | 1.00 | U |
| 95-47-6 | o-Xylene | 1.00 | U |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U |
| 107-12-0 | Propionitrile | 10.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.00 | U |
| 100-42-5 | Styrene | 1.00 | U |
| 98-06-6 | tert-Butylbenzene | 1.00 | U |
| 127-18-4 | Tetrachloroethene | 1.00 | U |
| 108-88-3 | Toluene | 1.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.00 | U |
| 79-01-6 | Trichloroethene | 1.00 | U |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U |
| 108-05-4 | Vinyl acetate | 1.00 | U |
| 75-01-4 | Vinyl chloride | 1.00 | U |

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (75 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 120) |
|---|---|---|---|---|
| 1011015-01 | 96 | 95 | 98 | 99 |
| 1011015-02 | 99 | 92 | 100 | 98 |
| 1011015-03 | 99 | 95 | 101 | 98 |
| 1011015-04 | 100 | 94 | 100 | 99 |
| B047068-BLK1 | 98 | 88 | 96 | 101 |
| B047068-BS1 | 103 | 102 | 104 | 99 |
| B047068-BSD1 | 107 | 104 | 107 | 99 |

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# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 10.8 | 108 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 11.6 | 116 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.6 | 106 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.4 | 104 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 10.2 | 102 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 11.6 | 116 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.5 | 115 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 8.64 | 86 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 8.82 | 88 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.2 | 112 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 8.64 | 86 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 10.7 | 107 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 9.79 | 98 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 10.5 | 105 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.2 | 112 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.0 | 110 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.0 | 100 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 10.7 | 107 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 10.3 | 103 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 10.8 | 108 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.5 | 105 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 10.8 | 108 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 10.6 | 106 | 60 - 135 |
| Acetone | 10.0 | 16.8 | 168 * | 40 - 140 |
| Acetonitrile | 100 | 87.8 | 88 | 75 - 125 |
| Acrylonitrile | 10.0 | 7.98 | 80 | 75 - 125 |
| Benzene | 10.0 | 10.5 | 105 | 80 - 120 |
| Bromobenzene | 10.0 | 10.3 | 103 | 75 - 125 |
| Bromochloromethane | 10.0 | 9.38 | 94 | 65 - 130 |
| Bromodichloromethane | 10.0 | 9.95 | 100 | 75 - 120 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. | |
|---|---|---|---|---|---|
| Bromoform | 10.0 | 8.94 | 89 | 70 - 130 | |
| Bromomethane | 10.0 | 10.0 | 100 | 30 - 145 | |
| Carbon disulfide | 10.0 | 10.5 | 105 | 35 - 160 | |
| Carbon tetrachloride | 10.0 | 11.0 | 110 | 80 - 120 | |
| Chlorobenzene | 10.0 | 10.5 | 105 | 80 - 120 | |
| Chlorodibromomethane | 10.0 | 9.75 | 98 | 60 - 135 | |
| Chloroethane | 10.0 | 7.05 | 70 | 60 - 135 | |
| Chloroform | 10.0 | 10.5 | 105 | 65 - 135 | |
| Chloromethane | 10.0 | 11.8 | 118 | 40 - 125 | |
| cis-1,2-Dichloroethene | 10.0 | 11.4 | 114 | 70 - 125 | |
| cis-1,3-Dichloropropene | 10.0 | 9.58 | 96 | 70 - 130 | |
| Cyclohexane | 10.0 | 9.50 | 95 | 75 - 125 | |
| Dibromomethane | 10.0 | 10.5 | 105 | 75 - 125 | |
| Dichlorodifluoromethane | 10.0 | 4.13 | 41 | 30 - 155 | |
| Ethyl methacrylate | 10.0 | 9.29 | 93 | 75 - 125 | |
| Ethylbenzene | 10.0 | 10.9 | 109 | 75 - 125 | |
| Freon 113 | 10.0 | 8.90 | 89 | 75 - 125 | |
| Hexachlorobutadiene | 10.0 | 9.08 | 91 | 50 - 140 | |
| Iodomethane | 10.0 | 5.25 | 52 * | 75 - 125 | NOT TC |
| Isobutyl alcohol | 100 | 117 | 117 | 75 - 125 | |
| Isopropylbenzene | 10.0 | 11.9 | 119 | 75 - 125 | |
| m,p-Xylenes | 20.0 | 22.0 | 110 | 75 - 130 | |
| Methacrylonitrile | 10.0 | 9.45 | 94 | 75 - 125 | |
| Methyl Acetate | 10.0 | 7.13 | 71 * | 75 - 125 | |
| Methyl tert-Butyl Ether | 10.0 | 7.97 | 80 | 65 - 125 | |
| Methylcyclohexane | 10.0 | 11.0 | 110 | 75 - 125 | |
| Methylene Chloride | 10.0 | 3.13 | 31 * | 55 - 140 | |
| Methylmethacrylate | 10.0 | 9.62 | 96 | 75 - 125 | |
| Naphthalene | 10.0 | 7.60 | 76 | 55 - 140 | |
| n-Butylbenzene | 10.0 | 11.3 | 113 | 70 - 135 | |
| n-Propylbenzene | 10.0 | 10.4 | 104 | 70 - 130 | |
| o-Xylene | 10.0 | 10.9 | 109 | 80 - 120 | |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| p-Isopropyltoluene | 10.0 | 11.4 | 114 | 75 - 130 |
| Propionitrile | 10.0 | 8.98 | 90 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 11.1 | 111 | 70 - 125 |
| Styrene | 10.0 | 10.6 | 106 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 12.2 | 122 | 70 - 130 |
| Tetrachloroethene | 10.0 | 11.8 | 118 | 45 - 150 |
| Toluene | 10.0 | 10.4 | 104 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 9.62 | 96 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 9.58 | 96 | 55 - 140 |
| Trichloroethene | 10.0 | 10.9 | 109 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 8.80 | 88 | 50 - 145 |
| Vinyl acetate | 20.0 | 13.9 | 69 * | 75 - 125 |
| Vinyl chloride | 10.0 | 8.62 | 86 | 50 - 145 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 11.4 | 114 | 6 | 30 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 12.2 | 122 | 5 | 30 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 11.4 | 114 | 7 | 30 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 11.1 | 111 | 6 | 30 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 10.7 | 107 | 5 | 30 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 12.0 | 120 | 4 | 30 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.9 | 119 | 4 | 30 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 10.5 | 105 | 19 | 30 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 11.3 | 113 | 7 | 30 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 10.4 | 104 | 16 | 30 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.9 | 119 | 6 | 30 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 10.5 | 105 | 19 | 30 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 11.3 | 113 | 5 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 10.2 | 102 | 4 | 30 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 11.2 | 112 | 6 | 30 | 70 - 130 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 10.0 | 11.2 | 112 | 5 | 30 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.8 | 118 | 5 | 30 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.8 | 118 | 7 | 30 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.6 | 106 | 6 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 11.6 | 116 | 8 | 30 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 11.2 | 112 | 8 | 30 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 11.3 | 113 | 4 | 30 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.0 | 100 | 4 | 30 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 11.4 | 114 | 5 | 30 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 11.5 | 115 | 8 | 30 | 60 - 135 |
| Acetone | 10.0 | 11.7 | 117 | 36 | 30 | 40 - 140 |
| Acetonitrile | 100 | 95.7 | 96 | 9 | 30 | 75 - 125 |
| Acrylonitrile | 10.0 | 8.79 | 88 | 10 | 30 | 75 - 125 |
| Benzene | 10.0 | 11.0 | 110 | 5 | 30 | 80 - 120 |
| Bromobenzene | 10.0 | 11.0 | 110 | 7 | 30 | 75 - 125 |
| Bromochloromethane | 10.0 | 10.0 | 100 | 7 | 30 | 65 - 130 |
| Bromodichloromethane | 10.0 | 10.5 | 105 | 6 | 30 | 75 - 120 |
| Bromoform | 10.0 | 9.60 | 96 | 7 | 30 | 70 - 130 |
| Bromomethane | 10.0 | 9.60 | 96 | 4 | 30 | 30 - 145 |
| Carbon disulfide | 10.0 | 11.0 | 110 | 4 | 30 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 11.5 | 115 | 5 | 30 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.9 | 109 | 4 | 30 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 10.4 | 104 | 7 | 30 | 60 - 135 |
| Chloroethane | 10.0 | 7.41 | 74 | 5 | 30 | 60 - 135 |
| Chloroform | 10.0 | 11.0 | 110 | 5 | 30 | 65 - 135 |
| Chloromethane | 10.0 | 11.7 | 117 | 1 | 30 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 12.2 | 122 | 6 | 30 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 7 | 30 | 70 - 130 |
| Cyclohexane | 10.0 | 9.98 | 100 | 5 | 30 | 75 - 125 |
| Dibromomethane | 10.0 | 11.1 | 111 | 6 | 30 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 4.37 | 44 | 6 | 30 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 10.3 | 103 | 10 | 30 | 75 - 125 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Ethylbenzene | 10.0 | 11.2 | 112 | 3 | 30 | 75 - 125 |
| Freon 113 | 10.0 | 9.26 | 93 | 4 | 30 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.0 | 100 | 10 | 30 | 50 - 140 |
| Iodomethane | 10.0 | 5.49 | 55 * | 4 | 30 | 75 - 125 |
| Isobutyl alcohol | 100 | 105 | 105 | 11 | 30 | 75 - 125 |
| Isopropylbenzene | 10.0 | 12.2 | 122 | 3 | 30 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.7 | 114 | 3 | 30 | 75 - 130 |
| Methacrylonitrile | 10.0 | 10.4 | 104 | 10 | 30 | 75 - 125 |
| Methyl Acetate | 10.0 | 7.89 | 79 | 10 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.0 | 100 | 23 | 30 | 65 - 125 |
| Methylcyclohexane | 10.0 | 11.5 | 115 | 4 | 30 | 75 - 125 |
| Methylene Chloride | 10.0 | 3.99 | 40 * | 24 | 30 | 55 - 140 |
| Methylmethacrylate | 10.0 | 10.1 | 101 | 5 | 30 | 75 - 125 |
| Naphthalene | 10.0 | 9.60 | 96 | 23 | 30 | 55 - 140 |
| n-Butylbenzene | 10.0 | 11.6 | 116 | 3 | 30 | 70 - 135 |
| n-Propylbenzene | 10.0 | 10.8 | 108 | 4 | 30 | 70 - 130 |
| o-Xylene | 10.0 | 11.3 | 113 | 4 | 30 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 11.9 | 119 | 4 | 30 | 75 - 130 |
| Propionitrile | 10.0 | 9.81 | 98 | 9 | 30 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 11.6 | 116 | 4 | 30 | 70 - 125 |
| Styrene | 10.0 | 11.2 | 112 | 5 | 30 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 12.7 | 127 | 4 | 30 | 70 - 130 |
| Tetrachloroethene | 10.0 | 12.0 | 120 | 2 | 30 | 45 - 150 |
| Toluene | 10.0 | 10.8 | 108 | 4 | 30 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 10.2 | 102 | 5 | 30 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 7 | 30 | 55 - 140 |
| Trichloroethene | 10.0 | 11.4 | 114 | 4 | 30 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 9.32 | 93 | 6 | 30 | 50 - 145 |
| Vinyl acetate | 20.0 | 15.6 | 78 | 12 | 30 | 75 - 125 |
| Vinyl chloride | 10.0 | 9.00 | 90 | 4 | 30 | 50 - 145 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047043 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047043-CCV1 )** | | | *Lab File ID: B02890359.D* | | | *Analyzed: 11/13/10 10:25* | | |
| 1,4-Difluorobenzene | 14263660 | 4.122 | 1.714212E+07 | 4.121 | 83 | 50 - 200 | 0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7265895 | 11.274 | 7318237 | 11.276 | 99 | 50 - 200 | -0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 2776138 | 7.577 | 3469404 | 7.576 | 80 | 50 - 200 | 0.0010 | +/-0.50 |
| Pentafluorobenzene | 11002470 | 3.485 | 1.32552E+07 | 3.484 | 83 | 50 - 200 | 0.0010 | +/-0.50 |
| **Blank (B047068-BLK1 )** | | | *Lab File ID: B02890360.D* | | | *Analyzed: 11/13/10 11:04* | | |
| 1,4-Difluorobenzene | 14647940 | 4.121 | 14263660 | 4.122 | 103 | 50 - 200 | -0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 4684484 | 11.281 | 7265895 | 11.274 | 64 | 50 - 200 | 0.0070 | +/-0.50 |
| Chlorobenzene-d5 | 3082015 | 7.577 | 2776138 | 7.577 | 111 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 11446190 | 3.484 | 11002470 | 3.485 | 104 | 50 - 200 | -0.0010 | +/-0.50 |
| **LCS (B047068-BS1 )** | | | *Lab File ID: B02890361.D* | | | *Analyzed: 11/13/10 11:30* | | |
| 1,4-Difluorobenzene | 12660440 | 4.12 | 14263660 | 4.122 | 89 | 50 - 200 | -0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7076833 | 11.275 | 7265895 | 11.274 | 97 | 50 - 200 | 0.0010 | +/-0.50 |
| Chlorobenzene-d5 | 2615907 | 7.576 | 2776138 | 7.577 | 94 | 50 - 200 | -0.0010 | +/-0.50 |
| Pentafluorobenzene | 9918945 | 3.483 | 11002470 | 3.485 | 90 | 50 - 200 | -0.0020 | +/-0.50 |
| **LCS Dup (B047068-BSD1 )** | | | *Lab File ID: B02890362.D* | | | *Analyzed: 11/13/10 11:57* | | |
| 1,4-Difluorobenzene | 12095950 | 4.12 | 14263660 | 4.122 | 85 | 50 - 200 | -0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 7121123 | 11.275 | 7265895 | 11.274 | 98 | 50 - 200 | 0.0010 | +/-0.50 |
| Chlorobenzene-d5 | 2526482 | 7.576 | 2776138 | 7.577 | 91 | 50 - 200 | -0.0010 | +/-0.50 |
| Pentafluorobenzene | 9413026 | 3.483 | 11002470 | 3.485 | 86 | 50 - 200 | -0.0020 | +/-0.50 |
| **GKHMS-GW-006-1010 (1011015-01 )** | | | *Lab File ID: B02890363.D* | | | *Analyzed: 11/13/10 12:24* | | |
| 1,4-Difluorobenzene | 14729290 | 4.121 | 14263660 | 4.122 | 103 | 50 - 200 | -0.0010 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 6291836 | 11.276 | 7265895 | 11.274 | 87 | 50 - 200 | 0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 3063146 | 7.577 | 2776138 | 7.577 | 110 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 11533790 | 3.484 | 11002470 | 3.485 | 105 | 50 - 200 | -0.0010 | +/-0.50 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047043 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **GKHMS-GW-09-1010 (1011015-02 )** | | | *Lab File ID: B02890364.D* | | | *Analyzed: 11/13/10 12:51* | | |
| 1,4-Difluorobenzene | 15055010 | 4.12 | 14263660 | 4.122 | 106 | 50 - 200 | -0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 6112726 | 11.276 | 7265895 | 11.274 | 84 | 50 - 200 | 0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 3054238 | 7.576 | 2776138 | 7.577 | 110 | 50 - 200 | -0.0010 | +/-0.50 |
| Pentafluorobenzene | 11760220 | 3.483 | 11002470 | 3.485 | 107 | 50 - 200 | -0.0020 | +/-0.50 |
| **GKHMS-GW-10-1010 (1011015-03 )** | | | *Lab File ID: B02890365.D* | | | *Analyzed: 11/13/10 13:18* | | |
| 1,4-Difluorobenzene | 13490000 | 4.12 | 14263660 | 4.122 | 95 | 50 - 200 | -0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 5662855 | 11.276 | 7265895 | 11.274 | 78 | 50 - 200 | 0.0020 | +/-0.50 |
| Chlorobenzene-d5 | 2741292 | 7.577 | 2776138 | 7.577 | 99 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 10417660 | 3.483 | 11002470 | 3.485 | 95 | 50 - 200 | -0.0020 | +/-0.50 |
| **GKHMS-TB-04 (1011015-04 )** | | | *Lab File ID: B02890366.D* | | | *Analyzed: 11/13/10 13:44* | | |
| 1,4-Difluorobenzene | 12710900 | 4.12 | 14263660 | 4.122 | 89 | 50 - 200 | -0.0020 | +/-0.50 |
| 1,4-Dichlorobenzene-d4 | 5380870 | 11.278 | 7265895 | 11.274 | 74 | 50 - 200 | 0.0040 | +/-0.50 |
| Chlorobenzene-d5 | 2645172 | 7.577 | 2776138 | 7.577 | 95 | 50 - 200 | 0.0000 | +/-0.50 |
| Pentafluorobenzene | 9804467 | 3.483 | 11002470 | 3.485 | 89 | 50 - 200 | -0.0020 | +/-0.50 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |

# INITIAL CALIBRATION STANDARDS

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046039 | Instrument: | GCMS-D |
| Calibration: | 0111602 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001979 | DFTPP050 WORKING STANDARD | S046039-TUN1 | D46148.D | 11/03/10 11:30 |
| 0001565 | SSTD001 8270LL 1/5ppm | S046039-CAL5 | D46149.D | 11/03/10 11:53 |
| 0001811 | SSTD00.05 8270LL 0.05/0.25ppm | S046039-CAL1 | D46150.D | 11/03/10 12:17 |
| 0001810 | SSTD00.1 8270LL 0.1/0.5ppm | S046039-CAL2 | D46151.D | 11/03/10 12:41 |
| 0001562 | SSTD00.2 8270LL 0.2/1ppm | S046039-CAL3 | D46152.D | 11/03/10 13:06 |
| 0001563 | SSTD00.5 8270LL 0.5/2.5ppm | S046039-CAL4 | D46153.D | 11/03/10 13:30 |
| 0001566 | SSTD02.5 8270LL 2.5/12.5ppm | S046039-CAL6 | D46154.D | 11/03/10 13:54 |
| 0001567 | SSTD005 8270LL 5/25ppm | S046039-CAL7 | D46155.D | 11/03/10 14:19 |
| 0001568 | SSTD010 8270LL 10/50ppm | S046039-CAL8 | D46156.D | 11/03/10 14:43 |
| 0001561 | SSTD020 8270LL 20/100ppm | S046039-CAL9 | D46157.D | 11/03/10 15:07 |
| 0002011 | SSTD02.5ICV 8270LL 2.5 PPM | S046039-SCV1 | D46158.D | 11/03/10 15:49 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46158.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S046039 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S046039-SCV1 | Injection Time: | 15:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 2500 | 2450 | 0.6958117 | 0.6817819 | | -2.0 | 20 |
| Acenaphthene | A | 2500 | 2370 | 1.324787 | 1.25343 | | -5.4 | 20 |
| Acenaphthylene | A | 2500 | 2390 | 2.222404 | 2.121 | | -4.6 | 20 |
| Anthracene | A | 2500 | 2380 | 1.227584 | 1.168661 | | -4.8 | 20 |
| Benzo[a]anthracene | A | 2500 | 2330 | 1.605312 | 1.496478 | | -6.8 | 20 |
| Benzo[a]pyrene | A | 2500 | 2370 | 2.253927 | 2.136756 | | -5.2 | 20 |
| Benzo[b]fluoranthene | A | 2500 | 2270 | 2.546752 | 2.312748 | | -9.2 | 20 |
| Benzo[g,h,i]perylene | A | 2500 | 2450 | 1.707555 | 1.675813 | | -1.9 | 20 |
| Benzo[k]fluoranthene | A | 2500 | 2380 | 2.564201 | 2.441688 | | -4.8 | 20 |
| Chrysene | A | 2500 | 2280 | 1.591607 | 1.453402 | | -8.7 | 20 |
| Dibenz[a,h]anthracene | A | 2500 | 2440 | 1.626379 | 1.584666 | | -2.6 | 20 |
| Fluoranthene | A | 2500 | 2350 | 1.235125 | 1.161404 | | -6.0 | 20 |
| Fluorene | A | 2500 | 2370 | 1.373122 | 1.301104 | | -5.2 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 2500 | 2260 | 2.228926 | 2.014394 | | -9.6 | 20 |
| Naphthalene | A | 2500 | 2480 | 1.230131 | 1.221897 | | -0.7 | 20 |
| Phenanthrene | A | 2500 | 2280 | 1.255689 | 1.144927 | | -8.8 | 20 |
| Pyrene | A | 2500 | 2400 | 2.168287 | 2.080985 | | -4.0 | 20 |
| 2-Fluorobiphenyl | A | 2500 | 2440 | 1.591732 | 1.552743 | | -2.4 | 20 |
| Nitrobenzene-d5 | A | 2500 | 2470 | 0.3971127 | 0.3917262 | | -1.4 | 20 |
| Terphenyl-d14 | A | 2500 | 2360 | 1.040014 | 0.9812326 | | -5.7 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46241.D | Injection Date: | 11/15/10 |
| Instrument ID: | GCMS-D | Injection Time: | 15:44 |
| Sequence: | S047051 | Lab Sample ID: | S047051-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.3 | PASS |
| 70 | Less than 2% of 69 | 0.983 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 49.1 | PASS |
| 197 | Less than 1% of 198 | 0.0964 | PASS |
| 199 | 5 - 9% of 198 | 6.29 | PASS |
| 275 | 10 - 30% of 198 | 20.4 | PASS |
| 365 | 1 - 200% of 198 | 2.37 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |
| 441 | Less than 100% of 443 | 76 | PASS |
| 442 | 40 - 200% of 198 | 53.9 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047051-CCV1 | D46242.D | 11/15/2010 | 15:59:00 |
| Blank | B048003-BLK1 | D46243.D | 11/15/2010 | 16:24:00 |
| LCS | B048003-BS1 | D46244.D | 11/15/2010 | 16:48:00 |
| Matrix Spike | B048003-MS1 | D46245.D | 11/15/2010 | 17:13:00 |
| Matrix Spike Dup | B048003-MSD1 | D46246.D | 11/15/2010 | 17:37:00 |
| GKHMS-GW-006-1010 | 1011015-01 | D46254.D | 11/15/2010 | 20:52:00 |
| GKHMS-GW-09-1010 | 1011015-02 | D46255.D | 11/15/2010 | 21:17:00 |
| GKHMS-GW-10-1010 | 1011015-03 | D46256.D | 11/15/2010 | 21:41:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46242.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S047051 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S047051-CCV1 | Injection Time: | 15:59 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1000 | 0.6958117 | 0.6971865 | | 0.2 | 20 |
| Acenaphthene | A | 1000 | 1050 | 1.324787 | 1.391577 | | 5.0 | 20 |
| Acenaphthylene | A | 1000 | 1090 | 2.222404 | 2.428374 | | 9.3 | 20 |
| Anthracene | A | 1000 | 1050 | 1.227584 | 1.293011 | | 5.3 | 20 |
| Benzo[a]anthracene | A | 1000 | 1050 | 1.605312 | 1.692061 | | 5.4 | 20 |
| Benzo[a]pyrene | A | 1000 | 1100 | 2.253927 | 2.469795 | | 9.6 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1040 | 2.546752 | 2.645648 | | 3.9 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 1010 | 1.707555 | 1.731324 | | 1.4 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1170 | 2.564201 | 3.006795 | | 17.3 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.754186 | | 10.2 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 995 | 1.626379 | 1.617862 | | -0.5 | 20 |
| Fluoranthene | A | 1000 | 1020 | 1.235125 | 1.261707 | | 2.2 | 20 |
| Fluorene | A | 1000 | 1040 | 1.373122 | 1.428469 | | 4.0 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 1030 | 2.228926 | 2.291624 | | 2.8 | 20 |
| Naphthalene | A | 1000 | 972 | 1.230131 | 1.19618 | | -2.8 | 20 |
| Phenanthrene | A | 1000 | 999 | 1.255689 | 1.254105 | | -0.1 | 20 |
| Pyrene | A | 1000 | 1030 | 2.168287 | 2.224069 | | 2.6 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1080 | 1.591732 | 1.717497 | | 7.9 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1120 | 0.3971127 | 0.444155 | | 11.8 | 20 |
| Terphenyl-d14 | A | 1000 | 995 | 1.040014 | 1.034785 | | -0.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048003-BLK1 | Batch: | B048003 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B048003-MSD1 | D46246.D | 17:37 |
| Matrix Spike | B048003-MS1 | D46245.D | 17:13 |
| LCS | B048003-BS1 | D46244.D | 16:48 |
| GKHMS-GW-10-1010 | 1011015-03 | D46256.D | 21:41 |
| GKHMS-GW-09-1010 | 1011015-02 | D46255.D | 21:17 |
| GKHMS-GW-006-1010 | 1011015-01 | D46254.D | 20:52 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B048003-BLK1 | File ID: | D46243.D |
| Sampled: | | Prepared: | 11/09/10 08:30 | Analyzed: | 11/15/10 16:24 |
| Solids: | | Preparation: | 3520C Cont. | Dilution: | |
| Batch: | B048003 | Sequence: | S047051 | Calibration: | 0111602 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ng/L) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 50.0 | U |
| 83-32-9 | Acenaphthene | 50.0 | U |
| 208-96-8 | Acenaphthylene | 50.0 | U |
| 120-12-7 | Anthracene | 50.0 | U |
| 56-55-3 | Benzo[a]anthracene | 50.0 | U |
| 50-32-8 | Benzo[a]pyrene | 50.0 | U |
| 205-99-2 | Benzo[b]fluoranthene | 50.0 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 50.0 | U |
| 207-08-9 | Benzo[k]fluoranthene | 50.0 | U |
| 218-01-9 | Chrysene | 50.0 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 50.0 | U |
| 206-44-0 | Fluoranthene | 50.0 | U |
| 86-73-7 | Fluorene | 50.0 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 50.0 | U |
| 91-20-3 | Naphthalene | 50.0 | U |
| 85-01-8 | Phenanthrene | 50.0 | U |
| 129-00-0 | Pyrene | 50.0 | U |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-D |

| | 2FBPL (50 - 110) | NB-d5 (40 - 110) | TRPL-D14 (50 - 135) |
|---|---|---|---|
| 1011015-01 | 97 | 93 | 103 |
| 1011015-02 | 83 | 88 | 95 |
| 1011015-03 | 86 | 87 | 97 |
| B048003-BLK1 | 92 | 98 | 102 |
| B048003-BS1 | 93 | 102 | 100 |
| B048003-MS1 | 91 | 98 | 98 |
| B048003-MSD1 | 85 | 86 | 98 |

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# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048003 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048003-MS1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ng/L) | SAMPLE CONCENTRATION (ng/L) | MS CONCENTRATION (ng/L) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | | 4790 | 96 | | 45 - 105 |
| Acenaphthene | 5000 | 600 | 5210 | 92 | | 45 - 110 |
| Acenaphthylene | 5000 | 55.1 | 4360 | 86 | | 50 - 105 |
| Anthracene | 5000 | 83.2 | 4560 | 90 | | 55 - 110 |
| Benzo[a]anthracene | 5000 | | 4970 | 99 | | 55 - 110 |
| Benzo[a]pyrene | 5000 | | 5890 | 118 | * | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | | 6430 | 129 | * | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | | 6270 | 125 | | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | | 5960 | 119 | | 45 - 125 |
| Chrysene | 5000 | | 5050 | 101 | | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | | 5860 | 117 | | 40 - 125 |
| Fluoranthene | 5000 | | 5050 | 101 | | 55 - 115 |
| Fluorene | 5000 | | 4660 | 93 | | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | | 5720 | 114 | | 45 - 125 |
| Naphthalene | 5000 | 45.8 | 4470 | 88 | | 40 - 100 |
| Phenanthrene | 5000 | | 4680 | 94 | | 50 - 115 |
| Pyrene | 5000 | | 4660 | 93 | | 50 - 130 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike Dup

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048003 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048003-MSD1 |
| Column: | | Sample Lab ID: | 1011003-03 |

| ANALYTE | SPIKE ADDED (ng/L) | MSD CONCENTRATION (ng/L) | MSD % REC. # | | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 4360 | 87 | | 10 | 20 | 45 - 105 |
| Acenaphthene | 5000 | 4810 | 84 | | 8 | 20 | 45 - 110 |
| Acenaphthylene | 5000 | 3920 | 77 | | 10 | 20 | 50 - 105 |
| Anthracene | 5000 | 4380 | 86 | | 4 | 20 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4870 | 97 | | 2 | 20 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5700 | 114 | * | 3 | 20 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 6000 | 120 | | 7 | 20 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 5920 | 118 | | 6 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 6150 | 123 | | 3 | 20 | 45 - 125 |
| Chrysene | 5000 | 4860 | 97 | | 4 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 5620 | 112 | | 4 | 20 | 40 - 125 |
| Fluoranthene | 5000 | 4880 | 98 | | 4 | 20 | 55 - 115 |
| Fluorene | 5000 | 4490 | 90 | | 4 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 5450 | 109 | | 5 | 20 | 45 - 125 |
| Naphthalene | 5000 | 3980 | 79 | | 11 | 20 | 40 - 100 |
| Phenanthrene | 5000 | 4530 | 91 | | 3 | 20 | 50 - 115 |
| Pyrene | 5000 | 4520 | 90 | | 3 | 20 | 50 - 130 |

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# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B048003 | Laboratory ID: | B048003-BS1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5150 | 103 | | 45 - 105 |
| Acenaphthene | 5000 | 5050 | 101 | | 45 - 110 |
| Acenaphthylene | 5000 | 4760 | 95 | | 50 - 105 |
| Anthracene | 5000 | 5100 | 102 | | 55 - 110 |
| Benzo[a]anthracene | 5000 | 5380 | 108 | | 55 - 110 |
| Benzo[a]pyrene | 5000 | 6490 | 130 | * | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 7110 | 142 | * | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 6900 | 138 | * | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 6560 | 131 | * | 45 - 125 |
| Chrysene | 5000 | 5470 | 109 | | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 6410 | 128 | * | 40 - 125 |
| Fluoranthene | 5000 | 5240 | 105 | | 55 - 115 |
| Fluorene | 5000 | 5120 | 102 | | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 6300 | 126 | * | 45 - 125 |
| Naphthalene | 5000 | 4820 | 96 | | 40 - 100 |
| Phenanthrene | 5000 | 4980 | 100 | | 50 - 115 |
| Pyrene | 5000 | 5180 | 104 | | 50 - 130 |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047051-CCV1 )** | | | *Lab File ID: D46242.D* | | | *Analyzed: 11/15/10 15:59* | | |
| 1,4-Dichlorobenzene-d4 | 325841 | 3.77 | 524277 | 3.79 | 62 | 50 - 200 | -0.0200 | +/-30.00 |
| Acenaphthene-d10 | 464052 | 6.88 | 890160 | 6.91 | 52 | 50 - 200 | -0.0300 | +/-30.00 |
| Chrysene-d12 | 405437 | 11.32 | 837431 | 11.37 | 48 | 50 - 200 | -0.0500 | +/-30.00 |
| Naphthalene-d8 | 1103894 | 5.05 | 1909751 | 5.08 | 58 | 50 - 200 | -0.0300 | +/-30.00 |
| Perylene-d12 | 215613 | 14.04 | 457505 | 14.11 | 47 | 50 - 200 | -0.0700 | +/-30.00 |
| Phenanthrene-d10 | 703035 | 8.41 | 1402237 | 8.45 | 50 | 50 - 200 | -0.0400 | +/-30.00 |
| **Blank (B048003-BLK1 )** | | | *Lab File ID: D46243.D* | | | *Analyzed: 11/15/10 16:24* | | |
| 1,4-Dichlorobenzene-d4 | 261328 | 3.76 | 325841 | 3.77 | 80 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 356280 | 6.88 | 464052 | 6.88 | 77 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 255985 | 11.33 | 405437 | 11.32 | 63 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 848944 | 5.05 | 1103894 | 5.05 | 77 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 126482 | 14.04 | 215613 | 14.04 | 59 | 50 - 200 | 0.0000 | +/-30.00 |
| Phenanthrene-d10 | 495770 | 8.41 | 703035 | 8.41 | 71 | 50 - 200 | 0.0000 | +/-30.00 |
| **LCS (B048003-BS1 )** | | | *Lab File ID: D46244.D* | | | *Analyzed: 11/15/10 16:48* | | |
| 1,4-Dichlorobenzene-d4 | 255394 | 3.76 | 325841 | 3.77 | 78 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 351186 | 6.88 | 464052 | 6.88 | 76 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 311790 | 11.33 | 405437 | 11.32 | 77 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 818344 | 5.05 | 1103894 | 5.05 | 74 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 159763 | 14.04 | 215613 | 14.04 | 74 | 50 - 200 | 0.0000 | +/-30.00 |
| Phenanthrene-d10 | 521004 | 8.42 | 703035 | 8.41 | 74 | 50 - 200 | 0.0100 | +/-30.00 |
| **Matrix Spike (B048003-MS1 )** | | | *Lab File ID: D46245.D* | | | *Analyzed: 11/15/10 17:13* | | |
| 1,4-Dichlorobenzene-d4 | 251101 | 3.76 | 325841 | 3.77 | 77 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 353391 | 6.88 | 464052 | 6.88 | 76 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 324523 | 11.33 | 405437 | 11.32 | 80 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 820915 | 5.05 | 1103894 | 5.05 | 74 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 176312 | 14.05 | 215613 | 14.04 | 82 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 506760 | 8.42 | 703035 | 8.41 | 72 | 50 - 200 | 0.0100 | +/-30.00 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047051 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B048003-MSD1 )** | | | *Lab File ID: D46246.D* | | | *Analyzed: 11/15/10 17:37* | | |
| 1,4-Dichlorobenzene-d4 | 211734 | 3.77 | 325841 | 3.77 | 65 | 50 - 200 | 0.0000 | +/-30.00 |
| Acenaphthene-d10 | 304122 | 6.88 | 464052 | 6.88 | 66 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 277345 | 11.33 | 405437 | 11.32 | 68 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 701201 | 5.05 | 1103894 | 5.05 | 64 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 144219 | 14.05 | 215613 | 14.04 | 67 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 437104 | 8.42 | 703035 | 8.41 | 62 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-006-1010 (1011015-01 )** | | | *Lab File ID: D46254.D* | | | *Analyzed: 11/15/10 20:52* | | |
| 1,4-Dichlorobenzene-d4 | 199750 | 3.76 | 325841 | 3.77 | 61 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 312999 | 6.88 | 464052 | 6.88 | 67 | 50 - 200 | 0.0000 | +/-30.00 |
| Chrysene-d12 | 306759 | 11.33 | 405437 | 11.32 | 76 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 679625 | 5.05 | 1103894 | 5.05 | 62 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 147233 | 14.05 | 215613 | 14.04 | 68 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 467269 | 8.42 | 703035 | 8.41 | 66 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-09-1010 (1011015-02 )** | | | *Lab File ID: D46255.D* | | | *Analyzed: 11/15/10 21:17* | | |
| 1,4-Dichlorobenzene-d4 | 192017 | 3.76 | 325841 | 3.77 | 59 | 50 - 200 | -0.0100 | +/-30.00 |
| Acenaphthene-d10 | 319357 | 6.89 | 464052 | 6.88 | 69 | 50 - 200 | 0.0100 | +/-30.00 |
| Chrysene-d12 | 351051 | 11.34 | 405437 | 11.32 | 87 | 50 - 200 | 0.0200 | +/-30.00 |
| Naphthalene-d8 | 665656 | 5.05 | 1103894 | 5.05 | 60 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 150069 | 14.07 | 215613 | 14.04 | 70 | 50 - 200 | 0.0300 | +/-30.00 |
| Phenanthrene-d10 | 459365 | 8.42 | 703035 | 8.41 | 65 | 50 - 200 | 0.0100 | +/-30.00 |
| **GKHMS-GW-10-1010 (1011015-03 )** | | | *Lab File ID: D46256.D* | | | *Analyzed: 11/15/10 21:41* | | |
| 1,4-Dichlorobenzene-d4 | 170561 | 3.77 | 325841 | 3.77 | 52 | 50 - 200 | 0.0000 | +/-30.00 |
| Acenaphthene-d10 | 264678 | 6.89 | 464052 | 6.88 | 57 | 50 - 200 | 0.0100 | +/-30.00 |
| Chrysene-d12 | 241734 | 11.34 | 405437 | 11.32 | 60 | 50 - 200 | 0.0200 | +/-30.00 |
| Naphthalene-d8 | 582181 | 5.05 | 1103894 | 5.05 | 53 | 50 - 200 | 0.0000 | +/-30.00 |
| Perylene-d12 | 118519 | 14.06 | 215613 | 14.04 | 55 | 50 - 200 | 0.0200 | +/-30.00 |
| Phenanthrene-d10 | 389282 | 8.42 | 703035 | 8.41 | 55 | 50 - 200 | 0.0100 | +/-30.00 |

6 RP 11/15

# GC ANALYSIS LOG

**Instrument ID:** HP5890 # V **Reviewed by:** BR **Date:** 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp ( °C): | 180 / 200 / 240 |
| Detector Temp ( °C): | 300 |
| Oven Initial Temp ( °C): | 60 / 150 |
| Initial Time (min): | 0.0 / 0.50 / 1.0 |
| Ramp Rate ( °C/min) : | 11-220-4 / 6-250-4 - 18-300-7 |
| Final Temp ( °C): | 200 / 275 / 300 |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30 meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: ~~1025~~ 111010V.M (125 11/15)

Analyst: RP

| File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|
| 111010 V | | | | | |

Injection Log

Directory: h:\gcdata\v\111010

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316231.d | 1. | EVAL MIX 2085 | STD 8081 | 10 Nov 10 11:24 |
| 2 | v0316232.d | 1. | TOX-3 2094 | STD 8081 | 10 Nov 10 12:07 |
| 3 | v0316233.d | 1. | CHLOR-3 2104 | STD 8081 | 10 Nov 10 12:39 |
| 4 | v0316234.d | 1. | SEQ CAL6 PEST-6 17220 | STD 8081 | 10 Nov 10 13:11 |
| 5 | v0316235.d | 1. | SEQ CAL5 PEST-5 17221 | STD 8081 | 10 Nov 10 13:43 |
| 6 | v0316236.d | 1. | SEQ CAL4 PEST-4 17222 | STD 8081 | 10 Nov 10 14:15 |
| 7 | v0316237.d | 1. | SEQ CAL3 PEST-3 17223 mvt use | STD 8081 | 10 Nov 10 14:47 |
| 8 | v0316238.d | 1. | SEQ CAL2 PEST-2 17224 | STD 8081 | 10 Nov 10 15:19 |
| 7 | v0316239.d | 1. | SEQ CAL3 PEST-3 17223 | STD 8081 | 10 Nov 10 16:23 |
| 9 | v0316240.d | 1. | SEQ SCV1 PEST-4 ICV 20~~55~~66 RP 11/11/11 | STD 8081 | 10 Nov 10 16:55 |
| 10 | v0316241.d | 1. | EVAL MIX | STD 8081 | 10 Nov 10 17:27 |
| 11 | v0316242.d | 1. | BLK (BG47023) | BLK,W | 10 Nov 10 17:59 |
| 12 | v0316243.d | 1. | BS ↓ | BS,W | 10 Nov 10 18:31 |
| 13 | v0316244.d | 1. | BSD | BS,W | 10 Nov 10 19:03 |
| 14 | v0316245.d | 1. | 100906LCS007-02 | WATER | 10 Nov 10 19:36 |
| 15 | v0316246.d | 1. | RP 11/15 SEQ CCV1 PEST-4 | TD | 10 Nov 10 20:07 |

RP 11/15/10

Comments: SO46058 011104: 1

# INITIAL CALIBRATION STANDARDS

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046056 | Instrument: | GCECD-V |
| Calibration: | 0111108 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002096 | TOXAPHENE LE-3 | S046056-CAL6 | V0316232.D | 11/10/10 12:07 |
| 0002104 | CHLORDANE LE-3 | S046056-CAL7 | V0316233.D | 11/10/10 12:39 |
| 0001720 | PEST MIX LE-6 | S046056-CAL5 | V0316234.D | 11/10/10 13:11 |
| 0001721 | PEST MIX LE-5 | S046056-CAL4 | V0316235.D | 11/10/10 13:43 |
| 0001721 | PEST MIX LE-5 | S046056-CAL4 | V0316235.D | 11/10/10 13:43 |
| 0001722 | PEST MIX LE-4 | S046056-CAL3 | V0316236.D | 11/10/10 14:15 |
| 0001724 | PEST MIX LE-2 | S046056-CAL1 | V0316238.D | 11/10/10 15:19 |
| 0001723 | PEST MIX LE-3 | S046056-CAL2 | V0316239.D | 11/10/10 16:23 |
| 0001723 | PEST MIX LE-3 | S046056-CAL2 | V0316239.D | 11/10/10 16:23 |
| 0002066 | PEST LEVEL-4(ICV) | S046056-SCV1 | V0316240.D | 11/10/10 16:55 |

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111010\V0316233.D\ECD1A.CH Vial: 3
Signal #2 : H:\GCDATA\V\111010\V0316233.D\ECD2B.CH
Acq On : 10 Nov 2010 12:39 Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:26 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Nov 10 15:16:18 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.67 | 6.46 | 137.3E6 | 210.9E6 | 25.594 | 25.000 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 127.97% | 125.00% |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 82988875 | 130.5E6 | 25.000 | 25.000 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 125.00% |
| Target Compounds | | | | | | |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| 34) L9 Chlordane | 9.34 | 10.38 | 170.0E6 | 328.1E6 | 502.732 | 504.206 |
| 35) L9 Chlordane {2} | 10.59 | 11.96 | 144.5E6 | 230.7E6 | 498.756 | 493.610 |
| 36) L9 Chlordane {3} | 12.56 | 14.07 | 375.8E6 | 662.4E6 | 512.932 | 530.189 |
| 37) L9 Chlordane {4} | 12.99 | 14.57 | 500.4E6 | 562.8E6 | 454.272 | 503.710 |
| 38) L9 Chlordane {5} | 15.49 | 17.60 | 103.4E6 | 188.8E6 | 504.872 | 546.468 |
| Sum Chlordane | | | 1294.2E6 | 1972.7E6 | 2473.564 | 2578.182 |
| Average Chlordane | | | | | 494.713 | 515.636 |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111010\V0316232.D\ECD1A.CH Vial: 2
Signal #2 : H:\GCDATA\V\111010\V0316232.D\ECD2B.CH
Acq On : 10 Nov 2010 12:07 Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Nov 10 15:28 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Wed Nov 10 15:16:18 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.70 | 6.47 | 239.1E6 | 357.7E6 | 25.000 | 25.000 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 125.00% | 125.00% |
| 28) S Decachlorobiphen | 22.15 | 24.09 | 142.2E6 | 213.5E6 | 25.000 | 25.000 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 125.00% |
| Target Compounds | | | | | | |
| 29) L8 Toxaphene | 14.53 | 15.60 | 45822342 | 96815464 | 466.409m | 500.000 |
| 30) L8 Toxaphene {2} | 15.66 | 17.38 | 110.4E6 | 154.8E6 | 502.234m | 499.650m |
| 31) L8 Toxaphene {3} | 16.81 | 17.75 | 70668992 | 263.7E6 | 498.131m | 497.089m |
| 32) L8 Toxaphene {4} | 17.55 | 18.78 | 48262374 | 147.0E6 | 500.695m | 468.075m |
| 33) L8 Toxaphene {5} | 18.33 | 20.28 | 83566428 | 138.1E6 | 485.231m | 491.754m |
| Sum Toxaphene | | | 358.7E6 | 800.5E6 | 2452.700 | 2456.569 |
| Average Toxaphene | | | | | 490.540 | 491.314 |
| Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average Chlordane | | | | | 0.000 | 0.000 |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 3927132 | 12.80733 | 0.9931665 | | | |
| 4,4'-DDD [2C] | 7107345 | 9.49265 | 0.9953261 | | | |
| 4,4'-DDE | 4930684 | 7.136616 | 0.9957538 | | | |
| 4,4'-DDE [2C] | 9800288 | 5.974536 | 0.9975432 | | | |
| 4,4'-DDT | 4479399 | 5.376023 | 0.9976117 | | | |
| 4,4'-DDT [2C] | 8030693 | 6.567605 | 0.9967026 | | | |
| Aldrin | 6583499 | 2.916463 | 0.9986387 | | | |
| Aldrin [2C] | 1.159123E+07 | 6.790814 | 0.9987355 | | | |
| alpha-BHC | 7716550 | 6.557162 | 0.9958162 | | | |
| alpha-BHC [2C] | 1.261036E+07 | 7.470782 | 0.9972337 | | | |
| alpha-Chlordane | 6247204 | 4.939292 | 0.998986 | | | |
| alpha-Chlordane [2C] | 1.088866E+07 | 2.845215 | 0.9988789 | | | |
| beta-BHC | 7297870 | 4.555459 | 0.9967492 | | | |
| beta-BHC [2C] | 5176619 | 8.3482 | 0.9987438 | | | |
| Chlordane | | | 0 | | | |
| Chlordane [2C] | | | 0 | | | |
| delta-BHC | 6616362 | 10.30961 | 0.9974496 | | | |
| delta-BHC [2C] | 1.07974E+07 | 9.479932 | 0.9979358 | | | |
| Dieldrin | 6090391 | 3.179883 | 0.9985682 | | | |
| Dieldrin [2C] | 1.096383E+07 | 6.199808 | 0.9986072 | | | |
| Endosulfan I | 6244553 | 4.221736 | 0.9987476 | | | |
| Endosulfan I [2C] | 1.001925E+07 | 2.535149 | 0.9990434 | | | |
| Endosulfan II | 5350386 | 7.442338 | 0.9985825 | | | |
| Endosulfan II [2C] | 9402900 | 2.260476 | 0.9987657 | | | |
| Endosulfan sulfate | 5062108 | 8.324653 | 0.9978397 | | | |
| Endosulfan Sulfate [2C] | 8402078 | 10.15314 | 0.9973928 | | | |
| Endrin | 5312643 | 5.508657 | 0.9981912 | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111108 | Instrument: | GCECD-V |
| | | Calibration Date: | 11/11/2010 4:23:49PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Endrin [2C] | 9243818 | 5.289009 | 0.9983315 | | | |
| Endrin Aldehyde | 3560554 | 17.56286 | 0.9979873 | | | |
| Endrin Aldehyde [2C] | 5430906 | 6.052219 | 0.9937648 | | | |
| Endrin ketone | 5928980 | 5.741913 | 0.9981873 | | | |
| Endrin Ketone [2C] | 8895054 | 5.732912 | 0.9975023 | | | |
| gamma-BHC [2C] | 1.164672E+07 | 7.685229 | 0.9987495 | | | |
| gamma-Chlordane | 6144086 | 2.815292 | 0.9986504 | | | |
| gamma-Chlordane [2C] | 1.103789E+07 | 3.33242 | 0.9987641 | | | |
| Heptachlor | 6980938 | 5.827347 | 0.9991177 | | | |
| Heptachlor [2C] | 1.296502E+07 | 2.559587 | 0.9991483 | | | |
| Heptachlor Epoxide | 6437835 | 4.29548 | 0.9991091 | | | |
| Heptachlor Epoxide [2C] | 1.128674E+07 | 2.341002 | 0.9990929 | | | |
| Methoxychlor | 2351134 | 2.448607 | 0.998842 | | | |
| Methoxychlor [2C] | 4166551 | 5.240687 | 0.9970825 | | | |
| Toxaphene | | | 0 | | | |
| Toxaphene [2C] | | | 0 | | | |
| TCMX | 5103199 | 8.965449 | 0.9975621 | | | |
| TCMX [2C] | 7444112 | 8.3338 | 0.9937107 | | | |
| DCB | 3805969 | 11.49518 | 0.9968368 | | | |
| DCB [2C] | 5944703 | 13.0102 | 0.9962796 | | | |

V0316231BRKDWN

| % BREAKDOWN | SIGNAL 1 RTx-CLP | SIGNAL 2 RTx-CLP2 |
|---|---|---|
| **ENDRIN** | **6.58** | **4.63** |
| **DDT** | **1.53** | **1.29** |

| | RAW RESPONSE | |
|---|---|---|
| ENDRIN KETONE | 8092017.00 | 11915024.00 |
| ENDRIN ALDEHYDE | 5794209.00 | 5002648.00 |
| **ENDRIN** | 197300000.00 | 348700000.00 |

| | | |
|---|---|---|
| DDE | 0.00 | 0.00 |
| DDD | 2229613.00 | 3545463.00 |
| **DDT** | 143600000.00 | 270800000.00 |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316240.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-SCV1 | Injection Time: | 16:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.4 | 3927132 | 4038988 | | 2.8 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 51.8 | 7107345 | 7357034 | | 3.5 | 20 |
| 4,4'-DDE | L | 50.0 | 48.8 | 4930684 | 4816830 | | -2.3 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.3 | 9800288 | 9666454 | | -1.4 | 20 |
| 4,4'-DDT | L | 50.0 | 48.1 | 4479399 | 4306818 | | -3.9 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.0 | 8030693 | 7864020 | | -2.1 | 20 |
| Aldrin | L | 50.0 | 48.9 | 6583499 | 6441240 | | -2.2 | 20 |
| Aldrin [2C] | L | 50.0 | 50.7 | 1.159123E+07 | 1.17541E+07 | | 1.4 | 20 |
| alpha-BHC | L | 50.0 | 50.4 | 7716550 | 7785798 | | 0.9 | 20 |
| alpha-BHC [2C] | L | 50.0 | 51.4 | 1.261036E+07 | 1.296084E+07 | | 2.8 | 20 |
| alpha-Chlordane | L | 50.0 | 48.0 | 6247204 | 5994614 | | -4.0 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.4 | 1.088866E+07 | 1.076895E+07 | | -1.1 | 20 |
| beta-BHC | L | 50.0 | 49.9 | 7297870 | 7287814 | | -0.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.4 | 5176619 | 4909320 | | -5.2 | 20 |
| delta-BHC | L | 50.0 | 51.8 | 6616362 | 6860098 | | 3.7 | 20 |
| delta-BHC [2C] | L | 50.0 | 52.3 | 1.07974E+07 | 1.12966E+07 | | 4.6 | 20 |
| Dieldrin | L | 50.0 | 48.9 | 6090391 | 5959458 | | -2.1 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.1 | 1.096383E+07 | 1.097932E+07 | | 0.1 | 20 |
| Endosulfan I | L | 50.0 | 48.0 | 6244553 | 5998544 | | -3.9 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.4 | 1.001925E+07 | 9892124 | | -1.3 | 20 |
| Endosulfan II | L | 50.0 | 47.4 | 5350386 | 5070140 | | -5.2 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.0 | 9402900 | 9219596 | | -1.9 | 20 |
| Endosulfan sulfate | L | 50.0 | 48.1 | 5062108 | 4866284 | | -3.9 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 47.9 | 8402078 | 8049164 | | -4.2 | 20 |
| Endrin | L | 50.0 | 48.8 | 5312643 | 5186818 | | -2.4 | 20 |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316240.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-SCV1 | Injection Time: | 16:55 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 50.5 | 9243818 | 9343426 | | 1.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 52.1 | 3560554 | 3709280 | | 4.2 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 51.1 | 5430906 | 5551866 | | 2.2 | 20 |
| Endrin ketone | L | 50.0 | 47.8 | 5928980 | 5662886 | | -4.5 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 48.5 | 8895054 | 8620990 | | -3.1 | 20 |
| gamma-BHC [2C] | L | 50.0 | 50.9 | 1.164672E+07 | 1.185677E+07 | | 1.8 | 20 |
| gamma-Chlordane | L | 50.0 | 49.0 | 6144086 | 6014530 | | -2.1 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.3 | 1.103789E+07 | 1.088972E+07 | | -1.3 | 20 |
| Heptachlor | L | 50.0 | 48.6 | 6980938 | 6778736 | | -2.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.5 | 1.296502E+07 | 1.284027E+07 | | -1.0 | 20 |
| Heptachlor Epoxide | L | 50.0 | 48.2 | 6437835 | 6203680 | | -3.6 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.1 | 1.128674E+07 | 1.108669E+07 | | -1.8 | 20 |
| Methoxychlor | L | 50.0 | 50.2 | 2351134 | 2358820 | | 0.3 | 20 |
| Methoxychlor [2C] | L | 50.0 | 47.5 | 4166551 | 3956046 | | -5.1 | 20 |
| TCMX | L | 25.0 | 25.4 | 5103199 | 5193616 | | 1.8 | 20 |
| TCMX [2C] | L | 25.0 | 24.8 | 7444112 | 7389744 | | -0.7 | 20 |
| DCB | L | 25.0 | 23.2 | 3805969 | 3533777 | | -7.2 | 20 |
| DCB [2C] | L | 25.0 | 23.0 | 5944703 | 5465896 | | -8.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316246.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S046056 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S046056-CCV1 | Injection Time: | 20:07 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Heptachlor Epoxide | L | 50.0 | 45.8 | 6437835 | 5892178 | | -8.5 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 47.2 | 1.128674E+07 | 1.066511E+07 | | -5.5 | 20 |
| TCMX | L | 25.0 | 24.3 | 5103199 | 4956876 | | -2.9 | 20 |
| TCMX [2C] | L | 25.0 | 24.4 | 7444112 | 7259684 | | -2.5 | 20 |
| DCB | L | 25.0 | 21.8 | 3805969 | 3315558 | | -12.9 | 20 |
| DCB [2C] | L | 25.0 | 22.1 | 5944703 | 5252344 | | -11.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# GC ANALYSIS LOG

**Instrument ID:** HP5890 # V **Reviewed by:** MV **Date:** 11/18/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp ( °C): | 180 / 200 / 240 |
| Detector Temp ( °C): | 300 |
| Oven Initial Temp ( °C): | 60 / 150 |
| Initial Time (min): | 0.0 / 0.50 / 1.0 |
| Ramp Rate ( °C/min) : | 11-220-4 / 6-250-4 / 18-300-2 |
| Final Temp ( °C): | 200 / 275 / 300 |
| Injection Volume (uL): | 1.0 / 2.0 / 2.5 |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30 meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 111010V-M Analyst: RP

| File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|
| 111510 V | | | | | |

## Injection Log

Directory: h:\gcdata\v\111510

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316258.d | 1. | EVAL MIX 2081 | STD 8081 | 15 Nov 10 10:54 |
| 2 | v0316259.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 15 Nov 10 11:26 |
| 3 | v0316260.d | 1. | TOX-3 2046 | STD 8081 | 15 Nov 10 12:04 |
| 4 | v0316261.d | 1. | CHLOR-3 2047 | STD 8081 | 15 Nov 10 12:36 |
| 5 | v0316262.d | 1. | B046065-BLK1 | BLK,W | 15 Nov 10 13:08 |
| 6 | v0316263.d | 1. | B046065-BS1 | BS,W | 15 Nov 10 13:40 |
| 7 | v0316264.d | 1. | B046065-BSD1 | BS,W | 15 Nov 10 14:12 |
| 8 | v0316265.d | 1. | 1011015-01 | WATER | 15 Nov 10 14:44 |
| 9 | v0316266.d | 1. | 1011015-02 | WATER | 15 Nov 10 15:16 |
| 10 | v0316267.d | 1. | 1011015-03 | WATER | 15 Nov 10 15:48 |
| 11 | v0316268.d | 1. | B045083-BLK1 | WATER | 15 Nov 10 16:20 |
| 12 | v0316269.d | 1. | B045083-BS1 R+Alum | BS WATER | 15 Nov 10 16:52 |
| 13 | v0316270.d | 1. | B045083-BSD1 R+Alum | BSD WATER | 15 Nov 10 17:24 |
| 14 | v0316271.d | 1. | 1010098-04 | WATER | 15 Nov 10 17:56 |
| 15 | v0316272.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 15 Nov 10 18:28 |
| 16 | v0316273.d | 1. | 1010098-10 | WATER | 15 Nov 10 19:00 |
| 17 | v0316274.d | 1. | 1010098-11 | WATER | 15 Nov 10 19:32 |
| 18 | v0316275.d | 1. | 1011002-14 | WATER | 15 Nov 10 20:04 |
| 19 | v0316276.d | 1. | 1011002-15 | WATER | 15 Nov 10 20:36 |
| 20 | v0316277.d | 1. | 1011002-16 | WATER | 15 Nov 10 21:08 |
| 21 | v0316278.d | 1. | 1011003-05 | WATER | 15 Nov 10 21:40 |
| 22 | v0316279.d | 1. | 1011003-09 | WATER | 15 Nov 10 22:12 |
| 23 | v0316280.d | 1. | SEQ CCV3 PEST-4 1722 | STD | 15 Nov 10 22:44 |

## Injection Log

Directory: h:\gcdata\v\111610

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | v0316281.d | 1. | EVAL MIX 2041 | STD 8081 | 16 Nov 10 09:48 |
| 2 | v0316282.d | 1. | SEQ CCV1 PEST-4 1722 | STD 8081 | 16 Nov 10 10:35 |
| 3 | v0316283.d | 1. | B045083-BS1 | BS WATER | 16 Nov 10 11:48 |
| 4 | v0316284.d | 1. | B045083-BSD1 | WATER | 16 Nov 10 12:49 |
| 5 | v0316285.d | 1. | SEQ CCV2 PEST-4 1722 | STD | 16 Nov 10 13:21 |
| 6 | v0316286.d | 1. | PEST-CHK 1932 | STD | 16 Nov 10 13:56 |

111610 V

Comments: S049004

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ:
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 5.103 | 5.480 | E6 | -7.4 | 117 |
| 2 | A | Hexachlorobenzene | 6.898 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 7.717 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 7.298 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 6.981 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 6.583 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 3.316 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 6.616 | 0.000 | E6 | 100.0# | -0# |
| 9 | A | 2,4-DDE | 0.000 | 891648.133 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 6.438 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 6.245 | 0.000 | E6 | 100.0# | -0# |
| 12 | A | gamma-Chlordane | 6.144 | 0.000 | E6 | 100.0# | -0# |
| 13 | A | alpha-Chlordane | 6.247 | 0.000 | E6 | 100.0# | -0# |
| 14 | B | Trans-Nonachlor | 0.000 | 10596299.210 | | 0.0 | 0# |
| 15 | B | 4,4-DDE | 4.931 | 0.000 | E6 | 100.0# | -0# |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# |
| 17 | MA | Dieldrin | 6.090 | 0.000 | E6 | 100.0# | -0# |
| 18 | MA | 2,4-DDT | 0.000 | 667655.967 | | 0.0 | 0# |
| 19 | MA | Endrin | 5.313 | 0.000 | E6 | 100.0# | -0# |
| 20 | B | Endosulfan II | 5.350 | 0.000 | E6 | 100.0# | -0# |
| 21 | A | 4,4-DDD | 3.927 | 0.000 | E6 | 100.0# | -0# |
| 22 | MA | 4,4-DDT | 4.479 | 0.000 | E6 | 100.0# | -0# |
| 23 | B | Endrin Aldehyde | 3.561 | 0.000 | E6 | 100.0# | -0# |
| 24 | B | Mirex | 0.000 | 0.000 | | 0.0 | 0# |
| 25 | B | Endosulfan Sulfate | 5.062 | 0.000 | E6 | 100.0# | -0# |
| 26 | A | Methoxychlor | 2.351 | 0.000 | E6 | 100.0# | -0# |
| 27 | B | Endrin Ketone | 5.929 | 0.000 | E6 | 100.0# | -0# |
| 28 | S | Decachlorobiphenyl | 3.806 | 3.806 | E6 | 0.0 | 102 |
| 29 | L8 | Toxaphene | 61.471 | 87.739 | E3 | -42.7# | 165# |
| 30 | L8 | Toxaphene {2} | 181.672 | 351.816 | E3 | -93.7# | 195# |
| 31 | L8 | Toxaphene {3} | 147.757 | 259.378 | E3 | -75.5# | 177# |
| 32 | L8 | Toxaphene {4} | 88.473 | 190.215 | E3 | -115.0# | 216# |
| 33 | L8 | Toxaphene {5} | 138.766 | 230.284 | E3 | -66.0# | 166# |
| 34 | L9 | Chlordane | 369.780 | 375.816 | E3 | -1.6 | 96 |
| 35 | L9 | Chlordane {2} | 263.821 | 308.850 | E3 | -17.1 | 94 |
| 36 | L9 | Chlordane {3} | 799.046 | 796.095 | E3 | 0.4 | 93 |
| 37 | L9 | Chlordane {4} | 1.265 | 1.060 | E6 | 16.2 | 93 |
| 38 | L9 | Chlordane {5} | 201.968 | 224.288 | E3 | -11.1 | 94 |

Signal #2
Continuing Calibration File: V0316261.D

| | | Compound | AvgRF | CCRF | | %Dev | Area% |
|---|---|---|---|---|---|---|---|
| 1 | S | Tetrachloro-m-xylene | 7.444 | 8.714 | E6 | -17.1 | 133 |
| 2 | A | Hexachlorobenzene | 8.994 | 0.000 | E6 | 100.0# | -0# |
| 3 | A | alpha-BHC | 12.610 | 0.000 | E6 | 100.0# | -0# |
| 4 | MA | gamma-BHC (Lindane) | 11.647 | 0.000 | E6 | 100.0# | -0# |
| 5 | MA | Heptachlor | 12.965 | 0.000 | E6 | 100.0# | -0# |
| 6 | MB | Aldrin | 11.591 | 0.000 | E6 | 100.0# | -0# |
| 7 | B | beta-BHC | 5.177 | 0.000 | E6 | 100.0# | -0# |
| 8 | B | delta-BHC | 10.797 | 0.000 | E6 | 100.0# | -0# |
| 9 | B | 2,4- | 0.000 | 0.000 | | 0.0 | 0# |
| 10 | B | Heptachlor Epoxide | 11.287 | 0.000 | E6 | 100.0# | -0# |
| 11 | A | Endosulfan I | 10.019 | 0.000 | E6 | 100.0# | -0# |

(#) = Out of
V0316261.D VC.M Thu Jan 20 2:19 2011

# Continuing Calibration Report GCECD-V

Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ.
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Thu Jan 20 16:30:52 2011
Response via : Initial Calibration

Continuing Calibration File: V0316261.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | | %Dev | Area% | |
|---|---|---|---|---|---|---|---|---|
| 12 | A | gamma-Chlordane | 11.038 | 0.000 | E6 | 100.0# | -0# | |
| 13 | A | alpha-Chlordane | 10.889 | 0.000 | E6 | 100.0# | -0# | |
| 14 | B | Trans-Nonachlor | 0.000 | 693284.806 | | 0.0 | | 0# |
| 15 | B | 4,4-DDE | 9.800 | 0.000 | E6 | 100.0# | -0# | |
| 16 | MA | 2,4-DDD | 0.000 | 0.000 | | 0.0 | 0# | |
| 17 | MA | Dieldrin | 10.964 | 0.000 | E6 | 100.0# | -0# | |
| 18 | MA | 2,4-DDT | 0.000 | 0.000 | | 0.0 | 0# | |
| 19 | MA | Endrin | 9.244 | 0.000 | E6 | 100.0# | -0# | |
| 20 | B | Endosulfan II | 9.403 | 0.000 | E6 | 100.0# | -0# | |
| 21 | A | 4,4-DDD | 7.107 | 0.000 | E6 | 100.0# | -0# | |
| 22 | MA | 4,4-DDT | 8.031 | 0.000 | E6 | 100.0# | -0# | |
| 23 | B | Endrin Aldehyde | 5.431 | 0.000 | E6 | 100.0# | -0# | |
| 24 | B | Mirex | 0.000 | 218320.266 | | 0.0 | | 0# |
| 25 | B | Endosulfan Sulfate | 8.402 | 0.000 | E6 | 100.0# | -0# | |
| 26 | A | Methoxychlor | 4.167 | 0.000 | E6 | 100.0# | -0# | |
| 27 | B | Endrin Ketone | 8.895 | 0.000 | E6 | 100.0# | -0# | |
| 28 | S | Decachlorobiphenyl | 5.945 | 5.745 | E6 | 3.4 | 100 | |
| 29 | L8 | Toxaphene | 157.914 | 277.443 | E3 | -75.7# | 177# | |
| 30 | L8 | Toxaphene (2) | 225.226 | 400.309 | E3 | -77.7# | 177# | |
| 31 | L8 | Toxaphene (3) | 402.433 | 755.677 | E3 | -87.8# | 192# | |
| 32 | L8 | Toxaphene (4) | 230.642 | 406.774 | E3 | -76.4# | 177# | |
| 33 | L8 | Toxaphene (5) | 214.962 | 342.157 | E3 | -59.2# | 153# | |
| 34 | L9 | Chlordane | 637.234 | 668.034 | E3 | -4.8 | 99 | |
| 35 | L9 | Chlordane (2) | 377.539 | 469.046 | E3 | -24.2# | 97 | |
| 36 | L9 | Chlordane (3) | 1.258 | 1.357 | E6 | -7.8 | 97 | |
| 37 | L9 | Chlordane (4) | 979.278 | 1156.718 | E3 | -18.1 | 97 | |
| 38 | L9 | Chlordane (5) | 316.875 | 369.008 | E3 | -16.5 | 98 | |

Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD1A.CH Vial: 4
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD2B.CH
Acq On : 15 Nov 2010 12:36 pm Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:30 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.67f | 6.46 | 137.0E6 | 217.8E6 | 26.848 | 29.264 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 134.24%# | 146.32%# |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 95143598 | 143.6E6 | 24.999 | 24.160 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 125.00% | 120.80% |
| Target Compounds | | | | | | |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| 34) L9 Chlordane | 9.34 | 10.38 | 187.9E6 | 334.0E6 | 508.162 | 524.167 |
| 35) L9 Chlordane {2} | 10.59 | 11.96 | 154.4E6 | 234.5E6 | 585.340 | 621.188 |
| 36) L9 Chlordane {3} | 12.56 | 14.07 | 398.0E6 | 678.3E6 | 498.154 | 539.171 |
| 37) L9 Chlordane {4} | 12.99 | 14.56 | 529.8E6 | 578.4E6 | 418.808 | 590.598 # |
| 38) L9 Chlordane {5} | 15.49 | 17.59 | 112.1E6 | 184.5E6 | 555.256 | 582.261 |
| Sum Chlordane | | | 1382.3E6 | 2009.7E6 | 2565.719 | 2857.386 |
| Average Chlordane | | | | | 513.144 | 571.477 |

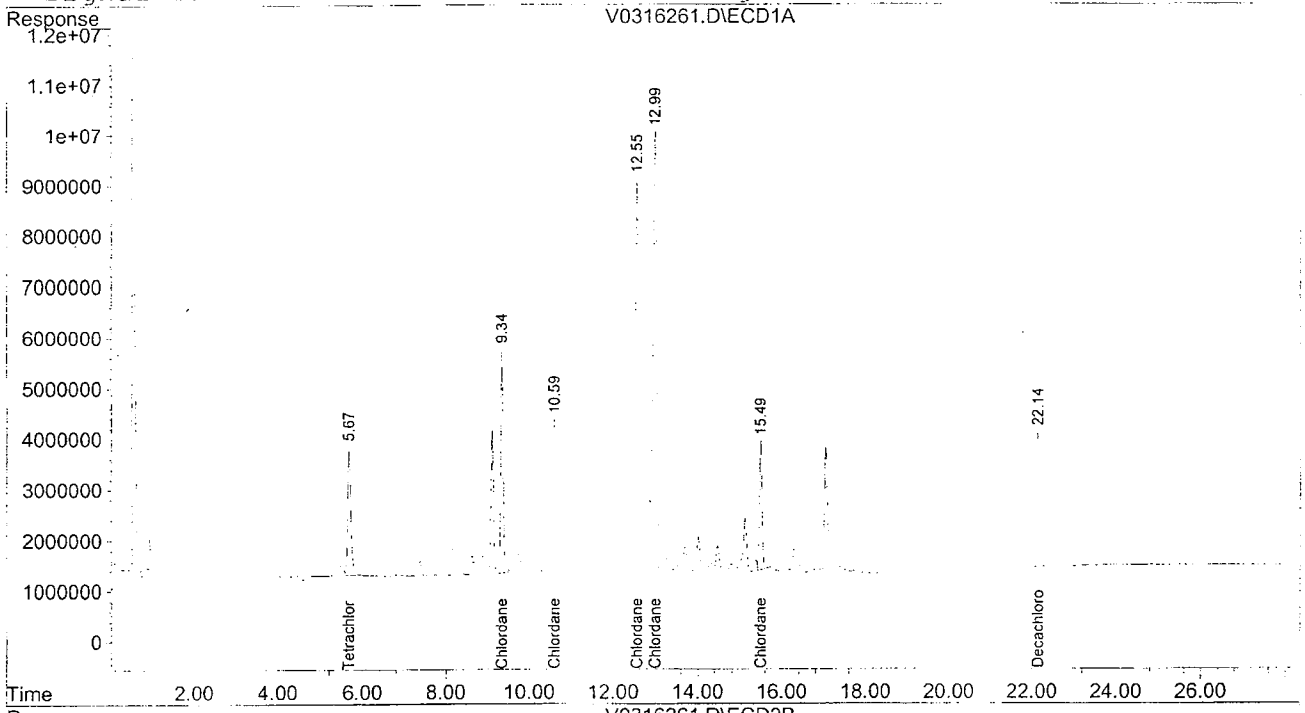
(f)=RT Delta Window (#)=Amoun ffer by > 25% nual int.
V0316261.D .VC.M Thu Jan 6:32:27 2011 Page 1

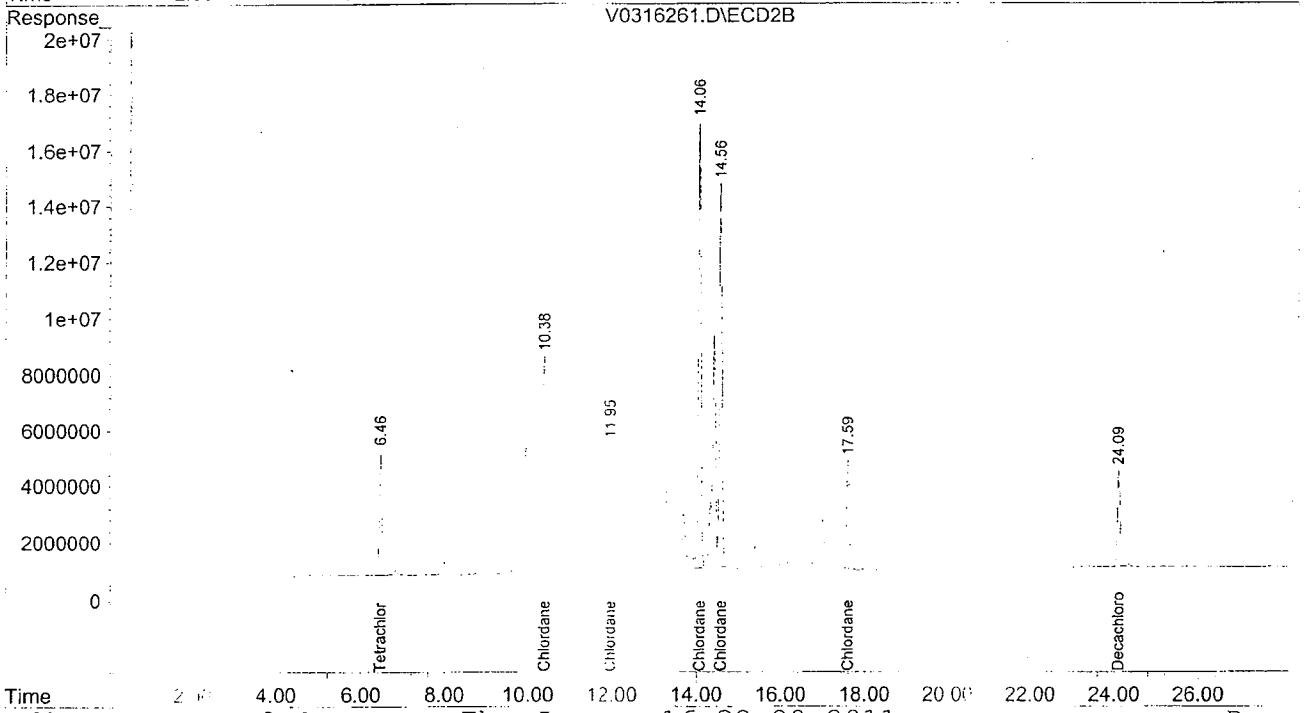
Quantitation Report

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD1A.CH Vial: 4
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316261.D\ECD2B.CH
Acq On : 15 Nov 2010 12:36 pm Operator: RP
Sample : CHLOR-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:30 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32



Quantitation Report (QT Reviewed)

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD1A.CH Vial: 3
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD2B.CH
Acq On : 15 Nov 2010 12:04 pm Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:28 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

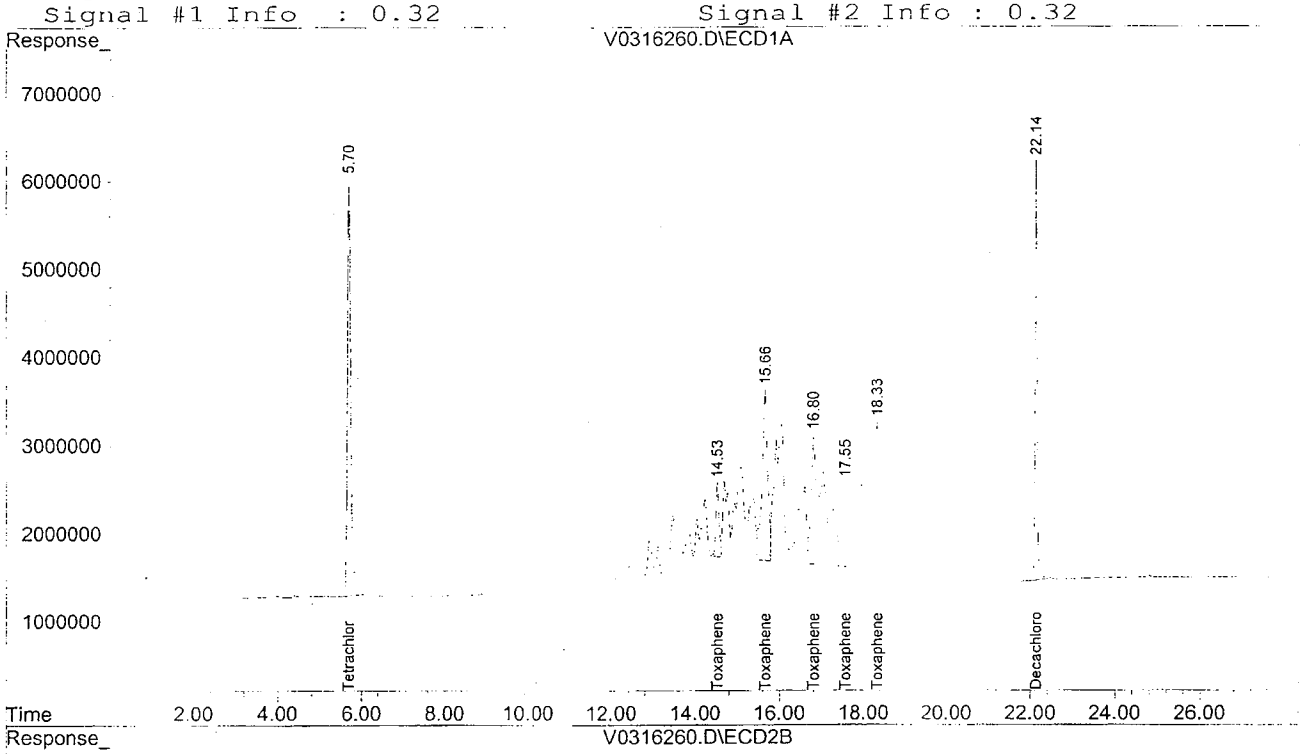
| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.70f | 6.46 | 254.7E6 | 366.8E6 | 49.909 | 49.280 |
| Spiked Amount | 20.000 | Range 50 - 130 | | Recovery = | 249.55%# | 246.40%# |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 167.2E6 | 245.7E6 | 43.941 | 41.335 |
| Spiked Amount | 20.000 | Range 30 - 150 | | Recovery = | 219.71%# | 206.68%# |
| Target Compounds | | | | | | |
| 29) L8 Toxaphene | 14.53 | 15.59 | 43869686 | 138.7E6 | 713.662 | 878.462 |
| 30) L8 Toxaphene {2} | 15.66 | 17.38 | 175.9E6 | 200.2E6 | 968.273 | 888.684 |
| 31) L8 Toxaphene {3} | 16.80 | 17.74 | 129.7E6 | 377.8E6 | 877.722 | 938.885 |
| 32) L8 Toxaphene {4} | 17.55 | 18.78 | 95107616 | 203.4E6 | 1074.985 | 881.829 |
| 33) L8 Toxaphene {5} | 18.33 | 20.28 | 115.1E6 | 171.1E6 | 829.759 | 795.855 |
| Sum Toxaphene | | | 559.7E6 | 1091.2E6 | 4464.401 | 4383.715 |
| Average Toxaphene | | | | | 892.880 | 876.743 |
| Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average Chlordane | | | | | 0.000 | 0.000 |

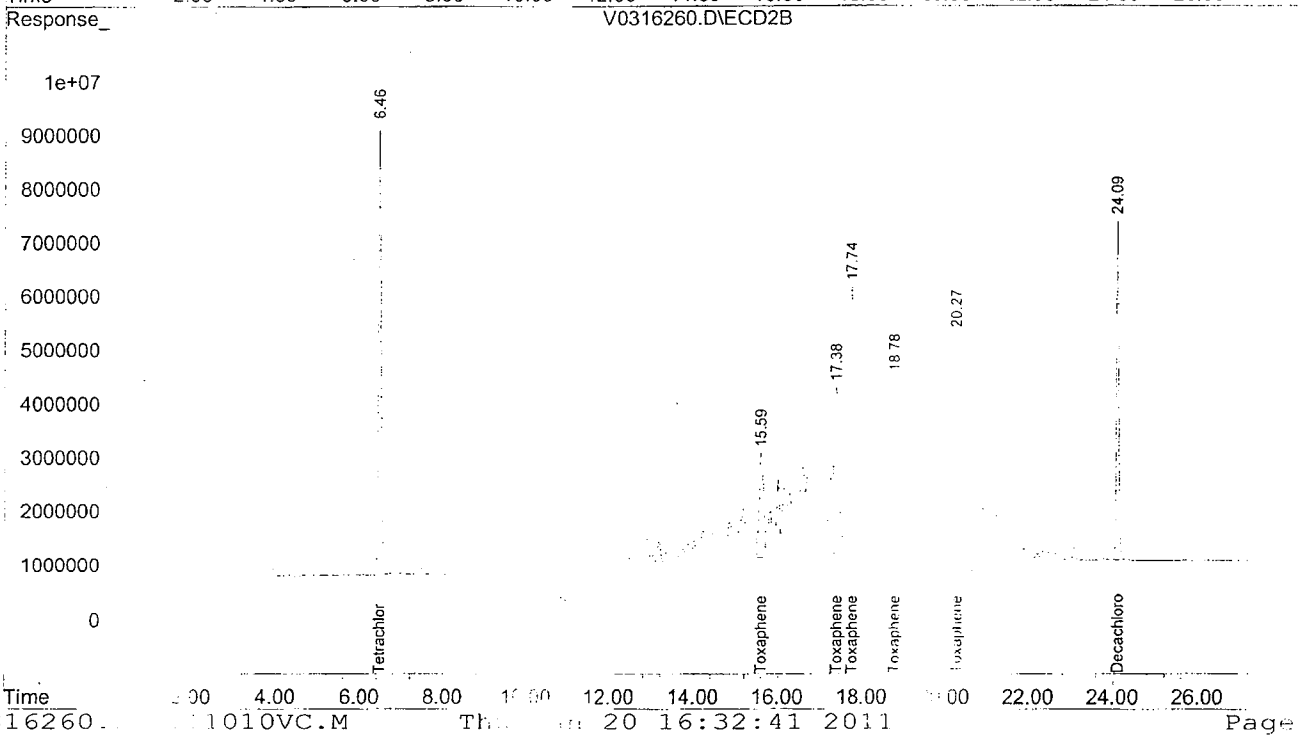
Quantitation Report

Signal #1 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD1A.CH Vial: 3
Signal #2 : H:\VOL1\GCDATA\V\ARCHIVE\111510\V0316260.D\ECD2B.CH
Acq On : 15 Nov 2010 12:04 pm Operator: RP
Sample : TOX-3 Inst : GCECD-V
Misc : STD 8081 Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Jan 20 16:28 2011 Quant Results File: 111010VC.RES

Quant Method : H:\VOL1\GCDATA\METHODS\V_ICAL\111010VC.M (Chemstation Integ
Title : 8081A-Pest_Tox_Chlor Method
Last Update : Wed Nov 17 15:04:08 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32



# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.6 | 3927132 | 4056868 | | 3.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 51.2 | 7107345 | 7277152 | | 2.4 | 20 |
| 4,4'-DDE | L | 50.0 | 51.0 | 4930684 | 5028686 | | 2.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 49.8 | 9800288 | 9760268 | | -0.4 | 20 |
| 4,4'-DDT | L | 50.0 | 49.8 | 4479399 | 4464286 | | -0.3 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.8 | 8030693 | 8006086 | | -0.3 | 20 |
| Aldrin | L | 50.0 | 50.3 | 6583499 | 6623548 | | 0.6 | 20 |
| Aldrin [2C] | L | 50.0 | 50.9 | 1.159123E+07 | 1.179124E+07 | | 1.7 | 20 |
| alpha-BHC | L | 50.0 | 52.1 | 7716550 | 8040072 | | 4.2 | 20 |
| alpha-BHC [2C] | L | 50.0 | 52.3 | 1.261036E+07 | 1.318789E+07 | | 4.6 | 20 |
| alpha-Chlordane | L | 50.0 | 49.6 | 6247204 | 6196054 | | -0.8 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.3 | 1.088866E+07 | 1.073454E+07 | | -1.4 | 20 |
| beta-BHC | L | 50.0 | 52.1 | 7297870 | 7598910 | | 4.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 47.9 | 5176619 | 4956086 | | -4.3 | 20 |
| delta-BHC | L | 50.0 | 54.1 | 6616362 | 7156772 | | 8.2 | 20 |
| delta-BHC [2C] | L | 50.0 | 53.1 | 1.07974E+07 | 1.145907E+07 | | 6.1 | 20 |
| Dieldrin | L | 50.0 | 50.4 | 6090391 | 6138264 | | 0.8 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.4 | 1.096383E+07 | 1.10548E+07 | | 0.8 | 20 |
| Endosulfan I | L | 50.0 | 47.8 | 6244553 | 5963266 | | -4.5 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.3 | 1.001925E+07 | 9870438 | | -1.5 | 20 |
| Endosulfan II | L | 50.0 | 48.7 | 5350386 | 5211888 | | -2.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.8 | 9402900 | 9355800 | | -0.5 | 20 |
| Endosulfan sulfate | L | 50.0 | 49.7 | 5062108 | 5034586 | | -0.5 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.4 | 8402078 | 8129800 | | -3.2 | 20 |
| Endrin | L | 50.0 | 51.0 | 5312643 | 5415740 | | 1.9 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316259.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV1 | Injection Time: | 11:26 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 51.7 | 9243818 | 9554568 | | 3.4 | 20 |
| Endrin Aldehyde | L | 50.0 | 46.6 | 3560554 | 3318566 | | -6.8 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 50.6 | 5430906 | 5501934 | | 1.3 | 20 |
| Endrin ketone | L | 50.0 | 49.0 | 5928980 | 5813120 | | -2.0 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 48.6 | 8895054 | 8652152 | | -2.7 | 20 |
| gamma-BHC [2C] | L | 50.0 | 51.6 | 1.164672E+07 | 1.202405E+07 | | 3.2 | 20 |
| gamma-Chlordane | L | 50.0 | 50.2 | 6144086 | 6163074 | | 0.3 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.2 | 1.103789E+07 | 1.087087E+07 | | -1.5 | 20 |
| Heptachlor | L | 50.0 | 49.0 | 6980938 | 6845460 | | -1.9 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.4 | 1.296502E+07 | 1.279548E+07 | | -1.3 | 20 |
| Heptachlor Epoxide | L | 50.0 | 49.4 | 6437835 | 6365172 | | -1.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.0 | 1.128674E+07 | 1.10573E+07 | | -2.0 | 20 |
| Methoxychlor | L | 50.0 | 51.8 | 2351134 | 2438070 | | 3.7 | 20 |
| Methoxychlor [2C] | L | 50.0 | 47.6 | 4166551 | 3963534 | | -4.9 | 20 |
| TCMX | L | 25.0 | 26.0 | 5103199 | 5303972 | | 3.9 | 20 |
| TCMX [2C] | L | 25.0 | 25.0 | 7444112 | 7455648 | | 0.2 | 20 |
| DCB | L | 25.0 | 24.7 | 3805969 | 3764899 | | -1.1 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5610868 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046065-BLK1 | Batch: | B046065 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B046065-BSD1 | V0316264.D | 14:12 |
| LCS | B046065-BS1 | V0316263.D | 13:40 |
| GKHMS-GW-10-1010 | 1011015-03 | V0316267.D | 15:48 |
| GKHMS-GW-09-1010 | 1011015-02 | V0316266.D | 15:16 |
| GKHMS-GW-006-1010 | 1011015-01 | V0316265.D | 14:44 |

CENTAURI LABS™

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B046065-BLK1 | File ID: | V0316262.D |
| Sampled: | | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 13:08 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B046065 | Sequence: | S049004 | Calibration: | 0111108 |
| Column: | 1 | | | | Instrument: GCECD-V |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 0.050 | U |
| 72-55-9 | 4,4'-DDE | 0.050 | U |
| 50-29-3 | 4,4'-DDT | 0.050 | U |
| 309-00-2 | Aldrin | 0.050 | U |
| 319-84-6 | alpha-BHC | 0.050 | U |
| 5103-71-9 | alpha-Chlordane | 0.050 | U |
| 319-85-7 | beta-BHC | 0.050 | U |
| 57-74-9 | Chlordane | 1.00 | U |
| 319-86-8 | delta-BHC | 0.050 | U |
| 60-57-1 | Dieldrin | 0.050 | U |
| 959-98-8 | Endosulfan I | 0.050 | U |
| 33213-65-9 | Endosulfan II | 0.050 | U |
| 1031-07-8 | Endosulfan sulfate | 0.050 | U |
| 72-20-8 | Endrin | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde | 0.050 | U |
| 53494-70-5 | Endrin ketone | 0.050 | U |
| 58-89-9 | gamma-BHC | 0.050 | U |
| 5103-74-2 | gamma-Chlordane | 0.050 | U |
| 76-44-8 | Heptachlor | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide | 0.050 | U |
| 72-43-5 | Methoxychlor | 0.050 | U |
| 8001-35-2 | Toxaphene | 1.00 | U |
| 143-50-0 | Kepone | 0.050 | U |
| 143-50-0 | Kepone [2C] | 0.050 | U |
| 2385-85-5 | Mirex | 0.050 | U |
| 2385-85-5 | Mirex [2C] | 0.050 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B046065-BLK1 | File ID: | V0316262.D |
| Sampled: | | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 13:08 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B046065 | Sequence: | S049004 | Calibration: | 0111108 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 0.050 | U |
| 118-74-1 | Hexachlorobenzene [2C] | 0.050 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B046065-BLK1 | File ID: | V0316262.D |
| Sampled: | | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 13:08 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | |
| Batch: | B046065 | Sequence: | S049004 | Calibration: | 0111108 |
| Column: | 2 | | | | |

Instrument: GCECD-V

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 72-54-8 | 4,4'-DDD [2C] | 0.050 | U |
| 72-55-9 | 4,4'-DDE [2C] | 0.050 | U |
| 50-29-3 | 4,4'-DDT [2C] | 0.050 | U |
| 309-00-2 | Aldrin [2C] | 0.050 | U |
| 319-84-6 | alpha-BHC [2C] | 0.050 | U |
| 5103-71-9 | alpha-Chlordane [2C] | 0.050 | U |
| 319-85-7 | beta-BHC [2C] | 0.050 | U |
| 57-74-9 | Chlordane [2C] | 1.00 | U |
| 319-86-8 | delta-BHC [2C] | 0.050 | U |
| 60-57-1 | Dieldrin [2C] | 0.050 | U |
| 959-98-8 | Endosulfan I [2C] | 0.050 | U |
| 33213-65-9 | Endosulfan II [2C] | 0.050 | U |
| 1031-07-8 | Endosulfan Sulfate [2C] | 0.050 | U |
| 72-20-8 | Endrin [2C] | 0.050 | U |
| 7421-93-4 | Endrin Aldehyde [2C] | 0.050 | U |
| 53494-70-5 | Endrin Ketone [2C] | 0.050 | U |
| 58-89-9 | gamma-BHC [2C] | 0.050 | U |
| 5103-74-2 | gamma-Chlordane [2C] | 0.050 | U |
| 76-44-8 | Heptachlor [2C] | 0.050 | U |
| 1024-57-3 | Heptachlor Epoxide [2C] | 0.050 | U |
| 72-43-5 | Methoxychlor [2C] | 0.050 | U |
| 8001-35-2 | Toxaphene [2C] | 1.00 | U |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316272.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV2 | Injection Time: | 18:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 51.2 | 3927132 | 4017144 | | 2.3 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 52.6 | 7107345 | 7483022 | | 5.3 | 20 |
| 4,4'-DDE | L | 50.0 | 49.5 | 4930684 | 4879706 | | -1.0 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 50.4 | 9800288 | 9877784 | | 0.8 | 20 |
| 4,4'-DDT | L | 50.0 | 46.4 | 4479399 | 4160028 | | -7.1 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 50.0 | 8030693 | 8033248 | | 0.04 | 20 |
| Aldrin | L | 50.0 | 47.6 | 6583499 | 6265822 | | -4.8 | 20 |
| Aldrin [2C] | L | 50.0 | 51.4 | 1.159123E+07 | 1.192005E+07 | | 2.8 | 20 |
| alpha-BHC | L | 50.0 | 49.6 | 7716550 | 7650676 | | -0.9 | 20 |
| alpha-BHC [2C] | L | 50.0 | 53.0 | 1.261036E+07 | 1.33796E+07 | | 6.1 | 20 |
| alpha-Chlordane | L | 50.0 | 46.1 | 6247204 | 5763774 | | -7.7 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 49.9 | 1.088866E+07 | 1.087077E+07 | | -0.2 | 20 |
| beta-BHC | L | 50.0 | 48.7 | 7297870 | 3227424 | | -2.7 | 20 |
| beta-BHC [2C] | L | 50.0 | 48.3 | 5176619 | 4996522 | | -3.5 | 20 |
| delta-BHC | L | 50.0 | 51.8 | 6616362 | 6849552 | | 3.5 | 20 |
| delta-BHC [2C] | L | 50.0 | 54.3 | 1.07974E+07 | 1.171687E+07 | | 8.5 | 20 |
| Dieldrin | L | 50.0 | 47.7 | 6090391 | 5811592 | | -4.6 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.7 | 1.096383E+07 | 1.110888E+07 | | 1.3 | 20 |
| Endosulfan I | L | 50.0 | 44.9 | 6244553 | 5603772 | | -10.3 | 20 |
| Endosulfan I [2C] | L | 50.0 | 49.9 | 1.001925E+07 | 9990868 | | -0.3 | 20 |
| Endosulfan II | L | 50.0 | 45.9 | 5350386 | 4910082 | | -8.2 | 20 |
| Endosulfan II [2C] | L | 50.0 | 49.3 | 9402900 | 9277900 | | -1.3 | 20 |
| Endosulfan sulfate | L | 50.0 | 47.3 | 5062108 | 4788552 | | -5.4 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.6 | 8402078 | 8169674 | | -2.8 | 20 |
| Endrin | L | 50.0 | 49.1 | 5312643 | 5218246 | | -1.8 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316272.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV2 | Injection Time: | 18:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin [2C] | L | 50.0 | 52.5 | 9243818 | 9713220 | | 5.1 | 20 |
| Endrin Aldehyde | L | 50.0 | 47.5 | 3560554 | 3380038 | | -5.1 | 20 |
| Endrin Aldehyde [2C] | L | 50.0 | 49.7 | 5430906 | 5401690 | | -0.5 | 20 |
| Endrin ketone | L | 50.0 | 47.2 | 5928980 | 5599254 | | -5.6 | 20 |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8763520 | | -1.5 | 20 |
| gamma-BHC [2C] | L | 50.0 | 52.3 | 1.164672E+07 | 1.219179E+07 | | 4.7 | 20 |
| gamma-Chlordane | L | 50.0 | 46.8 | 6144086 | 5745286 | | -6.5 | 20 |
| gamma-Chlordane [2C] | L | 50.0 | 49.8 | 1.103789E+07 | 1.098883E+07 | | -0.4 | 20 |
| Heptachlor | L | 50.0 | 41.9 | 6980938 | 5845736 | | -16.3 | 20 |
| Heptachlor [2C] | L | 50.0 | 49.3 | 1.296502E+07 | 1.278192E+07 | | -1.4 | 20 |
| Heptachlor Epoxide | L | 50.0 | 46.4 | 6437835 | 5980800 | | -7.1 | 20 |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.5 | 1.128674E+07 | 1.117517E+07 | | -1.0 | 20 |
| Methoxychlor | L | 50.0 | 47.2 | 2351134 | 2221906 | | -5.5 | 20 |
| Methoxychlor [2C] | L | 50.0 | 48.0 | 4166551 | 4001668 | | -4.0 | 20 |
| TCMX | L | 25.0 | 24.6 | 5103199 | 5011176 | | -1.8 | 20 |
| TCMX [2C] | L | 25.0 | 25.3 | 7444112 | 7544380 | | 1.4 | 20 |
| DCB | L | 25.0 | 23.2 | 3805969 | 3532432 | | -7.2 | 20 |
| DCB [2C] | L | 25.0 | 23.6 | 5944703 | 5609424 | | -5.6 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDD | L | 50.0 | 48.0 | 3927132 | 3770986 | | -4.0 | 20 |
| 4,4'-DDD [2C] | L | 50.0 | 48.3 | 7107345 | 6866646 | | -3.4 | 20 |
| 4,4'-DDE | L | 50.0 | 46.6 | 4930684 | 4591422 | | -6.9 | 20 |
| 4,4'-DDE [2C] | L | 50.0 | 51.2 | 9800288 | 1.002769E+07 | | 2.3 | 20 |
| 4,4'-DDT | L | 50.0 | 42.2 | 4479399 | 3782032 | | -15.6 | 20 |
| 4,4'-DDT [2C] | L | 50.0 | 49.9 | 8030693 | 8018976 | | -0.1 | 20 |
| Aldrin | L | 50.0 | 43.2 | 6583499 | 5685812 | | -13.6 | 20 |
| Aldrin [2C] | L | 50.0 | 51.7 | 1.159123E+07 | 1.197679E+07 | | 3.3 | 20 |
| alpha-BHC | L | 50.0 | 45.6 | 7716550 | 7040958 | | -8.8 | 20 |
| alpha-BHC [2C] | L | 50.0 | 53.0 | 1.261036E+07 | 1.336872E+07 | | 6.0 | 20 |
| alpha-Chlordane | L | 50.0 | 41.8 | 6247204 | 5227724 | | -16.3 | 20 |
| alpha-Chlordane [2C] | L | 50.0 | 50.1 | 1.088866E+07 | 1.091461E+07 | | 0.2 | 20 |
| beta-BHC | L | 50.0 | 44.9 | 7297870 | 2980204 | | -10.1 | 20 |
| beta-BHC [2C] | L | 50.0 | 48.6 | 5176619 | 5037110 | | -2.7 | 20 |
| delta-BHC | L | 50.0 | 47.8 | 6616362 | 6326490 | | -4.4 | 20 |
| delta-BHC [2C] | L | 50.0 | 55.0 | 1.07974E+07 | 1.188226E+07 | | 10.0 | 20 |
| Dieldrin | L | 50.0 | 43.4 | 6090391 | 5288288 | | -13.2 | 20 |
| Dieldrin [2C] | L | 50.0 | 50.8 | 1.096383E+07 | 1.112931E+07 | | 1.5 | 20 |
| Endosulfan I | L | 50.0 | 40.2 | 6244553 | 5014186 | | -19.7 | 20 |
| Endosulfan I [2C] | L | 50.0 | 50.2 | 1.001925E+07 | 1.004955E+07 | | 0.3 | 20 |
| Endosulfan II | L | 50.0 | 42.2 | 5350386 | 4515086 | | -15.6 | 20 |
| Endosulfan II [2C] | L | 50.0 | 48.5 | 9402900 | 9122232 | | -3.0 | 20 |
| Endosulfan sulfate | L | 50.0 | 43.0 | 5062108 | 4358376 | | -13.9 | 20 |
| Endosulfan Sulfate [2C] | L | 50.0 | 48.5 | 8402078 | 8149176 | | -3.0 | 20 |
| Endrin | L | 50.0 | 45.2 | 5312643 | 4798624 | | -9.7 | 20 |

# CONTINUING CALIBRATION VERIFICATION

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-V | Calibration: | 0111108 |
| Lab File ID: | V0316280.D | Calibration Date: | 11/11/10 16:23 |
| Sequence: | S049004 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S049004-CCV3 | Injection Time: | 22:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Endrin [2C] | L | 50.0 | 48.9 | 9243818 | 9041360 | | -2.2 | 20 | |
| Endrin Aldehyde | L | 50.0 | 44.1 | 3560554 | 3138266 | | -11.9 | 20 | |
| Endrin Aldehyde [2C] | L | 50.0 | 48.4 | 5430906 | 5259008 | | -3.2 | 20 | |
| Endrin ketone | L | 50.0 | 43.4 | 5928980 | 5151682 | | -13.1 | 20 | |
| Endrin Ketone [2C] | L | 50.0 | 49.3 | 8895054 | 8766434 | | -1.4 | 20 | |
| gamma-BHC [2C] | L | 50.0 | 52.4 | 1.164672E+07 | 1.220732E+07 | | 4.8 | 20 | |
| gamma-Chlordane | L | 50.0 | 42.3 | 6144086 | 5202852 | | -15.3 | 20 | |
| gamma-Chlordane [2C] | L | 50.0 | 50.1 | 1.103789E+07 | 1.105896E+07 | | 0.2 | 20 | |
| Heptachlor | L | 50.0 | 36.8 | 6980938 | 5139642 | | -26.4 | 20 | * |
| Heptachlor [2C] | L | 50.0 | 48.5 | 1.296502E+07 | 1.256813E+07 | | -3.1 | 20 | |
| Heptachlor Epoxide | L | 50.0 | 42.0 | 6437835 | 5412026 | | -15.9 | 20 | |
| Heptachlor Epoxide [2C] | L | 50.0 | 49.8 | 1.128674E+07 | 1.123936E+07 | | -0.4 | 20 | |
| Methoxychlor | L | 50.0 | 44.1 | 2351134 | 2071848 | | -11.9 | 20 | |
| Methoxychlor [2C] | L | 50.0 | 47.4 | 4166551 | 3949076 | | -5.2 | 20 | |
| TCMX | L | 25.0 | 21.2 | 5103199 | 4336128 | | -15.0 | 20 | |
| TCMX [2C] | L | 25.0 | 25.5 | 7444112 | 7604768 | | 2.2 | 20 | |
| DCB | L | 25.0 | 21.8 | 3805969 | 3320276 | | -12.8 | 20 | |
| DCB [2C] | L | 25.0 | 24.6 | 5944703 | 5852540 | | -1.6 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# SURROGATE SUMMARY SHEET

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-V |

| | DCB [2C] (30 - 135) | DCB (30 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| 1011015-01 | 111 | 109 | 107 | 125 |
| 1011015-02 | 109 | 104 | 111 | 125 |
| 1011015-03 | 58 | 53 | 71 | 106 |
| B046065-BLK1 | 95 | 99 | 96 | 101 |
| B046065-BS1 | 108 | 113 | 112 | 119 |
| B046065-BSD1 | 116 | 120 | 114 | 97 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046065 | Laboratory ID: | B046065-BS1 |
| Column: | | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.527 | 105 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.504 | 101 | 50 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Hexachlorobenzene | 0.500 | 0.541 | 108 | 3 | 30 | 50 - 150 |
| Hexachlorobenzene [2C] | 0.500 | 0.516 | 103 | 2 | 30 | 50 - 150 |

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# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046065 | Laboratory ID: | B046065-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.630 | 126 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.599 | 120 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.581 | 116 | 45 - 140 |
| Aldrin | 0.500 | 0.600 | 120 | 25 - 140 |
| alpha-BHC | 0.500 | 0.606 | 121 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.589 | 118 | 65 - 125 |
| beta-BHC | 0.500 | 0.607 | 121 | 65 - 125 |
| delta-BHC | 0.500 | 0.564 | 113 | 45 - 135 |
| Dieldrin | 0.500 | 0.602 | 120 | 60 - 130 |
| Endosulfan I | 0.500 | 0.593 | 119 * | 50 - 110 |
| Endosulfan II | 0.500 | 0.592 | 118 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.571 | 114 | 55 - 135 |
| Endrin | 0.500 | 0.613 | 123 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.568 | 114 | 55 - 135 |
| Endrin ketone | 0.500 | 0.581 | 116 | 75 - 125 |
| gamma-BHC | 0.500 | 0.602 | 120 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.600 | 120 | 60 - 125 |
| Heptachlor | 0.500 | 0.592 | 118 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.588 | 118 | 60 - 130 |
| Methoxychlor | 0.500 | 0.602 | 120 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 0.500 | 0.650 | 130 | 3 | 20 | 25 - 150 |
| 4,4'-DDE | 0.500 | 0.602 | 120 | 0.5 | 20 | 35 - 140 |
| 4,4'-DDT | 0.500 | 0.600 | 120 | 3 | 20 | 45 - 140 |
| Aldrin | 0.500 | 0.609 | 122 | 1 | 20 | 25 - 140 |
| alpha-BHC | 0.500 | 0.617 | 123 | 2 | 20 | 60 - 130 |
| alpha-Chlordane | 0.500 | 0.599 | 120 | 2 | 20 | 65 - 125 |
| beta-BHC | 0.500 | 0.648 | 130 * | 6 | 20 | 65 - 125 |
| delta-BHC | 0.500 | 0.578 | 116 | 2 | 20 | 45 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046065 | Laboratory ID: | B046065-BSD1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Dieldrin | 0.500 | 0.617 | 123 | | 3 | 20 | 60 - 130 |
| Endosulfan I | 0.500 | 0.618 | 124 | * | 4 | 20 | 50 - 110 |
| Endosulfan II | 0.500 | 0.609 | 122 | | 3 | 20 | 30 - 130 |
| Endosulfan sulfate | 0.500 | 0.586 | 117 | | 3 | 20 | 55 - 135 |
| Endrin | 0.500 | 0.626 | 125 | | 2 | 20 | 55 - 135 |
| Endrin Aldehyde | 0.500 | 0.589 | 118 | | 4 | 20 | 55 - 135 |
| Endrin ketone | 0.500 | 0.607 | 121 | | 4 | 20 | 75 - 125 |
| gamma-BHC | 0.500 | 0.605 | 121 | | 0.6 | 20 | 25 - 135 |
| gamma-Chlordane | 0.500 | 0.614 | 123 | | 2 | 20 | 60 - 125 |
| Heptachlor | 0.500 | 0.605 | 121 | | 2 | 20 | 40 - 130 |
| Heptachlor Epoxide | 0.500 | 0.605 | 121 | | 3 | 20 | 60 - 130 |
| Methoxychlor | 0.500 | 0.627 | 125 | | 4 | 20 | 55 - 150 |

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# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046065 | Laboratory ID: | B046065-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.618 | 124 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.595 | 119 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.570 | 114 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.601 | 120 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.598 | 120 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.587 | 117 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.560 | 112 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.554 | 111 | 45 - 135 |
| Dieldrin [2C] | 0.500 | 0.601 | 120 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.585 | 117 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.596 | 119 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.555 | 111 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.616 | 123 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.622 | 124 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.583 | 117 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.598 | 120 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.585 | 117 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.582 | 116 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.582 | 116 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.541 | 108 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDD [2C] | 0.500 | 0.638 | 128 | 3 | 20 | 25 - 150 |
| 4,4'-DDE [2C] | 0.500 | 0.611 | 122 | 3 | 20 | 35 - 140 |
| 4,4'-DDT [2C] | 0.500 | 0.593 | 119 | 4 | 20 | 45 - 140 |
| Aldrin [2C] | 0.500 | 0.608 | 122 | 1 | 20 | 25 - 140 |
| alpha-BHC [2C] | 0.500 | 0.605 | 121 | 1 | 20 | 60 - 130 |
| alpha-Chlordane [2C] | 0.500 | 0.601 | 120 | 2 | 20 | 60 - 125 |
| beta-BHC [2C] | 0.500 | 0.575 | 115 | 3 | 20 | 65 - 125 |
| delta-BHC [2C] | 0.500 | 0.560 | 112 | 1 | 20 | 45 - 135 |

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# LCS / LCS DUPLICATE RECOVERY

## SW8081B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046065 | Laboratory ID: | B046065-BSD1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Dieldrin [2C] | 0.500 | 0.617 | 123 | 3 | 20 | 60 - 130 |
| Endosulfan I [2C] | 0.500 | 0.598 | 120 | 2 | 20 | 50 - 110 |
| Endosulfan II [2C] | 0.500 | 0.613 | 123 | 3 | 20 | 30 - 130 |
| Endosulfan Sulfate [2C] | 0.500 | 0.574 | 115 | 3 | 20 | 55 - 135 |
| Endrin [2C] | 0.500 | 0.630 | 126 | 2 | 20 | 55 - 135 |
| Endrin Aldehyde [2C] | 0.500 | 0.644 | 129 | 3 | 20 | 55 - 135 |
| Endrin Ketone [2C] | 0.500 | 0.608 | 122 | 4 | 20 | 75 - 125 |
| gamma-BHC [2C] | 0.500 | 0.606 | 121 | 1 | 20 | 25 - 135 |
| gamma-Chlordane [2C] | 0.500 | 0.601 | 120 | 3 | 20 | 60 - 125 |
| Heptachlor [2C] | 0.500 | 0.592 | 118 | 2 | 20 | 40 - 130 |
| Heptachlor Epoxide [2C] | 0.500 | 0.593 | 119 | 2 | 20 | 60 - 130 |
| Methoxychlor [2C] | 0.500 | 0.567 | 113 | 5 | 20 | 55 - 150 |

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081B

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011015-01 | File ID: | V0316265.D |
| Sampled: | 11/04/10 13:45 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 14:44 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Instrument: | GCECD-V |
| Batch: | B046065 | Sequence: | S049004 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| Hexachlorobenzene | * | 1 | 6.81 | | | 292808700 | 0.424 | |
| TCMX | * | 1 | 5.66 | 5.672 | 0.012 | 127857700 | 0.250 | 17.6 |
| TCMX | | 2 | 6.45 | 6.46 | 0.01 | 158756600 | 0.213 | 17.2 |
| DCB | * | 1 | 22.14 | 22.142 | 0.002 | 83077690 | 0.218 | 1.69 |
| DCB | | 2 | 24.09 | 24.092 | 0.002 | 132187100 | 0.222 | 2.02 |

* Column used for quantitation

CENTAURI LABS™

# ANALYSIS DATA SHEET

## GKHMS-GW-006-1010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | SDG: | | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | 1011015-01 | File ID: | V0316265.D | | |
| Sampled: | 11/04/10 13:45 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 14:44 | | |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | 1 | | |
| Batch: | B046065 | Sequence: | S049004 | Calibration: | 0111108 | Instrument: | GCECD-V |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 0.424 | |

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111510\V0316265.D\ECD1A.CH Vial: 8
Signal #2 : H:\GCDATA\V\111510\V0316265.D\ECD2B.CH
Acq On : 11-15-2010 14:44:29 Operator: RP
Sample : 1011015-01 Inst : GCECD-V
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 2 15:25 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Thu Nov 11 08:31:21 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.66 | 6.45 | 127.9E6 | 158.8E6 | 25.054 | 21.326 |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 125.27% | 106.63% |
| 28) S Decachlorobiphen | 22.14 | 24.09 | 83077686 | 132.2E6 | 21.828 | 22.236 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 109.14% | 111.18% |
| Target Compounds | | | | | | |
| 2) A Hexachlorobenzen | 6.81 | 0.00 | 292.8E6 | 0 | 42.447 | N.D. # |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average Chlordane | | | | | 0.000 | 0.000 |

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

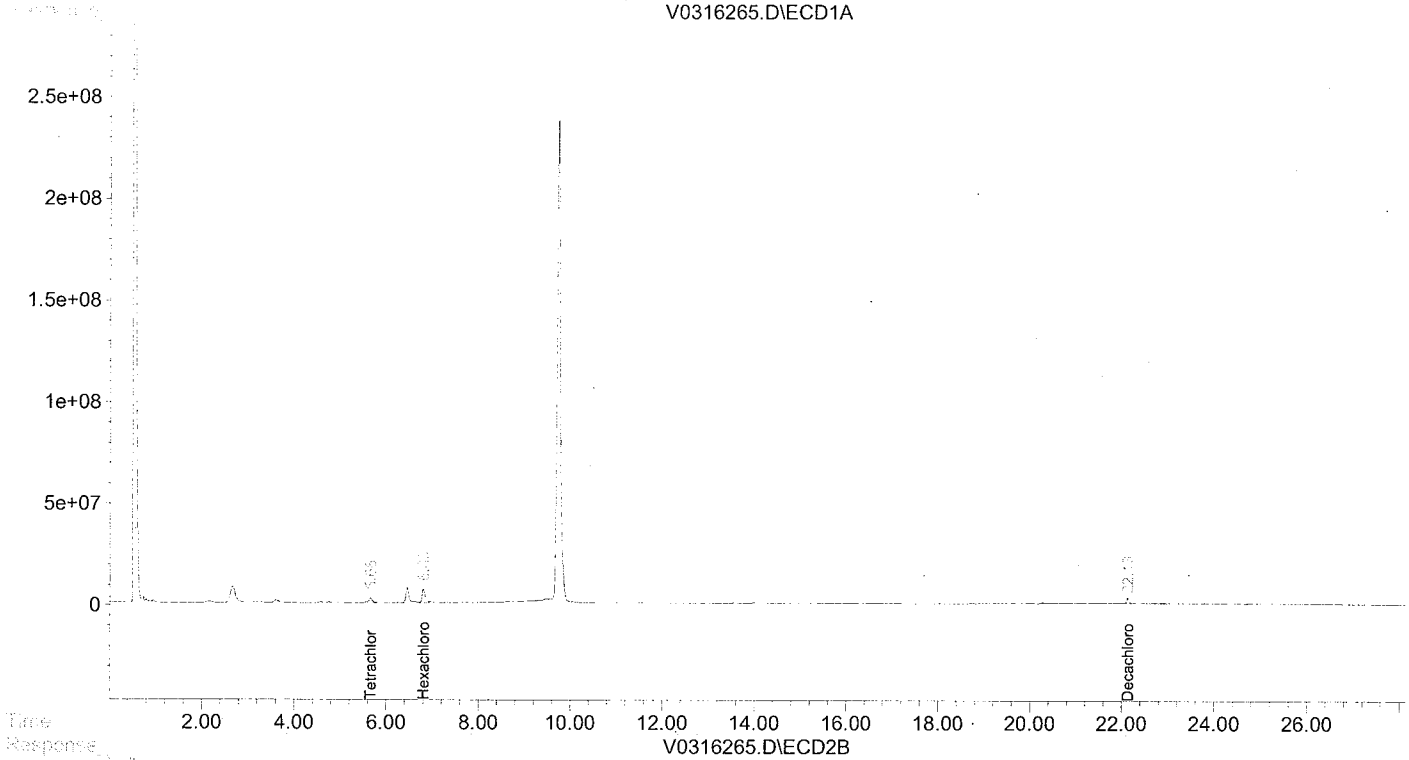
Quantitation Report

Signal #1 : H:\GCDATA\V\111510\V0316265.D\ECD1A.CH Vial: 8
Signal #2 : H:\GCDATA\V\111510\V0316265.D\ECD2B.CH
Acq On : 11-15-2010 14:44:29 Operator: RP
Sample : 1011015-01 Inst : GCECD-V
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 2 15:25 2010 Quant Results File: 111010VA.RES

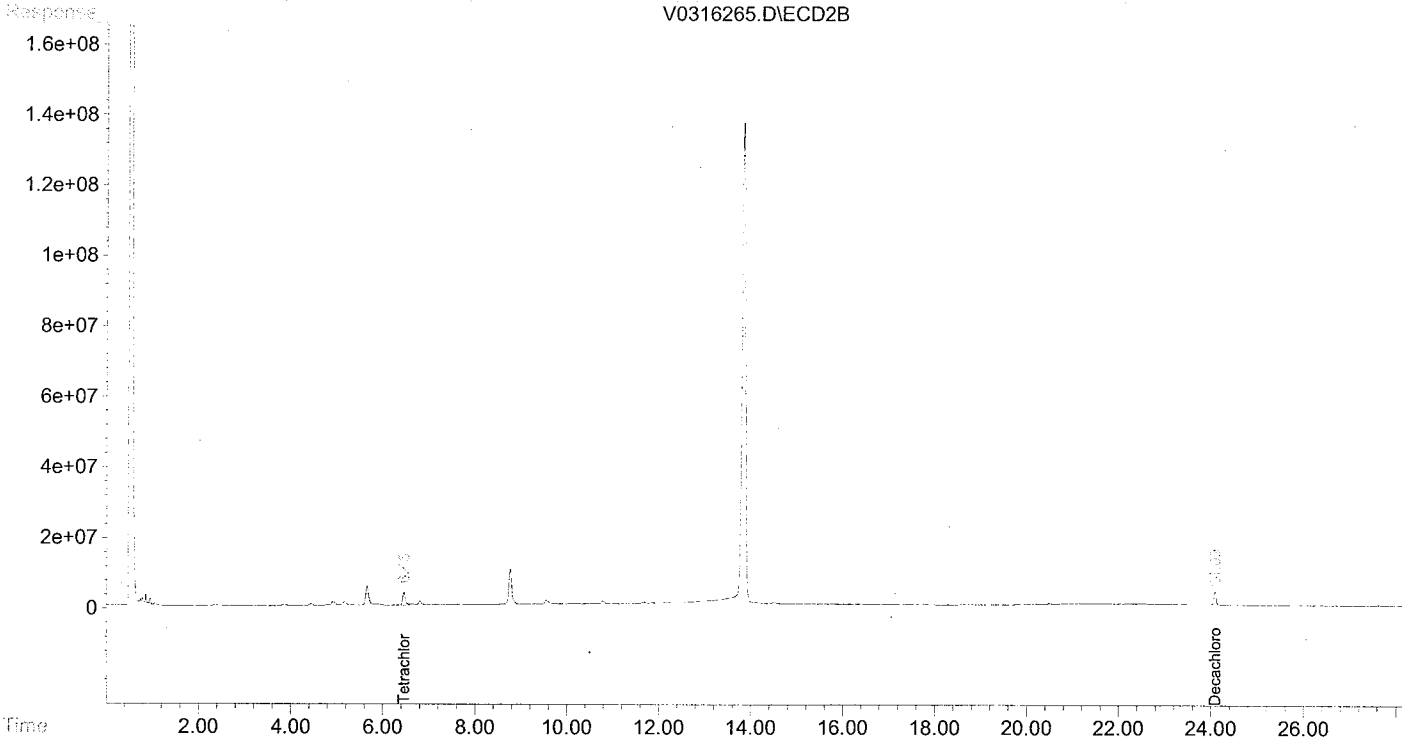
Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Thu Nov 11 08:31:21 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

V0316265.D\ECD1A




V0316265.D\ECD2B



# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081B

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011015-02 | File ID: | V0316266.D |
| Sampled: | 11/04/10 12:25 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 15:16 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Instrument: | GCECD-V |
| Batch: | B046065 | Sequence: | S049004 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| TCMX | * | 1 | 5.66 | 5.672 | 0.012 | 127926100 | 0.251 | 12.9 |
| TCMX | | 2 | 6.45 | 6.46 | 0.01 | 164962200 | 0.222 | 13.3 |
| DCB | * | 1 | 22.14 | 22.142 | 0.002 | 79447140 | 0.209 | 4.46 |
| DCB | | 2 | 24.09 | 24.092 | 0.002 | 129713600 | 0.218 | 4.4 |

* Column used for quantitation

# DUAL COLUMN CONFIRMATION SUMMARY

## SW8081B

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | 1011015-03 | File ID: | V0316267.D |
| Sampled: | 11/04/10 11:10 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 15:48 |
| Solids: | | Preparation: | 3510C Sep. Funnel | Instrument: | GCECD-V |
| Batch: | B046065 | Sequence: | S049004 | | |
| GC Column(1): | | | | GC Column(2): | |

| COMPOUND | | COL | RT | EXP RT | RT DIFF | AREA | CONC | %D |
|---|---|---|---|---|---|---|---|---|
| Hexachlorobenzene | * | 1 | 6.81 | | | 707293500 | 1.03 | |
| TCMX | * | 1 | 5.66 | 5.672 | 0.012 | 107906600 | 0.211 | 48.9 |
| TCMX | | 2 | 6.46 | 6.46 | 0 | 105768400 | 0.142 | 48.5 |
| DCB | * | 1 | 22.13 | 22.142 | 0.012 | 40235340 | 0.106 | 9.74 |
| DCB | | 2 | 24.09 | 24.092 | 0.002 | 69004300 | 0.116 | 9.53 |

* Column used for quantitation

CENTAURI LABS™

# ANALYSIS DATA SHEET

## GKHMS-GW-10-1010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | SDG: | | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | 1011015-03 | File ID: | V0316267.D | | |
| Sampled: | 11/04/10 11:10 | Prepared: | 11/09/10 11:55 | Analyzed: | 11/15/10 15:48 | | |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | 1 | | |
| Batch: | B046065 | Sequence: | S049004 | Calibration: | 0111108 | Instrument: | GCECD-V |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 1.03 | |

Quantitation Report (QT Reviewed)

Signal #1 : H:\GCDATA\V\111510\V0316267.D\ECD1A.CH Vial: 10
Signal #2 : H:\GCDATA\V\111510\V0316267.D\ECD2B.CH
Acq On : 11-15-2010 15:48:31 Operator: RP
Sample : 1011015-03 Inst : GCECD-V
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 11:48 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Thu Nov 11 08:31:21 2010
Response via : Initial Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32

| Compound | RT#1 | RT#2 | Resp#1 | Resp#2 | PPB | PPB |
|---|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | | |
| 1) S Tetrachloro-m-xy | 5.66 | 6.46 | 107.9E6 | 105.8E6 | 21.145 | 14.208 # |
| Spiked Amount 20.000 | Range 50 - 130 | | Recovery = | | 105.73% | 71.04% |
| 28) S Decachlorobiphen | 22.13 | 24.09 | 40235339 | 69004306 | 10.572 | 11.608 |
| Spiked Amount 20.000 | Range 30 - 150 | | Recovery = | | 52.86% | 58.04% |
| Target Compounds | | | | | | |
| 2) A Hexachlorobenzen | 6.81 | 0.00 | 707.3E6 | 0 | 102.534 | N.D. # |
| Sum Toxaphene | | | 0 | 0 | N.D. | N.D. |
| Average Toxaphene | | | | | 0.000 | 0.000 |
| Sum Chlordane | | | 0 | 0 | N.D. | N.D. |
| Average Chlordane | | | | | 0.000 | 0.000 |

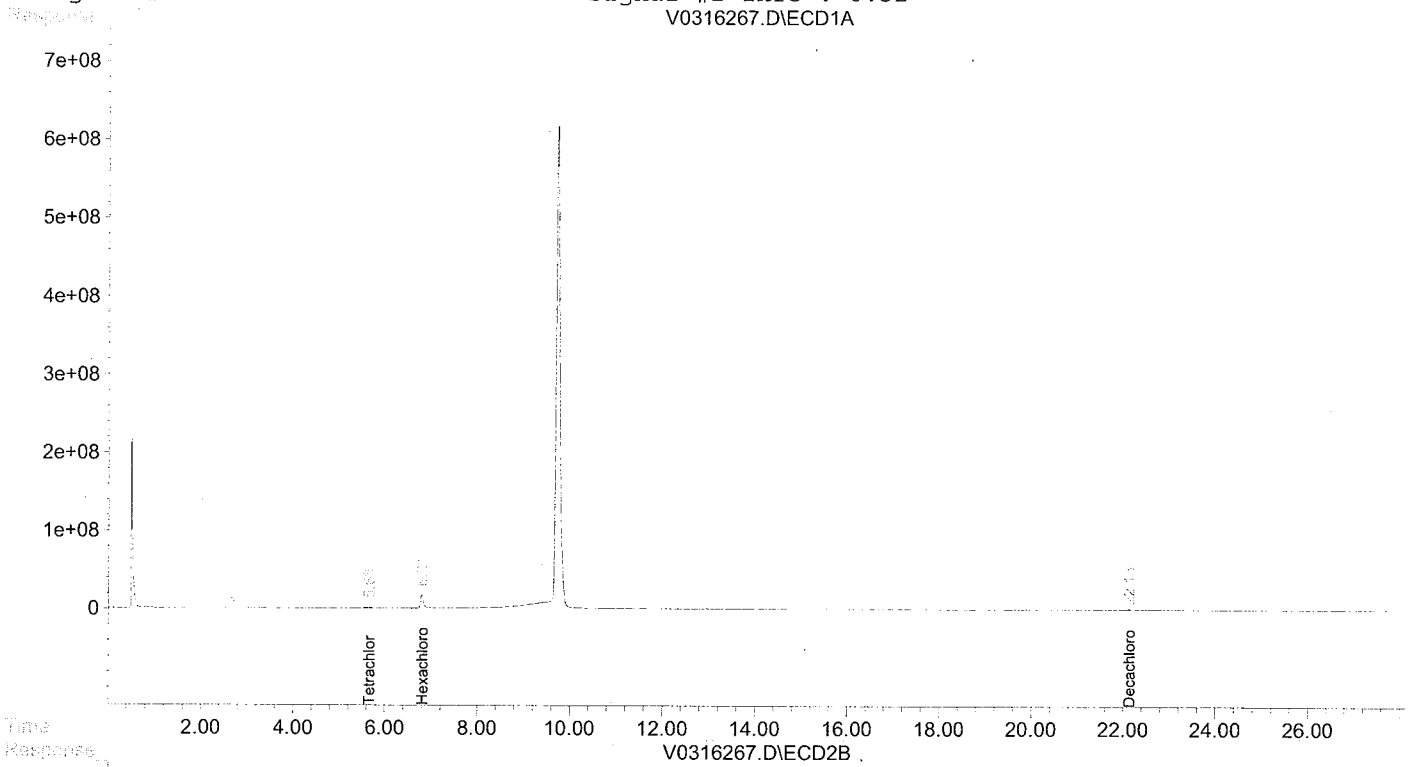
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

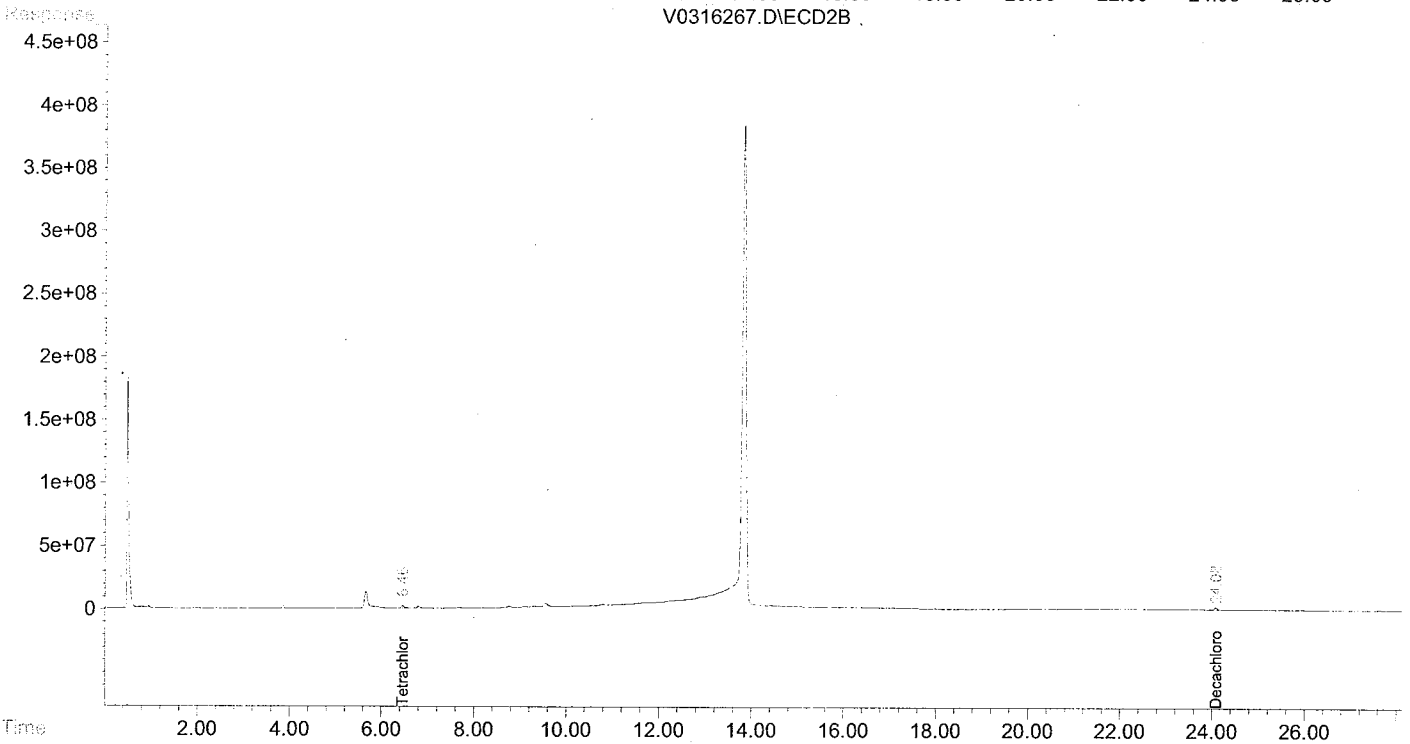
Quantitation Report

Signal #1 : H:\GCDATA\V\111510\V0316267.D\ECD1A.CH Vial: 10
Signal #2 : H:\GCDATA\V\111510\V0316267.D\ECD2B.CH
Acq On : 11-15-2010 15:48:31 Operator: RP
Sample : 1011015-03 Inst : GCECD-V
Misc : WATER Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Dec 3 11:48 2010 Quant Results File: 111010VA.RES

Quant Method : H:\GCDATA\METHODS\V ICAL\111010VA.M (Chemstation Integrator)
Title : 8081A-Pest Tox Chlor Method
Last Update : Thu Nov 11 08:31:21 2010
Response via : Multiple Level Calibration
DataAcq Meth : PEST32VA.M

Volume Inj. : 1.0uL
Signal #1 Phase : RTx-CLP Signal #2 Phase: RTx-CLP2
Signal #1 Info : 0.32 Signal #2 Info : 0.32



## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: JR Date: 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | ~~180~~ / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 18-300-7 |
| Final Temp(oC): | 200 / 275 / 300 / |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | |
|---|---|
| Column: | RTX-CLP 30meter |
| ID: | 0.32 mm |

**Detector B**

| | |
|---|---|
| Column: | RTX-CLP2 30 meter |
| ID: | 0.32 mm |

ICAL Method: 110910u-m Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 110910 | U | | | | | |
| 1 | U | | | | | |
| | U | | | | | |
| | U | | | | | |
| | U | | | | | |
| | U | | | | | |
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**Injection Log**

Directory: h:\gcdata\u\110910

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 1 | u0324425.d | 1. | SEQ CCV 1AR1242-3 | STD | 9 Nov 10 15:14 |
| 2 | u0324426.d | 1. | AR1660 LE-3 2 118 | STD 8082 | 9 Nov 10 15:59 |
| 3 | u0324427.d | 1. | AR2154 LE-3 2 138 | STD 8082 | 9 Nov 10 16:31 |
| 4 | u0324428.d | 1. | AR1248 LE-3 2 112 | STD 8082 | 9 Nov 10 17:04 |
| 5 | u0324429.d | 1. | AR1232 LE-3 2 130 | STD 8082 | 9 Nov 10 17:36 |
| 6 | u0324430.d | 1. | AR1242 LE-5 2 22 | STD 8082 | 9 Nov 10 18:08 |
| 7 | u0324431.d | 1. | AR1242 LE-4 2 123 | STD 8082 | 9 Nov 10 18:40 |
| 8 | u0324432.d | 1. | AR1242 LE-3 2 124 | STD 8082 | 9 Nov 10 19:12 |
| 9 | u0324433.d | 1. | AR1242 LE-2 2 125 | STD 8082 | 9 Nov 10 19:44 |
| 10 | u0324434.d | 1. | AR1242 LE-1 2 126 | STD 8082 | 9 Nov 10 20:16 |
| 11 | u0324435.d | 1. | AR1242 LE-3 ICV2 115 | STD 8082 | 9 Nov 10 20:48 |

RP 11/16/10

Comments: 5046049 3111107 - ICAL

# INITIAL CALIBRATION STANDARDS

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046049 | Instrument: | GCECD-U |
| Calibration: | 0111107 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0002118 | AR1660 LE-3 | S046049-CAL9 | U0324426.D | 11/09/10 15:59 |
| 0002136 | AR2154 LE-3 | S046049-CAL8 | U0324427.D | 11/09/10 16:31 |
| 0002112 | AR1248 LE-3 | S046049-CAL7 | U0324428.D | 11/09/10 17:04 |
| 0002130 | AR1232 LE-3 | S046049-CAL6 | U0324429.D | 11/09/10 17:36 |
| 0002122 | AR1242 LE-5 | S046049-CAL5 | U0324430.D | 11/09/10 18:08 |
| 0002123 | AR1242 LE-4 | S046049-CAL4 | U0324431.D | 11/09/10 18:40 |
| 0002124 | AR1242 LE-3 | S046049-CAL3 | U0324432.D | 11/09/10 19:12 |
| 0002125 | AR1242 LE-2 | S046049-CAL2 | U0324433.D | 11/09/10 19:44 |
| 0002126 | AR1242 LE-1 | S046049-CAL1 | U0324434.D | 11/09/10 20:16 |
| 0002148 | AR1242 LE-3 ICV(ACCU) | S046049-SCV1 | U0324435.D | 11/09/10 20:48 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111107 | Instrument: | GCECD-U |
| | | Calibration Date: | 11/11/2010 3:59:30PM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| PCB-1016 | | | | | 20 | |
| PCB-1016 [2C] | | | | | 20 | |
| PCB-1221 | | | | | 20 | |
| PCB-1221 [2C] | | | | | 20 | |
| PCB-1232 | | | | | 20 | |
| PCB-1232 [2C] | | | | | 20 | |
| PCB-1242 | 171589.2 | 3.47812 | | | 20 | |
| PCB-1242 [2C] | 93341.45 | 7.601439 | | | 20 | |
| PCB-1248 | | | | | 20 | |
| PCB-1248 [2C] | | | | | 20 | |
| PCB-1254 | | | | | 20 | |
| PCB-1254 [2C] | | | | | 20 | |
| PCB-1260 | | | | | 20 | |
| PCB-1260 [2C] | | | | | 20 | |
| TCMX | 1.640339E+07 | 6.750665 | | | 20 | |
| TCMX [2C] | 6591016 | 5.579828 | | | 20 | |
| DCB | 1.803116E+07 | 8.485352 | | | 20 | |
| DCB [2C] | 5214881 | 12.84059 | | | 20 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324435.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S046049 | Injection Date: | 11/09/10 |
| Lab Sample ID: | S046049-SCV1 | Injection Time: | 20:48 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 514 | 171589.2 | 175499 | | 2.3 | 20 |
| PCB-1242 [2C] | A | 500 | 533 | 93341.45 | 99374.44 | | 6.5 | 20 |
| TCMX | A | 25.0 | 27.8 | 1.640339E+07 | 1.824154E+07 | | 11.2 | 20 |
| TCMX [2C] | A | 25.0 | 27.1 | 6591016 | 7150932 | | 8.5 | 20 |
| DCB | A | 25.0 | 26.3 | 1.803116E+07 | 1.896397E+07 | | 5.2 | 20 |
| DCB [2C] | A | 25.0 | 26.4 | 5214881 | 5516664 | | 5.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

## GC ANALYSIS LOG

Intrument ID: HP6890 # U Reviewed by: DK Date: 11/16/10

| | |
|---|---|
| Data Acquisition Method: | Pest32 / PCB32 / Herb32 |
| Injector Temp (oC): | 180 / 200 / 240 / |
| Detector Temp(oC): | 300 |
| Oven Initial Temp(oC): | 60 / 150 / |
| Initial Time (min): | 0.0 / 0.50 / 1.0 / |
| Ramp Rate (oC/min) : | 10-200-4 / 11-250-4 / 18-300-2 |
| Final Temp(oC): | 200 / 275 / 300 / |
| Injection Volume(uL): | 1.0 / 2.0 / 2.5 / |

**Detector A**

| | | |
|---|---|---|
| Column: | RTX-CLP | 30meter |
| ID: | 0.32 mm | |

**Detector B**

| | | |
|---|---|---|
| Column: | RTX-CLP2 | 30 meter |
| ID: | 0.32 mm | |

ICAL Method: 110910u.m Analyst: RP

| Seq. | File ID | GPL ID | Dil | Matrix | Date | Comments |
|---|---|---|---|---|---|---|
| 111010 | U | | | | | |
| | U | Injection Log | | | | |
| | U | Directory: h:\gcdata\u\111010 | | | | |
| | U | Vial FileName Multiplier SampleName Misc Info Injected | | | | |
| | U | 1 u0324436.d 1. SEQ CCV 1AR1242-3 2,1,2,4 STD 10 Nov 10 11:01 | | | | |
| | U | 2 u0324437.d 1. B046115-BLK1 BLK,L 10 Nov 10 14:54 | | | | |
| | U | 3 u0324438.d 1. B046115-BS1 BKS,L 10 Nov 10 15:26 | | | | |
| | U | 4 u0324439.d 1. 1011006-01 LIQUID 10 Nov 10 15:58 | | | | |
| | U | 5 u0324440.d 1. 1011006-01MS LIQUID MS 10 Nov 10 16:30 | | | | |
| | U | 6 u0324441.d 1. 1011006-01MSD LIQUID MSD 10 Nov 10 17:03 | | | | |
| | U | 7 u0324442.d 1. 1011006-03 LIQUID 10 Nov 10 17:35 | | | | |
| | U | 8 u0324443.d 1. B046066-BLK1 BLK,W 10 Nov 10 18:07 | | | | |
| | U | 9 u0324444.d 1. B046066-BS1 BS,W 10 Nov 10 18:39 | | | | |
| | U | 10 u0324445.d 1. B046066-BSD1 BS,W 10 Nov 10 19:11 | | | | |
| | U | 11 u0324446.d 1. 1011015-01 WATER 10 Nov 10 19:43 | | | | |
| | U | 12 u0324447.d 1. SEQ CCV2 AR1242-3 2,1,2,4 STD 8082 10 Nov 10 20:15 | | | | |
| | U | 13 u0324448.d 1. 1011015-02 WATER 10 Nov 10 20:47 | | | | |
| | U | 14 u0324449.d 1. 1011015-03 WATER 10 Nov 10 21:19 | | | | |
| | U | 15 u0324450.d 1. SEQ CCV3 AR1242-3 2,1,2,4 STD 8082 10 Nov 10 21:52 | | | | |
| | U | 16 u0324451.d 1. 1011006-02 LIQUID 10 Nov 10 22:24 | | | | |
| | U | 17 u0324452.d 1. HEXANE 10 Nov 10 22:56 | | | | |
| | U | 18 u0324453.d 1. SEQ CCV4 AR1242-3 2,1,2,4 STD 8082 10 Nov 10 23:28 | | | | |
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11/16/10 RP

Comments: S042015

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324436.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047015 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S047015-CCV1 | Injection Time: | 11:01 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 554 | 171589.2 | 182371.8 | | 6.3 | 20 |
| PCB-1242 [2C] | A | 500 | 477 | 93341.45 | 89138.02 | | -4.5 | 20 |
| TCMX | A | 25.0 | 24.9 | 1.640339E+07 | 1.631067E+07 | | -0.6 | 20 |
| TCMX [2C] | A | 25.0 | 23.5 | 6591016 | 6192716 | | -6.0 | 20 |
| DCB | A | 25.0 | 23.2 | 1.803116E+07 | 1.675824E+07 | | -7.1 | 20 |
| DCB [2C] | A | 25.0 | 24.0 | 5214881 | 5017344 | | -3.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324447.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047015 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S047015-CCV2 | Injection Time: | 20:15 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 498 | 171589.2 | 171702.7 | | 0.07 | 20 |
| PCB-1242 [2C] | A | 500 | 474 | 93341.45 | 88592.74 | | -5.1 | 20 |
| TCMX | A | 25.0 | 24.9 | 1.640339E+07 | 1.633188E+07 | | -0.4 | 20 |
| TCMX [2C] | A | 25.0 | 23.7 | 6591016 | 6251852 | | -5.1 | 20 |
| DCB | A | 25.0 | 22.6 | 1.803116E+07 | 1.626745E+07 | | -9.8 | 20 |
| DCB [2C] | A | 25.0 | 22.0 | 5214881 | 4585548 | | -12.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324450.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047015 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S047015-CCV3 | Injection Time: | 21:52 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 479 | 171589.2 | 166091.8 | | -3.2 | 20 |
| PCB-1242 [2C] | A | 500 | 482 | 93341.45 | 89823.54 | | -3.8 | 20 |
| TCMX | A | 25.0 | 25.1 | 1.640339E+07 | 1.6464E+07 | | 0.4 | 20 |
| TCMX [2C] | A | 25.0 | 24.0 | 6591016 | 6313528 | | -4.2 | 20 |
| DCB | A | 25.0 | 22.4 | 1.803116E+07 | 1.613196E+07 | | -10.5 | 20 |
| DCB [2C] | A | 25.0 | 22.8 | 5214881 | 4753560 | | -8.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION VERIFICATION

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCECD-U | Calibration: | 0111107 |
| Lab File ID: | U0324453.D | Calibration Date: | 11/11/10 15:59 |
| Sequence: | S047015 | Injection Date: | 11/10/10 |
| Lab Sample ID: | S047015-CCV4 | Injection Time: | 23:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| PCB-1242 | A | 500 | 506 | 171589.2 | 174800.2 | | 1.9 | 20 |
| PCB-1242 [2C] | A | 500 | 484 | 93341.45 | 90390.9 | | -3.2 | 20 |
| TCMX | A | 25.0 | 25.6 | 1.640339E+07 | 1.678748E+07 | | 2.3 | 20 |
| TCMX [2C] | A | 25.0 | 24.2 | 6591016 | 6392392 | | -3.0 | 20 |
| DCB | A | 25.0 | 20.6 | 1.803116E+07 | 1.484775E+07 | | -17.7 | 20 |
| DCB [2C] | A | 25.0 | 21.0 | 5214881 | 4369052 | | -16.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS DATA SHEET

## Blank

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011015 | | |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS | | |
| Matrix: | Water | Laboratory ID: | B046066-BLK1 | File ID: | U0324443.D | | |
| Sampled: | | Prepared: | 11/09/10 11:55 | Analyzed: | 11/10/10 18:07 | | |
| Solids: | | Preparation: | 3510C Sep. Funnel | Dilution: | | | |
| Batch: | B046066 | Sequence: | S047015 | Calibration: | 0111107 | Instrument: | GCECD-U |
| Column: | 2 | | | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 12674-11-2 | PCB-1016 [2C] | 1.00 | U |
| 11104-28-2 | PCB-1221 [2C] | 1.00 | U |
| 11141-16-5 | PCB-1232 [2C] | 1.00 | U |
| 53469-21-9 | PCB-1242 [2C] | 1.00 | U |
| 12672-29-6 | PCB-1248 [2C] | 1.00 | U |
| 11097-69-1 | PCB-1254 [2C] | 1.00 | U |
| 11096-82-5 | PCB-1260 [2C] | 1.00 | U |

# METHOD BLANK SUMMARY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B046066-BLK1 | Batch: | B046066 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| LCS Dup | B046066-BSD1 | U0324445.D | 19:11 |
| LCS | B046066-BS1 | U0324444.D | 18:39 |
| GKHMS-GW-10-1010 | 1011015-03 | U0324449.D | 21:19 |
| GKHMS-GW-09-1010 | 1011015-02 | U0324448.D | 20:47 |
| GKHMS-GW-006-1010 | 1011015-01 | U0324446.D | 19:43 |

# SURROGATE SUMMARY SHEET

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCECD-U |

| | DCB [2C] (40 - 135) | DCB (40 - 135) | TCMX [2C] (25 - 140) | TCMX (25 - 140) |
|---|---|---|---|---|
| 1011015-01 | 72 | 86 | 86 | 76 |
| 1011015-02 | 60 | 61 | 70 | 71 |
| 1011015-03 | 49 | 49 | 61 | 77 |
| B046066-BLK1 | 58 | 63 | 66 | 64 |
| B046066-BS1 | 75 | 84 | 85 | 90 |
| B046066-BSD1 | 78 | 98 | 86 | 90 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046066 | Laboratory ID: | B046066-BS1 |
| Column: | 1 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 | 5.00 | 5.06 | 101 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 | 5.00 | 5.02 | 100 | 0.8 | 30 | 25 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8082

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011015 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3510C Sep. Funnel |
| Batch: | B046066 | Laboratory ID: | B046066-BS1 |
| Column: | 2 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 4.62 | 92 | 25 - 125 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| PCB-1242 [2C] | 5.00 | 4.77 | 95 | 3 | 30 | 25 - 125 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: FEBRUARY 15, 2011**

**FROM:** **DANIELLE M. BAUGHMAN** **COPIES: DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – MERCURY**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – 1011015**

**SAMPLES:**

3/Aqueous/

G01-MW-06-1010-111710 G01-MW-09-1010 G01-MW-10-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011015, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for mercury. The samples were collected by Tetra Tech NUS on November 4, 2010 and analyzed by Centauri Labs under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Mercury analyses were conducted using SW-846 7470A.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Laboratory Control Sample Recoveries
* • Matrix Spike Recoveries
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

No issues to report.

Notes

The following contaminant was detected in the laboratory method blank at the following maximum concentration:

| Analyte | Maximum Concentration | Action Level |
|---|---|---|
| Mercury | 0.01 ug/L | 0.05 ug/L |

(1) CCB associated with samples run on 11/17/10.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No actions were taken for blank contamination.

Executive Summary

**Laboratory Performance:** No issues to report.

**Other Factors Affecting Data Quality:** No issues to report.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Danielle M. Baughman
Project Engineer

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-06-1010-111710 | | | G01-MW-09-1010 | | | G01-MW-10-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011015 | LAB_ID | 1011015-01 | | | 1011015-02 | | | 1011015-03 | | |
| FRACTION: M | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.0114 | U | | 0.0114 | U | | 0.0114 | U | |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: 245.1 Dig
Prepared Date/Time: 11/17/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:22 |

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: 245.1 Dig
Prepared Date/Time: 11/17/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:24 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: 245.1 Dig
Prepared Date/Time: 11/17/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:27 |

# APPENDIX C
# SUPPORT DOCUMENTATION

## Subcontracted Analyses

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1011015-01 | 6020A QSM TAL |
| 1011015-01 | 8081B Pesticides |
| 1011015-01 | 8270D LL SVOC TCL |
| 1011015-01 | Mercury, Total 7470A |
| 1011015-02 | 6020A QSM TAL |
| 1011015-02 | 8081B Pesticides |
| 1011015-02 | 8270D LL SVOC TCL |
| 1011015-02 | Mercury, Total 7470A |
| 1011015-03 | 6020A QSM TAL |
| 1011015-03 | 8081B Pesticides |
| 1011015-03 | 8270D LL SVOC TCL |
| 1011015-03 | Mercury, Total 7470A |

A laboratory control sample was extracted and analyzed with this batch. Six spike recoveries were above the QC.

**PCBs**

Three water samples were extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead, a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

**PESTICIDES**

Three water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. One analyte in the LCS and LCSD had recoveries above the QC limits. Because the samples did not contain that analyte, the data is not affected. All remaining recoveries were within the QC limits.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-GW-006-1010 | 1011015-01 | SW7470A | Water | 11/4/2010 | 11/5/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-09-1010 | 1011015-02 | SW7470A | Water | 11/4/2010 | 11/5/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-10-1010 | 1011015-03 | SW7470A | Water | 11/4/2010 | 11/5/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-TB-04 | 1011015-04 | SW8260B | Water | 11/4/2010 | 11/5/2010 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-10

WO # 101015

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs** **7210 Corporate Court** **Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz** **301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8260B | G01-MW-06 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8720D/8270DSIM | G01-MW-06 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8082A | G01-MW-06 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8081B | G01-MW-06 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 6020A | G01-MW-06 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8260B | G01-MW-09 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8720D/8270DSIM | G01-MW-09 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8082A | G01-MW-09 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8081B | G01-MW-09 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 6020A | G01-MW-09 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8260B | G01-MW-10 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8720D/8270DSIM | G01-MW-10 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8082A | G01-MW-10 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8081B | G01-MW-10 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 6020A | G01-MW-10 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | GKHMS-TB-04 | 00:00 | SW846 8260B | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

| 1. Relinquished By: **Gary Braganza** | Date: 11/04/2010 | Time: 15:13 | Received By: **Federal Express** | Date: 11/04/2010 | Time: 16:13 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

**SDG** 1011015

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| HG | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| HG | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| OV | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | GKHMS-TB-04 | 1011015-04 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| SIM | NG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| SIM | NG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| SIM | NG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| PCB | | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PEST | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PEST | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |
| PEST | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICV01** | Mercury | 3.06 | 3.0 | 102.0 | 90.0 - 110.0 | CV | 11/17/2010 | 16:15 | HG101117a |
| **CCV01** | Mercury | 5.17 | 5.0 | 103.4 | 90.0 - 110.0 | CV | 11/17/2010 | 16:29 | HG101117a |
| **CCV02** | Mercury | 5.18 | 5.0 | 103.6 | 90.0 - 110.0 | CV | 11/17/2010 | 17:02 | HG101117a |
| **CCV03** | Mercury | 5.05 | 5.0 | 101.0 | 90.0 - 110.0 | CV | 11/17/2010 | 17:35 | HG101117a |
| **CCV04** | Mercury | 4.88 | 5.0 | 97.6 | 90.0 - 110.0 | CV | 11/17/2010 | 18:09 | HG101117a |
| **CCV05** | Mercury | 4.66 | 5.0 | 93.2 | 90.0 - 110.0 | CV | 11/17/2010 | 18:41 | HG101117a |

# Metals

## - 2b -

## CRDL STANDARD FOR AA & ICP

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**AA CRDL Standard Source:** PLASMA-PURE

**ICP CRDL Standard Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Advisory Limits (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CRI01** | | | | | | | | | |
| | Mercury | 0.21 | 0.2 | 105.0 | 70 - 130 | CV | 11/17/20 | 16:26 | HG101117 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | MDL | CRQL | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **ICB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:18 | HG101117a |
| **CCB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:32 | HG101117a |
| **CCB02** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:04 | HG101117a |
| **CCB03** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:38 | HG101117a |
| **CCB04** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 18:13 | HG101117a |
| **CCB05** | Mercury | 0.01 | +/-0.20 | J | 0.01 | 0.20 | CV | 11/17/2010 | 18:44 | HG101117a |

# Metals
## - 3b -
## PREPARATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Instrument:** CV5

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | MDL ug/L | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **PBW2** | | **WATER** | | **Batch Number:** | **B047045** | | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 17:41 | HG101117a |
| **PBW1** | | **WATER** | | **Batch Number:** | **B047046** | | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 16:34 | HG101117a |

# Metals
## - 10 -
## METHOD DETECTION LIMITS

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Analyte | Wave- length (nm) | MDL ug/L | CRQL ug/L | Date: |
|---|---|---|---|---|
| Mercury | 253.70 | 0.0114 | 0.2000 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD
**SDG No.:** 101117A
**Contract:**
**Lab Code:** CHEM
**Method:** CV
**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047045 | | | | | | |
| PBW2 | PBW02 | MB | WATER | | 100.0 | 100.0 | |
| LCSW3 | LCSW03 | LCS | WATER | | 100.0 | 100.0 | |
| 1010098-01 | GKHMS-GW-002-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-01S | GKHMS-GW-002-1010S | MS | WATER | | 100.0 | 100.0 | |
| 1010098-01SD | GKHMS-GW-002-1010SD | MSD | WATER | | 100.0 | 100.0 | |
| 1010098-02 | GKHMS-GW-003-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-03 | GKHMS-GW-004-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-04 | GKHMS-GW-005-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-05 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-06 | GKHMS-GW-007-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-08 | GKHMS-GW-008-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-09 | GKHMS-GW-009-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-10 | GKHMS-GW-010-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-11 | GKHMS-GW-011-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-12 | GKHMS-GW-012-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-13 | GKHMS-GW-013-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-01 | G01-MW-01-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-02 | G01-MW-02-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-04 | G01-MW-04-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD
**SDG No.:** 101117A
**Contract:**
**Lab Code:** CHEM
**Method:** CV
**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047046 | | | | | | |
| PBW1 | PBW1 | MB | WATER | | 100.0 | 100.0 | |
| LCSW1 | LCSW1 | LCS | WATER | | 100.0 | 100.0 | |
| LCSW2 | LCSW2 | LCS | WATER | | 100.0 | 100.0 | |
| 1011026-05 | 1011026-05 | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MS | 1011026-05MS | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MSD | 1011026-05MSD | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-01 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-02 | GKHMS-GW-09-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-03 | GKHMS-GW-10-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals

14

## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| S0 | 1.00 | 1557 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.2 | 1.00 | 1600 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.5 | 1.00 | 1603 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S1.0 | 1.00 | 1606 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S5.0 | 1.00 | 1609 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S10.0 | 1.00 | 1612 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICV01 | 1.00 | 1615 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICB01 | 1.00 | 1618 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CRI01 | 1.00 | 1626 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV01 | 1.00 | 1629 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB01 | 1.00 | 1632 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW1 | 1.00 | 1634 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW1 | 1.00 | 1637 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW2 | 1.00 | 1640 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1642 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1645 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1648 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1650 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1653 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1656 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1659 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV02 | 1.00 | 1702 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB02 | 1.00 | 1704 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05 | 1.00 | 1707 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MS | 1.00 | 1710 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MSD | 1.00 | 1712 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1716 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1719 | | | | | | | | | | | | | | | | | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1722 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-09-1010 | 1.00 | 1724 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-10-1010 | 1.00 | 1727 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1730 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1733 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV03 | 1.00 | 1735 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB03 | 1.00 | 1738 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW02 | 1.00 | 1741 | | | | | | | | | | | | | | | | X | | | | | | | | |

# Metals

14

## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| LCSW03 | 1.00 | 1745 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010 | 1.00 | 1747 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010S | 1.00 | 1750 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010SD | 1.00 | 1753 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-003-1010 | 1.00 | 1756 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-004-1010 | 1.00 | 1758 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-005-1010 | 1.00 | 1801 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1804 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-007-1010 | 1.00 | 1806 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV04 | 1.00 | 1809 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB04 | 1.00 | 1813 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-008-1010 | 1.00 | 1816 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-009-1010 | 1.00 | 1819 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-010-1010 | 1.00 | 1821 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-011-1010 | 1.00 | 1824 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-012-1010 | 1.00 | 1827 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-013-1010 | 1.00 | 1829 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-01-1010 | 1.00 | 1832 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-02-1010 | 1.00 | 1835 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-04-1010 | 1.00 | 1838 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV05 | 1.00 | 1841 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB05 | 1.00 | 1844 | | | | | | | | | | | | | | | | X | | | | | | | | |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: FEBRUARY 15, 2011**

**FROM:** **DANIELLE M. BAUGHMAN** **COPIES: DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – MERCURY**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – 1011015**

**SAMPLES:**

3/Aqueous/

G01-MW-06-1010-111710 G01-MW-09-1010 G01-MW-10-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011015, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for mercury. The samples were collected by Tetra Tech NUS on November 4, 2010 and analyzed by Centauri Labs under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Mercury analyses were conducted using SW-846 7470A.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Laboratory Control Sample Recoveries
* • Matrix Spike Recoveries
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

No issues to report.

Notes

The following contaminant was detected in the laboratory method blank at the following maximum concentration:

| Analyte | Maximum Concentration | Action Level |
|---|---|---|
| Mercury | 0.01 ug/L | 0.05 ug/L |

(1) CCB associated with samples run on 11/17/10.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No actions were taken for blank contamination.

Executive Summary

**Laboratory Performance:** No issues to report.

**Other Factors Affecting Data Quality:** No issues to report.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Danielle M. Baughman
Project Engineer

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607<br>SDG: 1011015<br>FRACTION: M<br>MEDIA: WATER | NSAMPLE | G01-MW-06-1010-111710 | | | G01-MW-09-1010 | | | G01-MW-10-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1011015-01 | | | 1011015-02 | | | 1011015-03 | | |
| | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/4/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.0114 | U | | 0.0114 | U | | 0.0114 | U | |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-006-1010
Sample Date/Time: 11/04/10 13:45
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011015-01
Percent solids:
Preparation Method: 245.1 Dig
Prepared Date/Time: 11/17/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:22 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-09-1010
Sample Date/Time: 11/04/10 12:25
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011015-02
Percent solids:
Preparation Method: 245.1 Dig
Prepared Date/Time: 11/17/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:24 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-10-1010
Sample Date/Time: 11/04/10 11:10
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011015-03
Percent solids:
Preparation Method: 245.1 Dig
Prepared Date/Time: 11/17/10 12:00

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 17:27 |

# APPENDIX C
# SUPPORT DOCUMENTATION

## Subcontracted Analyses

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1011015-01 | 6020A QSM TAL |
| 1011015-01 | 8081B Pesticides |
| 1011015-01 | 8270D LL SVOC TCL |
| 1011015-01 | Mercury, Total 7470A |
| 1011015-02 | 6020A QSM TAL |
| 1011015-02 | 8081B Pesticides |
| 1011015-02 | 8270D LL SVOC TCL |
| 1011015-02 | Mercury, Total 7470A |
| 1011015-03 | 6020A QSM TAL |
| 1011015-03 | 8081B Pesticides |
| 1011015-03 | 8270D LL SVOC TCL |
| 1011015-03 | Mercury, Total 7470A |

A laboratory control sample was extracted and analyzed with this batch. Six spike recoveries were above the QC.

**PCBs**

Three water samples were extracted and analyzed for PCB compounds using SW846 method 8082.
All extraction and analysis holding times were met.
All surrogate recoveries were well within the QC limits.
The matrix spike and matrix spike duplicate analysis could not be performed with the samples due to insufficient sample volume. Instead, a laboratory control sample and a duplicate laboratory control samples were extracted and analyzed along with the batch.
Manual integration was performed for the on some samples data files , when automatic integration provided by the software was inappropriate.

**PESTICIDES**

Three water samples were extracted and analyzed for pesticide compounds using SW846 method 8081.
Extraction and analyses holding times were met.
All surrogate recoveries were within the QC limits.
Because of sample volume limitations, a matrix spike and matrix spike duplicate could not be performed. Duplicate laboratory control samples were analyzed instead. One analyte in the LCS and LCSD had recoveries above the QC limits. Because the samples did not contain that analyte, the data is not affected. All remaining recoveries were within the QC limits.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| GKHMS-GW-006-1010 | 1011015-01 | SW7470A | Water | 11/4/2010 | 11/5/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-09-1010 | 1011015-02 | SW7470A | Water | 11/4/2010 | 11/5/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-10-1010 | 1011015-03 | SW7470A | Water | 11/4/2010 | 11/5/2010 |
| | | SW8081B | | | |
| | | SW8082 | | | |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-TB-04 | 1011015-04 | SW8260B | Water | 11/4/2010 | 11/5/2010 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-10

WO # 101015

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8260B | G01-MW-06 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8720D/8270DSIM | G01-MW-06 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8082A | G01-MW-06 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 8081B | G01-MW-06 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | SW846 6020A | G01-MW-06 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8260B | G01-MW-09 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8720D/8270DSIM | G01-MW-09 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8082A | G01-MW-09 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 8081B | G01-MW-09 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | SW846 6020A | G01-MW-09 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8260B | G01-MW-10 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8720D/8270DSIM | G01-MW-10 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8082A | G01-MW-10 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 8081B | G01-MW-10 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | SW846 6020A | G01-MW-10 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | GKHMS-TB-04 | 00:00 | SW846 8260B | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

| 1. Relinquished By: **Gary Braganza** | Date: 11/04/2010 | Time: 15:13 | Received By: **Federal Express** | Date: 11/04/2010 | Time: 16:13 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

**SDG** 1011015

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| HG | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| HG | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/17/2010 | 11/17/2010 | 13 | 0 | 13 |
| OV | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| OV | UG/L | GKHMS-TB-04 | 1011015-04 | NM | 11/04/2010 | 11/13/2010 | 11/13/2010 | 9 | 0 | 9 |
| SIM | NG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| SIM | NG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| SIM | NG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/09/2010 | 11/15/2010 | 5 | 6 | 11 |
| PCB | | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PCB | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/04/2010 | 11/10/2010 | 0 | 6 | 6 |
| PEST | UG/L | G01-MW-06-1010 | 1011015-01 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PEST | UG/L | G01-MW-09-1010 | 1011015-02 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |
| PEST | UG/L | G01-MW-10-1010 | 1011015-03 | NM | 11/04/2010 | 11/04/2010 | 11/15/2010 | 0 | 11 | 11 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICV01** | Mercury | 3.06 | 3.0 | 102.0 | 90.0 - 110.0 | CV | 11/17/2010 | 16:15 | HG101117a |
| **CCV01** | Mercury | 5.17 | 5.0 | 103.4 | 90.0 - 110.0 | CV | 11/17/2010 | 16:29 | HG101117a |
| **CCV02** | Mercury | 5.18 | 5.0 | 103.6 | 90.0 - 110.0 | CV | 11/17/2010 | 17:02 | HG101117a |
| **CCV03** | Mercury | 5.05 | 5.0 | 101.0 | 90.0 - 110.0 | CV | 11/17/2010 | 17:35 | HG101117a |
| **CCV04** | Mercury | 4.88 | 5.0 | 97.6 | 90.0 - 110.0 | CV | 11/17/2010 | 18:09 | HG101117a |
| **CCV05** | Mercury | 4.66 | 5.0 | 93.2 | 90.0 - 110.0 | CV | 11/17/2010 | 18:41 | HG101117a |

# Metals

## - 2b -

## CRDL STANDARD FOR AA & ICP

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**AA CRDL Standard Source:** PLASMA-PURE

**ICP CRDL Standard Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Advisory Limits (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CRI01** | | | | | | | | | |
| | Mercury | 0.21 | 0.2 | 105.0 | 70 - 130 | CV | 11/17/20 | 16:26 | HG101117 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | MDL | CRQL | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **ICB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:18 | HG101117a |
| **CCB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:32 | HG101117a |
| **CCB02** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:04 | HG101117a |
| **CCB03** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:38 | HG101117a |
| **CCB04** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 18:13 | HG101117a |
| **CCB05** | Mercury | 0.01 | +/-0.20 | J | 0.01 | 0.20 | CV | 11/17/2010 | 18:44 | HG101117a |

# Metals
## - 3b -
## PREPARATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Instrument:** CV5

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | MDL ug/L | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **PBW2** | | **WATER** | | **Batch Number:** | **B047045** | | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 17:41 | HG101117a |
| **PBW1** | | **WATER** | | **Batch Number:** | **B047046** | | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 16:34 | HG101117a |

# Metals
## - 10 -
## METHOD DETECTION LIMITS

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Analyte | Wave- length (nm) | MDL ug/L | CRQL ug/L | Date: |
|---|---|---|---|---|
| Mercury | 253.70 | 0.0114 | 0.2000 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD
**SDG No.:** 101117A
**Contract:**
**Lab Code:** CHEM
**Method:** CV
**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047045 | | | | | | |
| PBW2 | PBW02 | MB | WATER | | 100.0 | 100.0 | |
| LCSW3 | LCSW03 | LCS | WATER | | 100.0 | 100.0 | |
| 1010098-01 | GKHMS-GW-002-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-01S | GKHMS-GW-002-1010S | MS | WATER | | 100.0 | 100.0 | |
| 1010098-01SD | GKHMS-GW-002-1010SD | MSD | WATER | | 100.0 | 100.0 | |
| 1010098-02 | GKHMS-GW-003-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-03 | GKHMS-GW-004-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-04 | GKHMS-GW-005-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-05 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-06 | GKHMS-GW-007-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-08 | GKHMS-GW-008-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-09 | GKHMS-GW-009-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-10 | GKHMS-GW-010-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-11 | GKHMS-GW-011-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-12 | GKHMS-GW-012-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-13 | GKHMS-GW-013-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-01 | G01-MW-01-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-02 | G01-MW-02-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-04 | G01-MW-04-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD
**SDG No.:** 101117A
**Contract:**
**Lab Code:** CHEM
**Method:** CV
**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047046 | | | | | | |
| PBW1 | PBW1 | MB | WATER | | 100.0 | 100.0 | |
| LCSW1 | LCSW1 | LCS | WATER | | 100.0 | 100.0 | |
| LCSW2 | LCSW2 | LCS | WATER | | 100.0 | 100.0 | |
| 1011026-05 | 1011026-05 | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MS | 1011026-05MS | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MSD | 1011026-05MSD | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-01 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-02 | GKHMS-GW-09-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-03 | GKHMS-GW-10-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals

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## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| S0 | 1.00 | 1557 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.2 | 1.00 | 1600 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.5 | 1.00 | 1603 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S1.0 | 1.00 | 1606 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S5.0 | 1.00 | 1609 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S10.0 | 1.00 | 1612 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICV01 | 1.00 | 1615 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICB01 | 1.00 | 1618 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CRI01 | 1.00 | 1626 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV01 | 1.00 | 1629 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB01 | 1.00 | 1632 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW1 | 1.00 | 1634 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW1 | 1.00 | 1637 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW2 | 1.00 | 1640 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1642 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1645 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1648 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1650 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1653 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1656 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1659 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV02 | 1.00 | 1702 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB02 | 1.00 | 1704 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05 | 1.00 | 1707 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MS | 1.00 | 1710 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MSD | 1.00 | 1712 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1716 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1719 | | | | | | | | | | | | | | | | | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1722 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-09-1010 | 1.00 | 1724 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-10-1010 | 1.00 | 1727 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1730 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1733 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV03 | 1.00 | 1735 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB03 | 1.00 | 1738 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW02 | 1.00 | 1741 | | | | | | | | | | | | | | | | X | | | | | | | | |

# Metals

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## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| LCSW03 | 1.00 | 1745 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010 | 1.00 | 1747 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010S | 1.00 | 1750 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010SD | 1.00 | 1753 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-003-1010 | 1.00 | 1756 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-004-1010 | 1.00 | 1758 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-005-1010 | 1.00 | 1801 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1804 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-007-1010 | 1.00 | 1806 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV04 | 1.00 | 1809 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB04 | 1.00 | 1813 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-008-1010 | 1.00 | 1816 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-009-1010 | 1.00 | 1819 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-010-1010 | 1.00 | 1821 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-011-1010 | 1.00 | 1824 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-012-1010 | 1.00 | 1827 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-013-1010 | 1.00 | 1829 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-01-1010 | 1.00 | 1832 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-02-1010 | 1.00 | 1835 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-04-1010 | 1.00 | 1838 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV05 | 1.00 | 1841 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB05 | 1.00 | 1844 | | | | | | | | | | | | | | | | X | | | | | | | | |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

| | | | |
|---|---|---|---|
| **TO:** | **S. STOTLER-HARDY** | **DATE:** | **FEBRUARY 15, 2011** |
| **FROM:** | **A. COGNETTI** | **COPIES:** | **DV FILE** |

**SUBJECT:** **ORGANIC DATA VALIDATION: VOC/PAH**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) - 1011022**

**SAMPLES:** 4/Aqueous/VOC

G01-MW-01-1010 G01-MW-02-1010 G01-MW-04-1010 GKHMS-TB-05

3/Aqueous/PAH

G01-MW-01-1010 G01-MW-02-1010 G01-MW-04-1010

## OVERVIEW

The sample set for NAS Key West, CTO JM16, SDG 1011022 consisted of three (3) aqueous environmental samples and one (1) aqueous trip blank analyzed for volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). No field duplicate pairs were included in this SDG.

The samples were collected by TetraTech NUS on November 5, 2010 and analyzed by Centauri Laboratories. All analyses were conducted using USEPA SW-846 Methods 8260B and 8270C SIM analytical and reporting protocols.

The sample data in this SDG were validated with regard to the following list of parameters.

| | |
|---|---|
| | • Data Completeness |
| * | • Holding Times |
| * | • GC/MS Tuning |
| | • Initial and Continuing Calibration |
| * | • Laboratory Blank Analyses |
| | • Surrogate Recoveries |
| | • Blank Spike/Blank Spike Duplicate Results |
| * | • Matrix Spike/Matrix Spike Duplicate Results |
| * | • Internal Standard Recoveries |
| * | • Compound Identification |
| * | • Detection Limits |

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

## VOC

Discrepancies in the initial calibration mean Response Factor (RF) and RF Relative Standard Deviation (RSD) data were noted by Tetra Tech data validators for the same calibration on November 11, 2010 on instrument GCMS-B. The discrepancy was brought to the attention of the laboratory. Because the laboratory which provided the analysis closed, Chem Tech, the company that purchased Centauri Laboratories, examined the

data. Chem Tech provided the raw data for the initial calibration. The raw data will be used in this SDG for validation purposes. The initial calibration relative response factors (RRF) for several compounds were less than the 0.05 quality control limit on November 11, 2010 on instrument GCMS-B. The compounds were bromomethane, methyl acetate, acetone, acrylonitrile, acetonitrile, propionitirile, methacrylonitrile, isobutanol and 2-butanone. The positive acetone result in sample GKHMS-TB-05 was qualified as estimated (J). The nondetected results of the aforementioned compounds in the affected samples were qualified as rejected (UR).

The initial calibration relative percent deviation (RSD) was greater than the 15% quality control limit for several target compounds on November 11, 2010 on instrument GCMS-B. The target compounds were chloromethane, vinyl chloride, bromomethane, chloroethane, methylene chloride, acetone, carbon tetrachloride and trans-1,3-dichloropropene. The positive acetone result in sample GKHMS-TB-05 was qualified as estimated (J). The nondetected results of the aforementioned target compounds were qualified as estimated (UJ).

The continuing calibration RRFs for 1,2-dibromo-3-chloropropane, acetone and bromomethane were less than the 0.05 quality control limit on November 13, 2010 @ 10:25 on instrument GCMS-B. The nondetected 1,2-dibromo-3-chloropropane, acetone and bromomethane results in the affected samples were qualified as rejected (UR). The positive acetone result in sample GKHMS-TB-05 was qualified as estimated (J).

The continuing calibration percent differences (%Ds) for several target compounds were greater than the 20% quality control limit on November 13, 2010 @ 10:25. The target compounds were 1,2-dibromo-3-chloropropane, 2,2-dichloropropane, acetonitrile, acrylonitrile, bromoform, chloromethane, cis-1,3-dichloropropene, ethyl methacrylate, isobutyl alcohol, methacrylonitrile, methyl acetate, methyl tert-butyl ether, methylene chloride and propionitrile. The nondetected results of the aforementioned target compounds were qualified as estimated (UJ).

The laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) percent recovery (%R) of methylene chloride was less than the lower quality control limit in batch B047068. The nondetected methylene chloride results were qualified as estimated (UJ). The LCS %R of acetone and the relative pecent difference (RPD) were greater than the upper quality control limit. The positive acetone result in sample GKHMS-TB-05 was qualified as estimated (J).

**PAH**

The PAH surrogate recoveries of all three surrogates in samples G01-MW-02-1010 and G01-MW-04-1010 were greater than the upper quality control limit. The positive acenaphthene and acenaphthylene results in sample G01-MW-04-1010 were qualified as estimated (J). No action was taken on the nondetected results in sample G01-MW-02-1010 and G01-MW-04-1010.

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. Because the laboratory which provided the analysis closed, Chem Tech, the company that purchased Centauri Laboratories, provided the data. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks. The retention time and response factor for 1-methylnaphthalene are very similar to 2-methylnaphthalene. The positive and nondetected 1-methylnaphthalene results were qualified as estimated (J) and (UJ). The nondetected 1-methylnaphthalene results were reported to the reporting limit. The other PAHs in the original package were reported to the method detection limit.

**ADDITIONAL COMMENTS**

The trip blank, GKHMS-TB-05, had a positive detection for acetone. No action was taken on the nondetected acetone results in the environmental samples.

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. Chem Tech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not reported by the laboratory. The following tables outline the discrepancies between the compounds reported/not reported by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC- 8260B |
| 1-methylnaphthalene | PAH- 8270C |

The laboratory was contacted in regards to the compounds listed in the table above. None of the above compounds were calibrated in the associated analytical methods. 1,4-Dioxane in the VOC fraction was searched for as a Tentatively Identified Compound in Method 8260B but the laboratory did not detect 1,4-dioxane. 1,4-Dioxane were excluded from the data base due to a lack of instrument calibration.

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |
| 1,2,3-trichloropropane |
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Isobutanol |
| Methacrylonitrile |
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

Naphthalene was reported in both the VOC and PAH fractions in this SDG.

The LCS %Rs of methyl acetate and vinyl acetate were less than the lower quality control limit in batch B047068. The LCSD %Rs and the RPDs were within quality control limits for methyl acetate and vinyl acetate. No action was taken on the nondetected methyl acetate and vinyl acetate results.

The matrix spike/ matrix spike duplicate (MS/MSD) %Rs of acenaphthene was less than the lower quality control limit. The spiked sample was not from this SDG. No action was taken on the acenaphthene samples. The MS %R of 2-methylnaphthalene was greater than the upper quality control limit. No action was taken on the nondetected 2-methylnaphthalene results. The RPD for pyrene was greater than the quality control limit. The %Rs for pyrene in the MS and MSD were within quality control limits. No action was taken on the nondetected pyrene results.

Nondetected results were reported to the method detection limit (MDL).

## EXECUTIVE SUMMARY

**Laboratory Performance Issues:** The initial calibration and continuing calibration RRFs for several compounds were less than quality control limits. The initial calibration RSD was greater than the 15% quality control limit for several target compounds. The continuing calibration %Ds for several target compounds exceeded quality control limits. The LCS/LCSD %Rs of methylene chloride and acetone were outside quality control limits. The PAH surrogate recoveries of all three surrogates in samples G01-MW-02-1010 and G01-MW-04-1010 were greater than the upper quality control limit. The 1-methylnaphthalene results were provided using 2-methylnaphthalene for quantitation of the peaks.

**Other factors affecting data quality:** The closing of Centauri Laboratories affected the ability of the data validator to obtain missing data.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October 1999) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

| PROJ_NO: 02607<br>SDG: 1011022<br>FRACTION: OV<br>MEDIA: WATER | NSAMPLE | G01-MW-01-1010 | | | G01-MW-02-1010 | | | G01-MW-04-1010 | | | GKHMS-TB-05 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1011022-01 | | | 1011022-02 | | | 1011022-03 | | | 1011022-04 | | |
| | SAMP_DATE | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 1 | U | | 1 | U | | 1 | U | | 0.2 | U | |
| 1,1,1-TRICHLOROETHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 0.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 1.65 | U | | 1.65 | U | | 1.65 | U | | 0.33 | U | |
| 1,1,2-TRICHLOROETHANE | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 2.4 | U | | 2.4 | U | | 2.4 | U | | 0.48 | U | |
| 1,1-DICHLOROETHANE | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.18 | U | |
| 1,1-DICHLOROETHENE | | 1.4 | U | | 1.4 | U | | 1.4 | U | | 0.28 | U | |
| 1,1-DICHLOROPROPENE | | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 2.45 | U | | 2.45 | U | | 2.45 | U | | 0.49 | U | |
| 1,2,3-TRICHLOROPROPANE | | 1.8 | U | | 1.8 | U | | 1.8 | U | | 0.36 | U | |
| 1,2,4-TRICHLOROBENZENE | | 2.4 | U | | 2.4 | U | | 2.4 | U | | 0.48 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 2.15 | U | | 2.15 | U | | 2.15 | U | | 0.43 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 2.95 | UR | C | 2.95 | UR | C | 2.95 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 1.05 | U | | 1.05 | U | | 1.05 | U | | 0.21 | U | |
| 1,2-DICHLOROBENZENE | | 1.5 | U | | 1.5 | U | | 1.5 | U | | 0.3 | U | |
| 1,2-DICHLOROETHANE | | 2.55 | UJ | C | 2.55 | UJ | C | 2.55 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.95 | U | | 0.95 | U | | 0.95 | U | | 0.19 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 2.25 | U | | 2.25 | U | | 2.25 | U | | 0.45 | U | |
| 1,3-DICHLOROBENZENE | | 2.2 | U | | 2.2 | U | | 2.2 | U | | 0.44 | U | |
| 1,3-DICHLOROPROPANE | | 1.15 | U | | 1.15 | U | | 1.15 | U | | 0.23 | U | |
| 1,4-DICHLOROBENZENE | | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| 2,2-DICHLOROPROPANE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| 2-BUTANONE | | 1.75 | UJ | C | 1.75 | UJ | C | 1.75 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 1.9 | U | | 1.9 | U | | 1.9 | U | | 0.38 | U | |
| 2-HEXANONE | | 1.55 | U | | 1.55 | U | | 1.55 | U | | 0.31 | U | |
| 4-CHLOROTOLUENE | | 2 | U | | 2 | U | | 2 | U | | 0.4 | U | |
| 4-ISOPROPYLTOLUENE | | 2.75 | U | | 2.75 | U | | 2.75 | U | | 0.55 | U | |
| 4-METHYL-2-PENTANONE | | 1.15 | U | | 1.15 | U | | 1.15 | U | | 0.23 | U | |
| ACETONE | | 4 | UR | C | 4 | UR | C | 4 | UR | C | 14.2 | J | CE |
| ACETONITRILE | | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| ACRYLONITRILE | | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| BENZENE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 1.55 | U | | 1.55 | U | | 1.55 | U | | 0.31 | U | |
| BROMOCHLOROMETHANE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | U | |
| BROMODICHLOROMETHANE | | 0.95 | UJ | C | 0.95 | UJ | C | 0.95 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | G01-MW-02-1010 | G01-MW-04-1010 | GKHMS-TB-05 |
|---|---|---|---|---|---|
| SDG: 1011022 | LAB_ID | 1011022-01 | 1011022-02 | 1011022-03 | 1011022-04 |
| FRACTION: OV | SAMP_DATE | 11/5/2010 | 11/5/2010 | 11/5/2010 | 11/5/2010 |
| MEDIA: WATER | QC_TYPE | NM | NM | NM | NM |
| | UNITS | UG/L | UG/L | UG/L | UG/L |
| | PCT_SOLIDS | 0.0 | 0.0 | 0.0 | 0.0 |
| | DUP_OF | | | | |

| PARAMETER | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROMOFORM | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |
| BROMOMETHANE | 1.95 | UR | C | 1.95 | UR | C | 1.95 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | U | |
| CARBON TETRACHLORIDE | 1.3 | UJ | C | 1.3 | UJ | C | 1.3 | UJ | C | 0.26 | UJ | C |
| CHLOROBENZENE | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | U | |
| CHLORODIBROMOMETHANE | 1.3 | U | | 1.3 | U | | 1.3 | U | | 0.26 | U | |
| CHLOROETHANE | 1.15 | UJ | C | 1.15 | UJ | C | 1.15 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.18 | U | |
| CHLOROMETHANE | 3.95 | UJ | C | 3.95 | UJ | C | 3.95 | UJ | C | 0.79 | UJ | C |
| CIS-1,2-DICHLOROETHENE | 1 | U | | 1 | U | | 1 | U | | 0.2 | U | |
| CIS-1,3-DICHLOROPROPENE | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| DIBROMOMETHANE | 1.3 | UJ | C | 1.3 | UJ | C | 1.3 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | 2.1 | U | | 2.1 | U | | 2.1 | U | | 0.42 | U | |
| ETHYL METHACRYLATE | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | 1.4 | U | | 1.4 | U | | 1.4 | U | | 0.28 | U | |
| HEXACHLOROBUTADIENE | 2.9 | UJ | C | 2.9 | UJ | C | 2.9 | UJ | C | 0.58 | UJ | C |
| ISOBUTANOL | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| ISOPROPYLBENZENE | 1.85 | U | | 1.85 | U | | 1.85 | U | | 0.37 | U | |
| M+P-XYLENES | 3.35 | U | | 3.35 | U | | 3.35 | U | | 0.67 | U | |
| METHACRYLONITRILE | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| METHYL ACETATE | 1.35 | UR | C | 1.35 | UR | C | 1.35 | UR | C | 0.27 | UR | C |
| METHYL CYCLOHEXANE | 2.15 | U | | 2.15 | U | | 2.15 | U | | 0.43 | U | |
| METHYL IODIDE | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| METHYL METHACRYLATE | 5 | U | | 5 | U | | 5 | U | | 1 | U | |
| METHYL TERT-BUTYL ETHER | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | 0.85 | UJ | CE | 0.85 | UJ | CE | 0.85 | UJ | CE | 0.17 | UJ | CE |
| NAPHTHALENE | 2.7 | U | | 2.7 | U | | 2.7 | U | | 0.54 | U | |
| N-BUTYLBENZENE | 2.7 | UJ | C | 2.7 | UJ | C | 2.7 | UJ | C | 0.54 | UJ | C |
| N-PROPYLBENZENE | 2.2 | U | | 2.2 | U | | 2.2 | U | | 0.44 | U | |
| O-XYLENE | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | U | |
| PROPIONITRILE | 5 | UR | C | 5 | UR | C | 5 | UR | C | 1 | UR | C |
| SEC-BUTYLBENZENE | 2.5 | U | | 2.5 | U | | 2.5 | U | | 0.5 | U | |
| STYRENE | 1.8 | U | | 1.8 | U | | 1.8 | U | | 0.36 | U | |
| TERT-BUTYLBENZENE | 2.1 | U | | 2.1 | U | | 2.1 | U | | 0.42 | U | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | | | G01-MW-02-1010 | | | G01-MW-04-1010 | | | GKHMS-TB-05 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011022 | LAB_ID | 1011022-01 | | | 1011022-02 | | | 1011022-03 | | | 1011022-04 | | |
| FRACTION: OV | SAMP_DATE | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TETRACHLOROETHENE | | 1.9 | U | | 1.9 | U | | 1.9 | U | | 0.38 | U | |
| TOLUENE | | 1.35 | U | | 1.35 | U | | 1.35 | U | | 0.27 | U | |
| TRANS-1,2-DICHLOROETHENE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 1.1 | UJ | C | 1.1 | UJ | C | 1.1 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 1.5 | UJ | C | 1.5 | UJ | C | 1.5 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 1.75 | U | | 1.75 | U | | 1.75 | U | | 0.35 | U | |
| VINYL ACETATE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | U | |
| VINYL CHLORIDE | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | | | G01-MW-02-1010 | | | G01-MW-04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011022 | LAB_ID | 1011022-01 | | | 1011022-02 | | | 1011022-03 | | |
| FRACTION: PAH | SAMP_DATE | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |

| PARAMETER | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
|---|---|---|---|---|---|---|---|---|---|
| 1-METHYLNAPHTHALENE | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | UJ | Q |
| 2-METHYLNAPHTHALENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| ACENAPHTHENE | 0.0167 | U | | 0.0167 | U | | 0.055 | J | R |
| ACENAPHTHYLENE | 0.0167 | U | | 0.0167 | U | | 0.022 | J | PR |
| ANTHRACENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)ANTHRACENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| INDENO(1,2,3-CD)PYRENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PHENANTHRENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| PYRENE | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01-1010
Sample Date/Time: 11/05/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 14:11

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 14:11 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 14:11 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 14:11 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 14:11 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 14:11 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 14:11 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 14:11 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01-1010
Sample Date/Time: 11/05/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 14:11

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 14:11 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 14:11 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 14:11 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01-1010
Sample Date/Time: 11/05/10 11:40
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 14:11

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 14:11 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:11 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100 % | 70-120 | 1 | 11/13/10 14:11 |
| 4-Bromofluorobenzene | 460-00-4 | 95 % | 75-120 | 1 | 11/13/10 14:11 |
| Dibromofluoromethane | 1868-53-7 | 101 % | 85-115 | 1 | 11/13/10 14:11 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/13/10 14:11 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/05/10 10:35
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 14:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 14:38 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 14:38 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 14:38 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 14:38 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 14:38 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 14:38 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 14:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/05/10 10:35
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 14:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 14:38 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 14:38 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 14:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/05/10 10:35
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 14:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 14:38 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 14:38 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101 % | 70-120 | 1 | 11/13/10 14:38 |
| 4-Bromofluorobenzene | 460-00-4 | 94 % | 75-120 | 1 | 11/13/10 14:38 |
| Dibromofluoromethane | 1868-53-7 | 101 % | 85-115 | 1 | 11/13/10 14:38 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/13/10 14:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-04-1010
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:05

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 15:05 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 15:05 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 15:05 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 15:05 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 15:05 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 15:05 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 15:05 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-04-1010
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:05

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 15:05 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 15:05 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 15:05 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-04-1010
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:05

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 15:05 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:05 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101 % | 70-120 | 1 | 11/13/10 15:05 |
| 4-Bromofluorobenzene | 460-00-4 | 94 % | 75-120 | 1 | 11/13/10 15:05 |
| Dibromofluoromethane | 1868-53-7 | 102 % | 85-115 | 1 | 11/13/10 15:05 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-120 | 1 | 11/13/10 15:05 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-05
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/13/10 15:32 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/13/10 15:32 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/13/10 15:32 |
| Acetone | 67-64-1 | 14.2 | | 0.800 | 5.00 | 1 | ug/L | 11/13/10 15:32 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/13/10 15:32 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 15:32 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/13/10 15:32 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-05
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/13/10 15:32 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/13/10 15:32 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/13/10 15:32 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-05
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011022-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:32

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/13/10 15:32 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/13/10 15:32 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 104 % | 70-120 | 1 | 11/13/10 15:32 |
| 4-Bromofluorobenzene | 460-00-4 | 96 % | 75-120 | 1 | 11/13/10 15:32 |
| Dibromofluoromethane | 1868-53-7 | 103 % | 85-115 | 1 | 11/13/10 15:32 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-120 | 1 | 11/13/10 15:32 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: G01-MW-01-1010

Sample Date/Time: 11/05/10 11:40

File ID: B02890367.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011022-01

Percent solids: N/A

Preparation Method: EPA 5030B

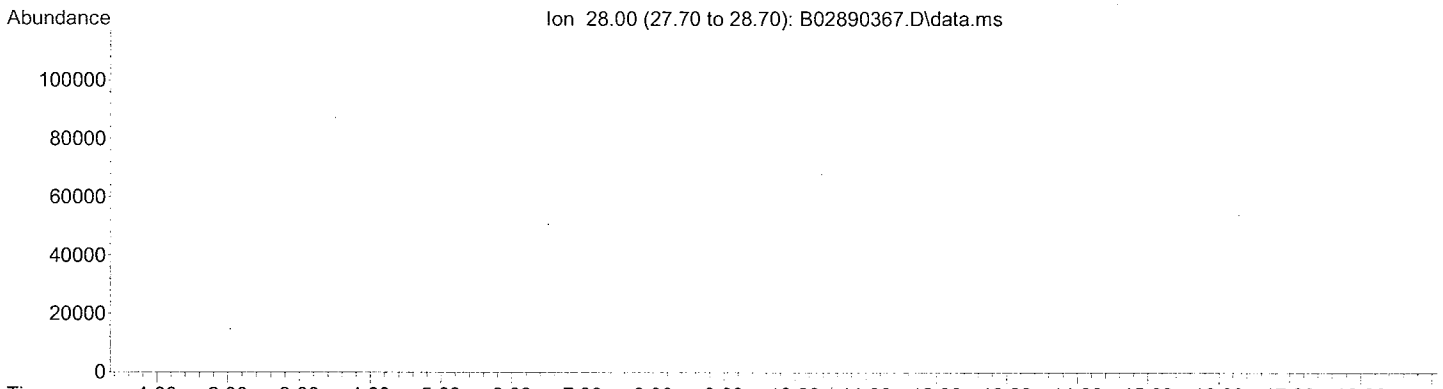
Prepared Date/Time: 11/13/10 14:11

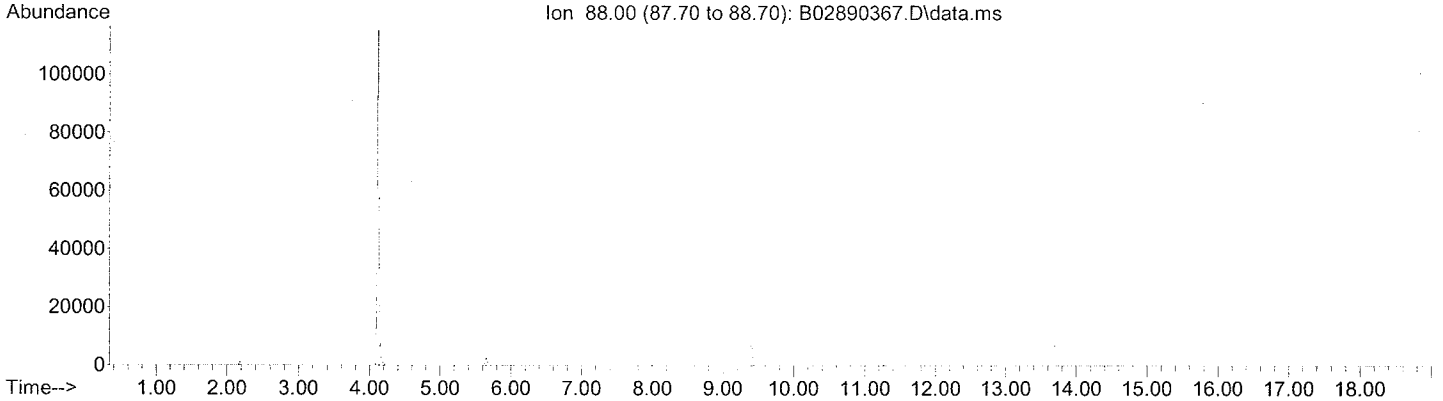
Analyzed Date/Time: 11/13/10 14:11

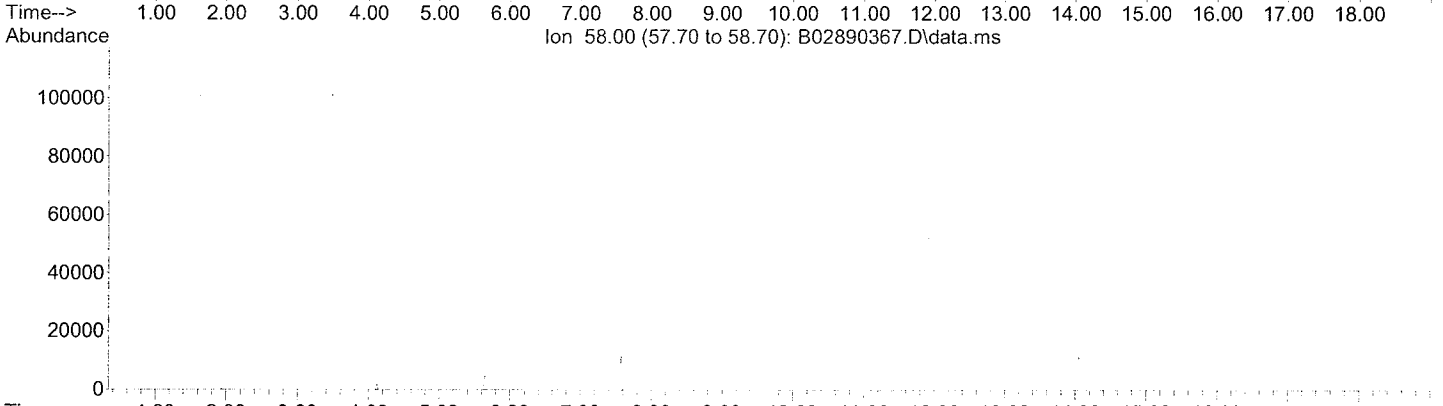
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

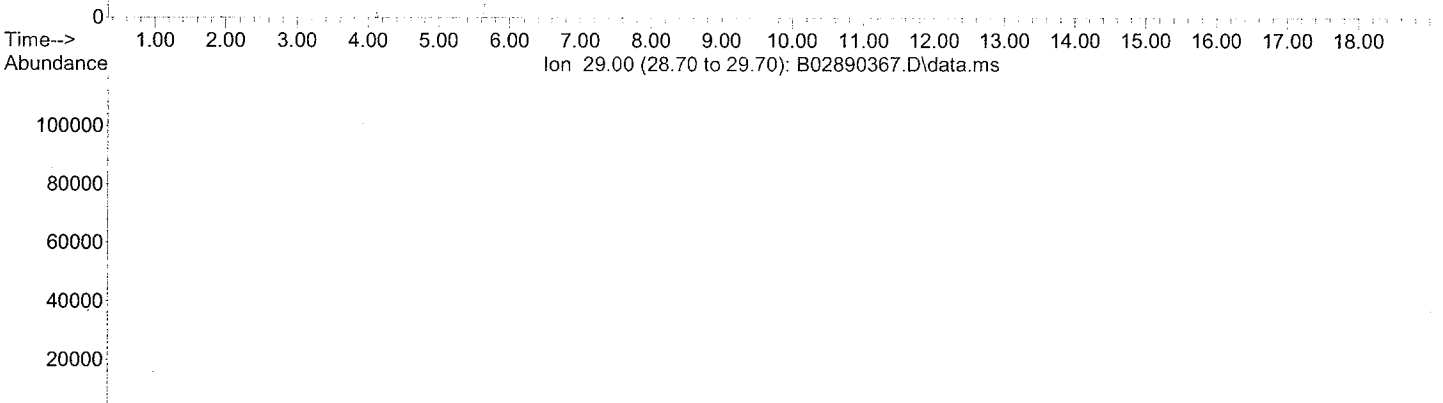
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890367.D
Operator : MP
Acquired : 13 Nov 2010 2:11 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011022-01
Misc Info : TETRA TECH, WATER
Vial Number: 10



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: G01-MW-02-1010

Sample Date/Time: 11/05/10 10:35

File ID: B02890368.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011022-02

Percent solids: N/A

Preparation Method: EPA 5030B

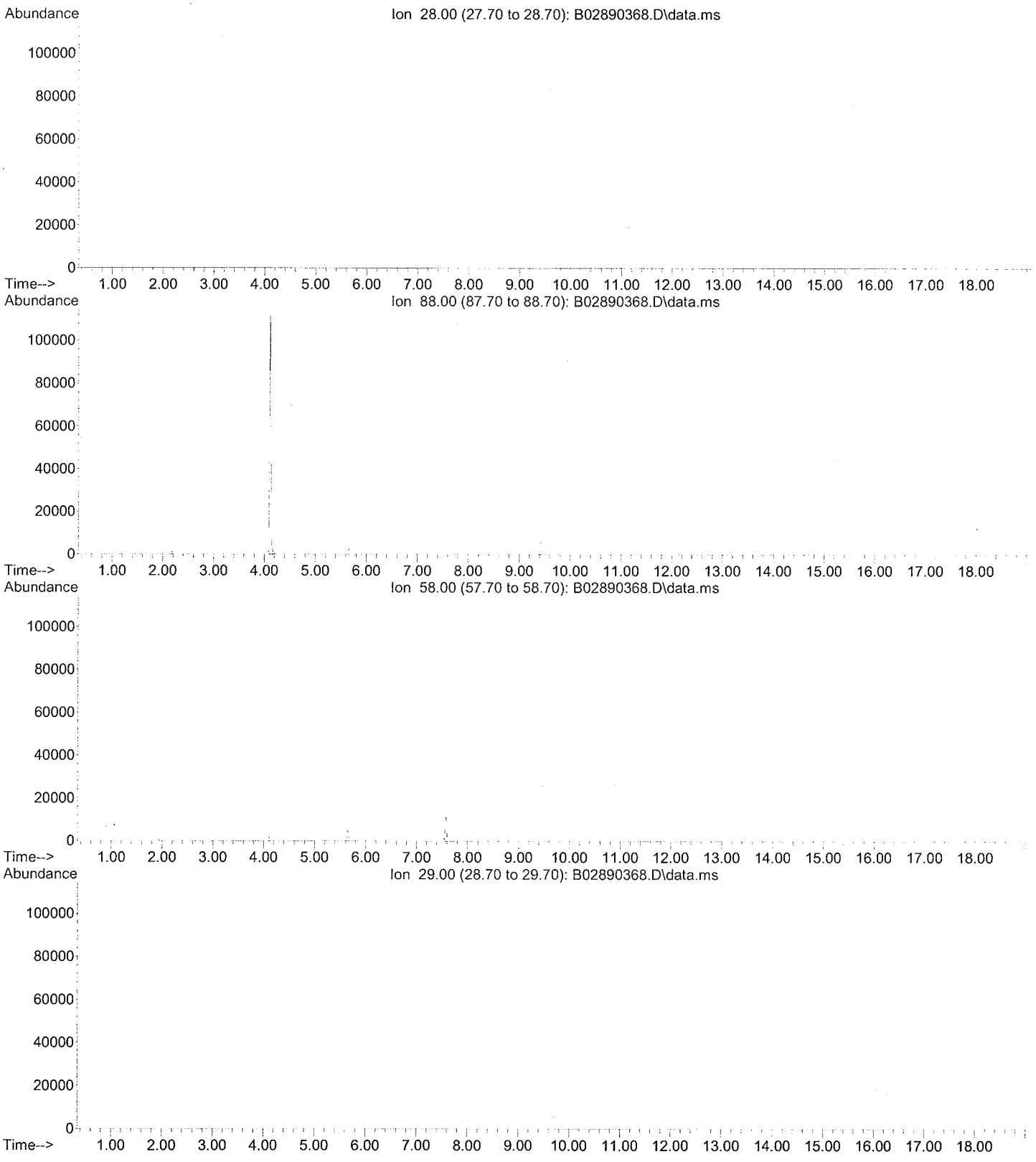
Prepared Date/Time: 11/13/10 14:38

Analyzed Date/Time: 11/13/10 14:38

| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890368.D
Operator : MP
Acquired : 13 Nov 2010 2:38 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011022-02
Misc Info : TETRA TECH, WATER
Vial Number: 11



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: G01-MW-04-1010

Sample Date/Time: 11/05/10 09:28

File ID: B02890369.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011022-03

Percent solids: N/A

Preparation Method: EPA 5030B

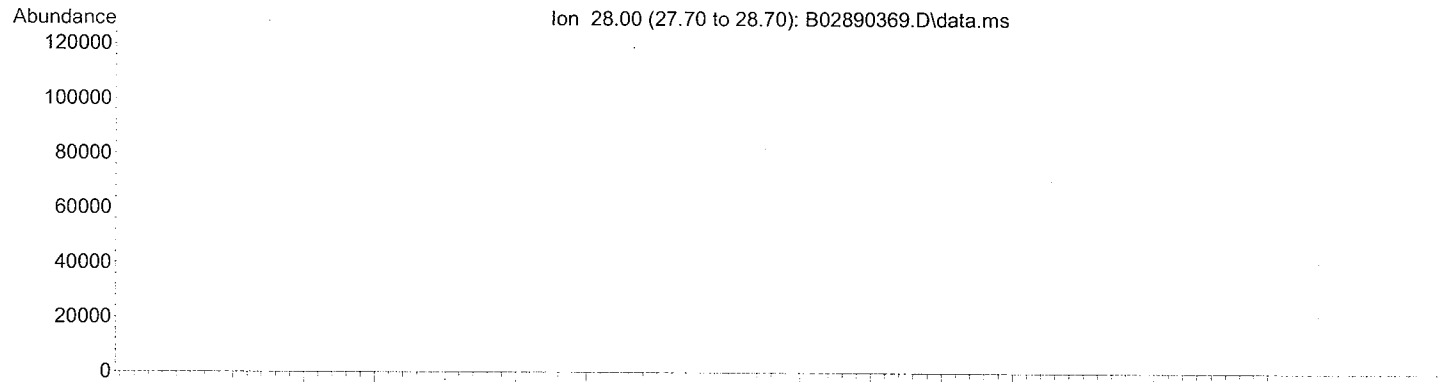
Prepared Date/Time: 11/13/10 15:05

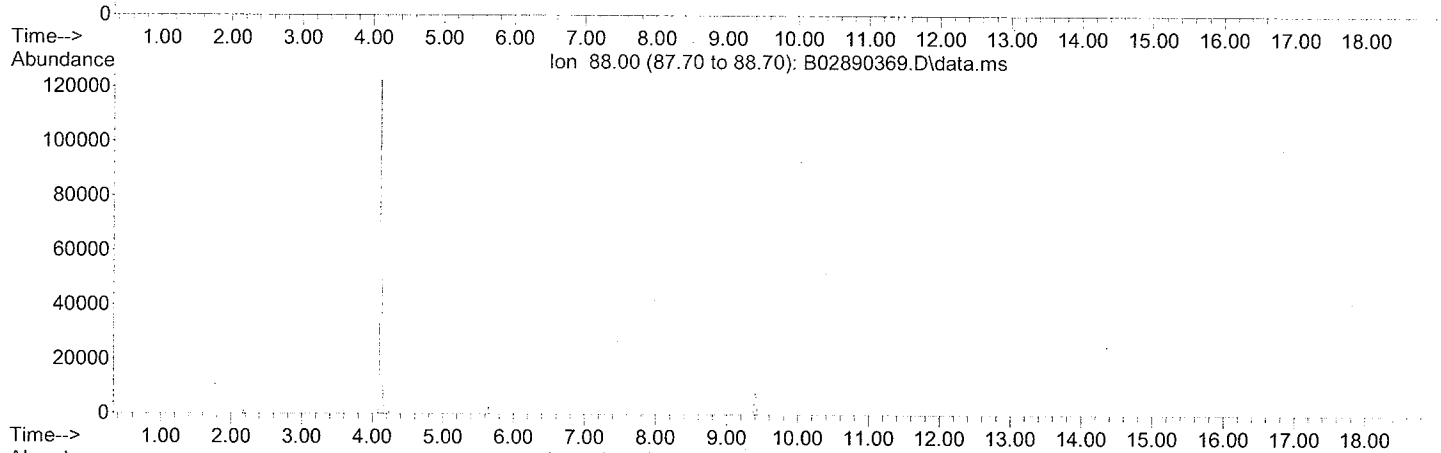
Analyzed Date/Time: 11/13/10 15:05

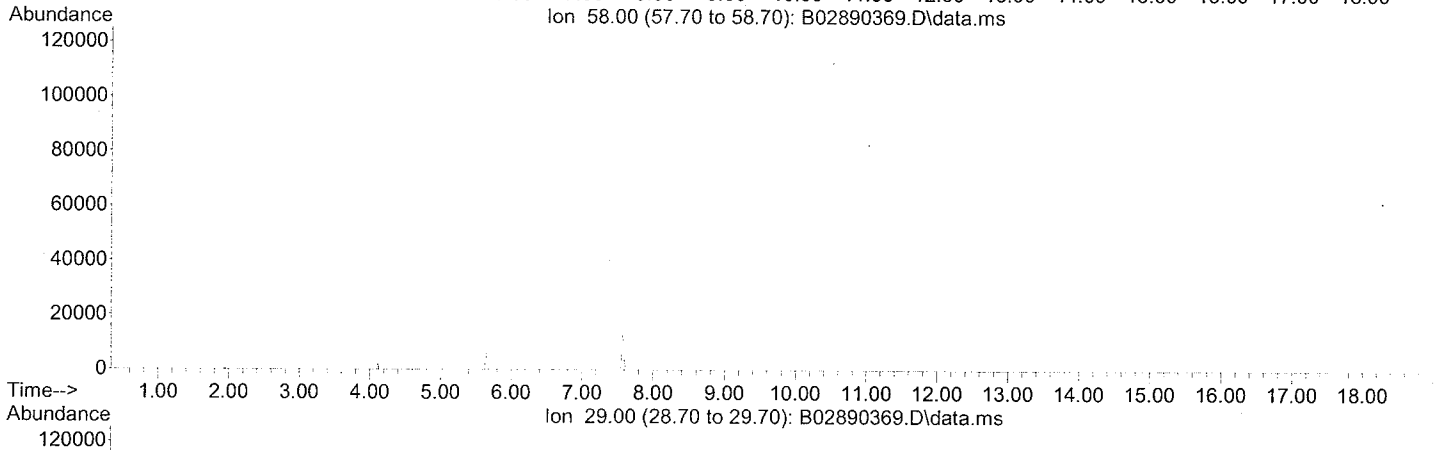
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

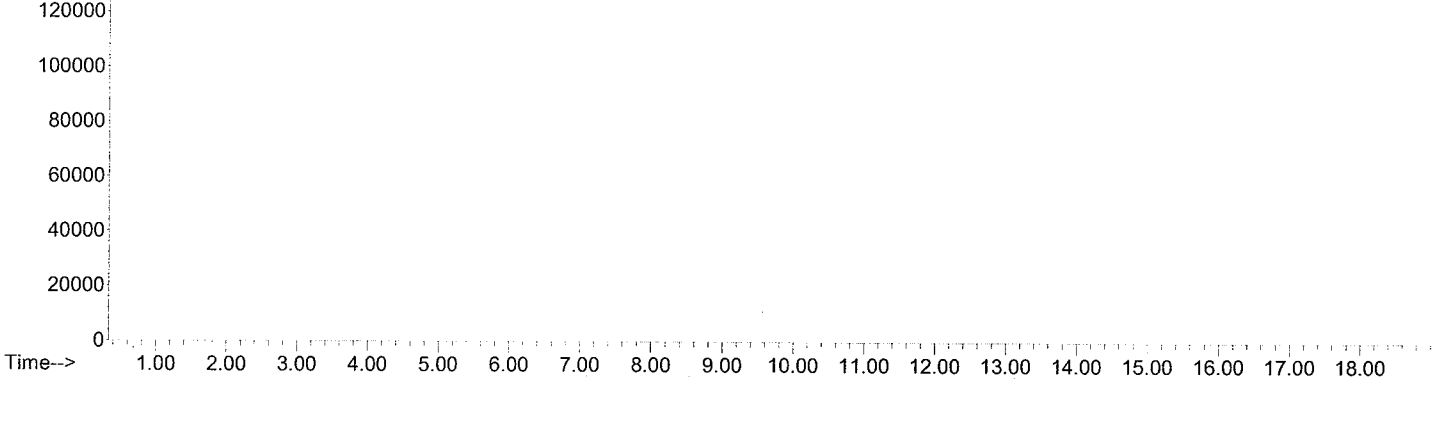
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890369.D
Operator : MP
Acquired : 13 Nov 2010 3:05 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011022-03
Misc Info : TETRA TECH, WATER
Vial Number: 12



CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: GKHMS-TB-05

Sample Date/Time: 11/05/10 09:28

File ID: B02890370.D

Analytical Method: SW8260B

Sample Matrix: Water

Sample ID: 1011022-04

Percent solids: N/A

Preparation Method: EPA 5030B

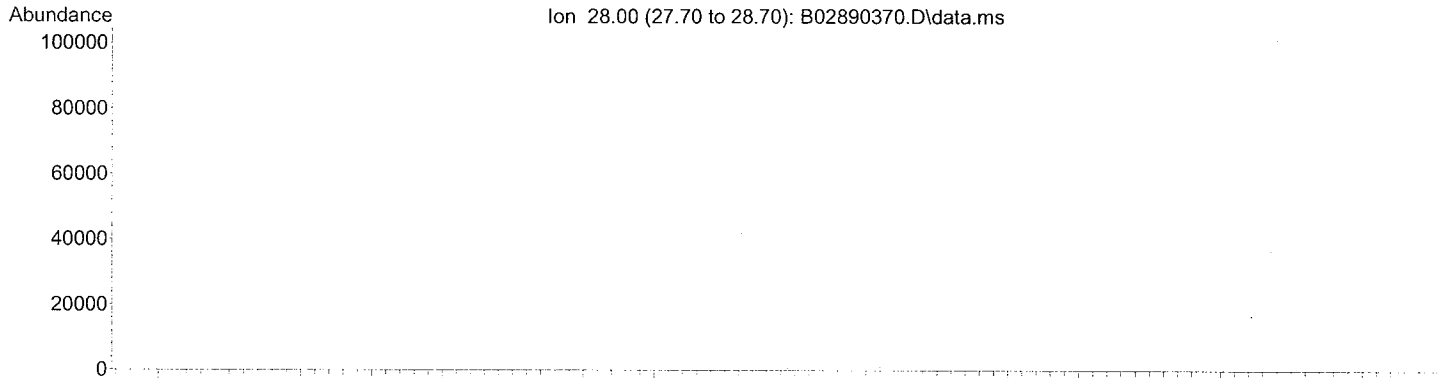
Prepared Date/Time: 11/13/10 15:32

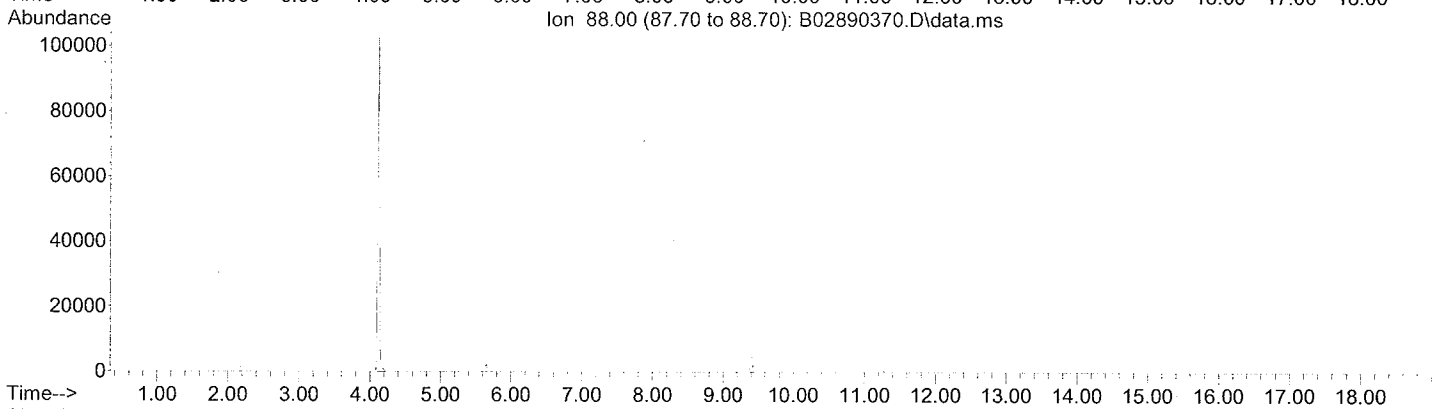
Analyzed Date/Time: 11/13/10 15:32

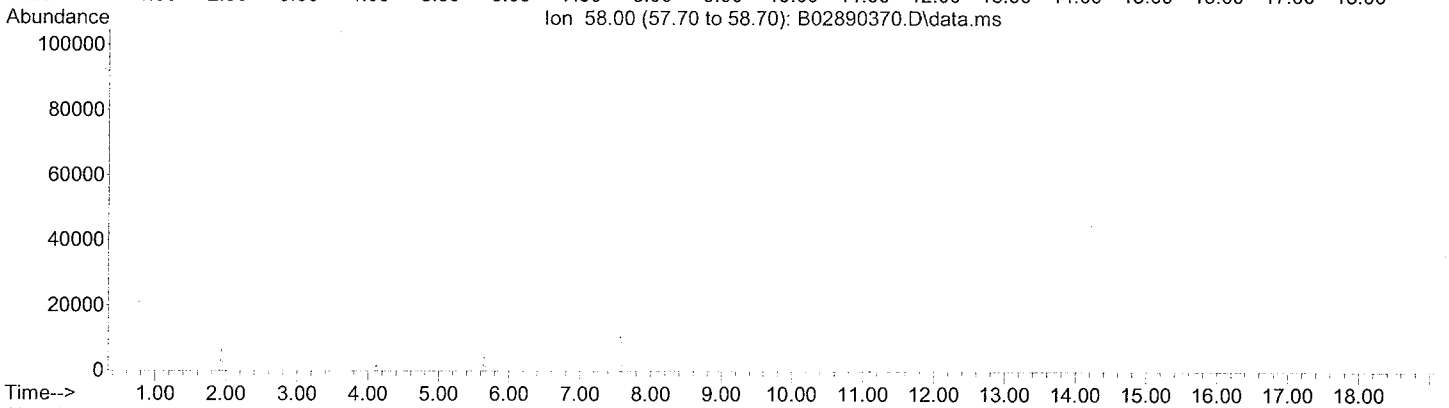
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1,4-Dioxane | 123-91-1 | BQL | U | 50 | 1 | ug/L |

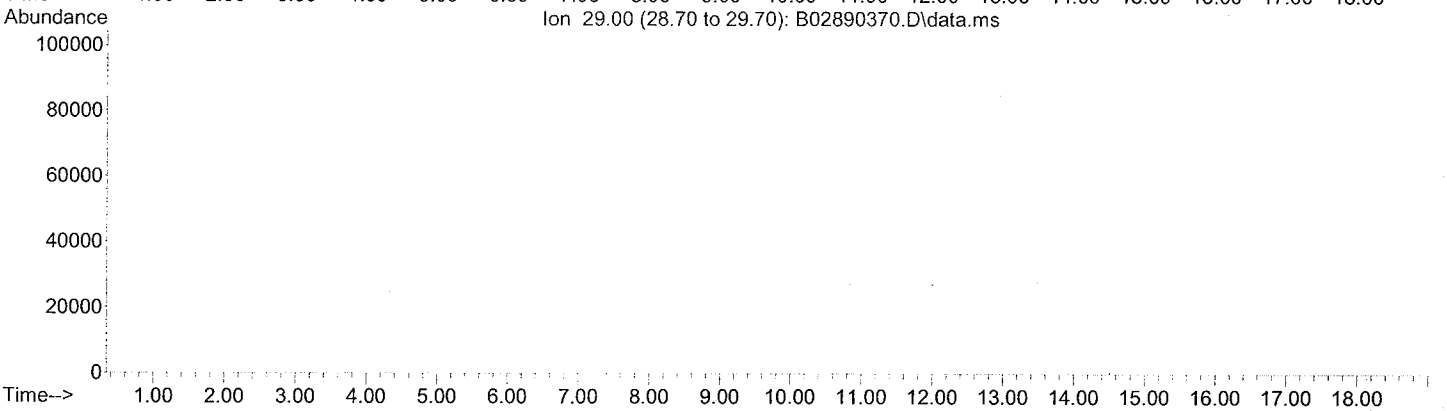
The analysis was performed by Centauri Labs.

File :H:\VOL1\GCMSDATA\B\Sequence\111310\B02890370.D
Operator : MP
Acquired : 13 Nov 2010 3:32 pm using AcqMethod 8260LL.M
Instrument : GCMS-B
Sample Name: 1011022-04
Misc Info : TETRA TECH, WATER
Vial Number: 13



CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01-1010
Sample Date/Time: 11/05/10 11:40
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011022-01
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 14:45 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 94 % | 50-110 | 1 | 11/18/10 14:45 |
| Nitrobenzene-d5 | 4165-60-0 | 110 % | 40-110 | 1 | 11/18/10 14:45 |
| Terphenyl-d14 | 1718-51-0 | 103 % | 50-135 | 1 | 11/18/10 14:45 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/05/10 10:35
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011022-02
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:10 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 142 % | 50-110 | 1 | 11/18/10 15:10 |
| Nitrobenzene-d5 | 4165-60-0 | 151 % | 40-110 | 1 | 11/18/10 15:10 |
| Terphenyl-d14 | 1718-51-0 | 181 % | 50-135 | 1 | 11/18/10 15:10 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-04-1010
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011022-03
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Acenaphthene | 83-32-9 | 55.0 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Acenaphthylene | 208-96-8 | 22.0 | J | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:34 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 130 % | 50-110 | 1 | 11/18/10 15:34 |
| Nitrobenzene-d5 | 4165-60-0 | 145 % | 40-110 | 1 | 11/18/10 15:34 |
| Terphenyl-d14 | 1718-51-0 | 141 % | 50-135 | 1 | 11/18/10 15:34 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: G01-MW-01-1010

Sample Date/Time: 11/5/10 11:40

File ID: D46336.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011022-01

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 09:30

Analyzed Date/Time: 11/18/10 14:45

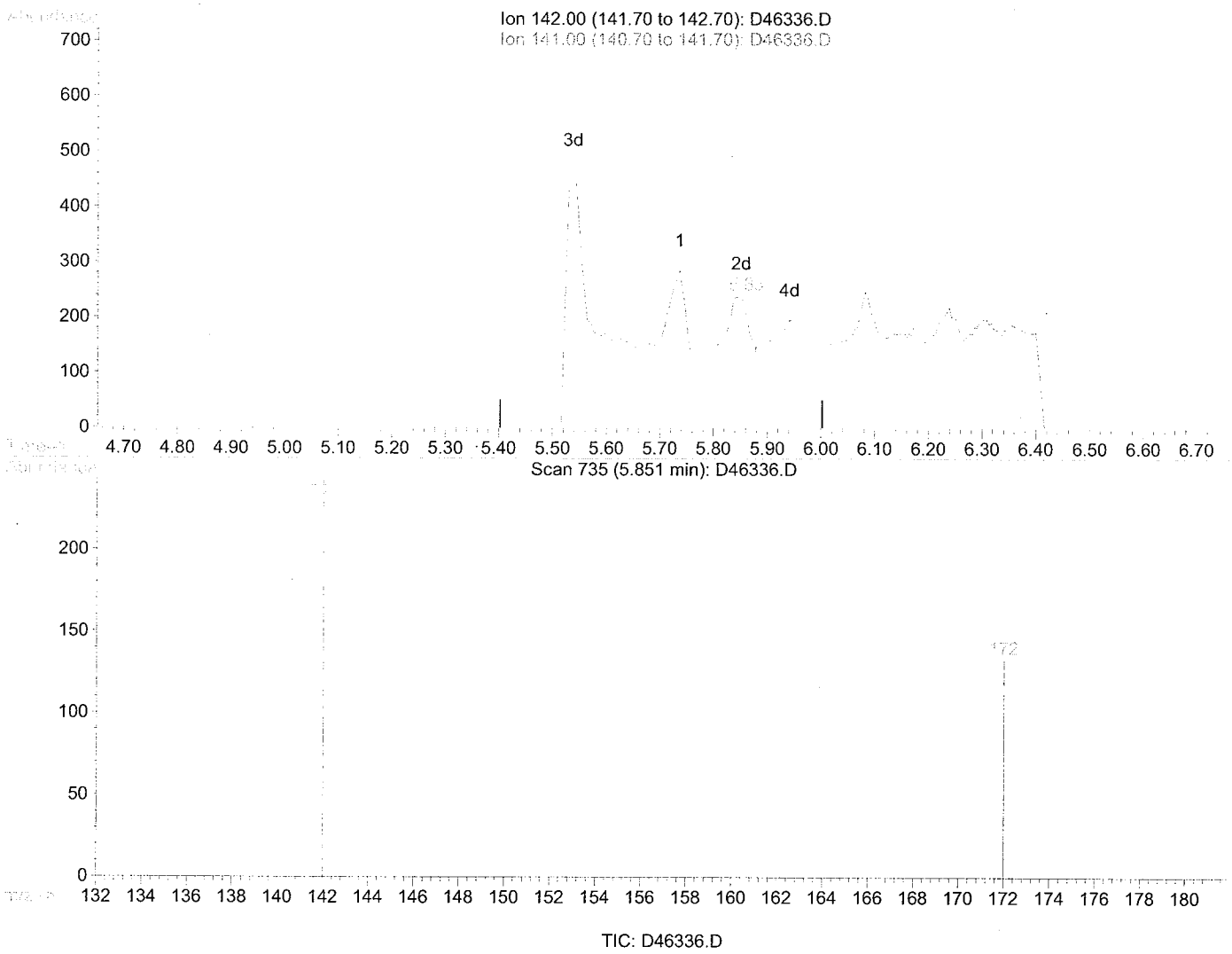
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111810\D46336.D Vial: 10
Acq On : 18 Nov 2010 14:45 Operator: JI
Sample : 1011022-01 Inst : GCMS-D
Misc : TETRA TECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:02 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46336.D

(5) 2-Methylnaphthalene (T)

5.85min 3.12ug/L m

response 229

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: G01-MW-02-1010

Sample Date/Time: 11/5/10 10:35

File ID: D46337.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011022-02

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 09:30

Analyzed Date/Time: 11/18/10 15:10

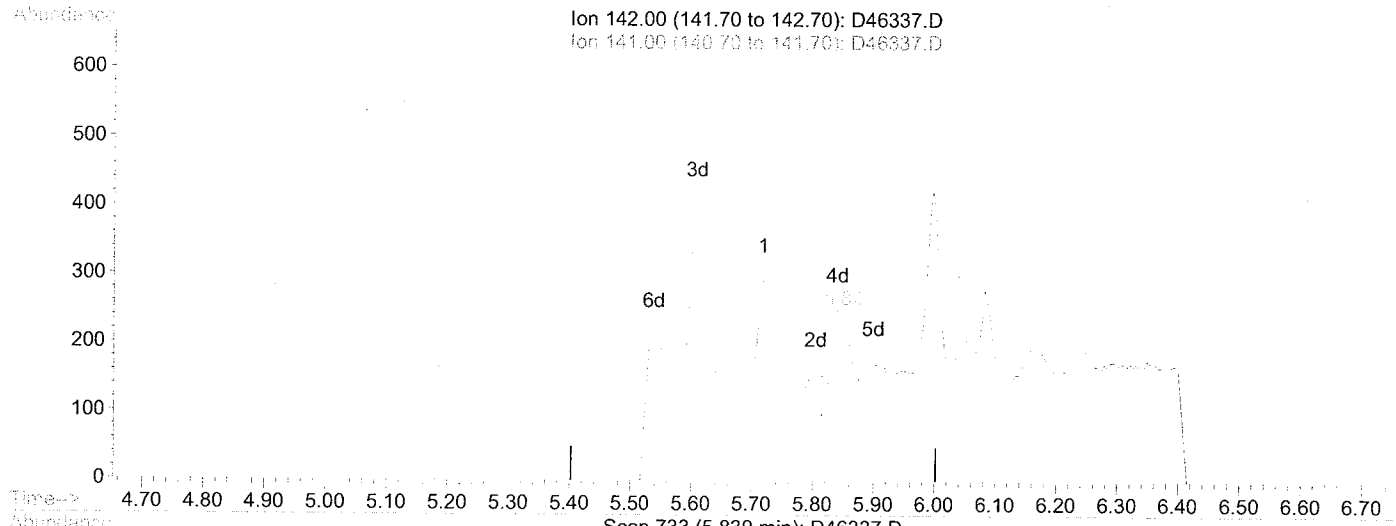
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111810\D46337.D Vial: 11
Acq On : 18 Nov 2010 15:10 Operator: JI
Sample : 1011022-02 Inst : GCMS-D
Misc : TETRA TECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:02 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46337.D

(5) 2-Methylnaphthalene (T)

5.84min 2.57ug/L m

response 197

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

CHEMTECH

# TIC Report

Client Name: Tetra Tech NUS, Inc

Client Sample ID: G01-MW-04-1010

Sample Date/Time: 11/5/10 09:28

File ID: D46338.D

Analytical Method: SW8270C SIM

Sample Matrix: Water

Sample ID: 1011022-03

Percent solids: N/A

Preparation Method: SW 3520C

Prepared Date/Time: 11/12/10 09:30

Analyzed Date/Time: 11/18/10 15:34

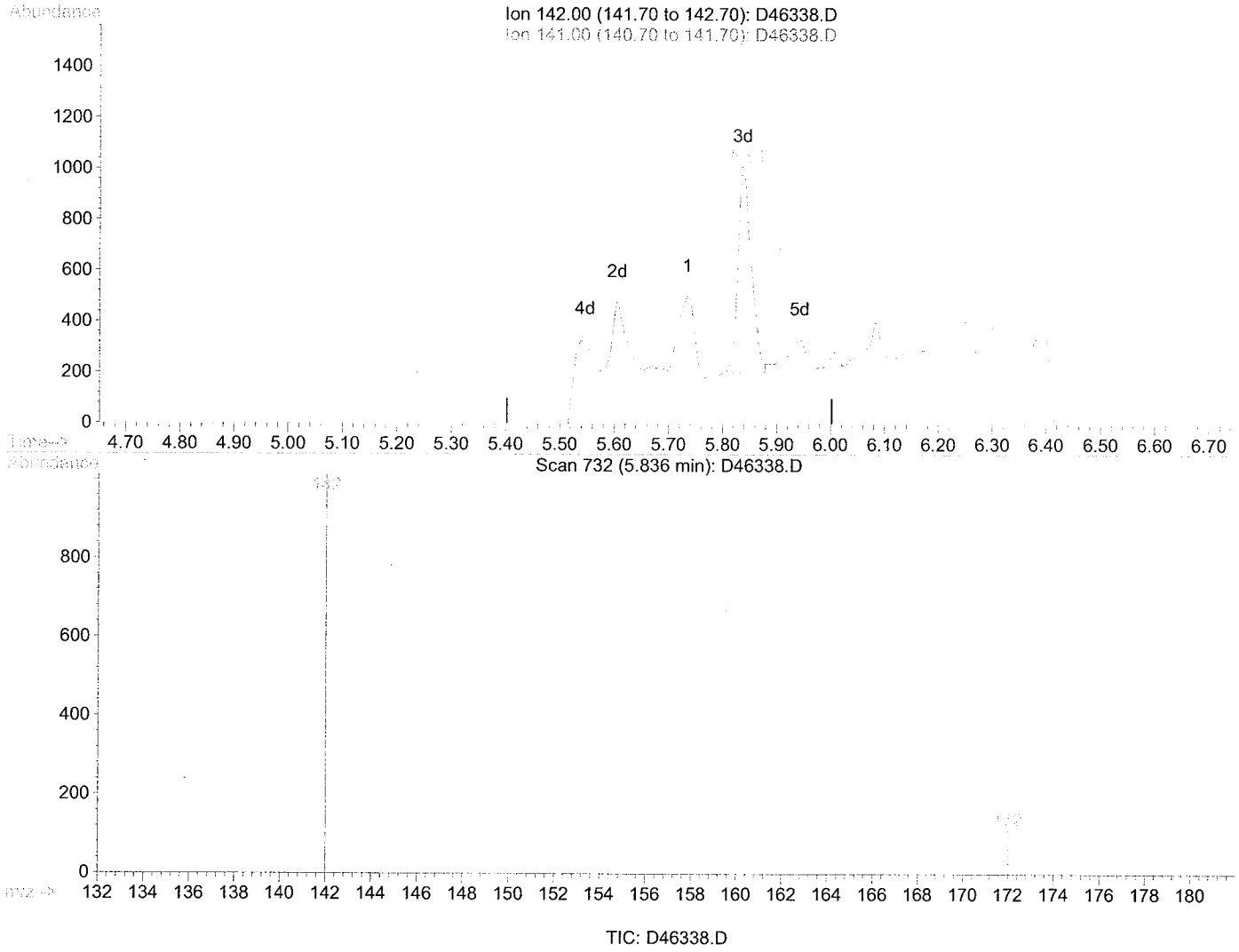
| Parameter | CAS | Reported Result | Q | Reporting Limit | Dil Fact | Units |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 90-12-0 | BQL | U | 50 | 1 | ng/L |

The analysis was performed by Centauri Labs.

Quantitation Report

Data File : H:\VOL1\GCMSDATA\D\111810\D46338.D Vial: 12
Acq On : 18 Nov 2010 15:34 Operator: JI
Sample : 1011022-03 Inst : GCMS-D
Misc : TETRA TECH, WATER HP#P JI Multiplr: 1.00
Quant Time: Feb 3 11:03 2011 Quant Results File: temp.res

Method : C:\HPCHEM\2\METHODS\110310D.M (RTE Integrator)
Title : SIM PAH calibration
Last Update : Wed Nov 24 13:50:48 2010
Response via : Single Level Calibration




TIC: D46338.D

(5) 2-Methylnaphthalene (T)

5.84min 16.91ug/L m

response 1379

| Ion | Exp% | Act% |
|---|---|---|
| 142.00 | 100 | 100 |
| 141.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

# APPENDIX C

## SUPPORT DOCUMENTATION

CHEMTECH

ADDENDUM PACKAGE CASE NARRATIVE
Tetra Tech – Key West NAS SDG 1011022

The data presented herein was not analyzed by CHEMTECH. We are forwarding the data that was analyzed by Centauri Labs, LLC. They are responsible for the data in its entirety.

Volatiles

1,4-Dioxane was not included in the calibration curve under which these samples were analyzed. All sample data files were scanned for the presence of 1,4-Dioxane's major ions (28, 88, 58 and 29). 1,4-Dioxane was not detected in any of the samples in this SDG. The ion scans are included in this addendum package.
Several compounds had their average response factor updated for the calibration curve after the quant reports had been printed. None of the affected compounds were detected above the MDL in the any samples in this SDG. A corrected Form 7 is provided.

Semivolatile PAHs

1-Methylnaphthalene was not included in the calibration curve under which these samples were analyzed. Because the retention time and ions for 1-methylnaphthalene are known, and the response factor is very similar to 2-methylnaphthalene, peaks seen in the 1-methylnaphthalene RT area were quanted using the 2-methylnaphthalene response from the current calibration curve. Concentrations of 1-methylnaphthalene are reported as estimated (J flagged) values.

Mercury

Results for Mercury were included in the original data summary package. The QC forms and raw data for these samples is included in this addendum package.

Virginia Zusman, Laboratory Director
Chemtech

2/4/2011

## SAMPLE RECIEPT

Four water samples were received on 11/06/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/02/2010.

## VOLATILES

Four water samples were analyzed for volatile organic compounds by the SW846 method 8260B.
The samples were analyzed within the holding time.

All surrogate recoveries and internal standard responses were within the QC limits.

Duplicate laboratory control samples were analyzed along with the batch.

Recovery of one compound in the LCS was above the QC limits.
Acetone was detected in sample GKHMS-TB-05. Although the recovery for acetone was above QC limits for the LCS and RPD, the response in the CCV and recovery in the LCSD were within QC limits.

The recoveries of four analytes were below QC limits in the LCS and two analytes in the LCSD. Because those compounds were not detected above the method detection limit in the samples, the data is not affected. The % RPD for one compound was above the QC limits for the pair.

The response for two compounds was above the QC limits in the daily CCV and five was below QC limits. None of the affected compounds were detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

## SW8270LL-PAH SIM

Three water samples were extracted by method 3520C. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
Samples G01-MW-02-1010, and G01-MW-04-1010 had three surrogate recoveries above the QC limits. Sample B048006-MS1 had one surrogate recovery above the QC limits. All other surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were shared with work order 1011026. Three spike recoveries and one %RPD were outside the QC limits.
A laboratory control sample was extracted and analyzed with this batch. All spike recoveries were within the QC limits.

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-12

| | | | | |
|---|---|---|---|---|
| Project No:<br>**112G02607** | Facility:<br>**KEY WEST NAS** | Project Manager:<br>**Shauna Stotler-Hardy** | Carrier:<br>**Federal Express** | Laboratory Name:<br>**Centauri Labs**<br>**7210 Corporate Court**<br>**Fredrick, MD 21703** |
| Task No:<br>**JM16** | Turn Around Time:<br>**Standard** | Field Ops Leader:<br>**Gary Braganza** | Carrier/Waybill No. | Point of Contact:<br>**Chino Ortiz**<br>**301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8260B** | G01-MW-01 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8720D/8270DSIM** | G01-MW-01 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8082A** | G01-MW-01 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8081B** | G01-MW-01 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 6020A** | G01-MW-01 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8260B** | G01-MW-02 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8720D/8270DSIM** | G01-MW-02 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8082A** | G01-MW-02 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8081B** | G01-MW-02 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 6020A** | G01-MW-02 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8260B** | G01-MW-04 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8720D/8270DSIM** | G01-MW-04 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8082A** | G01-MW-04 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8081B** | G01-MW-04 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 6020A** | G01-MW-04 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | GKHMS-TB-05 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

101022

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By:<br>**Gary Braganza** | Date:<br>11/05/2010 | Time:<br>13:26 | Received By:<br>**Federal Express** | Date:<br>11/05/2010 | Time:<br>15:26 |
| 2. Relinquished By: | Date: | Time: | Received By:<br>D Dell | Date:<br>11/6/10 | Time:<br>10:30 |

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1011022 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 11/8/2010 10:13:00AM |
| Date Received: | 11/6/2010 3:26:00PM | Logged In By: | Chino Ortiz |
| Received By: | Murli Purohit | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

| | |
|---|---|
| Shipping Container in good condition? | Y |
| Custody seals present on shipping container? | Y |
| Condition: *Intact-signed and dated* | |
| Chain-of-Custody present? | Y |
| COC agrees with sample labels? | Y |
| COC signed? | Y |
| Packing present in shipping container? | Y |
| Custody seals present on sample bottles? | N |
| Condition: *Intact* | |
| Samples intact? | Y |
| Sufficient volume for requested tests? | Y |
| Preservation confirmed? | Y |
| Are there Volatiles samples present? | N |
| Has Zero Headspace? | N/A |
| Total number of bottles: | |
| Total number of samples: | 4 |

Comments:

HOLD TIMES

**SDG** 1011022

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | G01-MW-04-1010 | 1011022-03 | NM | 11/05/2010 | 11/17/2010 | 11/17/2010 | 12 | 0 | 12 |
| HG | UG/L | G01-MW-02-1010 | 1011022-02 | NM | 11/05/2010 | 11/17/2010 | 11/17/2010 | 12 | 0 | 12 |
| HG | UG/L | G01-MW-01-1010 | 1011022-01 | NM | 11/05/2010 | 11/17/2010 | 11/17/2010 | 12 | 0 | 12 |
| OV | UG/L | GKHMS-TB-05 | 1011022-04 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| OV | UG/L | G01-MW-04-1010 | 1011022-03 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| OV | UG/L | G01-MW-02-1010 | 1011022-02 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| OV | UG/L | G01-MW-01-1010 | 1011022-01 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| SIM | NG/L | G01-MW-04-1010 | 1011022-03 | NM | 11/05/2010 | 11/12/2010 | 11/18/2010 | 7 | 6 | 13 |
| SIM | NG/L | G01-MW-02-1010 | 1011022-02 | NM | 11/05/2010 | 11/12/2010 | 11/18/2010 | 7 | 6 | 13 |
| SIM | NG/L | G01-MW-01-1010 | 1011022-01 | NM | 11/05/2010 | 11/12/2010 | 11/18/2010 | 7 | 6 | 13 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890285.D | Injection Date: | 11/11/10 |
| Instrument ID: | GCMS-B | Injection Time: | 08:22 |
| Sequence: | S047034 | Lab Sample ID: | S047034-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.3 | PASS |
| 75 | 30 - 60% of 95 | 45.5 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.8 | PASS |
| 175 | 5 - 9% of 174 | 7.16 | PASS |
| 176 | 95 - 101% of 174 | 97.5 | PASS |
| 177 | 5 - 9% of 176 | 6.47 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047034-CAL5 | B02890286.D | 11/11/2010 | 9:37:00 |
| Cal Standard | S047034-CAL3 | B02890287.D | 11/11/2010 | 10:06:00 |
| Cal Standard | S047034-CAL2 | B02890288.D | 11/11/2010 | 10:33:00 |
| Cal Standard | S047034-CAL1 | B02890289.D | 11/11/2010 | 11:00:00 |
| Cal Standard | S047034-CAL4 | B02890290.D | 11/11/2010 | 11:27:00 |
| Cal Standard | S047034-CAL6 | B02890291.D | 11/11/2010 | 11:54:00 |
| Cal Standard | S047034-CAL7 | B02890292.D | 11/11/2010 | 12:20:00 |
| Cal Standard | S047034-CAL8 | B02890293.D | 11/11/2010 | 12:47:00 |
| Secondary Cal Check | S047034-SCV1 | B02890299.D | 11/11/2010 | 16:39:00 |

# INITIAL CALIBRATION STANDARDS

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047034 | Instrument: | GCMS-B |
| Calibration: | 0111803 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001918 | VOA Tune (GC/MS-B) | S047034-TUN1 | B02890285.D | 11/11/10 08:22 |
| 0002258 | VOA ICAL 10.0 PPB ELEMENT | S047034-CAL5 | B02890286.D | 11/11/10 09:37 |
| 0002256 | VOA ICAL 2.0 PPB ELEMENT | S047034-CAL3 | B02890287.D | 11/11/10 10:06 |
| 0002255 | VOA ICAL 1.0 PPB ELEMENT | S047034-CAL2 | B02890288.D | 11/11/10 10:33 |
| 0002254 | VOA ICAL 0.5 PPB ELEMENT | S047034-CAL1 | B02890289.D | 11/11/10 11:00 |
| 0002257 | VOA ICAL 5.0 PPB ELEMENT | S047034-CAL4 | B02890290.D | 11/11/10 11:27 |
| 0002259 | VOA ICAL 20.0 PPB ELEMENT | S047034-CAL6 | B02890291.D | 11/11/10 11:54 |
| 0002260 | VOA ICAL 40.0 PPB ELEMENT | S047034-CAL7 | B02890292.D | 11/11/10 12:20 |
| 0002261 | VOA ICAL 50.0 PPB ELEMENT | S047034-CAL8 | B02890293.D | 11/11/10 12:47 |
| 0002266 | VOA MIX SECOND SOURCE ELEMENT | S047034-SCV1 | B02890299.D | 11/11/10 16:39 |

Response Factor Report GCMS-B

Raw data provided in the addendum.

Method Path : H:\VOL1\GCMSDATA\B\METHODS\
Method File : 8260_111110.M
Title :
Last Update : Wed Nov 17 19:08:22 2010
Response Via : Initial Calibration

Calibration Files
0.5 =B02890289.D 1.0 =B02890288.D 2.0 =B02890287.D 5.0 =B02890290.D 10 =B02890286.D 20 =B
50 =B02890293.D

| | | Compound | 0.5 | 1.0 | 2.0 | 5.0 | 10 | 20 | 40 | 50 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ---------- | ISTD | ---------- | | | | | | | |
| 2) | T | Dichlorodifluo... | 0.360 | 0.326 | 0.320 | 0.444 | 0.392 | 0.355 | 0.356 | 0.376 | 0.366 | 10.70 |
| 3) | T | Chloromethane | 0.289 | 0.255 | 0.222 | 0.281 | 0.167 | 0.242 | 0.256 | | 0.245 | 16.79 |
| 4) | T | Vinyl chloride | 0.291 | 0.281 | 0.284 | 0.410 | 0.299 | 0.385 | 0.363 | 0.393 | 0.338 | 16.18 |
| 5) | T | Bromomethane | 0.039 | 0.035 | 0.031 | 0.021 | 0.016 | 0.017 | 0.018 | 0.021 | 0.025 | 35.98 |
| 6) | T | Chloroethane | 0.824 | 0.511 | 0.375 | 0.323 | 0.275 | | | | 0.461 | 47.87 |
| 7) | T | Trichlorofluor... | 0.662 | 0.599 | 0.600 | 0.788 | 0.675 | 0.649 | 0.623 | 0.574 | 0.646 | 10.35 |
| 8) | T | Freon 113 | 0.447 | 0.406 | 0.410 | 0.443 | 0.446 | 0.384 | 0.398 | 0.408 | 0.418 | 5.80 |
| 9) | T | 1,1-Dichloroet... | 0.327 | 0.295 | 0.298 | 0.310 | 0.305 | 0.265 | 0.273 | 0.282 | 0.295 | 6.97 |
| 10) | T | Methylene chlo... | | 2.119 | 1.006 | 0.984 | 0.316 | 0.323 | 0.302 | | 0.842 | 84.29 |
| 11) | T | Methyl Acetate | 0.017 | 0.019 | 0.019 | 0.021 | 0.019 | 0.019 | 0.021 | 0.022 | 0.020 | 8.11 |
| 12) | T | Iodomethane | 2.217 | 1.968 | 1.991 | 2.040 | 1.992 | 1.735 | 1.795 | 1.851 | 1.949 | 7.84 |
| 13) | T | Trans-1,2-dich... | 0.516 | 0.473 | 0.482 | 0.496 | 0.479 | 0.431 | 0.451 | 0.459 | 0.473 | 5.61 |
| 14) | T | 1,1-Dichloroet... | 0.650 | 0.588 | 0.588 | 0.596 | 0.588 | 0.535 | 0.574 | 0.591 | 0.589 | 5.34 |
| 15) | T | Acetone | 0.083 | 0.047 | 0.033 | 0.033 | 0.025 | 0.023 | 0.020 | 0.019 | 0.035 | 60.73 |
| 16) | T | MTBE | 0.409 | 0.363 | 0.336 | 0.368 | 0.355 | 0.320 | 0.337 | 0.349 | 0.355 | 7.57 |
| 17) | T | Acrylonitrile | 0.024 | 0.022 | 0.022 | 0.028 | 0.023 | 0.024 | 0.026 | 0.027 | 0.025 | 8.72 |
| 18) | T | Acetonitrile | | | 0.010 | 0.012 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 13.39 |
| 19) | T | Carbon disulfide | 1.109 | 0.984 | 0.995 | 1.020 | 0.996 | 0.868 | 0.897 | 0.926 | 0.974 | 7.84 |
| 20) | T | Vinyl Acetate | 0.147 | 0.141 | 0.137 | 0.153 | 0.136 | 0.146 | 0.161 | 0.168 | 0.149 | 7.68 |
| 21) | T | Propionitrile | | | 0.009 | 0.011 | 0.011 | 0.012 | 0.012 | 0.013 | 0.011 | 12.54 |
| 22) | | 2,2-Dichloropr... | 0.305 | 0.294 | 0.279 | 0.318 | 0.321 | 0.288 | 0.306 | 0.325 | 0.305 | 5.40 |
| 23) | T | cis-1,2-Dichlo... | 0.417 | 0.382 | 0.385 | 0.393 | 0.397 | 0.347 | 0.355 | 0.363 | 0.380 | 6.23 |
| 24) | T | Bromochloromet... | 0.139 | 0.117 | 0.113 | 0.121 | 0.113 | 0.109 | 0.115 | 0.115 | 0.118 | 7.75 |
| 25) | T | Chloroform | 0.635 | 0.567 | 0.558 | 0.561 | 0.565 | 0.516 | 0.556 | 0.574 | 0.567 | 5.80 |
| 26) | T | 1,1,1-Trichlor... | 0.572 | 0.526 | 0.545 | 0.585 | 0.584 | 0.539 | 0.580 | 0.597 | 0.566 | 4.56 |
| 27) | T | Cychlohexane | 0.800 | 0.723 | 0.740 | 0.816 | 0.829 | 0.723 | 0.730 | 0.741 | 0.763 | 5.84 |
| 28) | S | Dibromofluorom... | 0.296 | 0.306 | 0.296 | 0.313 | 0.315 | 0.319 | 0.322 | 0.333 | 0.312 | 4.11 |
| 29) | T | Carbon tetrach... | 2.138 | 1.278 | 0.880 | 0.687 | 0.581 | 0.514 | 0.533 | 0.546 | 0.895 | 63.12 |
| 30) | T | Methyl Methacr... | 0.405 | 0.368 | 0.374 | 0.417 | 0.411 | 0.363 | 0.368 | 0.375 | 0.385 | 5.73 |
| 31) | T | Methacrylonitrile | 0.037 | 0.038 | 0.037 | 0.042 | 0.042 | 0.040 | 0.042 | 0.043 | 0.040 | 5.96 |
| 32) | T | Ethyl Methacry... | 0.137 | 0.130 | 0.138 | 0.162 | 0.163 | 0.171 | 0.184 | 0.197 | 0.160 | 14.90 |
| 33) | S | 1,2-Dichloroet... | 0.216 | 0.221 | 0.211 | 0.229 | 0.220 | 0.221 | 0.225 | 0.237 | 0.222 | 3.64 |
| 34) | T | Isobutyl Alcohol | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 5.68 |
| 35) | I | 1,4-Difluorobenzene | ---------- | ISTD | ---------- | | | | | | | |
| 36) | T | 2-Butanone | 0.034 | 0.030 | 0.028 | 0.031 | 0.029 | 0.029 | 0.028 | 0.030 | 0.030 | 5.86 |
| 37) | T | 2-Chloroethylv... | | | | 0.002 | 0.006 | 0.004 | 0.006 | 0.007 | 0.005 | 40.09 NOT TC |
| 38) | T | 1.1-Dichloropr... | 0.509 | 0.457 | 0.461 | 0.473 | 0.450 | 0.410 | 0.426 | 0.429 | 0.452 | 6.90 |
| 39) | T | Benzene | 1.354 | 1.229 | 1.237 | 1.249 | 1.192 | 1.086 | 1.097 | 1.092 | 1.192 | 7.99 |
| 40) | T | 1,2-Dchloroethane | 0.257 | 0.218 | 0.204 | 0.203 | 0.187 | 0.181 | 0.188 | 0.192 | 0.204 | 12.08 |
| 41) | T | Trichloroethene | | 0.315 | 0.322 | 0.320 | 0.317 | 0.292 | 0.303 | 0.307 | 0.311 | 3.52 |
| 42) | T | Methylcyclohexane | 0.609 | 0.567 | 0.595 | 0.673 | 0.667 | 0.609 | 0.615 | 0.617 | 0.619 | 5.72 |
| 43) | T | 1,2-Dchloropro... | | | 0.230 | 0.237 | 0.230 | 0.216 | 0.223 | 0.226 | 0.227 | 3.23 |
| 44) | T | Dibromomethane | 0.073 | 0.067 | 0.068 | 0.073 | 0.072 | 0.071 | 0.073 | 0.074 | 0.071 | 3.73 |
| 45) | T | Bromodichlorom... | 0.264 | 0.245 | 0.250 | 0.261 | 0.261 | 0.252 | 0.268 | 0.275 | 0.260 | 3.82 |
| 46) | T | cis-1,3-Dichlo... | 0.215 | 0.216 | 0.233 | 0.261 | 0.280 | 0.270 | 0.297 | 0.309 | 0.260 | 13.76 |
| 47) | S | Toluene-d8 | 1.001 | 0.983 | 1.001 | 1.014 | 1.035 | 1.052 | 1.056 | 1.064 | 1.026 | 2.95 |
| 48) | T | Toluene | 0.859 | 0.779 | 0.798 | 0.787 | 0.761 | 0.702 | 0.708 | 0.710 | 0.763 | 7.14 |
| 49) | T | trans-1,3-Dich... | 0.119 | 0.129 | 0.141 | 0.172 | 0.184 | 0.189 | 0.212 | 0.223 | 0.171 | 22.34 |
| 50) | T | 1,1,2-Trichlor... | 0.107 | 0.093 | 0.094 | 0.100 | 0.097 | 0.095 | 0.093 | 0.093 | 0.097 | 5.14 |
| 51) | I | Chlorobenzene-d5 | ---------- | ISTD | ---------- | | | | | | | |
| 52) | T | 4-Methyl-2-Pen... | | 0.370 | 0.288 | 0.274 | 0.251 | 0.254 | 0.270 | 0.277 | 0.283 | 14.19 |
| 53) | T | 2-Hexanone | 0.138 | 0.146 | 0.159 | 0.173 | 0.164 | 0.176 | 0.191 | 0.195 | 0.168 | 12.05 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54) | T | Tetrachloroethene | 1.783 | 1.681 | 1.722 | 1.726 | 1.690 | 1.561 | 1.608 | 1.582 | 1.669 | 4.68 |
| 55) | T | 1,3-Dichloropr... | 1.047 | 0.997 | 0.984 | 0.983 | 0.961 | 0.933 | 0.978 | 0.984 | 0.983 | 3.29 |
| 56) | T | Dibromochlorom... | 0.565 | 0.565 | 0.563 | 0.603 | 0.600 | 0.597 | 0.648 | 0.658 | 0.600 | 6.15 |
| 57) | T | 1,2-Dibromomet... | 0.417 | 0.410 | 0.410 | 0.419 | 0.425 | 0.408 | 0.431 | 0.429 | 0.418 | 2.19 |
| 58) | T | Chlorobenzene | 3.780 | 3.515 | 3.503 | 3.342 | 3.235 | 3.045 | 3.161 | 3.133 | 3.339 | 7.37 |
| 59) | T | 1,1,1,2-Tetrac... | 0.966 | 0.938 | 0.960 | 0.991 | 0.954 | 0.914 | 0.930 | 0.907 | 0.945 | 3.00 |
| 60) | T | Ethylbenzene | 6.950 | 6.686 | 6.853 | 6.807 | 6.612 | 6.108 | 6.144 | 5.979 | 6.517 | 5.85 |
| 61) | T | m,p-xylene | 2.746 | 2.656 | 2.739 | 2.726 | 2.571 | 2.350 | 2.239 | 2.143 | 2.521 | 9.63 |
| 62) | T | o-xylene | 2.258 | 2.221 | 2.282 | 2.331 | 2.286 | 2.144 | 2.214 | 2.173 | 2.239 | 2.78 |
| 63) | T | Styrene | 3.226 | 3.282 | 3.434 | 3.625 | 3.439 | 3.328 | 3.482 | 3.434 | 3.406 | 3.69 |
| 64) | T | Bromoform | 0.243 | 0.249 | 0.263 | 0.293 | 0.292 | 0.307 | 0.336 | 0.341 | 0.290 | 12.84 |
| 65) | T | Isopropylbenzene | 6.000 | 6.015 | 6.238 | 6.468 | 6.504 | 6.133 | 6.339 | 6.197 | 6.237 | 3.05 |
| 66) | S | 4-Bromofluorob... | 1.391 | 1.380 | 1.409 | 1.478 | 1.489 | 1.554 | 1.570 | 1.575 | 1.481 | 5.45 |
| 67) | T | Bromobenzene | 1.198 | 1.149 | 1.135 | 1.162 | 1.130 | 1.106 | 1.172 | 1.170 | 1.153 | 2.49 |
| 68) | T | 1,1,2,2-Tetrac... | 0.499 | 0.468 | 0.479 | 0.480 | 0.447 | 0.447 | 0.430 | 0.413 | 0.458 | 6.24 |
| 69) | T | 1,2,3-Trichlor... | 0.409 | 0.394 | 0.394 | 0.411 | 0.384 | 0.393 | 0.404 | 0.402 | 0.399 | 2.31 |
| 70) | T | N-propylbenzene | 7.250 | 7.235 | 7.599 | 8.023 | 8.079 | 7.616 | 7.743 | 7.557 | 7.638 | 4.07 |
| 71) | T | 2-Chlorotoluene | 4.451 | 4.274 | 4.235 | 4.345 | 4.287 | 4.102 | 4.231 | 4.177 | 4.263 | 2.47 |
| 72) | T | 4-Chlorotoluene | 4.519 | 4.395 | 4.531 | 4.690 | 4.542 | 4.344 | 4.378 | 4.264 | 4.458 | 3.07 |
| 73) | T | 1,3,5-Trimethy... | | 4.903 | 5.157 | 5.490 | 5.369 | 5.075 | 5.073 | 4.891 | 5.137 | 4.36 |
| 74) | T | Tert-butylbenzene | 4.443 | 4.486 | 4.733 | 5.017 | 5.119 | 4.854 | 5.045 | 4.962 | 4.832 | 5.31 |
| 75) | T | 1,2,4-Trimethy... | 3.905 | 4.219 | 4.510 | 4.981 | 4.990 | 4.863 | 5.144 | 5.065 | 4.710 | 9.56 |
| 76) | T | Sec-butylbenzene | | 6.608 | 6.963 | 7.670 | 7.761 | 7.303 | 7.562 | 7.331 | 7.314 | 5.61 |
| 77) | T | 1,3-Dichlorobe... | 2.294 | 2.296 | 2.287 | 2.498 | 2.508 | 2.444 | 2.560 | 2.546 | 2.429 | 4.87 |
| 78) | T | 4-Isopropyltol... | | 4.853 | 5.347 | 6.261 | 6.319 | 6.087 | 6.303 | 6.125 | 5.899 | 9.68 |
| 79) | T | 1,4-Dichlorobe... | 2.294 | 2.287 | 2.300 | 2.481 | 2.367 | 2.320 | 2.429 | 2.414 | 2.362 | 3.09 |
| 80) | I | 1,4-Dichlorobenzen... | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | ---------- | ---------- | |
| 81) | T | 1,2-Dichlorobe... | 0.832 | 0.860 | 0.802 | 0.734 | 0.719 | 0.617 | 0.558 | 0.728 | 0.731 | 14.16 |
| 82) | T | n-Butylbenzene | | 1.334 | 1.623 | 1.881 | 1.975 | 1.718 | 1.574 | 2.074 | 1.740 | 14.70 |
| 83) | T | 1,2-Dibromo-3-... | | | 0.014 | 0.017 | 0.018 | 0.019 | 0.017 | | 0.017 | 10.41 |
| 84) | T | 1,2,4-Trichlor... | 0.144 | 0.159 | 0.146 | 0.224 | 0.270 | 0.304 | 0.365 | | 0.230 | 37.56 |
| 85) | T | Hexachlorobuta... | 0.323 | 0.433 | 0.446 | 0.441 | 0.482 | 0.460 | 0.418 | 0.552 | 0.444 | 14.48 |
| 86) | T | Naphthalene | 0.161 | 0.170 | 0.156 | 0.149 | 0.188 | 0.244 | 0.330 | | 0.200 | 32.92 |
| 87) | T | 1,2,3-Trichlor... | 0.103 | 0.115 | 0.111 | 0.143 | 0.202 | 0.230 | 0.280 | | 0.169 | 40.73 |

(#) = Out of Range

8260_111110.M Fri Feb 04 13:40:47 2011

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9449965 | 2.996188 | | | 15 | |
| 1,1,1-Trichloroethane | 0.5659896 | 4.560913 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.4579836 | 6.241163 | | | 15 | |
| 1,1,2-Trichloroethane | 0.1883814 | 25.83749 | | | 15 | * |
| 1,1-Dichloroethane | 0.5886556 | 5.340725 | | | 15 | |
| 1,1-Dichloroethene | 0.2945645 | 6.971788 | | | 15 | |
| 1,1-Dichloropropene | 0.8870995 | 28.79643 | | | 15 | * |
| 1,2,3-Trichlorobenzene | 0.1079407 | 60.25025 ok | | 0.9983741 | | |
| 1,2,3-Trichloropropane | 0.3987978 | 2.309246 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.1333765 | 61.8921 ok | | 0.9984971 | | |
| 1,2,4-Trimethylbenzene | 4.709513 | 9.55917 | | | 15 | |
| 1,2-Dibromo-3-chloropropane | 1.013838E-02 | 26.03012 | | | 15 | * |
| 1,2-Dibromoethane | 0.4184844 | 2.192751 | | | 15 | |
| 1,2-Dichlorobenzene | 0.3836902 | 9.931573 | | | 15 | |
| 1,2-Dichloroethane | 0.4037109 | 34.30786 | | | 15 | * |
| 1,2-Dichloroethene (total) | | | | | 15 | |
| 1,2-Dichloropropane | 0.3990268 | 21.50741 | | | 15 | * |
| 1,3,5-Trimethylbenzene | 5.136773 | 4.363395 | | | 15 | |
| 1,3-Dichlorobenzene | 2.429237 | 4.866861 | | | 15 | |
| 1,3-Dichloropropane | 0.9832992 | 3.286307 | | | 15 | |
| 1,4-Dichlorobenzene | 2.361546 | 3.090043 | | | 15 | |
| 2,2-Dichloropropane | 0.3046553 | 5.396329 | | | 15 | |
| 2-Butanone | 5.842675E-02 | 26.98709 | | | 15 | * |
| 2-Chloroethylvinyl Ether | 8723.567 | 41.18061 | | 0.9747346 | | |
| 2-Chlorotoluene | 4.262763 | 2.473932 | | | 15 | |
| 2-Hexanone | 0.1678354 | 12.05372 | | | 15 | |
| 4-Chlorotoluene | 4.45775 | 3.06895 | | | 15 | |

CENTAURI LABS™

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.2832524 | 14.19025 | | | 15 | |
| Acetone | 3.530808E-02 | 60.72747 ok | | 0.999617 | | |
| Acetonitrile | 12640.95 | 13.55521 | | | 15 | |
| Acrylonitrile | 31482.48 | 10.83697 | | | 15 | |
| Benzene | 2.347493 | 30.06644 | | | 15 | * |
| Bromobenzene | 1.15273 | 2.492457 | | | 15 | |
| Bromochloromethane | 0.1177031 | 7.751624 | | | 15 | |
| Bromodichloromethane | 0.5026204 | 21.74762 | | | 15 | * |
| Bromoform | 0.290434 | 12.84001 | | | 15 | |
| Bromomethane | 2.574268E-02 | 41.48754 ok | | 0.9991388 | | |
| Carbon disulfide | 0.9743583 | 7.835565 | | | 15 | |
| Carbon tetrachloride | 0.8946293 | 63.11922 ok | 0.9984195 | | | |
| Chlorobenzene | 3.33925 | 7.36761 | | | 15 | |
| Chlorodibromomethane | 0.5999869 | 6.15232 | | | 15 | |
| Chloroethane | 0.5391721 | 54.15445 | 0.9722477 | | | |
| Chloroform | 0.5666822 | 5.796015 | | | 15 | |
| Chloromethane | 0.24454 | 16.79022 ok | | 0.9931096 | | |
| cis-1,2-Dichloroethene | 0.3797202 | 6.232311 | | | 15 | |
| cis-1,3-Dichloropropene | 0.4930246 | 12.41325 | | | 15 | |
| Cyclohexane | 975484.5 | 9.121557 | | | 15 | |
| Dibromomethane | 0.1378844 | 21.47163 | | | 15 | * |
| Dichlorodifluoromethane | 0.3660774 | 10.70454 | | | 15 | |
| Ethyl methacrylate | 205471 | 17.74802 | | | 15 | * |
| Ethylbenzene | 6.517445 | 5.849966 | | | 15 | |
| Freon 113 | 1067379 | 8.201786 | | | 15 | |
| Hexachlorobutadiene | 0.2425145 | 29.6656 | | | 15 | * |
| Iodomethane | 2486491 | 7.590871 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 4974.099 | 4.738612 | | | 15 | |
| Isopropylbenzene | 6.236763 | 3.048825 | | | 15 | |
| m,p-Xylenes | 2.521251 | 9.628999 | | | 15 | |
| Methacrylonitrile | 52616.51 | 7.754166 | | | 15 | |
| Methyl Acetate | 26152.27 | 7.069333 | | | 15 | |
| Methyl tert-Butyl Ether | 0.354677 | 7.568475 | | | 15 | |
| Methylcyclohexane | 1036101 | 10.22823 | | | 15 | |
| Methylene Chloride | 0.8416174 | 84.28984 | 0.9310435 | | | |
| Methylmethacrylate | 492250.2 | 8.694056 | | | 15 | |
| Naphthalene | 0.1136276 | 60.49789 ok | | 0.99588 | | |
| n-Butylbenzene | 4.521909 | 23.51799 | | | 15 | * |
| n-Propylbenzene | 7.637786 | 4.068436 | | | 15 | |
| o-Xylene | 2.238511 | 2.784486 | | | 15 | |
| p-Isopropyltoluene | 5.899351 | 9.677282 | | | 15 | |
| Propionitrile | 14872.44 | 11.96743 | | | 15 | |
| sec-Butylbenzene | 7.313888 | 5.611493 | | | 15 | |
| Styrene | 3.406218 | 3.688098 | | | 15 | |
| tert-Butylbenzene | 4.832452 | 5.305811 | | | 15 | |
| Tetrachloroethene | 1.669076 | 4.675657 | | | 15 | |
| Toluene | 1.500687 | 29.46237 | | | 15 | * |
| trans-1,2-Dichloroethene | 0.473488 | 5.608299 | | | 15 | |
| trans-1,3-Dichloropropene | 0.3188505 | 10.53039 | 0.9637676 | | | |
| Trichloroethene | 0.723381 | 57.91742 | | | 15 | * |
| Trichlorofluoromethane | 0.6463387 | 10.35389 | | | 15 | |
| Vinyl acetate | 190045.8 | 9.269583 | | | 15 | |
| Vinyl chloride | 0.3381399 | 16.17694 ok | 0.9962687 | | | |
| Xylene (Total) | | | | | 15 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 12.1 | 0.9449965 | 1.143058 | | 21.0 | 20 | * |
| 1,1,1-Trichloroethane | A | 10.0 | 12.3 | 0.5659896 | 0.6984901 | | 23.4 | 20 | * |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 11.6 | 0.4579836 | 0.5304432 | | 15.8 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 12.4 | 0.1883814 | 0.1855327 | | -1.5 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 11.1 | 0.5886556 | 0.6540047 | | 11.1 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 12.0 | 0.2945645 | 0.3537672 | | 20.1 | 20 | * |
| 1,1-Dichloropropene | A | 10.0 | 12.5 | 0.8870995 | 0.8757924 | | -1.3 | 20 | |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 13.1 | 0.1079407 | 0.1749146 | | 30.7 | 20 | * |
| 1,2,3-Trichloropropane | A | 10.0 | 11.6 | 0.3987978 | 0.4622272 | | 15.9 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 12.9 | 0.1333765 | 0.2312968 | | 29.2 | 20 | * |
| 1,2,4-Trimethylbenzene | A | 10.0 | 13.3 | 4.709513 | 6.266435 | | 33.1 | 20 | * |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 11.9 | 1.013838E-02 | 1.304181E-02 | | 28.6 | 20 | * |
| 1,2-Dibromoethane | A | 10.0 | 11.4 | 0.4184844 | 0.4791551 | | 14.5 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 10.9 | 0.3836902 | 0.5128204 | | 33.7 | 20 | * |
| 1,2-Dichloroethane | A | 10.0 | 11.0 | 0.4037109 | 0.3482327 | | -13.7 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 12.1 | 0.3990268 | 0.4271672 | | 7.1 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 13.0 | 5.136773 | 6.686592 | | 30.2 | 20 | * |
| 1,3-Dichlorobenzene | A | 10.0 | 13.0 | 2.429237 | 3.16753 | | 30.4 | 20 | * |
| 1,3-Dichloropropane | A | 10.0 | 11.2 | 0.9832992 | 1.097714 | | 11.6 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 12.8 | 2.361546 | 3.016576 | | 27.7 | 20 | * |
| 2,2-Dichloropropane | A | 10.0 | 12.5 | 0.3046553 | 0.3802807 | | 24.8 | 20 | * |
| 2-Chloroethylvinyl Ether | Q | 20.0 | 8.81 | 8723.567 | 2664.35 | | -56.0 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 12.5 | 4.262763 | 5.312579 | | 24.6 | 20 | * |
| 2-Hexanone | A | 10.0 | 16.6 | 0.1678354 | 0.2784265 | | 65.9 | 20 | * |
| 4-Chlorotoluene | A | 10.0 | 12.6 | 4.45775 | 5.61065 | | 25.9 | 20 | * |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 10.0 | 13.2 | 0.2832524 | 0.3750909 | | 32.4 | 20 | * |
| Acetone | Q | 10.0 | 25.2 | 3.530808E-02 | 6.091001E-02 | | 152 | 20 | * |
| Acetonitrile | A | 100 | 103 | 12640.95 | 11519.52 | | -8.9 | 20 | |
| Acrylonitrile | A | 10.0 | 9.80 | 31482.48 | 27966 | | -11.2 | 20 | |
| Benzene | A | 10.0 | 11.7 | 2.347493 | 2.1679 | | -7.7 | 20 | |
| Bromobenzene | A | 10.0 | 11.8 | 1.15273 | 1.360163 | | 18.0 | 20 | |
| Bromochloromethane | A | 10.0 | 10.8 | 0.1177031 | 0.1276156 | | 8.4 | 20 | |
| Bromodichloromethane | A | 10.0 | 11.4 | 0.5026204 | 0.4600986 | | -8.5 | 20 | |
| Bromoform | A | 10.0 | 11.8 | 0.290434 | 0.34224 | | 17.8 | 20 | |
| Bromomethane | Q | 10.0 | 14.7 | 2.574268E-02 | 2.292744E-02 | | 46.7 | 20 | * |
| Carbon disulfide | A | 10.0 | 12.1 | 0.9743583 | 1.175792 | | 20.7 | 20 | * |
| Carbon tetrachloride | L | 10.0 | 12.0 | 0.8946293 | 0.6902278 | | 20.0 | 20 | |
| Chlorobenzene | A | 10.0 | 11.8 | 3.33925 | 3.923561 | | 17.5 | 20 | |
| Chlorodibromomethane | A | 10.0 | 11.6 | 0.5999869 | 0.6940801 | | 15.7 | 20 | |
| Chloroethane | L | 10.0 | 8.58 | 0.5391721 | 0.2425101 | | -14.2 | 20 | |
| Chloroform | A | 10.0 | 11.6 | 0.5666822 | 0.6561524 | | 15.8 | 20 | |
| Chloromethane | Q | 10.0 | 11.8 | 0.24454 | 0.2585695 | | 17.6 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 13.1 | 0.3797202 | 0.4990148 | | 31.4 | 20 | * |
| cis-1,3-Dichloropropene | A | 10.0 | 12.4 | 0.4930246 | 0.5036888 | | 2.2 | 20 | |
| Cyclohexane | A | 10.0 | 11.4 | 975484.5 | 1009411 | | 3.5 | 20 | |
| Dibromomethane | A | 10.0 | 11.6 | 0.1378844 | 0.1289826 | | -6.5 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 4.89 | 0.3660774 | 0.1788952 | | -51.1 | 20 | * |
| Ethyl methacrylate | A | 10.0 | 12.0 | 205471 | 223274.4 | | 8.7 | 20 | |
| Ethylbenzene | A | 10.0 | 12.1 | 6.517445 | 7.907933 | | 21.3 | 20 | * |
| Freon 113 | A | 10.0 | 9.06 | 1067379 | 438728.3 | | -58.9 | 20 | * |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 12.2 | 0.2425145 | 0.3490812 | | 43.9 | 20 | * |
| Iodomethane | A | 10.0 | 6.03 | 2486491 | 1362969 | | -45.2 | 20 | * |
| Isobutyl alcohol | A | 100 | 180 | 4974.099 | 8154.36 | | 63.9 | 20 | * |
| Isopropylbenzene | A | 10.0 | 13.5 | 6.236763 | 8.413115 | | 34.9 | 20 | * |
| m,p-Xylenes | A | 20.0 | 24.4 | 2.521251 | 3.072141 | | 21.8 | 20 | * |
| Methacrylonitrile | A | 10.0 | 11.7 | 52616.51 | 54509.1 | | 3.6 | 20 | |
| Methyl Acetate | A | 10.0 | 8.05 | 26152.27 | 18448.5 | | -29.5 | 20 | * |
| Methyl tert-Butyl Ether | A | 10.0 | 9.99 | 0.354677 | 0.3544708 | | -0.06 | 20 | |
| Methylcyclohexane | A | 10.0 | 12.5 | 1036101 | 1189489 | | 14.8 | 20 | |
| Methylene Chloride | L | 10.0 | 5.20 | 0.8416174 | 0.3204574 | | -48.0 | 20 | * |
| Methylmethacrylate | A | 10.0 | 11.3 | 492250.2 | 506313.7 | | 2.9 | 20 | |
| Naphthalene | Q | 10.0 | 12.2 | 0.1136276 | 0.160184 | | 22.1 | 20 | * |
| n-Butylbenzene | A | 10.0 | 13.6 | 4.521909 | 6.951643 | | 53.7 | 20 | * |
| n-Propylbenzene | A | 10.0 | 12.3 | 7.637786 | 9.415693 | | 23.3 | 20 | * |
| o-Xylene | A | 10.0 | 12.2 | 2.238511 | 2.735001 | | 22.2 | 20 | * |
| p-Isopropyltoluene | A | 10.0 | 13.8 | 5.899351 | 8.120284 | | 37.6 | 20 | * |
| Propionitrile | A | 10.0 | 11.3 | 14872.44 | 14869.4 | | -0.02 | 20 | |
| sec-Butylbenzene | A | 10.0 | 13.2 | 7.313888 | 9.653285 | | 32.0 | 20 | * |
| Styrene | A | 10.0 | 11.8 | 3.406218 | 4.025902 | | 18.2 | 20 | |
| tert-Butylbenzene | A | 10.0 | 13.6 | 4.832452 | 6.564499 | | 35.8 | 20 | * |
| Tetrachloroethene | A | 10.0 | 18.4 | 1.669076 | 3.073396 | | 84.1 | 20 | * |
| Toluene | A | 10.0 | 11.9 | 1.500687 | 1.407883 | | -6.2 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 10.7 | 0.473488 | 0.5062932 | | 6.9 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 10.9 | 0.3188505 | 0.3384454 | | 8.9 | 20 | |
| Trichloroethene | A | 10.0 | 12.3 | 0.723381 | 0.5952818 | | -17.7 | 20 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890299.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047034 | Injection Date: | 11/11/10 |
| Lab Sample ID: | S047034-SCV1 | Injection Time: | 16:39 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Trichlorofluoromethane | A | 10.0 | 9.35 | 0.6463387 | 0.6042435 | | -6.5 | 20 | |
| Vinyl acetate | A | 20.0 | 15.1 | 190045.8 | 129972.9 | | -31.6 | 20 | * |
| Vinyl chloride | L | 10.0 | 10.1 | 0.3381399 | 0.3690015 | | 1.1 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890358.D | Injection Date: | 11/13/10 |
| Instrument ID: | GCMS-B | Injection Time: | 09:59 |
| Sequence: | S047043 | Lab Sample ID: | S047043-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.6 | PASS |
| 75 | 30 - 60% of 95 | 46.6 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.44 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 90 | PASS |
| 175 | 5 - 9% of 174 | 7.09 | PASS |
| 176 | 95 - 101% of 174 | 97 | PASS |
| 177 | 5 - 9% of 176 | 6.32 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047043-CCV1 | B02890359.D | 11/13/2010 | 10:25:00 |
| Blank | B047068-BLK1 | B02890360.D | 11/13/2010 | 11:04:00 |
| LCS | B047068-BS1 | B02890361.D | 11/13/2010 | 11:30:00 |
| LCS Dup | B047068-BSD1 | B02890362.D | 11/13/2010 | 11:57:00 |
| G01-MW-01-1010 | 1011022-01 | B02890367.D | 11/13/2010 | 14:11:00 |
| G01-MW-02-1010 | 1011022-02 | B02890368.D | 11/13/2010 | 14:38:00 |
| G01-MW-04-1010 | 1011022-03 | B02890369.D | 11/13/2010 | 15:05:00 |
| GKHMS-TB-05 | 1011022-04 | B02890370.D | 11/13/2010 | 15:32:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 10.2 | 0.9449965 | 0.9647971 | | 2.1 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.6 | 0.5659896 | 0.6029627 | | 6.5 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 9.68 | 0.4579836 | 0.4431138 | | -3.2 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 9.75 | 0.1883814 | 0.1848595 | | -1.9 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 9.87 | 0.5886556 | 0.5810381 | | -1.3 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 10.6 | 0.2945645 | 0.3111978 | | 5.6 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 10.2 | 0.8870995 | 0.908979 | | 2.5 | 20 | |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 9.42 | 0.1079407 | 9.390612E-02 | | -5.8 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 9.92 | 0.3987978 | 0.3956187 | | -0.8 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 9.49 | 0.1333765 | 0.127899 | | -5.1 | 20 | |
| 1,2,4-Trimethylbenzene | A | 10.0 | 10.5 | 4.709513 | 4.950406 | | 5.1 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 8.03 | 1.013838E-02 | 6.962589E-03 | | -31.3 | 20 | * |
| 1,2-Dibromoethane | A | 10.0 | 10.1 | 0.4184844 | 0.4216138 | | 0.7 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 9.37 | 0.3836902 | 0.3490381 | | -9.0 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 9.70 | 0.4037109 | 0.3877971 | | -3.9 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 10.0 | 0.3990268 | 0.4475479 | | 12.2 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 10.4 | 5.136773 | 5.35013 | | 4.2 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 10.0 | 2.429237 | 2.442425 | | 0.5 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 10.3 | 0.9832992 | 1.016214 | | 3.3 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 9.95 | 2.361546 | 2.350705 | | -0.5 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 6.11 | 0.3046553 | 0.1862132 | | -38.9 | 20 | * |
| 2-Butanone | A | 20.0 | 17.4 | 5.842675E-02 | 5.101698E-02 | | -12.7 | 20 | |
| 2-Chlorotoluene | A | 10.0 | 9.97 | 4.262763 | 4.24989 | | -0.3 | 20 | |
| 2-Hexanone | A | 20.0 | 17.6 | 0.1678354 | 0.147796 | | -11.9 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 10.1 | 4.45775 | 4.510313 | | 1.2 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 20.0 | 16.4 | 0.2832524 | 0.2322376 | | -18.0 | 20 | |
| Acetone | Q | 20.0 | 23.4 | 3.530808E-02 | 2.865479E-02 | | 17.2 | 20 | |
| Acetonitrile | A | 100 | 75.7 | 12640.95 | 8023.29 | | -36.5 | 20 | * |
| Acrylonitrile | A | 50.0 | 43.9 | 31482.48 | 23767.22 | | -24.5 | 20 | * |
| Benzene | A | 10.0 | 10.0 | 2.347493 | 2.339548 | | -0.3 | 20 | |
| Bromobenzene | A | 10.0 | 9.53 | 1.15273 | 1.099011 | | -4.7 | 20 | |
| Bromochloromethane | A | 10.0 | 8.97 | 0.1177031 | 0.1056288 | | -10.3 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.61 | 0.5026204 | 0.4899405 | | -2.5 | 20 | |
| Bromoform | A | 10.0 | 7.88 | 0.290434 | 0.2287955 | | -21.2 | 20 | * |
| Bromomethane | Q | 10.0 | 8.23 | 2.574268E-02 | 2.053375E-02 | | -17.7 | 20 | |
| Carbon disulfide | A | 20.0 | 18.8 | 0.9743583 | 0.9153649 | | -6.1 | 20 | |
| Carbon tetrachloride | L | 10.0 | 10.1 | 0.8946293 | 0.5928995 | | 1.4 | 20 | |
| Chlorobenzene | A | 10.0 | 9.77 | 3.33925 | 3.263749 | | -2.3 | 20 | |
| Chlorodibromomethane | A | 10.0 | 9.45 | 0.5999869 | 0.5673432 | | -5.4 | 20 | |
| Chloroethane | L | 10.0 | 8.71 | 0.5391721 | 0.2374645 | | -12.9 | 20 | |
| Chloroform | A | 10.0 | 9.90 | 0.5666822 | 0.5612375 | | -1.0 | 20 | |
| Chloromethane | Q | 10.0 | 16.3 | 0.24454 | 0.3662771 | | 62.7 | 20 | * |
| cis-1,2-Dichloroethene | A | 10.0 | 9.61 | 0.3797202 | 0.3648481 | | -3.9 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 8.44 | 0.4930246 | 0.3206827 | | -35.0 | 20 | * |
| Cyclohexane | A | 10.0 | 10.3 | 975484.5 | 864034.7 | | -11.4 | 20 | |
| Dibromomethane | A | 10.0 | 9.69 | 0.1378844 | 0.1354875 | | -1.7 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 9.41 | 0.3660774 | 0.3445141 | | -5.9 | 20 | |
| Ethyl methacrylate | A | 10.0 | 8.46 | 205471 | 149150.4 | | -27.4 | 20 | * |
| Ethylbenzene | A | 10.0 | 10.2 | 6.517445 | 6.666581 | | 2.3 | 20 | |
| Freon 113 | A | 5.00 | 11.3 | 1067379 | 1038242 | | -2.7 | 20 | |

CENTAURI LABS™

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 10.5 | 0.2425145 | 0.238292 | | -1.7 | 20 | |
| Iodomethane | A | 10.0 | 9.39 | 2486491 | 2014255 | | -19.0 | 20 | |
| Isobutyl alcohol | A | 200 | 172 | 4974.099 | 3706.84 | | -25.5 | 20 | * |
| Isopropylbenzene | A | 10.0 | 10.2 | 6.236763 | 6.37656 | | 2.2 | 20 | |
| m,p-Xylenes | A | 20.0 | 20.6 | 2.521251 | 2.593592 | | 2.9 | 20 | |
| Methacrylonitrile | A | 10.0 | 9.05 | 52616.51 | 39943.5 | | -24.1 | 20 | * |
| Methyl Acetate | A | 10.0 | 9.47 | 26152.27 | 20598.2 | | -21.2 | 20 | * |
| Methyl tert-Butyl Ether | A | 10.0 | 1.99 | 0.354677 | 7.067413E-02 | | -80.1 | 20 | * |
| Methylcyclohexane | A | 10.0 | 10.7 | 1036101 | 942537.4 | | -9.0 | 20 | |
| Methylene Chloride | L | 10.0 | 1.62 | 0.8416174 | 0.2541324 | | -83.8 | 20 | * |
| Methylmethacrylate | A | 10.0 | 10.4 | 492250.2 | 438966 | | -10.8 | 20 | |
| Naphthalene | Q | 10.0 | 8.68 | 0.1136276 | 8.272169E-02 | | -13.2 | 20 | |
| n-Butylbenzene | A | 10.0 | 10.8 | 4.521909 | 4.924539 | | 8.9 | 20 | |
| n-Propylbenzene | A | 10.0 | 10.2 | 7.637786 | 7.787941 | | 2.0 | 20 | |
| o-Xylene | A | 10.0 | 9.94 | 2.238511 | 2.224639 | | -0.6 | 20 | |
| p-Isopropyltoluene | A | 10.0 | 10.6 | 5.899351 | 6.264044 | | 6.2 | 20 | |
| Propionitrile | A | 10.0 | 8.13 | 14872.44 | 10140.5 | | -31.8 | 20 | * |
| sec-Butylbenzene | A | 10.0 | 10.4 | 7.313888 | 7.623382 | | 4.2 | 20 | |
| Styrene | A | 10.0 | 9.97 | 3.406218 | 3.395335 | | -0.3 | 20 | |
| tert-Butylbenzene | A | 10.0 | 10.4 | 4.832452 | 5.036201 | | 4.2 | 20 | |
| Tetrachloroethene | A | 10.0 | 11.1 | 1.669076 | 1.856583 | | 11.2 | 20 | |
| Toluene | A | 10.0 | 9.48 | 1.500687 | 1.420266 | | -5.4 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 10.2 | 0.473488 | 0.4803866 | | 1.5 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 8.44 | 0.3188505 | 0.3206827 | | -15.6 | 20 | |
| Trichloroethene | A | 10.0 | 10.1 | 0.723381 | 0.6181457 | | -14.5 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Trichlorofluoromethane | A | 10.0 | 11.5 | 0.6463387 | 0.7426795 | | 14.9 | 20 |
| Vinyl acetate | A | 20.0 | 18.6 | 190045.8 | 152225 | | -19.9 | 20 |
| Vinyl chloride | L | 10.0 | 11.9 | 0.3381399 | 0.4384397 | | 19.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047068-BLK1 | Batch: | B047068 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-TB-05 | 1011022-04 | B02890370.D | 15:32 |
| G01-MW-04-1010 | 1011022-03 | B02890369.D | 15:05 |
| G01-MW-02-1010 | 1011022-02 | B02890368.D | 14:38 |
| G01-MW-01-1010 | 1011022-01 | B02890367.D | 14:11 |
| LCS Dup | B047068-BSD1 | B02890362.D | 11:57 |
| LCS | B047068-BS1 | B02890361.D | 11:30 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.00 | U |
| 78-93-3 | 2-Butanone | 5.00 | U |
| 95-49-8 | 2-Chlorotoluene | 1.00 | U |
| 591-78-6 | 2-Hexanone | 5.00 | U |
| 106-43-4 | 4-Chlorotoluene | 1.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Instrument: | GCMS-B | | | | |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.00 | U |
| 75-05-8 | Acetonitrile | 10.0 | U |
| 107-13-1 | Acrylonitrile | 5.00 | U |
| 71-43-2 | Benzene | 1.00 | U |
| 108-86-1 | Bromobenzene | 1.00 | U |
| 74-97-5 | Bromochloromethane | 1.00 | U |
| 75-27-4 | Bromodichloromethane | 1.00 | U |
| 75-25-2 | Bromoform | 1.00 | U |
| 74-83-9 | Bromomethane | 1.00 | U |
| 75-15-0 | Carbon disulfide | 1.00 | U |
| 56-23-5 | Carbon tetrachloride | 1.00 | U |
| 108-90-7 | Chlorobenzene | 1.00 | U |
| 124-48-1 | Chlorodibromomethane | 1.00 | U |
| 75-00-3 | Chloroethane | 1.00 | U |
| 67-66-3 | Chloroform | 1.00 | U |
| 74-87-3 | Chloromethane | 1.00 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U |
| 110-82-7 | Cyclohexane | 1.00 | U |
| 74-95-3 | Dibromomethane | 1.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U |
| 97-63-2 | Ethyl methacrylate | 1.00 | U |
| 100-41-4 | Ethylbenzene | 1.00 | U |
| 76-13-1 | Freon 113 | 1.00 | U |
| 87-68-3 | Hexachlorobutadiene | 1.00 | U |
| 74-88-4 | Iodomethane | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Column: | 1 | | | | Instrument: GCMS-B |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 78-83-1 | Isobutyl alcohol | 20.0 | U |
| 98-82-8 | Isopropylbenzene | 1.00 | U |
| | m,p-Xylenes | 1.00 | U |
| 126-98-7 | Methacrylonitrile | 1.00 | U |
| 76-20-9 | Methyl Acetate | 1.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 1.00 | U |
| 108-87-2 | Methylcyclohexane | 1.00 | U |
| 75-09-2 | Methylene Chloride | 1.00 | U |
| 80-62-6 | Methylmethacrylate | 1.00 | U |
| 91-20-3 | Naphthalene | 1.00 | U |
| 104-51-8 | n-Butylbenzene | 1.00 | U |
| 103-65-1 | n-Propylbenzene | 1.00 | U |
| 95-47-6 | o-Xylene | 1.00 | U |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U |
| 107-12-0 | Propionitrile | 10.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.00 | U |
| 100-42-5 | Styrene | 1.00 | U |
| 98-06-6 | tert-Butylbenzene | 1.00 | U |
| 127-18-4 | Tetrachloroethene | 1.00 | U |
| 108-88-3 | Toluene | 1.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.00 | U |
| 79-01-6 | Trichloroethene | 1.00 | U |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U |
| 108-05-4 | Vinyl acetate | 1.00 | U |
| 75-01-4 | Vinyl chloride | 1.00 | U |

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (75 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 120) |
|---|---|---|---|---|
| 1011022-01 | 100 | 95 | 101 | 98 |
| 1011022-02 | 101 | 94 | 101 | 97 |
| 1011022-03 | 101 | 94 | 102 | 100 |
| 1011022-04 | 104 | 96 | 103 | 100 |
| B047068-BLK1 | 98 | 88 | 96 | 101 |
| B047068-BS1 | 103 | 102 | 104 | 99 |
| B047068-BSD1 | 107 | 104 | 107 | 99 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 10.8 | 108 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 11.6 | 116 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.6 | 106 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.4 | 104 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 10.2 | 102 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 11.6 | 116 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.5 | 115 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 8.64 | 86 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 8.82 | 88 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.2 | 112 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 8.64 | 86 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 10.7 | 107 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 9.79 | 98 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 10.5 | 105 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.2 | 112 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.0 | 110 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.0 | 100 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 10.7 | 107 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 10.3 | 103 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 10.8 | 108 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.5 | 105 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 10.8 | 108 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 10.6 | 106 | 60 - 135 |
| Acetone | 10.0 | 16.8 | 168 * | 40 - 140 |
| Acetonitrile | 100 | 87.8 | 88 | 75 - 125 |
| Acrylonitrile | 10.0 | 7.98 | 80 | 75 - 125 |
| Benzene | 10.0 | 10.5 | 105 | 80 - 120 |
| Bromobenzene | 10.0 | 10.3 | 103 | 75 - 125 |
| Bromochloromethane | 10.0 | 9.38 | 94 | 65 - 130 |
| Bromodichloromethane | 10.0 | 9.95 | 100 | 75 - 120 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 8.94 | 89 | 70 - 130 |
| Bromomethane | 10.0 | 10.0 | 100 | 30 - 145 |
| Carbon disulfide | 10.0 | 10.5 | 105 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 11.0 | 110 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.5 | 105 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 9.75 | 98 | 60 - 135 |
| Chloroethane | 10.0 | 7.05 | 70 | 60 - 135 |
| Chloroform | 10.0 | 10.5 | 105 | 65 - 135 |
| Chloromethane | 10.0 | 11.8 | 118 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 11.4 | 114 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 9.58 | 96 | 70 - 130 |
| Cyclohexane | 10.0 | 9.50 | 95 | 75 - 125 |
| Dibromomethane | 10.0 | 10.5 | 105 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 4.13 | 41 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 9.29 | 93 | 75 - 125 |
| Ethylbenzene | 10.0 | 10.9 | 109 | 75 - 125 |
| Freon 113 | 10.0 | 8.90 | 89 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 9.08 | 91 | 50 - 140 |
| Iodomethane | 10.0 | 5.25 | 52 * | 75 - 125 |
| Isobutyl alcohol | 100 | 117 | 117 | 75 - 125 |
| Isopropylbenzene | 10.0 | 11.9 | 119 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.0 | 110 | 75 - 130 |
| Methacrylonitrile | 10.0 | 9.45 | 94 | 75 - 125 |
| Methyl Acetate | 10.0 | 7.13 | 71 * | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 7.97 | 80 | 65 - 125 |
| Methylcyclohexane | 10.0 | 11.0 | 110 | 75 - 125 |
| Methylene Chloride | 10.0 | 3.13 | 31 * | 55 - 140 |
| Methylmethacrylate | 10.0 | 9.62 | 96 | 75 - 125 |
| Naphthalene | 10.0 | 7.60 | 76 | 55 - 140 |
| n-Butylbenzene | 10.0 | 11.3 | 113 | 70 - 135 |
| n-Propylbenzene | 10.0 | 10.4 | 104 | 70 - 130 |
| o-Xylene | 10.0 | 10.9 | 109 | 80 - 120 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| p-Isopropyltoluene | 10.0 | 11.4 | 114 | 75 - 130 |
| Propionitrile | 10.0 | 8.98 | 90 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 11.1 | 111 | 70 - 125 |
| Styrene | 10.0 | 10.6 | 106 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 12.2 | 122 | 70 - 130 |
| Tetrachloroethene | 10.0 | 11.8 | 118 | 45 - 150 |
| Toluene | 10.0 | 10.4 | 104 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 9.62 | 96 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 9.58 | 96 | 55 - 140 |
| Trichloroethene | 10.0 | 10.9 | 109 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 8.80 | 88 | 50 - 145 |
| Vinyl acetate | 20.0 | 13.9 | 69 * | 75 - 125 |
| Vinyl chloride | 10.0 | 8.62 | 86 | 50 - 145 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 11.4 | 114 | 6 | 30 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 12.2 | 122 | 5 | 30 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 11.4 | 114 | 7 | 30 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 11.1 | 111 | 6 | 30 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 10.7 | 107 | 5 | 30 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 12.0 | 120 | 4 | 30 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.9 | 119 | 4 | 30 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 10.5 | 105 | 19 | 30 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 11.3 | 113 | 7 | 30 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 10.4 | 104 | 16 | 30 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.9 | 119 | 6 | 30 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 10.5 | 105 | 19 | 30 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 11.3 | 113 | 5 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 10.2 | 102 | 4 | 30 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 11.2 | 112 | 6 | 30 | 70 - 130 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 10.0 | 11.2 | 112 | 5 | 30 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.8 | 118 | 5 | 30 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.8 | 118 | 7 | 30 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.6 | 106 | 6 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 11.6 | 116 | 8 | 30 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 11.2 | 112 | 8 | 30 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 11.3 | 113 | 4 | 30 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.0 | 100 | 4 | 30 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 11.4 | 114 | 5 | 30 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 11.5 | 115 | 8 | 30 | 60 - 135 |
| Acetone | 10.0 | 11.7 | 117 | 36 | 30 | 40 - 140 |
| Acetonitrile | 100 | 95.7 | 96 | 9 | 30 | 75 - 125 |
| Acrylonitrile | 10.0 | 8.79 | 88 | 10 | 30 | 75 - 125 |
| Benzene | 10.0 | 11.0 | 110 | 5 | 30 | 80 - 120 |
| Bromobenzene | 10.0 | 11.0 | 110 | 7 | 30 | 75 - 125 |
| Bromochloromethane | 10.0 | 10.0 | 100 | 7 | 30 | 65 - 130 |
| Bromodichloromethane | 10.0 | 10.5 | 105 | 6 | 30 | 75 - 120 |
| Bromoform | 10.0 | 9.60 | 96 | 7 | 30 | 70 - 130 |
| Bromomethane | 10.0 | 9.60 | 96 | 4 | 30 | 30 - 145 |
| Carbon disulfide | 10.0 | 11.0 | 110 | 4 | 30 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 11.5 | 115 | 5 | 30 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.9 | 109 | 4 | 30 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 10.4 | 104 | 7 | 30 | 60 - 135 |
| Chloroethane | 10.0 | 7.41 | 74 | 5 | 30 | 60 - 135 |
| Chloroform | 10.0 | 11.0 | 110 | 5 | 30 | 65 - 135 |
| Chloromethane | 10.0 | 11.7 | 117 | 1 | 30 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 12.2 | 122 | 6 | 30 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 7 | 30 | 70 - 130 |
| Cyclohexane | 10.0 | 9.98 | 100 | 5 | 30 | 75 - 125 |
| Dibromomethane | 10.0 | 11.1 | 111 | 6 | 30 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 4.37 | 44 | 6 | 30 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 10.3 | 103 | 10 | 30 | 75 - 125 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Ethylbenzene | 10.0 | 11.2 | 112 | | 3 | 30 | 75 - 125 |
| Freon 113 | 10.0 | 9.26 | 93 | | 4 | 30 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.0 | 100 | | 10 | 30 | 50 - 140 |
| Iodomethane | 10.0 | 5.49 | 55 | * | 4 | 30 | 75 - 125 |
| Isobutyl alcohol | 100 | 105 | 105 | | 11 | 30 | 75 - 125 |
| Isopropylbenzene | 10.0 | 12.2 | 122 | | 3 | 30 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.7 | 114 | | 3 | 30 | 75 - 130 |
| Methacrylonitrile | 10.0 | 10.4 | 104 | | 10 | 30 | 75 - 125 |
| Methyl Acetate | 10.0 | 7.89 | 79 | | 10 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.0 | 100 | | 23 | 30 | 65 - 125 |
| Methylcyclohexane | 10.0 | 11.5 | 115 | | 4 | 30 | 75 - 125 |
| Methylene Chloride | 10.0 | 3.99 | 40 | * | 24 | 30 | 55 - 140 |
| Methylmethacrylate | 10.0 | 10.1 | 101 | | 5 | 30 | 75 - 125 |
| Naphthalene | 10.0 | 9.60 | 96 | | 23 | 30 | 55 - 140 |
| n-Butylbenzene | 10.0 | 11.6 | 116 | | 3 | 30 | 70 - 135 |
| n-Propylbenzene | 10.0 | 10.8 | 108 | | 4 | 30 | 70 - 130 |
| o-Xylene | 10.0 | 11.3 | 113 | | 4 | 30 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 11.9 | 119 | | 4 | 30 | 75 - 130 |
| Propionitrile | 10.0 | 9.81 | 98 | | 9 | 30 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 11.6 | 116 | | 4 | 30 | 70 - 125 |
| Styrene | 10.0 | 11.2 | 112 | | 5 | 30 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 12.7 | 127 | | 4 | 30 | 70 - 130 |
| Tetrachloroethene | 10.0 | 12.0 | 120 | | 2 | 30 | 45 - 150 |
| Toluene | 10.0 | 10.8 | 108 | | 4 | 30 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 10.2 | 102 | | 5 | 30 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 10.2 | 102 | | 7 | 30 | 55 - 140 |
| Trichloroethene | 10.0 | 11.4 | 114 | | 4 | 30 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 9.32 | 93 | | 6 | 30 | 50 - 145 |
| Vinyl acetate | 20.0 | 15.6 | 78 | | 12 | 30 | 75 - 125 |
| Vinyl chloride | 10.0 | 9.00 | 90 | | 4 | 30 | 50 - 145 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047043 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047043-CCV1 )** | | | *Lab File ID: B02890359.D* | | | *Analyzed: 11/13/10 10:25* | | | |
| 1,4-Difluorobenzene | 14263660 | 4.122 | 1.714212E+07 | 4.121 | 83 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7265895 | 11.274 | 7318237 | 11.276 | 99 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2776138 | 7.577 | 3469404 | 7.576 | 80 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11002470 | 3.485 | 1.32552E+07 | 3.484 | 83 | 50 - 200 | 0.0010 | +/-0.50 | |
| **Blank (B047068-BLK1 )** | | | *Lab File ID: B02890360.D* | | | *Analyzed: 11/13/10 11:04* | | | |
| 1,4-Difluorobenzene | 14647940 | 4.121 | 14263660 | 4.122 | 103 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 4684484 | 11.281 | 7265895 | 11.274 | 64 | 50 - 200 | 0.0070 | +/-0.50 | |
| Chlorobenzene-d5 | 3082015 | 7.577 | 2776138 | 7.577 | 111 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11446190 | 3.484 | 11002470 | 3.485 | 104 | 50 - 200 | -0.0010 | +/-0.50 | |
| **LCS (B047068-BS1 )** | | | *Lab File ID: B02890361.D* | | | *Analyzed: 11/13/10 11:30* | | | |
| 1,4-Difluorobenzene | 12660440 | 4.12 | 14263660 | 4.122 | 89 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7076833 | 11.275 | 7265895 | 11.274 | 97 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2615907 | 7.576 | 2776138 | 7.577 | 94 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9918945 | 3.483 | 11002470 | 3.485 | 90 | 50 - 200 | -0.0020 | +/-0.50 | |
| **LCS Dup (B047068-BSD1 )** | | | *Lab File ID: B02890362.D* | | | *Analyzed: 11/13/10 11:57* | | | |
| 1,4-Difluorobenzene | 12095950 | 4.12 | 14263660 | 4.122 | 85 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7121123 | 11.275 | 7265895 | 11.274 | 98 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2526482 | 7.576 | 2776138 | 7.577 | 91 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9413026 | 3.483 | 11002470 | 3.485 | 86 | 50 - 200 | -0.0020 | +/-0.50 | |
| **G01-MW-01-1010 (1011022-01 )** | | | *Lab File ID: B02890367.D* | | | *Analyzed: 11/13/10 14:11* | | | |
| 1,4-Difluorobenzene | 13676150 | 4.121 | 14263660 | 4.122 | 96 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5673778 | 11.277 | 7265895 | 11.274 | 78 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 2865634 | 7.577 | 2776138 | 7.577 | 103 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 10517670 | 3.484 | 11002470 | 3.485 | 96 | 50 - 200 | -0.0010 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047043 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **G01-MW-02-1010 (1011022-02 )** | | | *Lab File ID: B02890368.D* | | | *Analyzed: 11/13/10 14:38* | | | |
| 1,4-Difluorobenzene | 13303090 | 4.12 | 14263660 | 4.122 | 93 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5314267 | 11.278 | 7265895 | 11.274 | 73 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 2717670 | 7.577 | 2776138 | 7.577 | 98 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 10223890 | 3.483 | 11002470 | 3.485 | 93 | 50 - 200 | -0.0020 | +/-0.50 | |
| **G01-MW-04-1010 (1011022-03 )** | | | *Lab File ID: B02890369.D* | | | *Analyzed: 11/13/10 15:05* | | | |
| 1,4-Difluorobenzene | 14763930 | 4.121 | 14263660 | 4.122 | 104 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5645409 | 11.278 | 7265895 | 11.274 | 78 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 3143965 | 7.578 | 2776138 | 7.577 | 113 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11326590 | 3.484 | 11002470 | 3.485 | 103 | 50 - 200 | -0.0010 | +/-0.50 | |
| **GKHMS-TB-05 (1011022-04 )** | | | *Lab File ID: B02890370.D* | | | *Analyzed: 11/13/10 15:32* | | | |
| 1,4-Difluorobenzene | 12106330 | 4.12 | 14263660 | 4.122 | 85 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5324206 | 11.278 | 7265895 | 11.274 | 73 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 2581085 | 7.576 | 2776138 | 7.577 | 93 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9213984 | 3.483 | 11002470 | 3.485 | 84 | 50 - 200 | -0.0020 | +/-0.50 | |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |

# INITIAL CALIBRATION STANDARDS

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046039 | Instrument: | GCMS-D |
| Calibration: | 0111602 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001979 | DFTPP050 WORKING STANDARD | S046039-TUN1 | D46148.D | 11/03/10 11:30 |
| 0001565 | SSTD001 8270LL 1/5ppm | S046039-CAL5 | D46149.D | 11/03/10 11:53 |
| 0001811 | SSTD00.05 8270LL 0.05/0.25ppm | S046039-CAL1 | D46150.D | 11/03/10 12:17 |
| 0001810 | SSTD00.1 8270LL 0.1/0.5ppm | S046039-CAL2 | D46151.D | 11/03/10 12:41 |
| 0001562 | SSTD00.2 8270LL 0.2/1ppm | S046039-CAL3 | D46152.D | 11/03/10 13:06 |
| 0001563 | SSTD00.5 8270LL 0.5/2.5ppm | S046039-CAL4 | D46153.D | 11/03/10 13:30 |
| 0001566 | SSTD02.5 8270LL 2.5/12.5ppm | S046039-CAL6 | D46154.D | 11/03/10 13:54 |
| 0001567 | SSTD005 8270LL 5/25ppm | S046039-CAL7 | D46155.D | 11/03/10 14:19 |
| 0001568 | SSTD010 8270LL 10/50ppm | S046039-CAL8 | D46156.D | 11/03/10 14:43 |
| 0001561 | SSTD020 8270LL 20/100ppm | S046039-CAL9 | D46157.D | 11/03/10 15:07 |
| 0002011 | SSTD02.5ICV 8270LL 2.5 PPM | S046039-SCV1 | D46158.D | 11/03/10 15:49 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# SECOND-SOURCE CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46158.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S046039 | Injection Date: | 11/03/10 |
| Lab Sample ID: | S046039-SCV1 | Injection Time: | 15:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 2500 | 2450 | 0.6958117 | 0.6817819 | | -2.0 | 20 |
| Acenaphthene | A | 2500 | 2370 | 1.324787 | 1.25343 | | -5.4 | 20 |
| Acenaphthylene | A | 2500 | 2390 | 2.222404 | 2.121 | | -4.6 | 20 |
| Anthracene | A | 2500 | 2380 | 1.227584 | 1.168661 | | -4.8 | 20 |
| Benzo[a]anthracene | A | 2500 | 2330 | 1.605312 | 1.496478 | | -6.8 | 20 |
| Benzo[a]pyrene | A | 2500 | 2370 | 2.253927 | 2.136756 | | -5.2 | 20 |
| Benzo[b]fluoranthene | A | 2500 | 2270 | 2.546752 | 2.312748 | | -9.2 | 20 |
| Benzo[g,h,i]perylene | A | 2500 | 2450 | 1.707555 | 1.675813 | | -1.9 | 20 |
| Benzo[k]fluoranthene | A | 2500 | 2380 | 2.564201 | 2.441688 | | -4.8 | 20 |
| Chrysene | A | 2500 | 2280 | 1.591607 | 1.453402 | | -8.7 | 20 |
| Dibenz[a,h]anthracene | A | 2500 | 2440 | 1.626379 | 1.584666 | | -2.6 | 20 |
| Fluoranthene | A | 2500 | 2350 | 1.235125 | 1.161404 | | -6.0 | 20 |
| Fluorene | A | 2500 | 2370 | 1.373122 | 1.301104 | | -5.2 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 2500 | 2260 | 2.228926 | 2.014394 | | -9.6 | 20 |
| Naphthalene | A | 2500 | 2480 | 1.230131 | 1.221897 | | -0.7 | 20 |
| Phenanthrene | A | 2500 | 2280 | 1.255689 | 1.144927 | | -8.8 | 20 |
| Pyrene | A | 2500 | 2400 | 2.168287 | 2.080985 | | -4.0 | 20 |
| 2-Fluorobiphenyl | A | 2500 | 2440 | 1.591732 | 1.552743 | | -2.4 | 20 |
| Nitrobenzene-d5 | A | 2500 | 2470 | 0.3971127 | 0.3917262 | | -1.4 | 20 |
| Terphenyl-d14 | A | 2500 | 2360 | 1.040014 | 0.9812326 | | -5.7 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46326.D | Injection Date: | 11/18/10 |
| Instrument ID: | GCMS-D | Injection Time: | 10:50 |
| Sequence: | S048011 | Lab Sample ID: | S048011-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 40.5 | PASS |
| 70 | Less than 2% of 69 | 0.483 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 52.8 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.35 | PASS |
| 275 | 10 - 30% of 198 | 21.4 | PASS |
| 365 | 1 - 200% of 198 | 3.1 | PASS |
| 443 | 17 - 23% of 442 | 19.2 | PASS |
| 441 | Less than 100% of 443 | 76.9 | PASS |
| 442 | 40 - 200% of 198 | 48.4 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| | S048011-CCV1 | D46328.D | 11/18/2010 | 11:30:00 |
| Blank | B048006-BLK1 | D46332.D | 11/18/2010 | 13:08:00 |
| LCS | B048006-BS1 | D46333.D | 11/18/2010 | 13:32:00 |
| Matrix Spike | B048006-MS1 | D46334.D | 11/18/2010 | 13:57:00 |
| Matrix Spike Dup | B048006-MSD1 | D46335.D | 11/18/2010 | 14:21:00 |
| G01-MW-01-1010 | 1011022-01 | D46336.D | 11/18/2010 | 14:45:00 |
| G01-MW-02-1010 | 1011022-02 | D46337.D | 11/18/2010 | 15:10:00 |
| G01-MW-04-1010 | 1011022-03 | D46338.D | 11/18/2010 | 15:34:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46328.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S048011 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S048011-CCV1 | Injection Time: | 11:30 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1040 | 0.6958117 | 0.7261758 | | 4.4 | 20 |
| Acenaphthene | A | 1000 | 1020 | 1.324787 | 1.350579 | | 1.9 | 20 |
| Acenaphthylene | A | 1000 | 1000 | 2.222404 | 2.223839 | | 0.06 | 20 |
| Anthracene | A | 1000 | 1060 | 1.227584 | 1.306923 | | 6.5 | 20 |
| Benzo[a]anthracene | A | 1000 | 1100 | 1.605312 | 1.758824 | | 9.6 | 20 |
| Benzo[a]pyrene | A | 1000 | 1120 | 2.253927 | 2.534103 | | 12.4 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1140 | 2.546752 | 2.897609 | | 13.8 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 918 | 1.707555 | 1.566834 | | -8.2 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1130 | 2.564201 | 2.887644 | | 12.6 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.745121 | | 9.6 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 918 | 1.626379 | 1.493027 | | -8.2 | 20 |
| Fluoranthene | A | 1000 | 995 | 1.235125 | 1.229038 | | -0.5 | 20 |
| Fluorene | A | 1000 | 965 | 1.373122 | 1.325718 | | -3.5 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 947 | 2.228926 | 2.109996 | | -5.3 | 20 |
| Naphthalene | A | 1000 | 870 | 1.230131 | 1.070101 | | -13.0 | 20 |
| Phenanthrene | A | 1000 | 1040 | 1.255689 | 1.309617 | | 4.3 | 20 |
| Pyrene | A | 1000 | 1170 | 2.168287 | 2.544271 | | 17.3 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1130 | 1.591732 | 1.801738 | | 13.2 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1020 | 0.3971127 | 0.4037676 | | 1.7 | 20 |
| Terphenyl-d14 | A | 1000 | 1110 | 1.040014 | 1.158106 | | 11.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048006-BLK1 | Batch: | B048006 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B048006-MSD1 | D46335.D | 14:21 |
| Matrix Spike | B048006-MS1 | D46334.D | 13:57 |
| LCS | B048006-BS1 | D46333.D | 13:32 |
| G01-MW-04-1010 | 1011022-03 | D46338.D | 15:34 |
| G01-MW-02-1010 | 1011022-02 | D46337.D | 15:10 |
| G01-MW-01-1010 | 1011022-01 | D46336.D | 14:45 |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B048006-BLK1 | File ID: | D46332.D |
| Sampled: | | Prepared: | 11/12/10 09:30 | Analyzed: | 11/18/10 13:08 |
| Solids: | | Preparation: | 3520C Cont. | Dilution: | |
| Batch: | B048006 | Sequence: | S048011 | Calibration: | 0111602 |
| Column: | 1 | | | | |

Instrument: GCMS-D

| CAS NO. | COMPOUND | CONC. (ng/L) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 50.0 | U |
| 83-32-9 | Acenaphthene | 50.0 | U |
| 208-96-8 | Acenaphthylene | 50.0 | U |
| 120-12-7 | Anthracene | 50.0 | U |
| 56-55-3 | Benzo[a]anthracene | 50.0 | U |
| 50-32-8 | Benzo[a]pyrene | 50.0 | U |
| 205-99-2 | Benzo[b]fluoranthene | 50.0 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 50.0 | U |
| 207-08-9 | Benzo[k]fluoranthene | 50.0 | U |
| 218-01-9 | Chrysene | 50.0 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 50.0 | U |
| 206-44-0 | Fluoranthene | 50.0 | U |
| 86-73-7 | Fluorene | 50.0 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 50.0 | U |
| 91-20-3 | Naphthalene | 50.0 | U |
| 85-01-8 | Phenanthrene | 50.0 | U |
| 129-00-0 | Pyrene | 50.0 | U |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-D |

| | 2FBPL (50 - 110) | NB-d5 (40 - 110) | TRPL-D14 (50 - 135) |
|---|---|---|---|
| 1011022-01 | 94 | 110 | 103 |
| 1011022-02 | 142* | 151* | 181* |
| 1011022-03 | 130* | 145* | 141* |
| B048006-BLK1 | 92 | 100 | 89 |
| B048006-BS1 | 93 | 100 | 93 |
| B048006-MS1 | 96 | 113* | 90 |
| B048006-MSD1 | 89 | 107 | 104 |

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# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048006 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048006-MS1 |
| Column: | | Sample Lab ID: | 1011026-05 |

| ANALYTE | SPIKE ADDED (ng/L) | SAMPLE CONCENTRATION (ng/L) | MS CONCENTRATION (ng/L) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 26.6 | 4880 | 97 | 45 - 105 |
| Acenaphthene | 5000 | 75000 | 70800 | -84 * | 45 - 110 |
| Acenaphthylene | 5000 | 988 | 5350 | 87 | 50 - 105 |
| Anthracene | 5000 | 1800 | 5550 | 75 | 55 - 110 |
| Benzo[a]anthracene | 5000 | | 4540 | 91 | 55 - 110 |
| Benzo[a]pyrene | 5000 | | 5060 | 101 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | | 5980 | 120 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | | 4390 | 88 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | | 5210 | 104 | 45 - 125 |
| Chrysene | 5000 | | 4480 | 90 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | | 4320 | 86 | 40 - 125 |
| Fluoranthene | 5000 | 1390 | 6530 | 103 | 55 - 115 |
| Fluorene | 5000 | 1730 | 5740 | 80 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | | 4180 | 84 | 45 - 125 |
| Naphthalene | 5000 | 95.0 | 4420 | 86 | 40 - 100 |
| Phenanthrene | 5000 | 173 | 4660 | 90 | 50 - 115 |
| Pyrene | 5000 | 483 | 4400 | 78 | 50 - 130 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## Matrix Spike Dup

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048006 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048006-MSD1 |
| Column: | | Sample Lab ID: | 1011026-05 |

| ANALYTE | SPIKE ADDED (ng/L) | MSD CONCENTRATION (ng/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5310 | 106 * | 8 | 20 | 45 - 105 |
| Acenaphthene | 5000 | 70700 | -85 * | 0.08 | 20 | 45 - 110 |
| Acenaphthylene | 5000 | 5320 | 87 | 0.5 | 20 | 50 - 105 |
| Anthracene | 5000 | 5670 | 77 | 2 | 20 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4900 | 98 | 8 | 20 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5280 | 106 | 4 | 20 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5870 | 117 | 2 | 20 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 4780 | 96 | 8 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 5720 | 114 | 9 | 20 | 45 - 125 |
| Chrysene | 5000 | 4710 | 94 | 5 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 4720 | 94 | 9 | 20 | 40 - 125 |
| Fluoranthene | 5000 | 6120 | 95 | 6 | 20 | 55 - 115 |
| Fluorene | 5000 | 6120 | 88 | 6 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 4540 | 91 | 8 | 20 | 45 - 125 |
| Naphthalene | 5000 | 4720 | 92 | 7 | 20 | 40 - 100 |
| Phenanthrene | 5000 | 4950 | 96 | 6 | 20 | 50 - 115 |
| Pyrene | 5000 | 5590 | 102 | 24 * | 20 | 50 - 130 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B048006 | Laboratory ID: | B048006-BS1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5020 | 100 | 45 - 105 |
| Acenaphthene | 5000 | 4720 | 94 | 45 - 110 |
| Acenaphthylene | 5000 | 4320 | 86 | 50 - 105 |
| Anthracene | 5000 | 4660 | 93 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4660 | 93 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5190 | 104 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5700 | 114 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 5220 | 104 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 5070 | 101 | 45 - 125 |
| Chrysene | 5000 | 4630 | 93 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 5130 | 103 | 40 - 125 |
| Fluoranthene | 5000 | 4690 | 94 | 55 - 115 |
| Fluorene | 5000 | 4570 | 91 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 4920 | 98 | 45 - 125 |
| Naphthalene | 5000 | 4540 | 91 | 40 - 100 |
| Phenanthrene | 5000 | 4680 | 94 | 50 - 115 |
| Pyrene | 5000 | 4570 | 91 | 50 - 130 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048011 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048011-CCV1 )** | | | *Lab File ID: D46328.D* | | | *Analyzed: 11/18/10 11:30* | | | |
| 1,4-Dichlorobenzene-d4 | 145296 | 3.7 | 524277 | 3.79 | 28 | 50 - 200 | -0.0900 | +/-30.00 | |
| Acenaphthene-d10 | 240208 | 6.82 | 890160 | 6.91 | 27 | 50 - 200 | -0.0900 | +/-30.00 | |
| Chrysene-d12 | 163764 | 11.25 | 837431 | 11.37 | 20 | 50 - 200 | -0.1200 | +/-30.00 | |
| Naphthalene-d8 | 559936 | 4.99 | 1909751 | 5.08 | 29 | 50 - 200 | -0.0900 | +/-30.00 | |
| Perylene-d12 | 83894 | 13.9 | 457505 | 14.11 | 18 | 50 - 200 | -0.2100 | +/-30.00 | |
| Phenanthrene-d10 | 335469 | 8.35 | 1402237 | 8.45 | 24 | 50 - 200 | -0.1000 | +/-30.00 | |
| **Blank (B048006-BLK1 )** | | | *Lab File ID: D46332.D* | | | *Analyzed: 11/18/10 13:08* | | | |
| 1,4-Dichlorobenzene-d4 | 146239 | 3.71 | 145296 | 3.7 | 101 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 229658 | 6.82 | 240208 | 6.82 | 96 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 170120 | 11.25 | 163764 | 11.25 | 104 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 522704 | 5 | 559936 | 4.99 | 93 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 99575 | 13.91 | 83894 | 13.9 | 119 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 302080 | 8.36 | 335469 | 8.35 | 90 | 50 - 200 | 0.0100 | +/-30.00 | |
| **LCS (B048006-BS1 )** | | | *Lab File ID: D46333.D* | | | *Analyzed: 11/18/10 13:32* | | | |
| 1,4-Dichlorobenzene-d4 | 142285 | 3.71 | 145296 | 3.7 | 98 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 218465 | 6.83 | 240208 | 6.82 | 91 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 190421 | 11.25 | 163764 | 11.25 | 116 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 484401 | 5 | 559936 | 4.99 | 87 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 108943 | 13.9 | 83894 | 13.9 | 130 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 316174 | 8.36 | 335469 | 8.35 | 94 | 50 - 200 | 0.0100 | +/-30.00 | |
| **Matrix Spike (B048006-MS1 )** | | | *Lab File ID: D46334.D* | | | *Analyzed: 11/18/10 13:57* | | | |
| 1,4-Dichlorobenzene-d4 | 102623 | 3.72 | 145296 | 3.7 | 71 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 145784 | 6.83 | 240208 | 6.82 | 61 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 156532 | 11.25 | 163764 | 11.25 | 96 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 340184 | 5 | 559936 | 4.99 | 61 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 72094 | 13.91 | 83894 | 13.9 | 86 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 202312 | 8.36 | 335469 | 8.35 | 60 | 50 - 200 | 0.0100 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011022 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048011 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit |
|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B048006-MSD1 )** | | | *Lab File ID: D46335.D* | | | *Analyzed: 11/18/10 14:21* | | |
| 1,4-Dichlorobenzene-d4 | 124376 | 3.72 | 145296 | 3.7 | 86 | 50 - 200 | 0.0200 | +/-30.00 |
| Acenaphthene-d10 | 193451 | 6.83 | 240208 | 6.82 | 81 | 50 - 200 | 0.0100 | +/-30.00 |
| Chrysene-d12 | 155226 | 11.25 | 163764 | 11.25 | 95 | 50 - 200 | 0.0000 | +/-30.00 |
| Naphthalene-d8 | 421761 | 5 | 559936 | 4.99 | 75 | 50 - 200 | 0.0100 | +/-30.00 |
| Perylene-d12 | 76894 | 13.91 | 83894 | 13.9 | 92 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 280691 | 8.36 | 335469 | 8.35 | 84 | 50 - 200 | 0.0100 | +/-30.00 |
| **G01-MW-01-1010 (1011022-01 )** | | | *Lab File ID: D46336.D* | | | *Analyzed: 11/18/10 14:45* | | |
| 1,4-Dichlorobenzene-d4 | 127257 | 3.72 | 145296 | 3.7 | 88 | 50 - 200 | 0.0200 | +/-30.00 |
| Acenaphthene-d10 | 185804 | 6.83 | 240208 | 6.82 | 77 | 50 - 200 | 0.0100 | +/-30.00 |
| Chrysene-d12 | 148000 | 11.25 | 163764 | 11.25 | 90 | 50 - 200 | 0.0000 | +/-30.00 |
| Naphthalene-d8 | 421910 | 5 | 559936 | 4.99 | 75 | 50 - 200 | 0.0100 | +/-30.00 |
| Perylene-d12 | 84397 | 13.91 | 83894 | 13.9 | 101 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 259904 | 8.36 | 335469 | 8.35 | 77 | 50 - 200 | 0.0100 | +/-30.00 |
| **G01-MW-02-1010 (1011022-02 )** | | | *Lab File ID: D46337.D* | | | *Analyzed: 11/18/10 15:10* | | |
| 1,4-Dichlorobenzene-d4 | 127776 | 3.72 | 145296 | 3.7 | 88 | 50 - 200 | 0.0200 | +/-30.00 |
| Acenaphthene-d10 | 205775 | 6.83 | 240208 | 6.82 | 86 | 50 - 200 | 0.0100 | +/-30.00 |
| Chrysene-d12 | 133947 | 11.25 | 163764 | 11.25 | 82 | 50 - 200 | 0.0000 | +/-30.00 |
| Naphthalene-d8 | 440610 | 5 | 559936 | 4.99 | 79 | 50 - 200 | 0.0100 | +/-30.00 |
| Perylene-d12 | 70792 | 13.91 | 83894 | 13.9 | 84 | 50 - 200 | 0.0100 | +/-30.00 |
| Phenanthrene-d10 | 274628 | 8.36 | 335469 | 8.35 | 82 | 50 - 200 | 0.0100 | +/-30.00 |
| **G01-MW-04-1010 (1011022-03 )** | | | *Lab File ID: D46338.D* | | | *Analyzed: 11/18/10 15:34* | | |
| 1,4-Dichlorobenzene-d4 | 133971 | 3.72 | 145296 | 3.7 | 92 | 50 - 200 | 0.0200 | +/-30.00 |
| Acenaphthene-d10 | 220626 | 6.83 | 240208 | 6.82 | 92 | 50 - 200 | 0.0100 | +/-30.00 |
| Chrysene-d12 | 176290 | 11.26 | 163764 | 11.25 | 108 | 50 - 200 | 0.0100 | +/-30.00 |
| Naphthalene-d8 | 468664 | 5 | 559936 | 4.99 | 84 | 50 - 200 | 0.0100 | +/-30.00 |
| Perylene-d12 | 85364 | 13.92 | 83894 | 13.9 | 102 | 50 - 200 | 0.0200 | +/-30.00 |
| Phenanthrene-d10 | 313352 | 8.36 | 335469 | 8.35 | 93 | 50 - 200 | 0.0100 | +/-30.00 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: FEBRUARY 9, 2011**

**FROM:** **DANIELLE M. BAUGHMAN** **COPIES: DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – MERCURY**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – 1011022**

**SAMPLES:**

3/Aqueous/

G01-MW-01-1010-111710 G01-MW-02-1010-111710 G01-MW-04-1010-111710

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011022, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for mercury. The samples were collected by Tetra Tech NUS on November 5, 2010 and analyzed by Centauri Labs under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Mercury analyses were conducted using SW-846 7470A.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
• Laboratory Method Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

The following contaminant was detected in the laboratory method blank at the following maximum concentration:

| Analyte | Maximum Concentration | Action Level |
|---|---|---|
| Mercury | 0.01 ug/L | 0.05 ug/L |

(1) CCB run on 11/17/10 associated with sample G01-MW-01-1010-111710.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level reported for lead was qualified as "U" as a result of laboratory blank contamination.

Notes

Nothing to report.

Executive Summary

**Laboratory Performance:** Mercury was present in the laboratory method blank.

**Other Factors Affecting Data Quality:** No issues to report.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Danielle M. Baughman
Project Engineer

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010-111710 | | | G01-MW-02-1010-111710 | | | G01-MW-04-1010-111710 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011022 | LAB_ID | 1011022-01 | | | 1011022-02 | | | 1011022-03 | | |
| FRACTION: M | SAMP_DATE | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| MERCURY | | 0.029 | U | A | 0.0114 | U | | 0.0114 | U | |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01-1010
Sample Date/Time: 11/05/10 11:40
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011022-01
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | 0.0290 | J | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:32 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/05/10 10:35
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011022-02
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:35 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-04-1010
Sample Date/Time: 11/05/10 09:28
Analytical Method: SW7470A

Sample Matrix: Water
Sample ID: 1011022-03
Percent solids:
Preparation Method: 7470A Dig
Prepared Date/Time: 11/17/10 11:50

| *Parameter* | *CAS* | *Reported Result* | *Q* | *Method Detection Limit* | *Reporting Limit* | *Dil Fact* | *Units* | *Analysis Date/Time* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 7439-97-6 | BQL | U | 0.0114 | 0.200 | 1 | ug/L | 11/17/10 18:38 |

# APPENDIX C
# SUPPORT DOCUMENTATION

**SAMPLE RECIEPT**

Four water samples were received on 11/06/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/02/2010.

**VOLATILES**

Four water samples were analyzed for volatile organic compounds by the SW846 method 8260B.
The samples were analyzed within the holding time.

All surrogate recoveries and internal standard responses were within the QC limits.

Duplicate laboratory control samples were analyzed along with the batch.

Recovery of one compound in the LCS was above the QC limits.
Acetone was detected in sample GKHMS-TB-05. Although the recovery for acetone was above QC limits for the LCS and RPD, the response in the CCV and recovery in the LCSD were within QC limits.

The recoveries of four analytes were below QC limits in the LCS and two analytes in the LCSD. Because those compounds were not detected above the method detection limit in the samples, the data is not affected. The % RPD for one compound was above the QC limits for the pair.

The response for two compounds was above the QC limits in the daily CCV and five was below QC limits. None of the affected compounds were detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

**SW8270LL-PAH SIM**

Three water samples were extracted by method 3520C. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met.
Samples G01-MW-02-1010, and G01-MW-04-1010 had three surrogate recoveries above the QC limits. Sample B048006-MS1 had one surrogate recovery above the QC limits. All other surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were shared with work order 1011026. Three spike recoveries and one %RPD were outside the QC limits.
A laboratory control sample was extracted and analyzed with this batch. All spike recoveries were within the QC limits.

**Data Qualifiers Key Reference:**

**All Departments**

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

**Organics**

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

**Metals**

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| G01-MW-01-1010 | 1011022-01 | SW7470A | Water | 11/5/2010 | 11/6/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| G01-MW-02-1010 | 1011022-02 | SW7470A | Water | 11/5/2010 | 11/6/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| G01-MW-04-1010 | 1011022-03 | SW7470A | Water | 11/5/2010 | 11/6/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-TB-05 | 1011022-04 | SW8260B | Water | 11/5/2010 | 11/6/2010 |

**Subcontracted Analyses**

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1011022-01 | 6010C Full |
| 1011022-01 | 6020A Full |
| 1011022-01 | 8081A Pesticides |
| 1011022-01 | 8082 PCBs |
| 1011022-01 | 8270D LL SVOC TCL |
| 1011022-01 | Mercury, Total 7470A |
| 1011022-02 | 6010C Full |
| 1011022-02 | 6020A Full |
| 1011022-02 | 8081A Pesticides |
| 1011022-02 | 8082 PCBs |
| 1011022-02 | 8270D LL SVOC TCL |
| 1011022-02 | Mercury, Total 7470A |
| 1011022-03 | 6010C Full |
| 1011022-03 | 6020A Full |
| 1011022-03 | 8081A Pesticides |
| 1011022-03 | 8082 PCBs |
| 1011022-03 | 8270D LL SVOC TCL |
| 1011022-03 | Mercury, Total 7470A |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-12

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8260B** | G01-MW-01 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8720D/8270DSIM** | G01-MW-01 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8082A** | G01-MW-01 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8081B** | G01-MW-01 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 6020A** | G01-MW-01 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8260B** | G01-MW-02 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8720D/8270DSIM** | G01-MW-02 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8082A** | G01-MW-02 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8081B** | G01-MW-02 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 6020A** | G01-MW-02 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8260B** | G01-MW-04 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8720D/8270DSIM** | G01-MW-04 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8082A** | G01-MW-04 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8081B** | G01-MW-04 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 6020A** | G01-MW-04 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | GKHMS-TB-05 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

10 11 0 22

| 1. Relinquished By: **Gary Braganza** | Date: 11/05/2010 | Time: 13:26 | Received By: **Federal Express** | Date: 11/05/2010 | Time: 15:26 |
|---|---|---|---|---|---|
| 2. Relinquished By: | Date: | Time: | Received By: | Date: 11/6/10 | Time: 10:30 |

HOLDTIME

**SDG** 1011022

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | G01-MW-04-1010 | 1011022-03 | NM | 11/05/2010 | 11/17/2010 | 11/17/2010 | 12 | 0 | 12 |
| HG | UG/L | G01-MW-02-1010 | 1011022-02 | NM | 11/05/2010 | 11/17/2010 | 11/17/2010 | 12 | 0 | 12 |
| HG | UG/L | G01-MW-01-1010 | 1011022-01 | NM | 11/05/2010 | 11/17/2010 | 11/17/2010 | 12 | 0 | 12 |
| OV | UG/L | GKHMS-TB-05 | 1011022-04 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| OV | UG/L | G01-MW-04-1010 | 1011022-03 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| OV | UG/L | G01-MW-02-1010 | 1011022-02 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| OV | UG/L | G01-MW-01-1010 | 1011022-01 | NM | 11/05/2010 | 11/13/2010 | 11/13/2010 | 8 | 0 | 8 |
| SIM | NG/L | G01-MW-04-1010 | 1011022-03 | NM | 11/05/2010 | 11/12/2010 | 11/18/2010 | 7 | 6 | 13 |
| SIM | NG/L | G01-MW-02-1010 | 1011022-02 | NM | 11/05/2010 | 11/12/2010 | 11/18/2010 | 7 | 6 | 13 |
| SIM | NG/L | G01-MW-01-1010 | 1011022-01 | NM | 11/05/2010 | 11/12/2010 | 11/18/2010 | 7 | 6 | 13 |

# Metals

## - 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** PLASMA-PURE

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Acceptance Window (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **ICV01** | | | | | | | | | |
| | Mercury | 3.06 | 3.0 | 102.0 | 90.0 - 110.0 | CV | 11/17/2010 | 16:15 | HG101117a |
| **CCV01** | | | | | | | | | |
| | Mercury | 5.17 | 5.0 | 103.4 | 90.0 - 110.0 | CV | 11/17/2010 | 16:29 | HG101117a |
| **CCV02** | | | | | | | | | |
| | Mercury | 5.18 | 5.0 | 103.6 | 90.0 - 110.0 | CV | 11/17/2010 | 17:02 | HG101117a |
| **CCV03** | | | | | | | | | |
| | Mercury | 5.05 | 5.0 | 101.0 | 90.0 - 110.0 | CV | 11/17/2010 | 17:35 | HG101117a |
| **CCV04** | | | | | | | | | |
| | Mercury | 4.88 | 5.0 | 97.6 | 90.0 - 110.0 | CV | 11/17/2010 | 18:09 | HG101117a |
| **CCV05** | | | | | | | | | |
| | Mercury | 4.66 | 5.0 | 93.2 | 90.0 - 110.0 | CV | 11/17/2010 | 18:41 | HG101117a |

# Metals

- 2b -

## CRDL STANDARD FOR AA & ICP

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

**AA CRDL Standard Source:** PLASMA-PURE

**ICP CRDL Standard Source:**

| Sample ID | Analyte | Result ug/L | True Value ug/L | % Recovery | Advisory Limits (%R) | M | Analysis Date | Analysis Time | Run Number |
|---|---|---|---|---|---|---|---|---|---|
| **CRI01** | | | | | | | | | |
| | Mercury | 0.21 | 0.2 | 105.0 | 70 - 130 | CV | 11/17/20 | 16:26 | HG101117 |

# Metals

## - 3a -

## INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Analyte | Result ug/L | Acceptance Limit | Conc Qual | MDL | CRQL | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **ICB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:18 | HG101117a |
| **CCB01** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 16:32 | HG101117a |
| **CCB02** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:04 | HG101117a |
| **CCB03** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 17:38 | HG101117a |
| **CCB04** | Mercury | 0.01 | +/-0.20 | U | 0.01 | 0.20 | CV | 11/17/2010 | 18:13 | HG101117a |
| **CCB05** | Mercury | 0.01 | +/-0.20 | J | 0.01 | 0.20 | CV | 11/17/2010 | 18:44 | HG101117a |

## Metals
### - 3b -
### PREPARATION BLANK SUMMARY

**Client:** Chemtech MD **SDG No.:** 101117A

**Instrument:** CV5

| Sample ID | Analyte | Result (ug/L) | Acceptance Limit | Conc Qual | MDL ug/L | CRQL ug/L | M | Analysis Date | Analysis Time | Run |
|---|---|---|---|---|---|---|---|---|---|---|
| **PBW2** | | **WATER** | | **Batch Number:** | | **B047045** | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 17:41 | HG101117a |
| **PBW1** | | **WATER** | | **Batch Number:** | | **B047046** | | **Prep Date:** | | |
| | Mercury | 0.011 | <0.200 | U | 0.011 | 0.200 | CV | 11/17/2010 | 16:34 | HG101117a |

# Metals
## - 10 -
## METHOD DETECTION LIMITS

**Client:** Chemtech MD **SDG No.:** 101117A

**Contract:** **Lab Code:** CHEM **Case No.:** 101117A **SAS No.:** 101117A

| Analyte | Wave- length (nm) | MDL ug/L | CRQL ug/L | Date: |
|---|---|---|---|---|
| Mercury | 253.70 | 0.0114 | 0.2000 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD
**SDG No.:** 101117A
**Contract:**
**Lab Code:** CHEM
**Method:** CV
**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047045 | | | | | | |
| PBW2 | PBW02 | MB | WATER | | 100.0 | 100.0 | |
| LCSW3 | LCSW03 | LCS | WATER | | 100.0 | 100.0 | |
| 1010098-01 | GKHMS-GW-002-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-01S | GKHMS-GW-002-1010S | MS | WATER | | 100.0 | 100.0 | |
| 1010098-01SD | GKHMS-GW-002-1010SD | MSD | WATER | | 100.0 | 100.0 | |
| 1010098-02 | GKHMS-GW-003-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-03 | GKHMS-GW-004-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-04 | GKHMS-GW-005-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-05 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-06 | GKHMS-GW-007-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-08 | GKHMS-GW-008-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-09 | GKHMS-GW-009-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-10 | GKHMS-GW-010-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-11 | GKHMS-GW-011-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-12 | GKHMS-GW-012-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1010098-13 | GKHMS-GW-013-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-01 | G01-MW-01-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-02 | G01-MW-02-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011022-04 | G01-MW-04-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals
- 13 -
## SAMPLE PREPARATION SUMMARY

**Client:** Chemtech MD

**SDG No.:** 101117A

**Contract:**

**Lab Code:** CHEM

**Method:** CV

**Case No.:** 101117A **SAS No.:** 101117A

| Sample ID | Client ID | Sample Type | Matrix | Prep Date | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|---|---|---|---|---|---|---|---|
| **Batch Number:** | B047046 | | | | | | |
| PBW1 | PBW1 | MB | WATER | | 100.0 | 100.0 | |
| LCSW1 | LCSW1 | LCS | WATER | | 100.0 | 100.0 | |
| LCSW2 | LCSW2 | LCS | WATER | | 100.0 | 100.0 | |
| 1011026-05 | 1011026-05 | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MS | 1011026-05MS | SAM | WATER | | 100.0 | 100.0 | |
| B047046-MSD | 1011026-05MSD | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-01 | GKHMS-GW-006-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-02 | GKHMS-GW-09-1010 | SAM | WATER | | 100.0 | 100.0 | |
| 1011015-03 | GKHMS-GW-10-1010 | SAM | WATER | | 100.0 | 100.0 | |

# Metals

14

## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| S0 | 1.00 | 1557 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.2 | 1.00 | 1600 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S0.5 | 1.00 | 1603 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S1.0 | 1.00 | 1606 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S5.0 | 1.00 | 1609 | | | | | | | | | | | | | | | | X | | | | | | | | |
| S10.0 | 1.00 | 1612 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICV01 | 1.00 | 1615 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ICB01 | 1.00 | 1618 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CRI01 | 1.00 | 1626 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV01 | 1.00 | 1629 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB01 | 1.00 | 1632 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW1 | 1.00 | 1634 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW1 | 1.00 | 1637 | | | | | | | | | | | | | | | | X | | | | | | | | |
| LCSW2 | 1.00 | 1640 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1642 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1645 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1648 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1650 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1653 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1656 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1659 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV02 | 1.00 | 1702 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB02 | 1.00 | 1704 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05 | 1.00 | 1707 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MS | 1.00 | 1710 | | | | | | | | | | | | | | | | X | | | | | | | | |
| 1011026-05MSD | 1.00 | 1712 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1716 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1719 | | | | | | | | | | | | | | | | | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1722 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-09-1010 | 1.00 | 1724 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-10-1010 | 1.00 | 1727 | | | | | | | | | | | | | | | | X | | | | | | | | |
| ZZZZZZ | 1.00 | 1730 | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZ | 1.00 | 1733 | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV03 | 1.00 | 1735 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB03 | 1.00 | 1738 | | | | | | | | | | | | | | | | X | | | | | | | | |
| PBW02 | 1.00 | 1741 | | | | | | | | | | | | | | | | X | | | | | | | | |

# Metals

14

## ANALYSIS RUN LOG

Client: Chemtech MD Contract:

Lab Code: CHEM Case No.: 101117A SAS No.: 101117A SDG No.: 101117A

Instrument ID Number: CV5 Method: CV Run Number: HG101117a

Start Date: 11/17/2010 End Date: 11/17/2010

| EPA Sample No. | D/F | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AL | SB | AS | BA | BE | CD | CA | CR | CO | CU | FE | PB | MG | MN | HG | NI | K | SE | AG | NA | TL | V | ZN | CN |
| LCSW03 | 1.00 | 1745 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010 | 1.00 | 1747 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010S | 1.00 | 1750 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-002-1010SD | 1.00 | 1753 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-003-1010 | 1.00 | 1756 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-004-1010 | 1.00 | 1758 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-005-1010 | 1.00 | 1801 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-006-1010 | 1.00 | 1804 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-007-1010 | 1.00 | 1806 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV04 | 1.00 | 1809 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB04 | 1.00 | 1813 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-008-1010 | 1.00 | 1816 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-009-1010 | 1.00 | 1819 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-010-1010 | 1.00 | 1821 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-011-1010 | 1.00 | 1824 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-012-1010 | 1.00 | 1827 | | | | | | | | | | | | | | | | X | | | | | | | | |
| GKHMS-GW-013-1010 | 1.00 | 1829 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-01-1010 | 1.00 | 1832 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-02-1010 | 1.00 | 1835 | | | | | | | | | | | | | | | | X | | | | | | | | |
| G01-MW-04-1010 | 1.00 | 1838 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCV05 | 1.00 | 1841 | | | | | | | | | | | | | | | | X | | | | | | | | |
| CCB05 | 1.00 | 1844 | | | | | | | | | | | | | | | | X | | | | | | | | |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

| | | | |
|---|---|---|---|
| **TO:** | **C. STOTLER-HARDY** | **DATE:** | **FEBRUARY 15, 2011** |
| **FROM:** | **JOSEPH KALINYAK** | **COPIES:** | **DV FILE** |

**SUBJECT:** **ORGANIC DATA VALIDATION – VOC / PAH**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – 1011026**

**SAMPLES:** 8 / Aqueous / VOC

| | | |
|---|---|---|
| G01-MW-01A-1010 | G01-MW-03-1010 | G01-MW-05-1010 |
| G01-MW-07-1010 | G01-MW-08-1010 | G01-MW-12-1010 |
| GKHMS-GW-FD04-1010 | GKHMS-TB-06-1010 | |

7 / Aqueous / PAH

| | | |
|---|---|---|
| G01-MW-01A-1010 | G01-MW-03-1010 | G01-MW-05-1010 |
| G01-MW-07-1010 | G01-MW-08-1010 | G01-MW-12-1010 |
| GKHMS-GW-FD04-1010 | | |

Overview

The sample set for NAS Key West, CTO JM16, SDG 1011026 consisted of eight (8) aqueous environmental samples, including one (1) trip blank sample. All samples were analyzed for volatile organic compounds (VOC) and seven (7) samples were analyzed for polynuclear aromatic hydrocarbons (PAH). One field duplicate pair was associated with this sample delivery group (SDG); GKHMS-GW-FD04-1010 / G01-MW-08-1010.

The samples were collected by Tetra Tech NUS on November 6 and 7, 2010 and analyzed by Centauri Laboratory. All analyses were conducted in accordance with SW-846 Method 8260B and 8270C SIM analytical and reporting protocols. The data contained in this SDG were fully validated with regard to the following parameters:

- Data Completeness
- * Holding Times
- * GC/MS Tuning
- Initial and Continuing Calibration
- * Laboratory Blank Analyses
- Blank Spike Results
- System Monitoring Compound/Surrogate Recovery
- Field Duplicate Results
- Compound Identification
- Compound Quantitation
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. ChemTech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not reported by the laboratory. In the VOC fraction 1,4-dioxane was one of these analytes. This is further discussed in the additional problems section. There were a number of issues with the initial calibration data provided by Centauri for VOCs. ChemTech was contacted and they did not provide revised forms for this package. As a result, the following non-detected VOC analytes were qualified estimated, (UJ), based on the lack of laboratory calculated relative response factors (RRF): acetonitrile, acrylonitrile, cyclohexane, ethyl methacrylate, 1,1,2-trichlorotrifluoroethane, methyl iodide, isobutyl alcohol, methacrylonitrile, methyl acetate, methyl cyclohexane, methyl methacrylate, propionitrile, and vinyl acetate.

The initial calibration and continuing calibration relative response factors (RRFs) for 1,2-dibromo-3-chloropropane, acetone, and bromomethane were less than the 0.05 quality control limit on instrument GCMS-B on 11/11/10 and on 11/12/10 @ 20:02. The non-detected 1,2-dibromo-3-chloropropane, acetone, and bromomethane results for all samples were qualified rejected, (UR).

The initial calibration r factor for the linear calibration was less than the 0.995 quality control limit for methylene chloride, chloroethane, and trans-1,3-dichloropropene. The non-detected methylene chloride, chloroethane, and trans-1,3-dichloropropene results for all samples were qualified estimated, (UJ)

The initial calibration relative standard deviation (RSD) was greater than the 15% quality control limit for 1,1,2-trichloroethane, 1,1-dichloropropene, 1,2-dibromo-3-chloropropane, 1,2-dichloroethane, 2-butanone, benzene, bromodichloromethane, dibromomethane, ethyl methacrylate, hexachlorobutadiene, n-butyl benzene, toluene, and trichloroethene for instrument GCMS-B affecting the analysis of all samples. All sample non-detected results for the aforementioned analytes were qualified estimated, (UJ), except sample 1,2-dibromo-3-chloropropane results which were qualified rejected for another issue.

The CCV percent difference was greater than the quality control limit of 20% for 2,2-dichloropropane, acetonitrile, acrylonitrile, bromoform, chloromethane, cis-1,3-dichloropropene, ethyl methacrylate, isobutyl alcohol, methacrylonitrile, methyl acetate, methyl tert-butyl ether, methylene chloride, and propionitrile for instrument GCMS-B on 11/13/10 @ 10:25 affecting samples G01-MW-01A-1010, G01-MW-03-1010, G01-MW-05-1010, G01-MW-07-1010, G01-MW-08-1010, G01-MW-12-1010, and GKHMS-GW-FD04-1010. All aforementioned sample non-detected results for the aforementioned analytes were qualified estimated, (UJ).

The CCV percent difference was greater than the quality control limit of 20% for 1,1,2-trichloroethane, 1,1-dichloropropene, 1,2,3-trichlorobenzene, 1,2-dichloroethane, 2-butanone, acetonitrile, benzene, bromodichloromethane, bromomethane, chloromethane, cis-1,3-dichloropropene, dibromomethane, methylene chloride, naphthalene, n-butyl benzene, toluene, and trichloroethene for instrument GCMS-B on 11/15/10 @ 09:49 affecting sample GKHMS-TB-06-1010. The sample GKHMS-TB-06-1010 non-detected results for the aforementioned analytes were qualified estimated, (UJ), except bromomethane results which were qualified rejected for another issue.

The VOC LCS %R was less than the quality control limit for batch B049003 for 2,2-dichloropropane, methyl iodide, methylene chloride, and vinyl acetate affecting sample GKHMS-TB-06-1010. The sample GKHMS-TB-06-1010 non-detected results for the aforementioned analytes were qualified estimated, (UJ).

The LCS %R was less than the quality control limit for batch B047068 for methyl iodide, methyl acetate, methylene chloride, and vinyl acetate. The LCS duplicate (LCSD) %R was less than the quality control limit for batch B047068 for, methyl iodide and methylene chloride. The samples GKHMS-GW-FD04-1010, G01-MW-08-1010, G01-MW-05-1010, G01-MW-12-1010, G01-MW-07-1010, G01-MW-03-1010, and G01-MW-01A-1010 methyl iodide and methylene chloride non-detected results were qualified estimated, (UJ). The sample GKHMS-TB-06-1010 methyl acetate and vinyl acetate results were not qualified as the LCSD %Rs were within the quality control limits as were the LCS/LCSD RPDs.

The surrogate %R was less than the quality control limit and greater than 10% for toluene-d8 for sample GKHMS-TB-06-1010. All sample non-detected VOC results were qualified estimated, (UJ), except 1,2-dibromo-3-chloropropane, acetone, and bromomethane results which were qualified rejected for another reason.

The internal standard recovery was less than 50%, the quality control limit, for 1,4-dichlorobenzene-d4 for sample GKHMS-TB-06-1010. The non-detected VOCs associated with the internal standard for sample GKHMS-TB-06-1010 were qualified estimated, (UJ).

The matrix spike (MS) and MS duplicate MSD %Rs were less than the quality control limit for methyl iodide, methyl acetate, methylene chloride, and vinyl acetate for spiked sample G01-MW-05-1010. The non-detected methyl iodide, methyl acetate, methylene chloride, and vinyl acetate results were qualified estimated, (UJ), for spiked sample G01-MW-05-1010.

PAH

It was noted by the data validator that 1-methylnaphthalene was not reported by the laboratory as outlined in Worksheet #15 of the NAS Key West SAP (August 2010). The laboratory was contacted and requested to provide the missing data. The 1-methylnaphthalene results were not provided by the laboratory and 1-methylnaphthalene results were not reported for this SDG.

The RPD was greater than the 30% quality control limit for anthracene for the field duplicate sample pair GKHMS-GW-FD04-1010 / G01-MW-08-1010. The positive anthracene results for samples GKHMS-GW-FD04-1010 and G01-MW-08-1010 were qualified estimated, (J), due to field duplicate imprecision.

**ADDITIONAL COMMENTS**

Upon receipt of this data package, Centauri Laboratory had closed. This made it difficult to obtain information that was missing from this data package. ChemTech purchased Centauri Laboratory and tried to retrieve missing data from the original data package which caused a delay in this report. In this data package, several target compounds identified in the SAP were not originally reported by the Centauri laboratory. The following tables outline the discrepancies between the compounds reported/not reported initially by the laboratory in various fractions as presented in the NAS Key West QAPP.

| Target Compounds Listed in the SAP but not reported by the Lab | Fraction |
|---|---|
| 1,4-dioxane | VOC |
| 1-methylnaphthalene | PAH |

Naphthalene was reported in both the VOC and PAH fractions in this SDG.

The following compounds were reported by the laboratory but were not required per the SAP.

| Compounds Reported by the Lab not listed in the SAP in the VOC Fraction |
|---|
| 1,1,1,2-tetrachloroethane |
| 1,1-dichloropropene |
| 1,2,3-trichloropropane |
| 1,2,4-trimethylbenzene |
| 1,3,5-trimethylbenzene |
| 1,3-dichloropropane |
| 2,2-dichloropropane |
| 2-chlorotoluene |
| 4-chlorotoluene |
| 4-isopropyltoluene |
| Acetonitrile |
| Acrylonitrile |
| bromobenzene |
| Dibromomethane |
| Ethyl methacrylate |
| Hexachlorobutadiene |
| Isobutanol |
| Methacrylonitrile |
| Methyl iodide |
| Methyl methacrylate |
| Naphthalene |
| n-butylbenzene |
| n-propylbenzene |
| Propionitrile |
| Sec-butylbenzene |
| Tert-butylbenzene |
| Vinyl acetate |

Sample G01-MW-05-1010 was mislabeled by the laboratory throughout the laboratory report as sample G01-MW-02-1010. Sample G01-MW-05-1010 was collected on 11/07/10 and sample G01-MW-02-1010 was collected on 11/05/10. The report was manually corrected by the data validation chemist.

Sample G01-MW-05-1010 was analyzed both undiluted and diluted 10X due to a higher than the calibration curve acenaphthene PAH analysis result in the undiluted sample analysis. Results were combined from the analyses as reported in Appendix A.

The VOC laboratory control sample (LCS) percent recovery (%R) was greater than the quality control limit for batch B049003 for 1,2,3-trichlorobenzene, carbon tetrachloride, naphthalene, tetrachloroethene, and trichloroethene affecting sample GKHMS-TB-06-1010. No action was taken for the aforementioned non-detected affected sample analyte results.

The VOC LCS %R was greater than the quality control limit for batch B047068 for acetone affecting samples GKHMS-GW-FD04-1010, G01-MW-08-1010, G01-MW-05-1010, G01-MW-12-1010, G01-MW-07-1010, G01-MW-03-1010, and G01-MW-01A-1010. Additionally, the RPD for acetone for the LCS/LCSD was greater than the 30% quality control limit. No action was taken as the LCSD %R for acetone was within the quality control limits

VOC surrogate %Rs were greater than the quality control limit for 1,2-dichloroethane-d4 and dibromofluoromethane for sample GKHMS-TB-06-1010. No action was taken for this issue as all sample results were non-detected.

The VOC matrix spike (MS) and the MS duplicate (MSD) had %Rs greater than the quality control limit for a number of VOCs for spiked sample G01-MW-05-1010. Other VOC analytes had recoveries outside the quality control limit either high or low for either the MS or the MSD. No action was taken for the high quality control limit recoveries as the sample had non-detected results for all VOCs. And no action was taken for the other quality control limit non-compliances as the alternate MS or MSD analyte recovery was satisfactory.

The PAH MS and MSD %Rs were less than the quality control limit for acenaphthene for spiked sample G01-MW-05-1010. No action was taken as the sample concentration was significantly higher than the spiked added. Other PAH analytes had quality control limit non-compliances for either the MS, the MSD, or the RPD for the MS/MSD, but no action was taken as the alternate analyte in the MS or the MSD was within the quality control limits.

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** VOC RRF quality control limit non-compliances resulted in rejection of all sample non-detected 1,2-dibromo-3-chloropropane, acetone, and bromomethane results. VOC initial calibration r factors less than the quality control limit for the linear calibration resulted in qualification of all sample non-detected methylene chloride, chloroethane, and trans-1,3-dichloropropene results. VOC continuing calibration verification %D quality control limit non-compliances resulted in non-detected sample data qualifications. VOC LCS, surrogate and internal standard recovery quality control limit non-compliances resulted in sample data qualifications for non-detected VOCs.

**Other Factors Affecting Data Quality:** Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). Samples GKHMS-GW-FD04-1010 and G01-MW-08-1010 anthracene results were qualified estimated due to field duplicate imprecision.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

**Appendix A**

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01A-1010 | | | G01-MW-03-1010 | | | G01-MW-05-1010 | | | G01-MW-07-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-01 | | | 1011026-02 | | | 1011026-05 | | | 1011026-03 | | |
| FRACTION: OV | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/7/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 1,1,1-TRICHLOROETHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 1,1,2,2-TETRACHLOROETHANE | | 1.65 | U | | 1.65 | U | | 1.65 | U | | 1.65 | U | |
| 1,1,2-TRICHLOROETHANE | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 2.4 | UJ | C | 2.4 | UJ | C | 2.4 | UJ | C | 2.4 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.9 | U | |
| 1,1-DICHLOROETHENE | | 1.4 | U | | 1.4 | U | | 1.4 | U | | 1.4 | U | |
| 1,1-DICHLOROPROPENE | | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 2.45 | UJ | C | 2.45 | UJ | C | 2.45 | UJ | C | 2.45 | UJ | C |
| 1,2,3-TRICHLOROPROPANE | | 1.8 | U | | 1.8 | U | | 1.8 | U | | 1.8 | U | |
| 1,2,4-TRICHLOROBENZENE | | 2.4 | U | | 2.4 | U | | 2.4 | U | | 2.4 | U | |
| 1,2,4-TRIMETHYLBENZENE | | 2.15 | U | | 2.15 | U | | 2.15 | U | | 2.15 | U | |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 2.95 | UR | C | 2.95 | UR | C | 2.95 | UR | C | 2.95 | UR | C |
| 1,2-DIBROMOETHANE | | 1.05 | U | | 1.05 | U | | 1.05 | U | | 1.05 | U | |
| 1,2-DICHLOROBENZENE | | 1.5 | U | | 1.5 | U | | 1.5 | U | | 1.5 | U | |
| 1,2-DICHLOROETHANE | | 2.55 | UJ | C | 2.55 | UJ | C | 2.55 | UJ | C | 2.55 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.95 | U | | 0.95 | U | | 0.95 | U | | 0.95 | U | |
| 1,3,5-TRIMETHYLBENZENE | | 2.25 | U | | 2.25 | U | | 2.25 | U | | 2.25 | U | |
| 1,3-DICHLOROBENZENE | | 2.2 | U | | 2.2 | U | | 2.2 | U | | 2.2 | U | |
| 1,3-DICHLOROPROPANE | | 1.15 | U | | 1.15 | U | | 1.15 | U | | 1.15 | U | |
| 1,4-DICHLOROBENZENE | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| 2,2-DICHLOROPROPANE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C |
| 2-BUTANONE | | 1.75 | UJ | C | 1.75 | UJ | C | 1.75 | UJ | C | 1.75 | UJ | C |
| 2-CHLOROTOLUENE | | 1.9 | U | | 1.9 | U | | 1.9 | U | | 1.9 | U | |
| 2-HEXANONE | | 1.55 | U | | 1.55 | U | | 1.55 | U | | 1.55 | U | |
| 4-CHLOROTOLUENE | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| 4-ISOPROPYLTOLUENE | | 2.75 | U | | 2.75 | U | | 2.75 | U | | 2.75 | U | |
| 4-METHYL-2-PENTANONE | | 1.15 | U | | 1.15 | U | | 1.15 | U | | 1.15 | U | |
| ACETONE | | 4 | UR | C | 4 | UR | C | 4 | UR | C | 4 | UR | C |
| ACETONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| ACRYLONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| BENZENE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C |
| BROMOBENZENE | | 1.55 | U | | 1.55 | U | | 1.55 | U | | 1.55 | U | |
| BROMOCHLOROMETHANE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 1.2 | U | |
| BROMODICHLOROMETHANE | | 0.95 | UJ | C | 0.95 | UJ | C | 0.95 | UJ | C | 0.95 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-08-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | | GKHMS-TB-06-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-06 | | | 1011026-04 | | | 1011026-07 | | | 1011026-08 | | |
| FRACTION: OV | SAMP_DATE | 11/7/2010 | | | 11/6/2010 | | | 11/6/2010 | | | 11/8/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | G01-MW-08-1010 | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1,1,2-TETRACHLOROETHANE | | 1 | U | | 1 | U | | 1 | U | | 0.2 | UJ | C |
| 1,1,1-TRICHLOROETHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 0.25 | UJ | C |
| 1,1,2,2-TETRACHLOROETHANE | | 1.65 | U | | 1.65 | U | | 1.65 | U | | 0.33 | UJ | C |
| 1,1,2-TRICHLOROETHANE | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |
| 1,1,2-TRICHLOROTRIFLUOROETHANE | | 2.4 | UJ | C | 2.4 | UJ | C | 2.4 | UJ | C | 0.48 | UJ | C |
| 1,1-DICHLOROETHANE | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.18 | UJ | C |
| 1,1-DICHLOROETHENE | | 1.4 | U | | 1.4 | U | | 1.4 | U | | 0.28 | UJ | C |
| 1,1-DICHLOROPROPENE | | 1.7 | UJ | C | 1.7 | UJ | C | 1.7 | UJ | C | 0.34 | UJ | C |
| 1,2,3-TRICHLOROBENZENE | | 2.45 | UJ | C | 2.45 | UJ | C | 2.45 | UJ | C | 0.49 | UJ | CN |
| 1,2,3-TRICHLOROPROPANE | | 1.8 | U | | 1.8 | U | | 1.8 | U | | 0.36 | UJ | C |
| 1,2,4-TRICHLOROBENZENE | | 2.4 | U | | 2.4 | U | | 2.4 | U | | 0.48 | UJ | CN |
| 1,2,4-TRIMETHYLBENZENE | | 2.15 | U | | 2.15 | U | | 2.15 | U | | 0.43 | UJ | C |
| 1,2-DIBROMO-3-CHLOROPROPANE | | 2.95 | UR | C | 2.95 | UR | C | 2.95 | UR | C | 0.59 | UR | C |
| 1,2-DIBROMOETHANE | | 1.05 | U | | 1.05 | U | | 1.05 | U | | 0.21 | UJ | C |
| 1,2-DICHLOROBENZENE | | 1.5 | U | | 1.5 | U | | 1.5 | U | | 0.3 | UJ | CN |
| 1,2-DICHLOROETHANE | | 2.55 | UJ | C | 2.55 | UJ | C | 2.55 | UJ | C | 0.51 | UJ | C |
| 1,2-DICHLOROPROPANE | | 0.95 | U | | 0.95 | U | | 0.95 | U | | 0.19 | UJ | C |
| 1,3,5-TRIMETHYLBENZENE | | 2.25 | U | | 2.25 | U | | 2.25 | U | | 0.45 | UJ | C |
| 1,3-DICHLOROBENZENE | | 2.2 | U | | 2.2 | U | | 2.2 | U | | 0.44 | UJ | C |
| 1,3-DICHLOROPROPANE | | 1.15 | U | | 1.15 | U | | 1.15 | U | | 0.23 | UJ | C |
| 1,4-DICHLOROBENZENE | | 5 | U | | 5 | U | | 5 | U | | 1 | UJ | C |
| 2,2-DICHLOROPROPANE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | CE |
| 2-BUTANONE | | 1.75 | UJ | C | 1.75 | UJ | C | 1.75 | UJ | C | 0.35 | UJ | C |
| 2-CHLOROTOLUENE | | 1.9 | U | | 1.9 | U | | 1.9 | U | | 0.38 | UJ | C |
| 2-HEXANONE | | 1.55 | U | | 1.55 | U | | 1.55 | U | | 0.31 | UJ | C |
| 4-CHLOROTOLUENE | | 2 | U | | 2 | U | | 2 | U | | 0.4 | UJ | C |
| 4-ISOPROPYLTOLUENE | | 2.75 | U | | 2.75 | U | | 2.75 | U | | 0.55 | UJ | C |
| 4-METHYL-2-PENTANONE | | 1.15 | U | | 1.15 | U | | 1.15 | U | | 0.23 | UJ | C |
| ACETONE | | 4 | UR | C | 4 | UR | C | 4 | UR | C | 0.8 | UR | C |
| ACETONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| ACRYLONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| BENZENE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| BROMOBENZENE | | 1.55 | U | | 1.55 | U | | 1.55 | U | | 0.31 | UJ | C |
| BROMOCHLOROMETHANE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | UJ | C |
| BROMODICHLOROMETHANE | | 0.95 | UJ | C | 0.95 | UJ | C | 0.95 | UJ | C | 0.19 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01A-1010 | | | G01-MW-03-1010 | | | G01-MW-05-1010 | | | G01-MW-07-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-01 | | | 1011026-02 | | | 1011026-05 | | | 1011026-03 | | |
| FRACTION: OV | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/7/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C |
| BROMOMETHANE | | 1.95 | UR | C | 1.95 | UR | C | 1.95 | UR | C | 1.95 | UR | C |
| CARBON DISULFIDE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 1.45 | U | |
| CARBON TETRACHLORIDE | | 1.3 | U | | 1.3 | U | | 1.3 | U | | 1.3 | U | |
| CHLOROBENZENE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 1.2 | U | |
| CHLORODIBROMOMETHANE | | 1.3 | U | | 1.3 | U | | 1.3 | U | | 1.3 | U | |
| CHLOROETHANE | | 1.15 | UJ | C | 1.15 | UJ | C | 1.15 | UJ | C | 1.15 | UJ | C |
| CHLOROFORM | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.9 | U | |
| CHLOROMETHANE | | 3.95 | UJ | C | 3.95 | UJ | C | 3.95 | UJ | C | 3.95 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CIS-1,3-DICHLOROPROPENE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C |
| CYCLOHEXANE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| DIBROMOMETHANE | | 1.3 | UJ | C | 1.3 | UJ | C | 1.3 | UJ | C | 1.3 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 2.1 | U | | 2.1 | U | | 2.1 | U | | 2.1 | U | |
| ETHYL METHACRYLATE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| ETHYLBENZENE | | 1.4 | U | | 1.4 | U | | 1.4 | U | | 1.4 | U | |
| ISOBUTANOL | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| ISOPROPYLBENZENE | | 1.85 | U | | 1.85 | U | | 1.85 | U | | 1.85 | U | |
| M+P-XYLENES | | 3.35 | U | | 3.35 | U | | 3.35 | U | | 3.35 | U | |
| METHACRYLONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| METHYL ACETATE | | 1.35 | UJ | C | 1.35 | UJ | C | 1.35 | UJ | CD | 1.35 | UJ | C |
| METHYL CYCLOHEXANE | | 2.15 | UJ | C | 2.15 | UJ | C | 2.15 | UJ | C | 2.15 | UJ | C |
| METHYL IODIDE | | 5 | UJ | CE | 5 | UJ | CE | 5 | UJ | CDE | 5 | UJ | CE |
| METHYL METHACRYLATE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C |
| METHYLENE CHLORIDE | | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | CD | 0.85 | UJ | C |
| N-BUTYLBENZENE | | 2.7 | UJ | C | 2.7 | UJ | C | 2.7 | UJ | C | 2.7 | UJ | C |
| N-PROPYLBENZENE | | 2.2 | U | | 2.2 | U | | 2.2 | U | | 2.2 | U | |
| O-XYLENE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 1.45 | U | |
| PROPIONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| SEC-BUTYLBENZENE | | 2.5 | U | | 2.5 | U | | 2.5 | U | | 2.5 | U | |
| STYRENE | | 1.8 | U | | 1.8 | U | | 1.8 | U | | 1.8 | U | |
| TERT-BUTYLBENZENE | | 2.1 | U | | 2.1 | U | | 2.1 | U | | 2.1 | U | |
| TETRACHLOROETHENE | | 1.9 | U | | 1.9 | U | | 1.9 | U | | 1.9 | U | |
| TOLUENE | | 1.35 | UJ | C | 1.35 | UJ | C | 1.35 | UJ | C | 1.35 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-08-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | | GKHMS-TB-06-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-06 | | | 1011026-04 | | | 1011026-07 | | | 1011026-08 | | |
| FRACTION: OV | SAMP_DATE | 11/7/2010 | | | 11/6/2010 | | | 11/6/2010 | | | 11/8/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | G01-MW-08-1010 | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| BROMOFORM | | 1.2 | UJ | C | 1.2 | UJ | C | 1.2 | UJ | C | 0.24 | UJ | C |
| BROMOMETHANE | | 1.95 | UR | C | 1.95 | UR | C | 1.95 | UR | C | 0.39 | UR | C |
| CARBON DISULFIDE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | UJ | C |
| CARBON TETRACHLORIDE | | 1.3 | U | | 1.3 | U | | 1.3 | U | | 0.26 | UJ | C |
| CHLOROBENZENE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | UJ | C |
| CHLORODIBROMOMETHANE | | 1.3 | U | | 1.3 | U | | 1.3 | U | | 0.26 | UJ | C |
| CHLOROETHANE | | 1.15 | UJ | C | 1.15 | UJ | C | 1.15 | UJ | C | 0.23 | UJ | C |
| CHLOROFORM | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.18 | UJ | C |
| CHLOROMETHANE | | 3.95 | UJ | C | 3.95 | UJ | C | 3.95 | UJ | C | 0.79 | UJ | C |
| CIS-1,2-DICHLOROETHENE | | 1 | U | | 1 | U | | 1 | U | | 0.2 | UJ | C |
| CIS-1,3-DICHLOROPROPENE | | 1.05 | UJ | C | 1.05 | UJ | C | 1.05 | UJ | C | 0.21 | UJ | C |
| CYCLOHEXANE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| DIBROMOMETHANE | | 1.3 | UJ | C | 1.3 | UJ | C | 1.3 | UJ | C | 0.26 | UJ | C |
| DICHLORODIFLUOROMETHANE | | 2.1 | U | | 2.1 | U | | 2.1 | U | | 0.42 | UJ | C |
| ETHYL METHACRYLATE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| ETHYLBENZENE | | 1.4 | U | | 1.4 | U | | 1.4 | U | | 0.28 | UJ | C |
| ISOBUTANOL | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| ISOPROPYLBENZENE | | 1.85 | U | | 1.85 | U | | 1.85 | U | | 0.37 | UJ | C |
| M+P-XYLENES | | 3.35 | U | | 3.35 | U | | 3.35 | U | | 0.67 | UJ | C |
| METHACRYLONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| METHYL ACETATE | | 1.35 | UJ | C | 1.35 | UJ | C | 1.35 | UJ | C | 0.27 | UJ | C |
| METHYL CYCLOHEXANE | | 2.15 | UJ | C | 2.15 | UJ | C | 2.15 | UJ | C | 0.43 | UJ | C |
| METHYL IODIDE | | 5 | UJ | CE | 5 | UJ | CE | 5 | UJ | CE | 1 | UJ | CE |
| METHYL METHACRYLATE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| METHYL TERT-BUTYL ETHER | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 0.25 | UJ | C |
| METHYLENE CHLORIDE | | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C | 0.17 | UJ | C |
| N-BUTYLBENZENE | | 2.7 | UJ | C | 2.7 | UJ | C | 2.7 | UJ | C | 0.54 | UJ | CN |
| N-PROPYLBENZENE | | 2.2 | U | | 2.2 | U | | 2.2 | U | | 0.44 | UJ | C |
| O-XYLENE | | 1.45 | U | | 1.45 | U | | 1.45 | U | | 0.29 | UJ | C |
| PROPIONITRILE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 1 | UJ | C |
| SEC-BUTYLBENZENE | | 2.5 | U | | 2.5 | U | | 2.5 | U | | 0.5 | UJ | C |
| STYRENE | | 1.8 | U | | 1.8 | U | | 1.8 | U | | 0.36 | UJ | C |
| TERT-BUTYLBENZENE | | 2.1 | U | | 2.1 | U | | 2.1 | U | | 0.42 | UJ | C |
| TETRACHLOROETHENE | | 1.9 | U | | 1.9 | U | | 1.9 | U | | 0.38 | UJ | C |
| TOLUENE | | 1.35 | UJ | C | 1.35 | UJ | C | 1.35 | UJ | C | 0.27 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01A-1010 | | | G01-MW-03-1010 | | | G01-MW-05-1010 | | | G01-MW-07-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-01 | | | 1011026-02 | | | 1011026-05 | | | 1011026-03 | | |
| FRACTION: OV | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/7/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TRANS-1,2-DICHLOROETHENE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 1.2 | U | |
| TRANS-1,3-DICHLOROPROPENE | | 1.1 | UJ | C | 1.1 | UJ | C | 1.1 | UJ | C | 1.1 | UJ | C |
| TRICHLOROETHENE | | 1.5 | UJ | C | 1.5 | UJ | C | 1.5 | UJ | C | 1.5 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 1.75 | U | | 1.75 | U | | 1.75 | U | | 1.75 | U | |
| VINYL ACETATE | | 1.45 | UJ | C | 1.45 | UJ | C | 1.45 | UJ | CD | 1.45 | UJ | C |
| VINYL CHLORIDE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 1.2 | U | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-08-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | | GKHMS-TB-06-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-06 | | | 1011026-04 | | | 1011026-07 | | | 1011026-08 | | |
| FRACTION: OV | SAMP_DATE | 11/7/2010 | | | 11/6/2010 | | | 11/6/2010 | | | 11/8/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | G01-MW-08-1010 | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TRANS-1,2-DICHLOROETHENE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | UJ | C |
| TRANS-1,3-DICHLOROPROPENE | | 1.1 | UJ | C | 1.1 | UJ | C | 1.1 | UJ | C | 0.22 | UJ | C |
| TRICHLOROETHENE | | 1.5 | UJ | C | 1.5 | UJ | C | 1.5 | UJ | C | 0.3 | UJ | C |
| TRICHLOROFLUOROMETHANE | | 1.75 | U | | 1.75 | U | | 1.75 | U | | 0.35 | UJ | C |
| VINYL ACETATE | | 1.45 | UJ | C | 1.45 | UJ | C | 1.45 | UJ | C | 0.29 | UJ | CE |
| VINYL CHLORIDE | | 1.2 | U | | 1.2 | U | | 1.2 | U | | 0.24 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01A-1010 | | | G01-MW-03-1010 | | | G01-MW-05-1010 | | | G01-MW-05-1010-DL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-01 | | | 1011026-02 | | | 1011026-05 | | | 1011026-05RE1 | | |
| FRACTION: PAH | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/6/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 2-METHYLNAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.0266 | J | P | | | |
| ACENAPHTHENE | | 0.0167 | U | | 0.0167 | U | | | | | 91.2 | | |
| ACENAPHTHYLENE | | 0.0167 | U | | 0.0167 | U | | 0.988 | | | | | |
| ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 1.8 | | | | | |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 1.39 | | | | | |
| FLUORENE | | 0.0167 | U | | 0.0167 | U | | 1.73 | | | | | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | | | |
| NAPHTHALENE | | 0.0167 | U | | 0.0167 | U | | 0.095 | | | | | |
| PHENANTHRENE | | 0.0167 | U | | 0.0167 | U | | 0.173 | | | | | |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.483 | | | | | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-07-1010 | | | G01-MW-08-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: 1011026 | LAB_ID | 1011026-03 | | | 1011026-06 | | | 1011026-04 | | | 1011026-07 | | |
| FRACTION: PAH | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/6/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | G01-MW-08-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 2-METHYLNAPHTHALENE | | 5.75 | | | 10.6 | | | 0.0599 | | | 11.1 | | |
| ACENAPHTHENE | | 1.32 | | | 1.41 | | | 3.24 | | | 1.47 | | |
| ACENAPHTHYLENE | | 0.123 | | | 0.213 | | | 0.267 | | | 0.231 | | |
| ANTHRACENE | | 0.0776 | | | 0.0544 | J | G | 0.234 | | | 0.0765 | J | G |
| BENZO(A)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(A)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(B)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(G,H,I)PERYLENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| BENZO(K)FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| CHRYSENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| DIBENZO(A,H)ANTHRACENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORANTHENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| FLUORENE | | 0.825 | | | 1.43 | | | 0.97 | | | 1.53 | | |
| INDENO(1,2,3-CD)PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |
| NAPHTHALENE | | 0.607 | | | 14 | | | 0.616 | | | 13.7 | | |
| PHENANTHRENE | | 0.0798 | | | 0.569 | | | 0.174 | | | 0.671 | | |
| PYRENE | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | | 0.0167 | U | |

## Appendix B

Results as Reported by the Laboratory

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01A-1010
Sample Date/Time: 11/06/10 10:31
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 15:59 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 15:59 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 15:59 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 15:59 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 15:59 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 15:59 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 15:59 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01A-1010
Sample Date/Time: 11/06/10 10:31
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 15:59 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 15:59 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 15:59 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01A-1010
Sample Date/Time: 11/06/10 10:31
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-01
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 15:59

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 15:59 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 15:59 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101 % | 70-120 | 1 | 11/13/10 15:59 |
| 4-Bromofluorobenzene | 460-00-4 | 95 % | 75-120 | 1 | 11/13/10 15:59 |
| Dibromofluoromethane | 1868-53-7 | 103 % | 85-115 | 1 | 11/13/10 15:59 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/13/10 15:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-03-1010
Sample Date/Time: 11/06/10 10:01
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 16:25

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 16:25 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 16:25 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 16:25 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 16:25 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 16:25 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 16:25 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 16:25 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-03-1010
Sample Date/Time: 11/06/10 10:01
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 16:25

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 16:25 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 16:25 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 16:25 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-03-1010
Sample Date/Time: 11/06/10 10:01
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-02
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 16:25

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 16:25 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:25 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 101 % | 70-120 | 1 | 11/13/10 16:25 |
| 4-Bromofluorobenzene | 460-00-4 | 94 % | 75-120 | 1 | 11/13/10 16:25 |
| Dibromofluoromethane | 1868-53-7 | 102 % | 85-115 | 1 | 11/13/10 16:25 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/13/10 16:25 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/07/10 09:35
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 17:46

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 17:46 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 17:46 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 17:46 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 17:46 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 17:46 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 17:46 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 17:46 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/07/10 09:35
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 17:46

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 17:46 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 17:46 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 17:46 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/07/10 09:35
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-05
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 17:46

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 17:46 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:46 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 107 % | 70-120 | 1 | 11/13/10 17:46 |
| 4-Bromofluorobenzene | 460-00-4 | 97 % | 75-120 | 1 | 11/13/10 17:46 |
| Dibromofluoromethane | 1868-53-7 | 106 % | 85-115 | 1 | 11/13/10 17:46 |
| Toluene-d8 | 2037-26-5 | 98 % | 85-120 | 1 | 11/13/10 17:46 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-07-1010
Sample Date/Time: 11/06/10 11:38
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 16:52

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 16:52 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 16:52 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 16:52 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 16:52 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 16:52 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 16:52 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 16:52 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-07-1010
Sample Date/Time: 11/06/10 11:38
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 16:52

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 16:52 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 16:52 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 16:52 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-07-1010
Sample Date/Time: 11/06/10 11:38
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-03
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 16:52

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 16:52 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 16:52 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 100 % | 70-120 | 1 | 11/13/10 16:52 |
| 4-Bromofluorobenzene | 460-00-4 | 96 % | 75-120 | 1 | 11/13/10 16:52 |
| Dibromofluoromethane | 1868-53-7 | 102 % | 85-115 | 1 | 11/13/10 16:52 |
| Toluene-d8 | 2037-26-5 | 100 % | 85-120 | 1 | 11/13/10 16:52 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW08-1010
Sample Date/Time: 11/07/10 11:15
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 18:12

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 18:12 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 18:12 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 18:12 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 18:12 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 18:12 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 18:12 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 18:12 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW08-1010
Sample Date/Time: 11/07/10 11:15
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 18:12

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 18:12 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Naphthalene | 91-20-3 | 42.4 | | 2.70 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 18:12 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 18:12 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW08-1010
Sample Date/Time: 11/07/10 11:15
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-06
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 18:12

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 18:12 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:12 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 109 % | 70-120 | 1 | 11/13/10 18:12 |
| 4-Bromofluorobenzene | 460-00-4 | 98 % | 75-120 | 1 | 11/13/10 18:12 |
| Dibromofluoromethane | 1868-53-7 | 109 % | 85-115 | 1 | 11/13/10 18:12 |
| Toluene-d8 | 2037-26-5 | 96 % | 85-120 | 1 | 11/13/10 18:12 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-12-1010
Sample Date/Time: 11/06/10 12:32
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 17:19

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 17:19 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 17:19 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 17:19 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 17:19 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 17:19 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 17:19 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 17:19 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-12-1010
Sample Date/Time: 11/06/10 12:32
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 17:19

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 17:19 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Naphthalene | 91-20-3 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 17:19 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 17:19 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-12-1010
Sample Date/Time: 11/06/10 12:32
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-04
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 17:19

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 17:19 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 17:19 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 104 % | 70-120 | 1 | 11/13/10 17:19 |
| 4-Bromofluorobenzene | 460-00-4 | 93 % | 75-120 | 1 | 11/13/10 17:19 |
| Dibromofluoromethane | 1868-53-7 | 104 % | 85-115 | 1 | 11/13/10 17:19 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/13/10 17:19 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD04-1010
Sample Date/Time: 11/07/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 18:39

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 1.65 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 1.70 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 2.45 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 2.95 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 2.55 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 2.25 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 2-Butanone | 78-93-3 | BQL | U | 1.75 | 25.0 | 1 | ug/L | 11/13/10 18:39 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 2-Hexanone | 591-78-6 | BQL | U | 1.55 | 25.0 | 1 | ug/L | 11/13/10 18:39 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 2.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 1.15 | 25.0 | 1 | ug/L | 11/13/10 18:39 |
| Acetone | 67-64-1 | BQL | U | 4.00 | 25.0 | 1 | ug/L | 11/13/10 18:39 |
| Acetonitrile | 75-05-8 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 18:39 |
| Acrylonitrile | 107-13-1 | BQL | U | 5.00 | 25.0 | 1 | ug/L | 11/13/10 18:39 |
| Benzene | 71-43-2 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Bromobenzene | 108-86-1 | BQL | U | 1.55 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Bromochloromethane | 74-97-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.950 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Bromoform | 75-25-2 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Bromomethane | 74-83-9 | BQL | U | 1.95 | 5.00 | 1 | ug/L | 11/13/10 18:39 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD04-1010
Sample Date/Time: 11/07/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 18:39

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Chlorobenzene | 108-90-7 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Chloroethane | 75-00-3 | BQL | U | 1.15 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Chloroform | 67-66-3 | BQL | U | 0.900 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Chloromethane | 74-87-3 | BQL | U | 3.95 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 1.05 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Cyclohexane | 110-82-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Dibromomethane | 74-95-3 | BQL | U | 1.30 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Ethylbenzene | 100-41-4 | BQL | U | 1.40 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Freon 113 | 76-13-1 | BQL | U | 2.40 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 2.90 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Iodomethane | 74-88-4 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 5.00 | 100 | 1 | ug/L | 11/13/10 18:39 |
| Isopropylbenzene | 98-82-8 | BQL | U | 1.85 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| m,p-Xylenes | | BQL | U | 3.35 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Methacrylonitrile | 126-98-7 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Methyl Acetate | 76-20-9 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 1.25 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Methylcyclohexane | 108-87-2 | BQL | U | 2.15 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.850 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Methylmethacrylate | 80-62-6 | BQL | U | 5.00 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Naphthalene | 91-20-3 | 42.2 | | 2.70 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| n-Butylbenzene | 104-51-8 | BQL | U | 2.70 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| n-Propylbenzene | 103-65-1 | BQL | U | 2.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| o-Xylene | 95-47-6 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 2.75 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Propionitrile | 107-12-0 | BQL | U | 5.00 | 50.0 | 1 | ug/L | 11/13/10 18:39 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 2.50 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Styrene | 100-42-5 | BQL | U | 1.80 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 2.10 | 5.00 | 1 | ug/L | 11/13/10 18:39 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD04-1010
Sample Date/Time: 11/07/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-07
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/13/10 18:39

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 1.90 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Toluene | 108-88-3 | BQL | U | 1.35 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 1.10 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Trichloroethene | 79-01-6 | BQL | U | 1.50 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 1.75 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Vinyl acetate | 108-05-4 | BQL | U | 1.45 | 5.00 | 1 | ug/L | 11/13/10 18:39 |
| Vinyl chloride | 75-01-4 | BQL | U | 1.20 | 5.00 | 1 | ug/L | 11/13/10 18:39 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 107 % | 70-120 | 1 | 11/13/10 18:39 |
| 4-Bromofluorobenzene | 460-00-4 | 97 % | 75-120 | 1 | 11/13/10 18:39 |
| Dibromofluoromethane | 1868-53-7 | 106 % | 85-115 | 1 | 11/13/10 18:39 |
| Toluene-d8 | 2037-26-5 | 97 % | 85-120 | 1 | 11/13/10 18:39 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-06-1010
Sample Date/Time: 11/08/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/15/10 11:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 630-20-6 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,1,1-Trichloroethane | 71-55-6 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | BQL | U | 0.330 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,1,2-Trichloroethane | 79-00-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,1-Dichloroethane | 75-34-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,1-Dichloroethene | 75-35-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,1-Dichloropropene | 563-58-6 | BQL | U | 0.340 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2,3-Trichlorobenzene | 87-61-6 | BQL | U | 0.490 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2,3-Trichloropropane | 96-18-4 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2,4-Trichlorobenzene | 120-82-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2,4-Trimethylbenzene | 95-63-6 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | BQL | U | 0.590 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2-Dibromoethane | 106-93-4 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2-Dichlorobenzene | 95-50-1 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2-Dichloroethane | 107-06-2 | BQL | U | 0.510 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,2-Dichloropropane | 78-87-5 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,3,5-Trimethylbenzene | 108-67-8 | BQL | U | 0.450 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,3-Dichlorobenzene | 541-73-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,3-Dichloropropane | 142-28-9 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 1,4-Dichlorobenzene | 106-46-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 2,2-Dichloropropane | 594-20-7 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 2-Butanone | 78-93-3 | BQL | U | 0.350 | 5.00 | 1 | ug/L | 11/15/10 11:38 |
| 2-Chlorotoluene | 95-49-8 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 2-Hexanone | 591-78-6 | BQL | U | 0.310 | 5.00 | 1 | ug/L | 11/15/10 11:38 |
| 4-Chlorotoluene | 106-43-4 | BQL | U | 0.400 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| 4-Methyl-2-pentanone | 108-10-1 | BQL | U | 0.230 | 5.00 | 1 | ug/L | 11/15/10 11:38 |
| Acetone | 67-64-1 | BQL | U | 0.800 | 5.00 | 1 | ug/L | 11/15/10 11:38 |
| Acetonitrile | 75-05-8 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/15/10 11:38 |
| Acrylonitrile | 107-13-1 | BQL | U | 1.00 | 5.00 | 1 | ug/L | 11/15/10 11:38 |
| Benzene | 71-43-2 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Bromobenzene | 108-86-1 | BQL | U | 0.310 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Bromochloromethane | 74-97-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Bromodichloromethane | 75-27-4 | BQL | U | 0.190 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Bromoform | 75-25-2 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Bromomethane | 74-83-9 | BQL | U | 0.390 | 1.00 | 1 | ug/L | 11/15/10 11:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-06-1010
Sample Date/Time: 11/08/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/15/10 11:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Carbon tetrachloride | 56-23-5 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Chlorobenzene | 108-90-7 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Chlorodibromomethane | 124-48-1 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Chloroethane | 75-00-3 | BQL | U | 0.230 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Chloroform | 67-66-3 | BQL | U | 0.180 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Chloromethane | 74-87-3 | BQL | U | 0.790 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| cis-1,2-Dichloroethene | 156-59-2 | BQL | U | 0.200 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| cis-1,3-Dichloropropene | 10061-01-5 | BQL | U | 0.210 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Cyclohexane | 110-82-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Dibromomethane | 74-95-3 | BQL | U | 0.260 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Dichlorodifluoromethane | 75-71-8 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Ethyl methacrylate | 97-63-2 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Ethylbenzene | 100-41-4 | BQL | U | 0.280 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Freon 113 | 76-13-1 | BQL | U | 0.480 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Hexachlorobutadiene | 87-68-3 | BQL | U | 0.580 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Iodomethane | 74-88-4 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Isobutyl alcohol | 78-83-1 | BQL | U | 1.00 | 20.0 | 1 | ug/L | 11/15/10 11:38 |
| Isopropylbenzene | 98-82-8 | BQL | U | 0.370 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| m,p-Xylenes | | BQL | U | 0.670 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Methacrylonitrile | 126-98-7 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Methyl Acetate | 76-20-9 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Methyl tert-Butyl Ether | 1634-04-4 | BQL | U | 0.250 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Methylcyclohexane | 108-87-2 | BQL | U | 0.430 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Methylene Chloride | 75-09-2 | BQL | U | 0.170 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Methylmethacrylate | 80-62-6 | BQL | U | 1.00 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Naphthalene | 91-20-3 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| n-Butylbenzene | 104-51-8 | BQL | U | 0.540 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| n-Propylbenzene | 103-65-1 | BQL | U | 0.440 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| o-Xylene | 95-47-6 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| p-Isopropyltoluene | 99-87-6 | BQL | U | 0.550 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Propionitrile | 107-12-0 | BQL | U | 1.00 | 10.0 | 1 | ug/L | 11/15/10 11:38 |
| sec-Butylbenzene | 135-98-8 | BQL | U | 0.500 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Styrene | 100-42-5 | BQL | U | 0.360 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| tert-Butylbenzene | 98-06-6 | BQL | U | 0.420 | 1.00 | 1 | ug/L | 11/15/10 11:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-TB-06-1010
Sample Date/Time: 11/08/10 00:00
Analytical Method: SW8260B

Sample Matrix: Water
Sample ID: 1011026-08
Percent solids:
Preparation Method: EPA 5030B
Prepared Date/Time: 11/15/10 11:38

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 127-18-4 | BQL | U | 0.380 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Toluene | 108-88-3 | BQL | U | 0.270 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| trans-1,2-Dichloroethene | 156-60-5 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| trans-1,3-Dichloropropene | 10061-02-6 | BQL | U | 0.220 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Trichloroethene | 79-01-6 | BQL | U | 0.300 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Trichlorofluoromethane | 75-69-4 | BQL | U | 0.350 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Vinyl acetate | 108-05-4 | BQL | U | 0.290 | 1.00 | 1 | ug/L | 11/15/10 11:38 |
| Vinyl chloride | 75-01-4 | BQL | U | 0.240 | 1.00 | 1 | ug/L | 11/15/10 11:38 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 17060-07-0 | 157 % | 70-120 | 1 | 11/15/10 11:38 |
| 4-Bromofluorobenzene | 460-00-4 | 86 % | 75-120 | 1 | 11/15/10 11:38 |
| Dibromofluoromethane | 1868-53-7 | 152 % | 85-115 | 1 | 11/15/10 11:38 |
| Toluene-d8 | 2037-26-5 | 84 % | 85-120 | 1 | 11/15/10 11:38 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-01A-1010
Sample Date/Time: 11/06/10 10:31
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011026-01
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 15:59 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 77 % | 50-110 | 1 | 11/18/10 15:59 |
| Nitrobenzene-d5 | 4165-60-0 | 84 % | 40-110 | 1 | 11/18/10 15:59 |
| Terphenyl-d14 | 1718-51-0 | 95 % | 50-135 | 1 | 11/18/10 15:59 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-03-1010
Sample Date/Time: 11/06/10 10:01
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011026-02
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Acenaphthene | 83-32-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Acenaphthylene | 208-96-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Anthracene | 120-12-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Fluorene | 86-73-7 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Naphthalene | 91-20-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Phenanthrene | 85-01-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:23 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 84 % | 50-110 | 1 | 11/18/10 16:23 |
| Nitrobenzene-d5 | 4165-60-0 | 88 % | 40-110 | 1 | 11/18/10 16:23 |
| Terphenyl-d14 | 1718-51-0 | 92 % | 50-135 | 1 | 11/18/10 16:23 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/07/10 09:35
Analytical Method: SW8270C SIM

JK 1/3/11

Sample Matrix: Water
Sample ID: 1011026-05
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 26.6 | J | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Acenaphthene | 83-32-9 | 75000 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Acenaphthylene | 208-96-8 | 988 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Anthracene | 120-12-7 | 1800 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Fluoranthene | 206-44-0 | 1390 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Fluorene | 86-73-7 | 1730 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Naphthalene | 91-20-3 | 95.0 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Phenanthrene | 85-01-8 | 173 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |
| Pyrene | 129-00-0 | 483 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:36 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 82 % | 50-110 | 1 | 11/18/10 17:36 |
| Nitrobenzene-d5 | 4165-60-0 | 92 % | 40-110 | 1 | 11/18/10 17:36 |
| Terphenyl-d14 | 1718-51-0 | 95 % | 50-135 | 1 | 11/18/10 17:36 |

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# Analytical Summary Report

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Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-02-1010
Sample Date/Time: 11/07/10 09:35
Analytical Method: SW8270C SIM

JK 1/3/11

Sample Matrix: Water
Sample ID: 1011026-05RE1
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Acenaphthene | 83-32-9 | 91200 | D | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Acenaphthylene | 208-96-8 | 2460 | D | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Anthracene | 120-12-7 | 1940 | D | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Chrysene | 218-01-9 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Fluoranthene | 206-44-0 | 1380 | D | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Fluorene | 86-73-7 | 1890 | D | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Naphthalene | 91-20-3 | BQL | U | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Phenanthrene | 85-01-8 | 215 | JD | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |
| Pyrene | 129-00-0 | 540 | D | 167 | 500 | 10 | ng/L | 11/24/10 12:21 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 86 % | 50-110 | 10 | 11/24/10 12:21 |
| Nitrobenzene-d5 | 4165-60-0 | 113 % | 40-110 | 10 | 11/24/10 12:21 |
| Terphenyl-d14 | 1718-51-0 | 105 % | 50-135 | 10 | 11/24/10 12:21 |

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-07-1010
Sample Date/Time: 11/06/10 11:38
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011026-03
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 5750 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Acenaphthene | 83-32-9 | 1320 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Acenaphthylene | 208-96-8 | 123 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Anthracene | 120-12-7 | 77.6 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Fluorene | 86-73-7 | 825 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Naphthalene | 91-20-3 | 607 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Phenanthrene | 85-01-8 | 79.8 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 16:48 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 81 % | 50-110 | 1 | 11/18/10 16:48 |
| Nitrobenzene-d5 | 4165-60-0 | 95 % | 40-110 | 1 | 11/18/10 16:48 |
| Terphenyl-d14 | 1718-51-0 | 98 % | 50-135 | 1 | 11/18/10 16:48 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW08-1010
Sample Date/Time: 11/07/10 11:15
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011026-06
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 10600 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Acenaphthene | 83-32-9 | 1410 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Acenaphthylene | 208-96-8 | 213 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Anthracene | 120-12-7 | 54.4 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Fluorene | 86-73-7 | 1430 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Naphthalene | 91-20-3 | 14000 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Phenanthrene | 85-01-8 | 569 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:01 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 79 % | 50-110 | 1 | 11/18/10 18:01 |
| Nitrobenzene-d5 | 4165-60-0 | 96 % | 40-110 | 1 | 11/18/10 18:01 |
| Terphenyl-d14 | 1718-51-0 | 90 % | 50-135 | 1 | 11/18/10 18:01 |

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# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: G01-MW-12-1010
Sample Date/Time: 11/06/10 12:32
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011026-04
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 59.9 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Acenaphthene | 83-32-9 | 3240 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Acenaphthylene | 208-96-8 | 267 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Anthracene | 120-12-7 | 234 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Fluorene | 86-73-7 | 970 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Naphthalene | 91-20-3 | 616 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Phenanthrene | 85-01-8 | 174 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 17:12 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 75 % | 50-110 | 1 | 11/18/10 17:12 |
| Nitrobenzene-d5 | 4165-60-0 | 92 % | 40-110 | 1 | 11/18/10 17:12 |
| Terphenyl-d14 | 1718-51-0 | 86 % | 50-135 | 1 | 11/18/10 17:12 |

CENTAURI LABS™

# Analytical Summary Report

Client Name: Tetra Tech NUS, Inc
Client Sample ID: GKHMS-GW-FD04-1010
Sample Date/Time: 11/07/10 00:00
Analytical Method: SW8270C SIM

Sample Matrix: Water
Sample ID: 1011026-07
Percent solids:
Preparation Method: 3520C Cont.
Prepared Date/Time: 11/12/10 09:30

| Parameter | CAS | Reported Result | Q | Method Detection Limit | Reporting Limit | Dil Fact | Units | Analysis Date/Time |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 91-57-6 | 11100 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Acenaphthene | 83-32-9 | 1470 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Acenaphthylene | 208-96-8 | 231 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Anthracene | 120-12-7 | 76.5 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Benzo[a]anthracene | 56-55-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Benzo[a]pyrene | 50-32-8 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Benzo[b]fluoranthene | 205-99-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Benzo[g,h,i]perylene | 191-24-2 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Benzo[k]fluoranthene | 207-08-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Chrysene | 218-01-9 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Dibenz[a,h]anthracene | 53-70-3 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Fluoranthene | 206-44-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Fluorene | 86-73-7 | 1530 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Naphthalene | 91-20-3 | 13700 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Phenanthrene | 85-01-8 | 671 | | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |
| Pyrene | 129-00-0 | BQL | U | 16.7 | 50.0 | 1 | ng/L | 11/18/10 18:25 |

| Surrogate Parameter | CAS | Recovery | Control Limits | Dil Fact | Analysis Date/Time |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 321-60-8 | 78 % | 50-110 | 1 | 11/18/10 18:25 |
| Nitrobenzene-d5 | 4165-60-0 | 96 % | 40-110 | 1 | 11/18/10 18:25 |
| Terphenyl-d14 | 1718-51-0 | 78 % | 50-135 | 1 | 11/18/10 18:25 |

## Appendix C

Support Documentation

# HOLD TIME

**SDG** 1011026

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OV | UG/L | GKHMS-TB-06-1010 | 1011026-08 | NM | 11/08/2010 | 11/15/2010 | 11/15/2010 | 7 | 0 | 7 |
| OV | UG/L | G01-MW-03-1010 | 1011026-02 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |
| OV | UG/L | G01-MW-05-1010 | 1011026-05 | NM | 11/07/2010 | 11/13/2010 | 11/13/2010 | 6 | 0 | 6 |
| OV | UG/L | G01-MW-07-1010 | 1011026-03 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |
| OV | UG/L | G01-MW-08-1010 | 1011026-06 | NM | 11/07/2010 | 11/13/2010 | 11/13/2010 | 6 | 0 | 6 |
| OV | UG/L | G01-MW-12-1010 | 1011026-04 | NM | 11/06/2010 | 11/13/2010 | 11/13/2010 | 7 | 0 | 7 |
| OV | UG/L | G01-MW-01A-1010 | 1011026-01 | NM | 11/06/2010 | 11/13/2010 | 11/13/2010 | 7 | 0 | 7 |
| OV | UG/L | GKHMS-GW-FD04-1010 | 1011026-07 | NM | 11/06/2010 | 11/13/2010 | 11/13/2010 | 7 | 0 | 7 |
| SIM | NG/L | GKHMS-GW-FD04-1010 | 1011026-07 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |
| SIM | NG/L | G01-MW-03-1010 | 1011026-02 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |
| SIM | NG/L | G01-MW-05-1010 | 1011026-05 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |
| SIM | NG/L | G01-MW-05-1010-DL | 1011026-05RE1 | NM | 11/07/2010 | 11/24/2010 | 11/24/2010 | 17 | 0 | 17 |
| SIM | NG/L | G01-MW-07-1010 | 1011026-03 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |
| SIM | NG/L | G01-MW-08-1010 | 1011026-06 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |
| SIM | NG/L | G01-MW-12-1010 | 1011026-04 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| SIM | NG/L | G01-MW-01A-1010 | 1011026-01 | NM | 11/06/2010 | 11/18/2010 | 11/18/2010 | 12 | 0 | 12 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-14

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8260B** | G01-MW-01A | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8720D/8270DSIM** | G01-MW-01A | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8082A** | G01-MW-01A | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8081B** | G01-MW-01A | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 6020A** | G01-MW-01A | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8260B** | G01-MW-03 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8720D/8270DSIM** | G01-MW-03 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8082A** | G01-MW-03 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8081B** | G01-MW-03 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 6020A** | G01-MW-03 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8260B** | G01-MW-07 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8720D/8270DSIM** | G01-MW-07 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8082A** | G01-MW-07 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8081B** | G01-MW-07 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 6020A** | G01-MW-07 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8260B** | G01-MW-12 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8720D/8270DSIM** | G01-MW-12 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8082A** | G01-MW-12 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8081B** | G01-MW-12 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 6020A** | G01-MW-12 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8260B** | G01-MW-05 | GW | VOCs (low level analysis) | 4°C/HCL | 9 | Glass - Clear | 40ml vials | Run MS/MSD |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8720D/8270DSIM** | G01-MW-05 | GW | SVOCs (low level) and SIM PAHs | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |

1011026

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8082A** | G01-MW-05 | GW | PCBs | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8081B** | G01-MW-05 | GW | Pesticides | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 6020A** | G01-MW-05 | GW | Metals | 4°C/HNO3 | 3 | Plastic - PE | 1L | Run MS/MSD |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8260B** | G01-MW-08 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8720D/8270DSIM** | G01-MW-08 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8082A** | G01-MW-08 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8081B** | G01-MW-08 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 6020A** | G01-MW-08 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8082A** | QC | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8260B** | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 6020A** | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8081B** | QC | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8720D/8270DSIM** | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/08/2010 | GKHMS-TB-06-1010 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By:<br>**Gary Braganza** | Date:<br>11/08/2010 | Time:<br>15:02 | Received By:<br>**Federal Express** | Date:<br>11/08/2010 | Time:<br>16:02 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date:<br>11/9/10 | Time:<br>9:45 |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

Comments:

1011026

## SAMPLE RECIEPT

Eight water samples were received on 11/00/2010. The samples arrived by FedEx. Sample receipt conditions and temperatures are documented on the Sample Receipt checklist.

If you have any questions regarding this report, please contact Kendra VanWyck at 240-575-1199.

This report only pertains to the samples listed on the "Sample Summary" report pages that follow this case narrative.

This report shall not be reproduced exception in full, without the written approval of Centauri Labs.

Samples were prepared and analyzed by Centauri Labs using the analytical methodologies indicated on the Sample Analysis Summary Report. In some chromatographic analyses, manual integration is used instead of automated integration because it produces more accurate results. All manual integrations are denoted on the sample quantitation report. Analysis results and limits for soil are reported on a dry weight basis unless otherwise specified on the report.

The report was issued on 12/02/2010.

## VOLATILES

Eight water samples were analyzed for volatile organic compounds by the SW846 method 8260B.
The samples were analyzed within the holding time.

Sample GKHMS-TB-06-1010 had one internal standard response and three surrogate recoveries outside of QC limits.
Because no analytes were detected in that sample above the method detection limit, the data is not affected.
All remaining surrogate recoveries and internal standard responses were within the QC limits.

Duplicate laboratory control samples were analyzed along with the first batch.

In batch B047068, recovery of one compound in the LCS was above the QC limits.
That compound was not detected in the samples analyzed above the reporting limit, therefore the data is not affected.
The recoveries of four analytes were below QC limits in the LCS and two analytes in the LCSD. Because those compounds were not detected above the method detection limit in the samples, the data is not affected. The % RPD for one compound was above the QC limits for the pair.

A matrix spike and matrix spike duplicate were performed on sample G01-MW-02-1010. The recoveries of seven compounds in the MS and nine compounds in the MSD were outside of QC limits.

In batch B048008, recoveries of five compounds in the LCS were above the QC limits.
Those compounds were not detected in the samples analyzed above the reporting limit, therefore the data is not affected.
The recoveries of four analytes were below QC limits in the LCS. Because those compounds were not detected above the method detection limit in the samples, the data is not affected.

In sequence S047043, the response for two compounds was above the QC limits in the daily CCV and five was below QC limits. None of the affected compounds were detected above the method detection limit in any associated client samples.

In sequence S048008, the response for four compounds was above the QC limits in the daily CCV and two was below QC limits. None of the affected compounds were detected above the method detection limit in any associated client samples.

All of the remaining QC was within QC limits.

**SW8270LL-PAH SIM**

Seven water samples were extracted by method 3520C. The sample extracts were analyzed for semi-volatile organic PAHs using a modified low-level method 8270-SIM.
Extraction and analysis holding times were met. 1/31/11 &
Sample G01-MW-02-1010 required reanalysis at 10X dilution factor to fit the results within the calibration limits.
Samples G01-MW-02-1010, and B048006-MS1 had one surrogate recovery above the QC limits. All other surrogate recoveries were within the QC requirements.
All internal standard responses were within QC limits.
Matrix spike and matrix spike duplicate analyses were performed on sample G01-MW-02-1010. Three spike recoveries and one %RPD were outside the QC limits.
A laboratory control sample was extracted and analyzed with this batch. All spike recoveries were within the QC limits.

Data Qualifiers Key Reference:

All Departments

| | |
|---|---|
| BQL | Below Quantitation Limit |
| U | Analyte was not detected and is reported as less that the Reporting Limit (LOD for DoD QSM projects) |
| B | Blank contamination. The reported result is associated with a contaminated blank. |
| J | Detected, but below the Reporting Limit; therefore, result is an estimated value. |
| D | Result is reported from a dilution analysis. |
| Q | One or more quality control criteria failed. |

Organics

| | |
|---|---|
| E | The reported result is estimated because the concentration is above the calibrated range. |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |

Metals

| | |
|---|---|
| E | The reported result is estimated due to a possible matrix interference (the serial dilution was not within control limits) |
| P | For GC analyses where two columns are used for analysis, the difference between the two column results exceeds 25%. |
| * | Duplicate analysis %RPD was not within control limits |

# Sample Summary Report

| Client Sample ID | Lab Sample ID | Analytical Method | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| G01-MW-01A-1010 | 1011026-01 | SW7470A | Water | 11/6/2010 | 11/9/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| G01-MW-02-1010 | 1011026-05 | SW7470A | Water | 11/7/2010 | 11/9/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| | 1011026-05RE1 | SW8270C SIM | | | |
| G01-MW-03-1010 | 1011026-02 | SW7470A | Water | 11/6/2010 | 11/9/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| G01-MW-07-1010 | 1011026-03 | SW7470A | Water | 11/6/2010 | 11/9/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| G01-MW08-1010 | 1011026-06 | SW7470A | Water | 11/7/2010 | 11/9/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| G01-MW-12-1010 | 1011026-04 | SW7470A | Water | 11/6/2010 | 11/9/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-GW-FD04-1010 | 1011026-07 | SW7470A | Water | 11/7/2010 | 11/9/2010 |
| | | SW8260B | | | |
| | | SW8270C SIM | | | |
| GKHMS-TB-06-1010 | 1011026-08 | SW8260B | Water | 11/8/2010 | 11/9/2010 |

## Subcontracted Analyses

The following analyses were subcontracted to EMPERICAL LABS

| Lab Number | Analysis |
|---|---|
| 1011026-01 | 6020A Full |
| 1011026-01 | 8081A Pesticides |
| 1011026-01 | 8082 PCBs |
| 1011026-01 | 8270D LL SVOC TCL |
| 1011026-01 | Mercury, Total 7470A |
| 1011026-02 | 6020A Full |
| 1011026-02 | 8081A Pesticides |
| 1011026-02 | 8082 PCBs |
| 1011026-02 | 8270D LL SVOC TCL |
| 1011026-02 | Mercury, Total 7470A |
| 1011026-03 | 6020A Full |
| 1011026-03 | 8081A Pesticides |
| 1011026-03 | 8082 PCBs |
| 1011026-03 | 8270D LL SVOC TCL |
| 1011026-03 | Mercury, Total 7470A |
| 1011026-04 | 6020A Full |
| 1011026-04 | 8081A Pesticides |
| 1011026-04 | 8082 PCBs |
| 1011026-04 | 8270D LL SVOC TCL |
| 1011026-04 | Mercury, Total 7470A |
| 1011026-05 | 6020A Full |
| 1011026-05 | 8081A Pesticides |
| 1011026-05 | 8082 PCBs |
| 1011026-05 | 8270D LL SVOC TCL |
| 1011026-06 | 6020A Full |
| 1011026-06 | 8081A Pesticides |
| 1011026-06 | 8082 PCBs |
| 1011026-06 | 8270D LL SVOC TCL |
| 1011026-06 | Mercury, Total 7470A |
| 1011026-07 | 6020A Full |
| 1011026-07 | 8081A Pesticides |
| 1011026-07 | 8082 PCBs |
| 1011026-07 | 8270D LL SVOC TCL |
| 1011026-07 | Mercury, Total 7470A |

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Work Order No.: | 1011026 | Carrier: | |
| Client: | Tetra Tech NUS, Inc | Tracking No.: | |
| Project: | KEY WEST NAS | Log-in Date: | 11/9/2010 3:01:00PM |
| Date Received: | 11/9/2010 9:45:00AM | Logged In By: | Chino Ortiz |
| Received By: | Chino Ortiz | Project Manager: | Shauna Stotler-Hardy |

Cooler name: Default Cooler

Shipping Container in good condition? Y

Custody seals present on shipping container? Y

Condition: *Intact-signed and dated*

Chain-of-Custody present? Y

COC agrees with sample labels? Y

COC signed? Y

Packing present in shipping container? Y

Custody seals present on sample bottles? N

Condition: *Intact*

Samples intact? Y

Sufficient volume for requested tests? Y

Preservation confirmed? Y

Are there Volatiles samples present? N

Has Zero Headspace? N/A

Total number of bottles:

Total number of samples: 8

Comments:

CENTAURI LABS™

# SW8260B

7210 Corporate Court, Frederick, MD 21703 P:(240) 575-1150 F: (301) 620-0731 www.centaurilabs.com

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890285.D | Injection Date: | 11/11/10 |
| Instrument ID: | GCMS-B | Injection Time: | 08:22 |
| Sequence: | S047034 | Lab Sample ID: | S047034-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.3 | PASS |
| 75 | 30 - 60% of 95 | 45.5 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.8 | PASS |
| 175 | 5 - 9% of 174 | 7.16 | PASS |
| 176 | 95 - 101% of 174 | 97.5 | PASS |
| 177 | 5 - 9% of 176 | 6.47 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S047034-CAL5 | B02890286.D | 11/11/2010 | 9:37:00 |
| Cal Standard | S047034-CAL3 | B02890287.D | 11/11/2010 | 10:06:00 |
| Cal Standard | S047034-CAL2 | B02890288.D | 11/11/2010 | 10:33:00 |
| Cal Standard | S047034-CAL1 | B02890289.D | 11/11/2010 | 11:00:00 |
| Cal Standard | S047034-CAL4 | B02890290.D | 11/11/2010 | 11:27:00 |
| Cal Standard | S047034-CAL6 | B02890291.D | 11/11/2010 | 11:54:00 |
| Cal Standard | S047034-CAL7 | B02890292.D | 11/11/2010 | 12:20:00 |
| Cal Standard | S047034-CAL8 | B02890293.D | 11/11/2010 | 12:47:00 |
| Secondary Cal Check | S047034-SCV1 | B02890299.D | 11/11/2010 | 16:39:00 |

# INITIAL CALIBRATION STANDARDS

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047034 | Instrument: | GCMS-B |
| Calibration: | 0111803 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001918 | VOA Tune (GC/MS-B) | S047034-TUN1 | B02890285.D | 11/11/10 08:22 |
| 0002258 | VOA ICAL 10.0 PPB ELEMENT | S047034-CAL5 | B02890286.D | 11/11/10 09:37 |
| 0002256 | VOA ICAL 2.0 PPB ELEMENT | S047034-CAL3 | B02890287.D | 11/11/10 10:06 |
| 0002255 | VOA ICAL 1.0 PPB ELEMENT | S047034-CAL2 | B02890288.D | 11/11/10 10:33 |
| 0002254 | VOA ICAL 0.5 PPB ELEMENT | S047034-CAL1 | B02890289.D | 11/11/10 11:00 |
| 0002257 | VOA ICAL 5.0 PPB ELEMENT | S047034-CAL4 | B02890290.D | 11/11/10 11:27 |
| 0002259 | VOA ICAL 20.0 PPB ELEMENT | S047034-CAL6 | B02890291.D | 11/11/10 11:54 |
| 0002260 | VOA ICAL 40.0 PPB ELEMENT | S047034-CAL7 | B02890292.D | 11/11/10 12:20 |
| 0002261 | VOA ICAL 50.0 PPB ELEMENT | S047034-CAL8 | B02890293.D | 11/11/10 12:47 |
| 0002266 | VOA MIX SECOND SOURCE ELEMENT | S047034-SCV1 | B02890299.D | 11/11/10 16:39 |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9449965 | 2.996188 | | | 15 | |
| 1,1,1-Trichloroethane | 0.5659896 | 4.560913 | | | 15 | |
| 1,1,2,2-Tetrachloroethane | 0.4579836 | 6.241163 | | | 15 | |
| 1,1,2-Trichloroethane | 0.1883814 | 25.83749 | | | 15 | * |
| 1,1-Dichloroethane | 0.5886556 | 5.340725 | | | 15 | |
| 1,1-Dichloroethene | 0.2945645 | 6.971788 | | | 15 | |
| 1,1-Dichloropropene | 0.8870995 | 28.79643 | | | 15 | * |
| 1,2,3-Trichlorobenzene | 0.1079407 | 60.25025 | | 0.9983741 | | |
| 1,2,3-Trichloropropane | 0.3987978 | 2.309246 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.1333765 | 61.8921 | | 0.9984971 | | |
| 1,2,4-Trimethylbenzene | 4.709513 | 9.55917 | | | 15 | |
| 1,2-Dibromo-3-chloropropane | 1.013838E-02 | 26.03012 | | | 15 | * |
| 1,2-Dibromoethane | 0.4184844 | 2.192751 | | | 15 | |
| 1,2-Dichlorobenzene | 0.3836902 | 9.931573 | | | 15 | |
| 1,2-Dichloroethane | 0.4037109 | 34.30786 | | | 15 | * |
| 1,2-Dichloroethene (total) | | | | | 15 | |
| 1,2-Dichloropropane | 0.3990268 | 21.50741 | | | 15 | * |
| 1,3,5-Trimethylbenzene | 5.136773 | 4.363395 | | | 15 | |
| 1,3-Dichlorobenzene | 2.429237 | 4.866861 | | | 15 | |
| 1,3-Dichloropropane | 0.9832992 | 3.286307 | | | 15 | |
| 1,4-Dichlorobenzene | 2.361546 | 3.090043 | | | 15 | |
| 2,2-Dichloropropane | 0.3046553 | 5.396329 | | | 15 | |
| 2-Butanone | 5.842675E-02 | 26.98709 | | | 15 | * |
| 2-Chloroethylvinyl Ether | 8723.567 | 41.18061 | | 0.9747346 | | |
| 2-Chlorotoluene | 4.262763 | 2.473932 | | | 15 | |
| 2-Hexanone | 0.1678354 | 12.05372 | | | 15 | |
| 4-Chlorotoluene | 4.45775 | 3.06895 | | | 15 | |

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# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 0.2832524 | 14.19025 | | | 15 | |
| Acetone | 3.530808E-02 | 60.72747 | | 0.999617 | | |
| Acetonitrile | 12640.95 | 13.55521 | | | 15 | |
| Acrylonitrile | 31482.48 | 10.83697 | | | 15 | |
| Benzene | 2.347493 | 30.06644 | | | 15 | * |
| Bromobenzene | 1.15273 | 2.492457 | | | 15 | |
| Bromochloromethane | 0.1177031 | 7.751624 | | | 15 | |
| Bromodichloromethane | 0.5026204 | 21.74762 | | | 15 | * |
| Bromoform | 0.290434 | 12.84001 | | | 15 | |
| Bromomethane | 2.574268E-02 | 41.48754 | | 0.9991388 | | |
| Carbon disulfide | 0.9743583 | 7.835565 | | | 15 | |
| Carbon tetrachloride | 0.8946293 | 63.11922 | 0.9984195 | | | |
| Chlorobenzene | 3.33925 | 7.36761 | | | 15 | |
| Chlorodibromomethane | 0.5999869 | 6.15232 | | | 15 | |
| Chloroethane | 0.5391721 | 54.15445 | 0.9722477 | | | |
| Chloroform | 0.5666822 | 5.796015 | | | 15 | |
| Chloromethane | 0.24454 | 16.79022 | | 0.9931096 | | |
| cis-1,2-Dichloroethene | 0.3797202 | 6.232311 | | | 15 | |
| cis-1,3-Dichloropropene | 0.4930246 | 12.41325 | | | 15 | |
| Cyclohexane | 975484.5 | 9.121557 | | | 15 | |
| Dibromomethane | 0.1378844 | 21.47163 | | | 15 | * |
| Dichlorodifluoromethane | 0.3660774 | 10.70454 | | | 15 | |
| Ethyl methacrylate | 205471 | 17.74802 | | | 15 | * |
| Ethylbenzene | 6.517445 | 5.849966 | | | 15 | |
| Freon 113 | 1067379 | 8.201786 | | | 15 | |
| Hexachlorobutadiene | 0.2425145 | 29.6656 | | | 15 | * |
| Iodomethane | 2486491 | 7.590871 | | | 15 | |

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# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| Isobutyl alcohol | 4974.099 | 4.738612 | | | 15 | |
| Isopropylbenzene | 6.236763 | 3.048825 | | | 15 | |
| m,p-Xylenes | 2.521251 | 9.628999 | | | 15 | |
| Methacrylonitrile | 52616.51 | 7.754166 | | | 15 | |
| Methyl Acetate | 26152.27 | 7.069333 | | | 15 | |
| Methyl tert-Butyl Ether | 0.354677 | 7.568475 | | | 15 | |
| Methylcyclohexane | 1036101 | 10.22823 | | | 15 | |
| Methylene Chloride | 0.8416174 | 84.28984 | 0.9310435 | | | |
| Methylmethacrylate | 492250.2 | 8.694056 | | | 15 | |
| Naphthalene | 0.1136276 | 60.49789 | | 0.99588 | | |
| n-Butylbenzene | 4.521909 | 23.51799 | | | 15 | * |
| n-Propylbenzene | 7.637786 | 4.068436 | | | 15 | |
| o-Xylene | 2.238511 | 2.784486 | | | 15 | |
| p-Isopropyltoluene | 5.899351 | 9.677282 | | | 15 | |
| Propionitrile | 14872.44 | 11.96743 | | | 15 | |
| sec-Butylbenzene | 7.313888 | 5.611493 | | | 15 | |
| Styrene | 3.406218 | 3.688098 | | | 15 | |
| tert-Butylbenzene | 4.832452 | 5.305811 | | | 15 | |
| Tetrachloroethene | 1.669076 | 4.675657 | | | 15 | |
| Toluene | 1.500687 | 29.46237 | | | 15 | * |
| trans-1,2-Dichloroethene | 0.473488 | 5.608299 | | | 15 | |
| trans-1,3-Dichloropropene | 0.3188505 | 10.53039 | 0.9637676 | | | |
| Trichloroethene | 0.723381 | 57.91742 | | | 15 | * |
| Trichlorofluoromethane | 0.6463387 | 10.35389 | | | 15 | |
| Vinyl acetate | 190045.8 | 9.269583 | | | 15 | |
| Vinyl chloride | 0.3381399 | 16.17694 | 0.9962687 | | | |
| Xylene (Total) | | | | | 15 | |

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# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9661999 | 0.938158 | 0.9598089 | 0.9913526 | 0.9540768 | 0.9140259 |
| 1,1,1-Trichloroethane | 0.5716372 | 0.5260339 | 0.5448277 | 0.5851371 | 0.5837521 | 0.5389697 |
| 1,1,2,2-Tetrachloroethane | 0.4991332 | 0.4678964 | 0.4789108 | 0.4800518 | 0.4474796 | 0.4470107 |
| 1,1,2-Trichloroethane | 0.2647862 | 0.2383654 | 0.2197189 | 0.1848996 | 0.1699335 | 0.1443241 |
| 1,1-Dichloroethane | 0.649798 | 0.5882044 | 0.5879825 | 0.5956452 | 0.5884075 | 0.534779 |
| 1,1-Dichloroethene | 0.3273262 | 0.2950931 | 0.2983486 | 0.3104462 | 0.3054459 | 0.2651381 |
| 1,1-Dichloropropene | 1.258064 | 1.167221 | 1.07867 | 0.8727685 | 0.7879212 | 0.6226275 |
| 1,2,3-Trichlorobenzene | | 4.488212E-02 | 4.725757E-02 | 7.754877E-02 | 0.1156031 | 0.1513494 |
| 1,2,3-Trichloropropane | 0.4090994 | 0.3943578 | 0.3939365 | 0.4106789 | 0.3835681 | 0.3928662 |
| 1,2,4-Trichlorobenzene | 5.820784E-02 | 6.226352E-02 | 0.0622143 | 0.1215533 | 0.1542707 | 0.1999517 |
| 1,2,4-Trimethylbenzene | 3.904644 | 4.219085 | 4.510162 | 4.981189 | 4.990102 | 4.862537 |
| 1,2-Dibromo-3-chloropropane | | | 6.061677E-03 | 9.283073E-03 | 0.0105345 | 1.222898E-02 |
| 1,2-Dibromoethane | 0.4173095 | 0.4097333 | 0.4095069 | 0.4186066 | 0.4252138 | 0.4075379 |
| 1,2-Dichlorobenzene | 0.3369696 | 0.3363011 | 0.3424098 | 0.3976041 | 0.4104662 | 0.4058953 |
| 1,2-Dichloroethane | 0.6353706 | 0.5566408 | 0.477022 | 0.3754503 | 0.3269677 | 0.2747916 |
| 1,2-Dichloroethene (total) | | | | | | |
| 1,2-Dichloropropane | | ~~0.3174607~~ | 0.5382984 | 0.4380424 | 0.4026908 | 0.3276466 |
| 1,3,5-Trimethylbenzene | ~~4.787505~~ | 4.903282 | 5.156683 | 5.489605 | 5.36881 | 5.075123 |
| 1,3-Dichlorobenzene | 2.294399 | 2.296009 | 2.287492 | 2.498121 | 2.507999 | 2.444228 |
| 1,3-Dichloropropane | 1.046708 | 0.9969618 | 0.9844731 | 0.98262 | 0.960785 | 0.9326723 |
| 1,4-Dichlorobenzene | 2.294373 | 2.286968 | 2.299539 | 2.481075 | 2.367444 | 2.32001 |
| 2,2-Dichloropropane | 0.3053055 | 0.2943166 | 0.2791844 | 0.3179525 | 0.320566 | 0.2881492 |
| 2-Butanone | 8.347984E-02 | 7.589666E-02 | 6.666735E-02 | 5.672706E-02 | 5.156089E-02 | 4.372004E-02 |
| 2-Chloroethylvinyl Ether | | | | 3726.7 | 10663.3 | 6130.825 |
| 2-Chlorotoluene | 4.450536 | 4.274091 | 4.234549 | 4.345189 | 4.28737 | 4.101524 |
| 2-Hexanone | 0.1375177 | 0.1464787 | 0.1594265 | 0.1729784 | 0.1635128 | 0.1761758 |
| 4-Chlorotoluene | 4.518525 | 4.394811 | 4.531095 | 4.689819 | 4.542225 | 4.343801 |
| 4-Methyl-2-pentanone | ~~0.4791755~~ | 0.3695585 | 0.2882822 | 0.2736929 | 0.2507166 | 0.2542846 |
| Acetone | 8.309848E-02 | 0.047196 | 3.338935E-02 | 3.268382E-02 | 2.485234E-02 | 2.262677E-02 |
| Acetonitrile | ~~23275.8~~ | ~~7926.7~~ | 13828.3 | 15539.38 | 12252.47 | 11079.67 |
| Acrylonitrile | 28015.6 | 26769 | 29319.4 | 36973.84 | 32157.12 | 30887.83 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Benzene | 3.345317 | 3.141349 | 2.898636 | 2.306899 | 2.088328 | 1.64926 |
| Bromobenzene | 1.197837 | 1.149164 | 1.134679 | 1.162135 | 1.130194 | 1.106302 |
| Bromochloromethane | 0.1386507 | 0.1172922 | 0.1127188 | 0.1208019 | 0.1129928 | 0.1092236 |
| Bromodichloromethane | 0.651928 | 0.626411 | 0.58648 | 0.4824465 | 0.4569819 | 0.3833571 |
| Bromoform | 0.2427173 | 0.248688 | 0.2626604 | 0.2931309 | 0.2922784 | 0.3065906 |
| Bromomethane | 4.607583E-02 | 3.528978E-02 | 3.081432E-02 | 0.0214595 | 0.0162045 | 1.680047E-02 |
| Carbon disulfide | 1.108554 | 0.984223 | 0.9953507 | 1.020147 | 0.9959798 | 0.8676915 |
| Carbon tetrachloride | 2.137978 | 1.278169 | 0.8802421 | 0.686505 | 0.5814422 | 0.5136549 |
| Chlorobenzene | 3.779919 | 3.515188 | 3.503233 | 3.341518 | 3.235002 | 3.04529 |
| Chlorodibromomethane | 0.564885 | 0.5653688 | 0.5630434 | 0.6027943 | 0.6002471 | 0.597042 |
| Chloroethane | 0.8235289 | 0.8877947 | 0.3745473 | 0.3353815 | 0.2746081 | ~~8.904902E-02~~ |
| Chloroform | 0.6353806 | 0.5672441 | 0.5581153 | 0.5607959 | 0.565272 | 0.5160746 |
| Chloromethane | 0.2889733 | 0.2551 | 0.2219589 | 0.2812103 | 0.1667933 | 0.2420746 |
| cis-1,2-Dichloroethene | 0.4174071 | 0.3815376 | 0.3846656 | 0.3931812 | 0.3966853 | 0.3466856 |
| cis-1,3-Dichloropropene | 0.5311825 | 0.5532356 | 0.544912 | 0.4828346 | 0.4902198 | 0.41076 |
| Cyclohexane | 922448 | 862791 | 980518.5 | 1064991 | 1143176 | 923405.5 |
| Dibromomethane | 0.1791022 | 0.171347 | 0.1585935 | 0.1354962 | 0.1257001 | 0.1071635 |
| Dichlorodifluoromethane | 0.3603113 | 0.3259786 | 0.3203894 | 0.4438325 | 0.3917254 | 0.3548379 |
| Ethyl methacrylate | 158190 | 155119 | 183200 | 210826 | 224662.8 | 217981.3 |
| Ethylbenzene | 6.949865 | 6.685956 | 6.852572 | 6.80743 | 6.612465 | 6.107955 |
| Freon 113 | 1030888 | 970364 | 1086535 | 1155461 | 1228790 | 980407.7 |
| Hexachlorobutadiene | 0.130606 | 0.1693834 | 0.1903878 | 0.2390104 | 0.2750723 | 0.3026933 |
| Iodomethane | 2556738 | 2349990 | 2638715 | 2661286 | 2746273 | 2215671 |
| Isobutyl alcohol | | 4611.55 | 4878.875 | 5197.4 | 5286.265 | 4810.8 |
| Isopropylbenzene | 6.000104 | 6.014735 | 6.238216 | 6.468397 | 6.503671 | 6.132555 |
| m,p-Xylenes | 2.745616 | 2.656072 | 2.739383 | 2.726084 | 2.570926 | 2.349657 |
| Methacrylonitrile | | 45806 | 49267 | 54342.2 | 58033.4 | 51482.35 |
| Methyl Acetate | | 22978 | 25603 | 27268.6 | 26526.5 | 24744.85 |
| Methyl tert-Butyl Ether | 0.4090424 | 0.3625357 | 0.3362333 | 0.3683095 | 0.3545392 | 0.3204985 |
| Methylcyclohexane | 911438 | 879982 | 1019774 | 1138154 | 1198285 | 1017214 |
| Methylene Chloride | ~~4.398411~~ | 2.119454 | 1.005618 | 0.9835308 | 0.3160566 | 0.3232213 |

# INITIAL CALIBRATION DATA

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| Methylmethacrylate | 466518 | 439231 | 495394 | 544349.2 | 566605.9 | 462965.6 |
| Naphthalene | 6.535976E-02 | 6.648687E-02 | 6.655624E-02 | 8.051205E-02 | 0.1073231 | 0.1603903 |
| n-Butylbenzene | ~~1.904706~~ | 2.623383 | 3.422787 | 4.790123 | 5.131009 | 5.093937 |
| n-Propylbenzene | 7.249518 | 7.23528 | 7.598912 | 8.023235 | 8.079361 | 7.615503 |
| o-Xylene | 2.257541 | 2.22104 | 2.281944 | 2.330894 | 2.286187 | 2.144324 |
| p-Isopropyltoluene | ~~4.354749~~ | 4.853078 | 5.347195 | 6.260868 | 6.318688 | 6.087148 |
| Propionitrile | | ~~8406~~ | 11577 | 14362 | 15817 | 14986.6 |
| sec-Butylbenzene | ~~6.234999~~ | 6.607846 | 6.962683 | 7.670025 | 7.761215 | 7.302712 |
| Styrene | 3.226224 | 3.28174 | 3.433672 | 3.6254 | 3.439261 | 3.327536 |
| tert-Butylbenzene | 4.443203 | 4.486326 | 4.732752 | 5.017155 | 5.119426 | 4.853839 |
| Tetrachloroethene | 1.783438 | 1.68053 | 1.72214 | 1.725551 | 1.689709 | 1.560537 |
| Toluene | 2.120906 | 1.992143 | 1.869368 | 1.45257 | 1.332934 | 1.066496 |
| trans-1,2-Dichloroethene | 0.5159202 | 0.4727767 | 0.4820972 | 0.4963073 | 0.479277 | 0.430957 |
| trans-1,3-Dichloropropene | 0.2943704 | 0.3300938 | 0.3301034 | 0.3172673 | 0.3231012 | 0.2876942 |
| Trichloroethene | 1.701524 | 0.8064873 | 0.75538 | 0.5901542 | 0.5557702 | 0.442945 |
| Trichlorofluoromethane | 0.6618447 | 0.5994312 | 0.5999676 | 0.788383 | 0.674507 | 0.6493505 |
| Vinyl acetate | 169074 | 168848 | 182227.8 | 199568.3 | 187861.8 | 185777.8 |
| Vinyl chloride | 0.2913112 | 0.2808113 | 0.283743 | 0.4098663 | 0.2985892 | 0.3845848 |
| Xylene (Total) | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 0.9297198 | 0.9066298 | | | | |
| 1,1,1-Trichloroethane | 0.580488 | 0.5970709 | | | | |
| 1,1,2,2-Tetrachloroethane | 0.4299956 | 0.4133906 | | | | |
| 1,1,2-Trichloroethane | 0.12297 | 0.1620533 | | | | |
| 1,1-Dichloroethane | 0.5736988 | 0.5907297 | | | | |
| 1,1-Dichloroethene | 0.2731361 | 0.2815821 | | | | |
| 1,1-Dichloropropene | 0.5651432 | 0.7443802 | | | | |
| 1,2,3-Trichlorobenzene | 0.2110035 | ~~0.2261641~~ | | | | |
| 1,2,3-Trichloropropane | 0.403843 | 0.4020327 | | | | |
| 1,2,4-Trichlorobenzene | 0.2751738 | ~~0.2944382~~ | | | | |
| 1,2,4-Trimethylbenzene | 5.143735 | 5.06465 | | | | |
| 1,2-Dibromo-3-chloropropane | 1.258366E-02 | ~~1.325394E-02~~ | | | | |
| 1,2-Dibromoethane | 0.4307833 | 0.4291841 | | | | |
| 1,2-Dichlorobenzene | 0.4205287 | 0.419347 | | | | |
| 1,2-Dichloroethane | 0.250099 | 0.3333454 | | | | |
| 1,2-Dichloroethene (total) | | | | | | |
| 1,2-Dichloropropane | 0.2953403 | 0.3921424 | | | | |
| 1,3,5-Trimethylbenzene | 5.072618 | 4.891289 | | | | |
| 1,3-Dichlorobenzene | 2.559945 | 2.545702 | | | | |
| 1,3-Dichloropropane | 0.977883 | 0.9842906 | | | | |
| 1,4-Dichlorobenzene | 2.429367 | 2.413593 | | | | |
| 2,2-Dichloropropane | 0.3063628 | 0.3254052 | | | | |
| 2-Butanone | 3.777558E-02 | 5.158662E-02 | | | | |
| 2-Chloroethylvinyl Ether | 11226.19 | 11870.82 | | | | |
| 2-Chlorotoluene | 4.231436 | 4.177407 | | | | |
| 2-Hexanone | 0.1913384 | 0.1952547 | | | | |
| 4-Chlorotoluene | 4.377985 | 4.26374 | | | | |
| 4-Methyl-2-pentanone | 0.2695934 | 0.2766388 | | | | |
| Acetone | 1.971482E-02 | 1.890304E-02 | | | | |
| Acetonitrile | 11578.83 | 11567.06 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Acrylonitrile | 33540.92 | 34196.16 | | | | |
| Benzene | 1.454958 | 1.8952 | | | | |
| Bromobenzene | 1.171928 | 1.169604 | | | | |
| Bromochloromethane | 0.1145832 | 0.1153619 | | | | |
| Bromodichloromethane | 0.3554299 | 0.4779285 | | | | |
| Bromoform | 0.3362345 | 0.341172 | | | | |
| Bromomethane | 1.813708E-02 | 2.115997E-02 | | | | |
| Carbon disulfide | 0.8973035 | 0.9256172 | | | | |
| Carbon tetrachloride | 0.5325763 | 0.5464664 | | | | |
| Chlorobenzene | 3.161003 | 3.132851 | | | | |
| Chlorodibromomethane | 0.6482285 | 0.6582862 | | | | |
| Chloroethane | ~~4.028737E-02~~ | ~~4.203815E-02~~ | | | | |
| Chloroform | 0.5564346 | 0.5741406 | | | | |
| Chloromethane | 0.2556699 | ~~0.3016193~~ | | | | |
| cis-1,2-Dichloroethene | 0.3545202 | 0.3630787 | | | | |
| cis-1,3-Dichloropropene | 0.3946276 | 0.536425 | | | | |
| Cyclohexane | 958395.5 | 948150.4 | | | | |
| Dibromomethane | 0.0964754 | 0.1291976 | | | | |
| Dichlorodifluoromethane | 0.3560107 | 0.3755334 | | | | |
| Ethyl methacrylate | 241567.2 | 252222 | | | | |
| Ethylbenzene | 6.144073 | 5.979243 | | | | |
| Freon 113 | 1044017 | 1042569 | | | | |
| Hexachlorobutadiene | 0.3147347 | 0.3182281 | | | | |
| Iodomethane | 2355662 | 2367590 | | | | |
| Isobutyl alcohol | 4929.766 | 5104.037 | | | | |
| Isopropylbenzene | 6.339132 | 6.19729 | | | | |
| m,p-Xylenes | 2.239335 | 2.142936 | | | | |
| Methacrylonitrile | 54534.57 | 54850.06 | | | | |
| Methyl Acetate | 27710.6 | 28234.34 | | | | |
| Methyl tert-Butyl Ether | 0.337393 | 0.3488646 | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111803 | Instrument: | GCMS-B |
| | | Calibration Date: | 11/11/2010 12:00:59AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| Methylcyclohexane | 1065091 | 1058872 | | | | |
| Methylene Chloride | 0.3018239 | ~~0.2360642~~ | | | | |
| Methylmethacrylate | 482983.8 | 479954.4 | | | | |
| Naphthalene | 0.2487651 | ~~0.2770895~~ | | | | |
| n-Butylbenzene | 5.343307 | 5.248814 | | | | |
| n-Propylbenzene | 7.743135 | 7.557342 | | | | |
| o-Xylene | 2.213517 | 2.172644 | | | | |
| p-Isopropyltoluene | 6.303304 | 6.125174 | | | | |
| Propionitrile | 16104.42 | 16387.64 | | | | |
| sec-Butylbenzene | 7.561813 | 7.330924 | | | | |
| Styrene | 3.481905 | 3.434006 | | | | |
| tert-Butylbenzene | 5.04541 | 4.961506 | | | | |
| Tetrachloroethene | 1.60839 | 1.582312 | | | | |
| Toluene | 0.9395911 | 1.231487 | | | | |
| trans-1,2-Dichloroethene | 0.451097 | 0.4594715 | | | | |
| trans-1,3-Dichloropropene | 0.2812491 | 0.3869245 | | | | |
| Trichloroethene | 0.4023055 | 0.532482 | | | | |
| Trichlorofluoromethane | 0.6233459 | 0.5738795 | | | | |
| Vinyl acetate | 211525 | 215483.4 | | | | |
| Vinyl chloride | 0.3631753 | 0.3930379 | | | | |
| Xylene (Total) | | | | | | |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890358.D | Injection Date: | 11/13/10 |
| Instrument ID: | GCMS-B | Injection Time: | 09:59 |
| Sequence: | S047043 | Lab Sample ID: | S047043-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.6 | PASS |
| 75 | 30 - 60% of 95 | 46.6 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.44 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 90 | PASS |
| 175 | 5 - 9% of 174 | 7.09 | PASS |
| 176 | 95 - 101% of 174 | 97 | PASS |
| 177 | 5 - 9% of 176 | 6.32 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S047043-CCV1 | B02890359.D | 11/13/2010 | 10:25:00 |
| Blank | B047068-BLK1 | B02890360.D | 11/13/2010 | 11:04:00 |
| LCS | B047068-BS1 | B02890361.D | 11/13/2010 | 11:30:00 |
| LCS Dup | B047068-BSD1 | B02890362.D | 11/13/2010 | 11:57:00 |
| G01-MW-01A-1010 | 1011026-01 | B02890371.D | 11/13/2010 | 15:59:00 |
| G01-MW-03-1010 | 1011026-02 | B02890372.D | 11/13/2010 | 16:25:00 |
| G01-MW-07-1010 | 1011026-03 | B02890373.D | 11/13/2010 | 16:52:00 |
| G01-MW-12-1010 | 1011026-04 | B02890374.D | 11/13/2010 | 17:19:00 |
| G01-MW-05-1010 | 1011026-05 | B02890375.D | 11/13/2010 | 17:46:00 |
| G01-MW08-1010 | 1011026-06 | B02890376.D | 11/13/2010 | 18:12:00 |
| GKHMS-GW-FD04-1010 | 1011026-07 | B02890377.D | 11/13/2010 | 18:39:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 10.2 | 0.9449965 | 0.9647971 | | 2.1 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.6 | 0.5659896 | 0.6029627 | | 6.5 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 9.68 | 0.4579836 | 0.4431138 | | -3.2 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 9.75 | 0.1883814 | 0.1848595 | | -1.9 | 20 | |
| 1,1-Dichloroethane | A | 10.0 | 9.87 | 0.5886556 | 0.5810381 | | -1.3 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 10.6 | 0.2945645 | 0.3111978 | | 5.6 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 10.2 | 0.8870995 | 0.908979 | | 2.5 | 20 | |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 9.42 | 0.1079407 | 9.390612E-02 | | -5.8 | 20 | |
| 1,2,3-Trichloropropane | A | 10.0 | 9.92 | 0.3987978 | 0.3956187 | | -0.8 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 9.49 | 0.1333765 | 0.127899 | | -5.1 | 20 | |
| 1,2,4-Trimethylbenzene | A | 10.0 | 10.5 | 4.709513 | 4.950406 | | 5.1 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 8.03 | 1.013838E-02 | 6.962589E-03 | | -31.3 | 20 | * |
| 1,2-Dibromoethane | A | 10.0 | 10.1 | 0.4184844 | 0.4216138 | | 0.7 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 9.37 | 0.3836902 | 0.3490381 | | -9.0 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 9.70 | 0.4037109 | 0.3877971 | | -3.9 | 20 | |
| 1,2-Dichloropropane | A | 10.0 | 10.0 | 0.3990268 | 0.4475479 | | 12.2 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 10.4 | 5.136773 | 5.35013 | | 4.2 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 10.0 | 2.429237 | 2.442425 | | 0.5 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 10.3 | 0.9832992 | 1.016214 | | 3.3 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 9.95 | 2.361546 | 2.350705 | | -0.5 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 6.11 | 0.3046553 | 0.1862132 | | -38.9 | 20 | * |
| 2-Butanone | A | 20.0 | 17.4 | 5.842675E-02 | 5.101698E-02 | | -12.7 | 20 | |
| 2-Chlorotoluene | A | 10.0 | 9.97 | 4.262763 | 4.24989 | | -0.3 | 20 | |
| 2-Hexanone | A | 20.0 | 17.6 | 0.1678354 | 0.147796 | | -11.9 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 10.1 | 4.45775 | 4.510313 | | 1.2 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 20.0 | 16.4 | 0.2832524 | 0.2322376 | | -18.0 | 20 | |
| Acetone | Q | 20.0 | 23.4 | 3.530808E-02 | 2.865479E-02 | | 17.2 | 20 | |
| Acetonitrile | A | 100 | 75.7 | 12640.95 | 8023.29 | | -36.5 | 20 | * |
| Acrylonitrile | A | 50.0 | 43.9 | 31482.48 | 23767.22 | | -24.5 | 20 | * |
| Benzene | A | 10.0 | 10.0 | 2.347493 | 2.339548 | | -0.3 | 20 | |
| Bromobenzene | A | 10.0 | 9.53 | 1.15273 | 1.099011 | | -4.7 | 20 | |
| Bromochloromethane | A | 10.0 | 8.97 | 0.1177031 | 0.1056288 | | -10.3 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.61 | 0.5026204 | 0.4899405 | | -2.5 | 20 | |
| Bromoform | A | 10.0 | 7.88 | 0.290434 | 0.2287955 | | -21.2 | 20 | * |
| Bromomethane | Q | 10.0 | 8.23 | 2.574268E-02 | 2.053375E-02 | | -17.7 | 20 | |
| Carbon disulfide | A | 20.0 | 18.8 | 0.9743583 | 0.9153649 | | -6.1 | 20 | |
| Carbon tetrachloride | L | 10.0 | 10.1 | 0.8946293 | 0.5928995 | | 1.4 | 20 | |
| Chlorobenzene | A | 10.0 | 9.77 | 3.33925 | 3.263749 | | -2.3 | 20 | |
| Chlorodibromomethane | A | 10.0 | 9.45 | 0.5999869 | 0.5673432 | | -5.4 | 20 | |
| Chloroethane | L | 10.0 | 8.71 | 0.5391721 | 0.2374645 | | -12.9 | 20 | |
| Chloroform | A | 10.0 | 9.90 | 0.5666822 | 0.5612375 | | -1.0 | 20 | |
| Chloromethane | Q | 10.0 | 16.3 | 0.24454 | 0.3662771 | | 62.7 | 20 | * |
| cis-1,2-Dichloroethene | A | 10.0 | 9.61 | 0.3797202 | 0.3648481 | | -3.9 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 8.44 | 0.4930246 | 0.3206827 | | -35.0 | 20 | * |
| Cyclohexane | A | 10.0 | 10.3 | 975484.5 | 864034.7 | | -11.4 | 20 | |
| Dibromomethane | A | 10.0 | 9.69 | 0.1378844 | 0.1354875 | | -1.7 | 20 | |
| Dichlorodifluoromethane | A | 10.0 | 9.41 | 0.3660774 | 0.3445141 | | -5.9 | 20 | |
| Ethyl methacrylate | A | 10.0 | 8.46 | 205471 | 149150.4 | | -27.4 | 20 | * |
| Ethylbenzene | A | 10.0 | 10.2 | 6.517445 | 6.666581 | | 2.3 | 20 | |
| Freon 113 | A | 5.00 | 11.3 | 1067379 | 1038242 | | -2.7 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 10.5 | 0.2425145 | 0.238292 | | -1.7 | 20 | |
| Iodomethane | A | 10.0 | 9.39 | 2486491 | 2014255 | | -19.0 | 20 | |
| Isobutyl alcohol | A | 200 | 172 | 4974.099 | 3706.84 | | -25.5 | 20 | * |
| Isopropylbenzene | A | 10.0 | 10.2 | 6.236763 | 6.37656 | | 2.2 | 20 | |
| m,p-Xylenes | A | 20.0 | 20.6 | 2.521251 | 2.593592 | | 2.9 | 20 | |
| Methacrylonitrile | A | 10.0 | 9.05 | 52616.51 | 39943.5 | | -24.1 | 20 | * |
| Methyl Acetate | A | 10.0 | 9.47 | 26152.27 | 20598.2 | | -21.2 | 20 | * |
| Methyl tert-Butyl Ether | A | 10.0 | 1.99 | 0.354677 | 7.067413E-02 | | -80.1 | 20 | * |
| Methylcyclohexane | A | 10.0 | 10.7 | 1036101 | 942537.4 | | -9.0 | 20 | |
| Methylene Chloride | L | 10.0 | 1.62 | 0.8416174 | 0.2541324 | | -83.8 | 20 | * |
| Methylmethacrylate | A | 10.0 | 10.4 | 492250.2 | 438966 | | -10.8 | 20 | |
| Naphthalene | Q | 10.0 | 8.68 | 0.1136276 | 8.272169E-02 | | -13.2 | 20 | |
| n-Butylbenzene | A | 10.0 | 10.8 | 4.521909 | 4.924539 | | 8.9 | 20 | |
| n-Propylbenzene | A | 10.0 | 10.2 | 7.637786 | 7.787941 | | 2.0 | 20 | |
| o-Xylene | A | 10.0 | 9.94 | 2.238511 | 2.224639 | | -0.6 | 20 | |
| p-Isopropyltoluene | A | 10.0 | 10.6 | 5.899351 | 6.264044 | | 6.2 | 20 | |
| Propionitrile | A | 10.0 | 8.13 | 14872.44 | 10140.5 | | -31.8 | 20 | * |
| sec-Butylbenzene | A | 10.0 | 10.4 | 7.313888 | 7.623382 | | 4.2 | 20 | |
| Styrene | A | 10.0 | 9.97 | 3.406218 | 3.395335 | | -0.3 | 20 | |
| tert-Butylbenzene | A | 10.0 | 10.4 | 4.832452 | 5.036201 | | 4.2 | 20 | |
| Tetrachloroethene | A | 10.0 | 11.1 | 1.669076 | 1.856583 | | 11.2 | 20 | |
| Toluene | A | 10.0 | 9.48 | 1.500687 | 1.420266 | | -5.4 | 20 | |
| trans-1,2-Dichloroethene | A | 10.0 | 10.2 | 0.473488 | 0.4803866 | | 1.5 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 8.44 | 0.3188505 | 0.3206827 | | -15.6 | 20 | |
| Trichloroethene | A | 10.0 | 10.1 | 0.723381 | 0.6181457 | | -14.5 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890359.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S047043 | Injection Date: | 11/13/10 |
| Lab Sample ID: | S047043-CCV1 | Injection Time: | 10:25 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Trichlorofluoromethane | A | 10.0 | 11.5 | 0.6463387 | 0.7426795 | | 14.9 | 20 |
| Vinyl acetate | A | 20.0 | 18.6 | 190045.8 | 152225 | | -19.9 | 20 |
| Vinyl chloride | L | 10.0 | 11.9 | 0.3381399 | 0.4384397 | | 19.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | B02890378.D | Injection Date: | 11/15/10 |
| Instrument ID: | GCMS-B | Injection Time: | 09:23 |
| Sequence: | S048008 | Lab Sample ID: | S048008-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 50 | 15 - 40% of 95 | 16.5 | PASS |
| 75 | 30 - 60% of 95 | 46.4 | PASS |
| 95 | Base peak, 100% relative abundance | 100 | PASS |
| 96 | 5 - 9% of 95 | 6.55 | PASS |
| 173 | Less than 2% of 174 | 0 | PASS |
| 174 | 50 - 200% of 95 | 87.3 | PASS |
| 175 | 5 - 9% of 174 | 7.06 | PASS |
| 176 | 95 - 101% of 174 | 97.7 | PASS |
| 177 | 5 - 9% of 176 | 6.63 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S048008-CCV1 | B02890379.D | 11/15/2010 | 9:49:00 |
| Blank | B049003-BLK1 | B02890380.D | 11/15/2010 | 10:16:00 |
| LCS | B049003-BS1 | B02890381.D | 11/15/2010 | 10:43:00 |
| GKHMS-TB-06-1010 | 1011026-08 | B02890383.D | 11/15/2010 | 11:38:00 |
| Matrix Spike | B049003-MS1 | B02890384.D | 11/15/2010 | 12:05:00 |
| Matrix Spike Dup | B049003-MSD1 | B02890385.D | 11/15/2010 | 12:32:00 |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 1,1,1,2-Tetrachloroethane | A | 10.0 | 10.0 | 0.9449965 | 0.9491511 | | 0.4 | 20 | |
| 1,1,1-Trichloroethane | A | 10.0 | 10.2 | 0.5659896 | 0.5779784 | | 2.1 | 20 | |
| 1,1,2,2-Tetrachloroethane | A | 10.0 | 10.7 | 0.4579836 | 0.4903044 | | 7.1 | 20 | |
| 1,1,2-Trichloroethane | A | 10.0 | 9.85 | 0.1883814 | 0.1437112 | | -23.7 | 20 | * |
| 1,1-Dichloroethane | A | 10.0 | 9.37 | 0.5886556 | 0.5517367 | | -6.3 | 20 | |
| 1,1-Dichloroethene | A | 10.0 | 9.71 | 0.2945645 | 0.2858931 | | -2.9 | 20 | |
| 1,1-Dichloropropene | A | 10.0 | 9.35 | 0.8870995 | 0.6382695 | | -28.0 | 20 | * |
| 1,2,3-Trichlorobenzene | Q | 10.0 | 12.5 | 0.1079407 | 0.1714487 | | 25.4 | 20 | * |
| 1,2,3-Trichloropropane | A | 10.0 | 10.6 | 0.3987978 | 0.4218935 | | 5.8 | 20 | |
| 1,2,4-Trichlorobenzene | Q | 10.0 | 11.7 | 0.1333765 | 0.2126437 | | 17.3 | 20 | |
| 1,2,4-Trimethylbenzene | A | 10.0 | 11.2 | 4.709513 | 5.297978 | | 12.5 | 20 | |
| 1,2-Dibromo-3-chloropropane | A | 10.0 | 9.53 | 1.013838E-02 | 1.073262E-02 | | 5.9 | 20 | |
| 1,2-Dibromoethane | A | 10.0 | 9.74 | 0.4184844 | 0.4074317 | | -2.6 | 20 | |
| 1,2-Dichlorobenzene | A | 10.0 | 8.70 | 0.3836902 | 0.4210197 | | 9.7 | 20 | |
| 1,2-Dichloroethane | A | 10.0 | 9.30 | 0.4037109 | 0.2864198 | | -29.1 | 20 | * |
| 1,2-Dichloropropane | A | 10.0 | 9.45 | 0.3990268 | 0.323849 | | -18.8 | 20 | |
| 1,3,5-Trimethylbenzene | A | 10.0 | 10.9 | 5.136773 | 5.577743 | | 8.6 | 20 | |
| 1,3-Dichlorobenzene | A | 10.0 | 11.0 | 2.429237 | 2.67406 | | 10.1 | 20 | |
| 1,3-Dichloropropane | A | 10.0 | 9.15 | 0.9832992 | 0.9001943 | | -8.5 | 20 | |
| 1,4-Dichlorobenzene | A | 10.0 | 10.8 | 2.361546 | 2.547879 | | 7.9 | 20 | |
| 2,2-Dichloropropane | A | 10.0 | 9.38 | 0.3046553 | 0.2859123 | | -6.2 | 20 | |
| 2-Butanone | A | 20.0 | 17.9 | 5.842675E-02 | 4.047097E-02 | | -30.7 | 20 | * |
| 2-Chlorotoluene | A | 10.0 | 10.4 | 4.262763 | 4.454226 | | 4.5 | 20 | |
| 2-Hexanone | A | 20.0 | 18.6 | 0.1678354 | 0.1559188 | | -7.1 | 20 | |
| 4-Chlorotoluene | A | 10.0 | 10.8 | 4.45775 | 4.836953 | | 8.5 | 20 | |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4-Methyl-2-pentanone | A | 20.0 | 16.3 | 0.2832524 | 0.2311587 | | -18.4 | 20 | |
| Acetone | Q | 20.0 | 18.0 | 3.530808E-02 | 2.293622E-02 | | -10.0 | 20 | |
| Acetonitrile | A | 100 | 87.1 | 12640.95 | 9893.12 | | -21.7 | 20 | * |
| Acrylonitrile | A | 50.0 | 46.1 | 31482.48 | 26786.44 | | -14.9 | 20 | |
| Benzene | A | 10.0 | 9.28 | 2.347493 | 1.671885 | | -28.8 | 20 | * |
| Bromobenzene | A | 10.0 | 10.4 | 1.15273 | 1.19706 | | 3.8 | 20 | |
| Bromochloromethane | A | 10.0 | 8.68 | 0.1177031 | 0.1022244 | | -13.2 | 20 | |
| Bromodichloromethane | A | 10.0 | 9.87 | 0.5026204 | 0.3872016 | | -23.0 | 20 | * |
| Bromoform | A | 10.0 | 10.8 | 0.290434 | 0.3140696 | | 8.1 | 20 | |
| Bromomethane | Q | 10.0 | 3.54 | 2.574268E-02 | 8.303776E-03 | | -64.6 | 20 | * |
| Carbon disulfide | A | 20.0 | 19.0 | 0.9743583 | 0.9271374 | | -4.8 | 20 | |
| Carbon tetrachloride | L | 10.0 | 9.99 | 0.8946293 | 0.5851107 | | -0.1 | 20 | |
| Chlorobenzene | A | 10.0 | 9.32 | 3.33925 | 3.112225 | | -6.8 | 20 | |
| Chlorodibromomethane | A | 10.0 | 9.71 | 0.5999869 | 0.5824614 | | -2.9 | 20 | |
| Chloroethane | L | 10.0 | 12.3 | 0.5391721 | 0.3287941 | | 23.3 | 20 | * |
| Chloroform | A | 10.0 | 9.43 | 0.5666822 | 0.5342691 | | -5.7 | 20 | |
| Chloromethane | Q | 10.0 | 11.3 | 0.24454 | 0.2475351 | | 12.8 | 20 | |
| cis-1,2-Dichloroethene | A | 10.0 | 9.44 | 0.3797202 | 0.3583891 | | -5.6 | 20 | |
| cis-1,3-Dichloropropene | A | 10.0 | 9.24 | 0.4930246 | 0.2738168 | | -44.5 | 20 | * |
| Cyclohexane | A | 10.0 | 9.43 | 975484.5 | 848152 | | -13.1 | 20 | |
| Dibromomethane | A | 10.0 | 10.1 | 0.1378844 | 0.1085927 | | -21.2 | 20 | * |
| Dichlorodifluoromethane | A | 10.0 | 9.13 | 0.3660774 | 0.3344005 | | -8.7 | 20 | |
| Ethyl methacrylate | A | 10.0 | 9.78 | 205471 | 184853.2 | | -10.0 | 20 | |
| Ethylbenzene | A | 10.0 | 9.79 | 6.517445 | 6.379796 | | -2.1 | 20 | |
| Freon 113 | A | 5.00 | 10.3 | 1067379 | 1010727 | | -5.3 | 20 | |

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# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobutadiene | A | 10.0 | 9.59 | 0.2425145 | 0.2820151 | | 16.3 | 20 | |
| Iodomethane | A | 10.0 | 9.52 | 2486491 | 2187362 | | -12.0 | 20 | |
| Isobutyl alcohol | A | 200 | 178 | 4974.099 | 4107.71 | | -17.4 | 20 | |
| Isopropylbenzene | A | 10.0 | 10.4 | 6.236763 | 6.485165 | | 4.0 | 20 | |
| m,p-Xylenes | A | 20.0 | 19.9 | 2.521251 | 2.504389 | | -0.7 | 20 | |
| Methacrylonitrile | A | 10.0 | 9.31 | 52616.51 | 44052.5 | | -16.3 | 20 | |
| Methyl Acetate | A | 10.0 | 9.61 | 26152.27 | 22401 | | -14.3 | 20 | |
| Methyl tert-Butyl Ether | A | 10.0 | 9.20 | 0.354677 | 0.3261366 | | -8.0 | 20 | |
| Methylcyclohexane | A | 10.0 | 9.90 | 1036101 | 939634.5 | | -9.3 | 20 | |
| Methylene Chloride | L | 10.0 | 1.01 | 0.8416174 | 0.2436185 | | -89.9 | 20 | * |
| Methylmethacrylate | A | 10.0 | 9.46 | 492250.2 | 429827.4 | | -12.7 | 20 | |
| Naphthalene | Q | 10.0 | 13.0 | 0.1136276 | 0.1784834 | | 29.9 | 20 | * |
| n-Butylbenzene | A | 10.0 | 11.1 | 4.521909 | 5.683387 | | 25.7 | 20 | * |
| n-Propylbenzene | A | 10.0 | 10.8 | 7.637786 | 8.233208 | | 7.8 | 20 | |
| o-Xylene | A | 10.0 | 9.94 | 2.238511 | 2.226065 | | -0.6 | 20 | |
| p-Isopropyltoluene | A | 10.0 | 11.5 | 5.899351 | 6.784484 | | 15.0 | 20 | |
| Propionitrile | A | 10.0 | 9.47 | 14872.44 | 12662.1 | | -14.9 | 20 | |
| sec-Butylbenzene | A | 10.0 | 11.2 | 7.313888 | 8.206134 | | 12.2 | 20 | |
| Styrene | A | 10.0 | 10.2 | 3.406218 | 3.475528 | | 2.0 | 20 | |
| tert-Butylbenzene | A | 10.0 | 11.1 | 4.832452 | 5.37384 | | 11.2 | 20 | |
| Tetrachloroethene | A | 10.0 | 9.58 | 1.669076 | 1.599099 | | -4.2 | 20 | |
| Toluene | A | 10.0 | 9.64 | 1.500687 | 1.110741 | | -26.0 | 20 | * |
| trans-1,2-Dichloroethene | A | 10.0 | 9.42 | 0.473488 | 0.4459864 | | -5.8 | 20 | |
| trans-1,3-Dichloropropene | L | 10.0 | 9.24 | 0.3188505 | 0.2738168 | | -7.6 | 20 | |
| Trichloroethene | A | 10.0 | 9.54 | 0.723381 | 0.4484329 | | -38.0 | 20 | * |

# CONTINUING CALIBRATION VERIFICATION

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-B | Calibration: | 0111803 |
| Lab File ID: | B02890379.D | Calibration Date: | 11/11/10 00:00 |
| Sequence: | S048008 | Injection Date: | 11/15/10 |
| Lab Sample ID: | S048008-CCV1 | Injection Time: | 09:49 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Trichlorofluoromethane | A | 10.0 | 11.1 | 0.6463387 | 0.7163621 | | 10.8 | 20 |
| Vinyl acetate | A | 20.0 | 18.4 | 190045.8 | 161470.9 | | -15.0 | 20 |
| Vinyl chloride | L | 10.0 | 8.20 | 0.3381399 | 0.295515 | | -18.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B047068-BLK1 | Batch: | B047068 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| GKHMS-GW-FD04-1010 | 1011026-07 | B02890377.D | 18:39 |
| G01-MW08-1010 | 1011026-06 | B02890376.D | 18:12 |
| G01-MW-02-1010 | 1011026-05 | B02890375.D | 17:46 |
| G01-MW-12-1010 | 1011026-04 | B02890374.D | 17:19 |
| G01-MW-07-1010 | 1011026-03 | B02890373.D | 16:52 |
| G01-MW-03-1010 | 1011026-02 | B02890372.D | 16:25 |
| G01-MW-01A-1010 | 1011026-01 | B02890371.D | 15:59 |
| LCS Dup | B047068-BSD1 | B02890362.D | 11:57 |
| LCS | B047068-BS1 | B02890361.D | 11:30 |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.00 | U |
| 78-93-3 | 2-Butanone | 5.00 | U |
| 95-49-8 | 2-Chlorotoluene | 1.00 | U |
| 591-78-6 | 2-Hexanone | 5.00 | U |
| 106-43-4 | 4-Chlorotoluene | 1.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.00 | U |
| 75-05-8 | Acetonitrile | 10.0 | U |
| 107-13-1 | Acrylonitrile | 5.00 | U |
| 71-43-2 | Benzene | 1.00 | U |
| 108-86-1 | Bromobenzene | 1.00 | U |
| 74-97-5 | Bromochloromethane | 1.00 | U |
| 75-27-4 | Bromodichloromethane | 1.00 | U |
| 75-25-2 | Bromoform | 1.00 | U |
| 74-83-9 | Bromomethane | 1.00 | U |
| 75-15-0 | Carbon disulfide | 1.00 | U |
| 56-23-5 | Carbon tetrachloride | 1.00 | U |
| 108-90-7 | Chlorobenzene | 1.00 | U |
| 124-48-1 | Chlorodibromomethane | 1.00 | U |
| 75-00-3 | Chloroethane | 1.00 | U |
| 67-66-3 | Chloroform | 1.00 | U |
| 74-87-3 | Chloromethane | 1.00 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U |
| 110-82-7 | Cyclohexane | 1.00 | U |
| 74-95-3 | Dibromomethane | 1.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U |
| 97-63-2 | Ethyl methacrylate | 1.00 | U |
| 100-41-4 | Ethylbenzene | 1.00 | U |
| 76-13-1 | Freon 113 | 1.00 | U |
| 87-68-3 | Hexachlorobutadiene | 1.00 | U |
| 74-88-4 | Iodomethane | 1.00 | U |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B047068-BLK1 | File ID: | B02890360.D |
| Sampled: | | Prepared: | 11/13/10 11:04 | Analyzed: | 11/13/10 11:04 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B047068 | Sequence: | S047043 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 78-83-1 | Isobutyl alcohol | 20.0 | U |
| 98-82-8 | Isopropylbenzene | 1.00 | U |
| | m,p-Xylenes | 1.00 | U |
| 126-98-7 | Methacrylonitrile | 1.00 | U |
| 76-20-9 | Methyl Acetate | 1.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 1.00 | U |
| 108-87-2 | Methylcyclohexane | 1.00 | U |
| 75-09-2 | Methylene Chloride | 1.00 | U |
| 80-62-6 | Methylmethacrylate | 1.00 | U |
| 91-20-3 | Naphthalene | 1.00 | U |
| 104-51-8 | n-Butylbenzene | 1.00 | U |
| 103-65-1 | n-Propylbenzene | 1.00 | U |
| 95-47-6 | o-Xylene | 1.00 | U |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U |
| 107-12-0 | Propionitrile | 10.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.00 | U |
| 100-42-5 | Styrene | 1.00 | U |
| 98-06-6 | tert-Butylbenzene | 1.00 | U |
| 127-18-4 | Tetrachloroethene | 1.00 | U |
| 108-88-3 | Toluene | 1.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.00 | U |
| 79-01-6 | Trichloroethene | 1.00 | U |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U |
| 108-05-4 | Vinyl acetate | 1.00 | U |
| 75-01-4 | Vinyl chloride | 1.00 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 10.8 | 108 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 11.6 | 116 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.6 | 106 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 10.4 | 104 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 10.2 | 102 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 11.6 | 116 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.5 | 115 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 8.64 | 86 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 8.82 | 88 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.2 | 112 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 8.64 | 86 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 10.7 | 107 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 9.79 | 98 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 10.5 | 105 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.2 | 112 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.0 | 110 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.0 | 100 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 10.7 | 107 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 10.3 | 103 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 10.8 | 108 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.5 | 105 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 10.8 | 108 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 10.6 | 106 | 60 - 135 |
| Acetone | 10.0 | 16.8 | 168 * | 40 - 140 |
| Acetonitrile | 100 | 87.8 | 88 | 75 - 125 |
| Acrylonitrile | 10.0 | 7.98 | 80 | 75 - 125 |
| Benzene | 10.0 | 10.5 | 105 | 80 - 120 |
| Bromobenzene | 10.0 | 10.3 | 103 | 75 - 125 |
| Bromochloromethane | 10.0 | 9.38 | 94 | 65 - 130 |
| Bromodichloromethane | 10.0 | 9.95 | 100 | 75 - 120 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 8.94 | 89 | 70 - 130 |
| Bromomethane | 10.0 | 10.0 | 100 | 30 - 145 |
| Carbon disulfide | 10.0 | 10.5 | 105 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 11.0 | 110 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.5 | 105 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 9.75 | 98 | 60 - 135 |
| Chloroethane | 10.0 | 7.05 | 70 | 60 - 135 |
| Chloroform | 10.0 | 10.5 | 105 | 65 - 135 |
| Chloromethane | 10.0 | 11.8 | 118 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 11.4 | 114 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 9.58 | 96 | 70 - 130 |
| Cyclohexane | 10.0 | 9.50 | 95 | 75 - 125 |
| Dibromomethane | 10.0 | 10.5 | 105 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 4.13 | 41 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 9.29 | 93 | 75 - 125 |
| Ethylbenzene | 10.0 | 10.9 | 109 | 75 - 125 |
| Freon 113 | 10.0 | 8.90 | 89 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 9.08 | 91 | 50 - 140 |
| Iodomethane | 10.0 | 5.25 | 52 * | 75 - 125 |
| Isobutyl alcohol | 100 | 117 | 117 | 75 - 125 |
| Isopropylbenzene | 10.0 | 11.9 | 119 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.0 | 110 | 75 - 130 |
| Methacrylonitrile | 10.0 | 9.45 | 94 | 75 - 125 |
| Methyl Acetate | 10.0 | 7.13 | 71 * | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 7.97 | 80 | 65 - 125 |
| Methylcyclohexane | 10.0 | 11.0 | 110 | 75 - 125 |
| Methylene Chloride | 10.0 | 3.13 | 31 * | 55 - 140 |
| Methylmethacrylate | 10.0 | 9.62 | 96 | 75 - 125 |
| Naphthalene | 10.0 | 7.60 | 76 | 55 - 140 |
| n-Butylbenzene | 10.0 | 11.3 | 113 | 70 - 135 |
| n-Propylbenzene | 10.0 | 10.4 | 104 | 70 - 130 |
| o-Xylene | 10.0 | 10.9 | 109 | 80 - 120 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| p-Isopropyltoluene | 10.0 | 11.4 | 114 | 75 - 130 |
| Propionitrile | 10.0 | 8.98 | 90 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 11.1 | 111 | 70 - 125 |
| Styrene | 10.0 | 10.6 | 106 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 12.2 | 122 | 70 - 130 |
| Tetrachloroethene | 10.0 | 11.8 | 118 | 45 - 150 |
| Toluene | 10.0 | 10.4 | 104 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 9.62 | 96 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 9.58 | 96 | 55 - 140 |
| Trichloroethene | 10.0 | 10.9 | 109 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 8.80 | 88 | 50 - 145 |
| Vinyl acetate | 20.0 | 13.9 | 69 * | 75 - 125 |
| Vinyl chloride | 10.0 | 8.62 | 86 | 50 - 145 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 11.4 | 114 | 6 | 30 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 12.2 | 122 | 5 | 30 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 11.4 | 114 | 7 | 30 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 11.1 | 111 | 6 | 30 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 10.7 | 107 | 5 | 30 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 12.0 | 120 | 4 | 30 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.9 | 119 | 4 | 30 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 10.5 | 105 | 19 | 30 | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 11.3 | 113 | 7 | 30 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 10.4 | 104 | 16 | 30 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.9 | 119 | 6 | 30 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 10.5 | 105 | 19 | 30 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 11.3 | 113 | 5 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 10.2 | 102 | 4 | 30 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 11.2 | 112 | 6 | 30 | 70 - 130 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | 10.0 | 11.2 | 112 | 5 | 30 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.8 | 118 | 5 | 30 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 11.8 | 118 | 7 | 30 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.6 | 106 | 6 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 11.6 | 116 | 8 | 30 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 11.2 | 112 | 8 | 30 | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 11.3 | 113 | 4 | 30 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.0 | 100 | 4 | 30 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 11.4 | 114 | 5 | 30 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 11.5 | 115 | 8 | 30 | 60 - 135 |
| Acetone | 10.0 | 11.7 | 117 | 36 | 30 | 40 - 140 |
| Acetonitrile | 100 | 95.7 | 96 | 9 | 30 | 75 - 125 |
| Acrylonitrile | 10.0 | 8.79 | 88 | 10 | 30 | 75 - 125 |
| Benzene | 10.0 | 11.0 | 110 | 5 | 30 | 80 - 120 |
| Bromobenzene | 10.0 | 11.0 | 110 | 7 | 30 | 75 - 125 |
| Bromochloromethane | 10.0 | 10.0 | 100 | 7 | 30 | 65 - 130 |
| Bromodichloromethane | 10.0 | 10.5 | 105 | 6 | 30 | 75 - 120 |
| Bromoform | 10.0 | 9.60 | 96 | 7 | 30 | 70 - 130 |
| Bromomethane | 10.0 | 9.60 | 96 | 4 | 30 | 30 - 145 |
| Carbon disulfide | 10.0 | 11.0 | 110 | 4 | 30 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 11.5 | 115 | 5 | 30 | 80 - 120 |
| Chlorobenzene | 10.0 | 10.9 | 109 | 4 | 30 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 10.4 | 104 | 7 | 30 | 60 - 135 |
| Chloroethane | 10.0 | 7.41 | 74 | 5 | 30 | 60 - 135 |
| Chloroform | 10.0 | 11.0 | 110 | 5 | 30 | 65 - 135 |
| Chloromethane | 10.0 | 11.7 | 117 | 1 | 30 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 12.2 | 122 | 6 | 30 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 7 | 30 | 70 - 130 |
| Cyclohexane | 10.0 | 9.98 | 100 | 5 | 30 | 75 - 125 |
| Dibromomethane | 10.0 | 11.1 | 111 | 6 | 30 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 4.37 | 44 | 6 | 30 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 10.3 | 103 | 10 | 30 | 75 - 125 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B047068 | Laboratory ID: | B047068-BSD1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Ethylbenzene | 10.0 | 11.2 | 112 | 3 | 30 | 75 - 125 |
| Freon 113 | 10.0 | 9.26 | 93 | 4 | 30 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.0 | 100 | 10 | 30 | 50 - 140 |
| Iodomethane | 10.0 | 5.49 | 55 * | 4 | 30 | 75 - 125 |
| Isobutyl alcohol | 100 | 105 | 105 | 11 | 30 | 75 - 125 |
| Isopropylbenzene | 10.0 | 12.2 | 122 | 3 | 30 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.7 | 114 | 3 | 30 | 75 - 130 |
| Methacrylonitrile | 10.0 | 10.4 | 104 | 10 | 30 | 75 - 125 |
| Methyl Acetate | 10.0 | 7.89 | 79 | 10 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 10.0 | 100 | 23 | 30 | 65 - 125 |
| Methylcyclohexane | 10.0 | 11.5 | 115 | 4 | 30 | 75 - 125 |
| Methylene Chloride | 10.0 | 3.99 | 40 * | 24 | 30 | 55 - 140 |
| Methylmethacrylate | 10.0 | 10.1 | 101 | 5 | 30 | 75 - 125 |
| Naphthalene | 10.0 | 9.60 | 96 | 23 | 30 | 55 - 140 |
| n-Butylbenzene | 10.0 | 11.6 | 116 | 3 | 30 | 70 - 135 |
| n-Propylbenzene | 10.0 | 10.8 | 108 | 4 | 30 | 70 - 130 |
| o-Xylene | 10.0 | 11.3 | 113 | 4 | 30 | 80 - 120 |
| p-Isopropyltoluene | 10.0 | 11.9 | 119 | 4 | 30 | 75 - 130 |
| Propionitrile | 10.0 | 9.81 | 98 | 9 | 30 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 11.6 | 116 | 4 | 30 | 70 - 125 |
| Styrene | 10.0 | 11.2 | 112 | 5 | 30 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 12.7 | 127 | 4 | 30 | 70 - 130 |
| Tetrachloroethene | 10.0 | 12.0 | 120 | 2 | 30 | 45 - 150 |
| Toluene | 10.0 | 10.8 | 108 | 4 | 30 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 10.2 | 102 | 5 | 30 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 10.2 | 102 | 7 | 30 | 55 - 140 |
| Trichloroethene | 10.0 | 11.4 | 114 | 4 | 30 | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 9.32 | 93 | 6 | 30 | 50 - 145 |
| Vinyl acetate | 20.0 | 15.6 | 78 | 12 | 30 | 75 - 125 |
| Vinyl chloride | 10.0 | 9.00 | 90 | 4 | 30 | 50 - 145 |

# METHOD BLANK SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B049003-BLK1 | Batch: | B049003 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B049003-MSD1 | B02890385.D | 12:32 |
| Matrix Spike | B049003-MS1 | B02890384.D | 12:05 |
| GKHMS-TB-06-1010 | 1011026-08 | B02890383.D | 11:38 |
| LCS | B049003-BS1 | B02890381.D | 10:43 |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B049003-BLK1 | File ID: | B02890380.D |
| Sampled: | | Prepared: | 11/15/10 10:16 | Analyzed: | 11/15/10 10:16 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B049003 | Sequence: | S048008 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.00 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.00 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.00 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1.00 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.00 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.00 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.00 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.00 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.00 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.00 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.00 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.00 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.00 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.00 | U |
| 107-06-2 | 1,2-Dichloroethane | 1.00 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.00 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.00 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.00 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.00 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.00 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.00 | U |
| 78-93-3 | 2-Butanone | 5.00 | U |
| 95-49-8 | 2-Chlorotoluene | 1.00 | U |
| 591-78-6 | 2-Hexanone | 5.00 | U |
| 106-43-4 | 4-Chlorotoluene | 1.00 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.00 | U |

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# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B049003-BLK1 | File ID: | B02890380.D |
| Sampled: | | Prepared: | 11/15/10 10:16 | Analyzed: | 11/15/10 10:16 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B049003 | Sequence: | S048008 | Calibration: | 0111803 |
| Column: | 1 | | | | |

Instrument: GCMS-B

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.00 | U |
| 75-05-8 | Acetonitrile | 10.0 | U |
| 107-13-1 | Acrylonitrile | 5.00 | U |
| 71-43-2 | Benzene | 1.00 | U |
| 108-86-1 | Bromobenzene | 1.00 | U |
| 74-97-5 | Bromochloromethane | 1.00 | U |
| 75-27-4 | Bromodichloromethane | 1.00 | U |
| 75-25-2 | Bromoform | 1.00 | U |
| 74-83-9 | Bromomethane | 1.00 | U |
| 75-15-0 | Carbon disulfide | 1.00 | U |
| 56-23-5 | Carbon tetrachloride | 1.00 | U |
| 108-90-7 | Chlorobenzene | 1.00 | U |
| 124-48-1 | Chlorodibromomethane | 1.00 | U |
| 75-00-3 | Chloroethane | 1.00 | U |
| 67-66-3 | Chloroform | 1.00 | U |
| 74-87-3 | Chloromethane | 1.00 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.00 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | 1.00 | U |
| 110-82-7 | Cyclohexane | 1.00 | U |
| 74-95-3 | Dibromomethane | 1.00 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.00 | U |
| 97-63-2 | Ethyl methacrylate | 1.00 | U |
| 100-41-4 | Ethylbenzene | 1.00 | U |
| 76-13-1 | Freon 113 | 1.00 | U |
| 87-68-3 | Hexachlorobutadiene | 1.00 | U |
| 74-88-4 | Iodomethane | 1.00 | U |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B049003-BLK1 | File ID: | B02890380.D |
| Sampled: | | Prepared: | 11/15/10 10:16 | Analyzed: | 11/15/10 10:16 |
| Solids: | | Preparation: | EPA 5030B | Dilution: | |
| Batch: | B049003 | Sequence: | S048008 | Calibration: | 0111803 |
| Instrument: | GCMS-B | | | | |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | Q |
|---|---|---|---|
| 78-83-1 | Isobutyl alcohol | 20.0 | U |
| 98-82-8 | Isopropylbenzene | 1.00 | U |
| | m,p-Xylenes | 1.00 | U |
| 126-98-7 | Methacrylonitrile | 1.00 | U |
| 76-20-9 | Methyl Acetate | 1.00 | U |
| 1634-04-4 | Methyl tert-Butyl Ether | 1.00 | U |
| 108-87-2 | Methylcyclohexane | 1.00 | U |
| 75-09-2 | Methylene Chloride | 1.00 | U |
| 80-62-6 | Methylmethacrylate | 1.00 | U |
| 91-20-3 | Naphthalene | 1.00 | U |
| 104-51-8 | n-Butylbenzene | 1.00 | U |
| 103-65-1 | n-Propylbenzene | 1.00 | U |
| 95-47-6 | o-Xylene | 1.00 | U |
| 99-87-6 | p-Isopropyltoluene | 1.00 | U |
| 107-12-0 | Propionitrile | 10.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.00 | U |
| 100-42-5 | Styrene | 1.00 | U |
| 98-06-6 | tert-Butylbenzene | 1.00 | U |
| 127-18-4 | Tetrachloroethene | 1.00 | U |
| 108-88-3 | Toluene | 1.00 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.00 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.00 | U |
| 79-01-6 | Trichloroethene | 1.00 | U |
| 75-69-4 | Trichlorofluoromethane | 1.00 | U |
| 108-05-4 | Vinyl acetate | 1.00 | U |
| 75-01-4 | Vinyl chloride | 1.00 | U |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B049003 | Laboratory ID: | B049003-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | 12.0 | 120 | 80 - 130 |
| 1,1,1-Trichloroethane | 10.0 | 12.8 | 128 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 8.54 | 85 | 65 - 130 |
| 1,1,2-Trichloroethane | 10.0 | 11.9 | 119 | 75 - 125 |
| 1,1-Dichloroethane | 10.0 | 11.1 | 111 | 70 - 135 |
| 1,1-Dichloroethene | 10.0 | 11.9 | 119 | 70 - 130 |
| 1,1-Dichloropropene | 10.0 | 11.1 | 111 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 10.0 | 14.7 | 147 * | 55 - 140 |
| 1,2,3-Trichloropropane | 10.0 | 11.5 | 115 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 10.0 | 13.2 | 132 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 10.0 | 12.5 | 125 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 10.0 | 12.1 | 121 | 50 - 130 |
| 1,2-Dibromoethane | 10.0 | 11.4 | 114 | 80 - 120 |
| 1,2-Dichlorobenzene | 10.0 | 10.5 | 105 | 70 - 120 |
| 1,2-Dichloroethane | 10.0 | 10.9 | 109 | 70 - 130 |
| 1,2-Dichloropropane | 10.0 | 11.1 | 111 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 10.0 | 12.2 | 122 | 75 - 130 |
| 1,3-Dichlorobenzene | 10.0 | 12.3 | 123 | 75 - 125 |
| 1,3-Dichloropropane | 10.0 | 10.6 | 106 | 75 - 125 |
| 1,4-Dichlorobenzene | 10.0 | 12.2 | 122 | 75 - 125 |
| 2,2-Dichloropropane | 10.0 | 3.82 | 38 * | 70 - 135 |
| 2-Chlorotoluene | 10.0 | 11.7 | 117 | 75 - 125 |
| 2-Hexanone | 10.0 | 10.5 | 105 | 55 - 130 |
| 4-Chlorotoluene | 10.0 | 11.8 | 118 | 75 - 130 |
| 4-Methyl-2-pentanone | 10.0 | 10.7 | 107 | 60 - 135 |
| Acetone | 10.0 | 13.0 | 130 | 40 - 140 |
| Acetonitrile | 100 | 101 | 101 | 75 - 125 |
| Acrylonitrile | 10.0 | 9.24 | 92 | 75 - 125 |
| Benzene | 10.0 | 10.7 | 107 | 80 - 120 |
| Bromobenzene | 10.0 | 11.4 | 114 | 75 - 125 |
| Bromochloromethane | 10.0 | 10.2 | 102 | 65 - 130 |
| Bromodichloromethane | 10.0 | 11.1 | 111 | 75 - 120 |

CENTAURI LABS™

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B049003 | Laboratory ID: | B049003-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Bromoform | 10.0 | 11.6 | 116 | 70 - 130 |
| Bromomethane | 10.0 | 6.38 | 64 | 30 - 145 |
| Carbon disulfide | 10.0 | 11.3 | 113 | 35 - 160 |
| Carbon tetrachloride | 10.0 | 12.1 | 121 * | 80 - 120 |
| Chlorobenzene | 10.0 | 11.0 | 110 | 80 - 120 |
| Chlorodibromomethane | 10.0 | 11.4 | 114 | 60 - 135 |
| Chloroethane | 10.0 | 10.1 | 101 | 60 - 135 |
| Chloroform | 10.0 | 11.9 | 119 | 65 - 135 |
| Chloromethane | 10.0 | 7.89 | 79 | 40 - 125 |
| cis-1,2-Dichloroethene | 10.0 | 12.4 | 124 | 70 - 125 |
| cis-1,3-Dichloropropene | 10.0 | 8.28 | 83 | 70 - 130 |
| Cyclohexane | 10.0 | 10.1 | 101 | 75 - 125 |
| Dibromomethane | 10.0 | 11.1 | 111 | 75 - 125 |
| Dichlorodifluoromethane | 10.0 | 4.50 | 45 | 30 - 155 |
| Ethyl methacrylate | 10.0 | 11.4 | 114 | 75 - 125 |
| Ethylbenzene | 10.0 | 11.2 | 112 | 75 - 125 |
| Freon 113 | 10.0 | 9.48 | 95 | 75 - 125 |
| Hexachlorobutadiene | 10.0 | 10.0 | 100 | 50 - 140 |
| Iodomethane | 10.0 | 5.67 | 57 * | 75 - 125 |
| Isobutyl alcohol | 100 | 120 | 120 | 75 - 125 |
| Isopropylbenzene | 10.0 | 12.5 | 125 | 75 - 125 |
| m,p-Xylenes | 20.0 | 22.6 | 113 | 75 - 130 |
| Methacrylonitrile | 10.0 | 11.1 | 111 | 75 - 125 |
| Methyl Acetate | 10.0 | 8.05 | 80 | 75 - 125 |
| Methyl tert-Butyl Ether | 10.0 | 12.4 | 124 | 65 - 125 |
| Methylcyclohexane | 10.0 | 11.0 | 110 | 75 - 125 |
| Methylene Chloride | 10.0 | 4.31 | 43 * | 55 - 140 |
| Methylmethacrylate | 10.0 | 10.2 | 102 | 75 - 125 |
| Naphthalene | 10.0 | 15.1 | 151 * | 55 - 140 |
| n-Butylbenzene | 10.0 | 12.1 | 121 | 70 - 135 |
| n-Propylbenzene | 10.0 | 11.1 | 111 | 70 - 130 |
| o-Xylene | 10.0 | 11.5 | 115 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | EPA 5030B |
| Batch: | B049003 | Laboratory ID: | B049003-BS1 |
| Column: | | Initial/Final: | 25 mL / 25 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| p-Isopropyltoluene | 10.0 | 12.5 | 125 | 75 - 130 |
| Propionitrile | 10.0 | 10.7 | 107 | 75 - 125 |
| sec-Butylbenzene | 10.0 | 12.1 | 121 | 70 - 125 |
| Styrene | 10.0 | 11.0 | 110 | 65 - 135 |
| tert-Butylbenzene | 10.0 | 12.3 | 123 | 70 - 130 |
| Tetrachloroethene | 10.0 | 20.8 | 208 * | 45 - 150 |
| Toluene | 10.0 | 10.9 | 109 | 75 - 120 |
| trans-1,2-Dichloroethene | 10.0 | 10.2 | 102 | 60 - 140 |
| trans-1,3-Dichloropropene | 10.0 | 8.28 | 83 | 55 - 140 |
| Trichloroethene | 10.0 | 13.7 | 137 * | 70 - 125 |
| Trichlorofluoromethane | 10.0 | 10.0 | 100 | 50 - 145 |
| Vinyl acetate | 20.0 | 3.33 | 17 * | 75 - 125 |
| Vinyl chloride | 10.0 | 5.44 | 54 | 50 - 145 |

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (75 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 120) |
|---|---|---|---|---|
| 1011026-01 | 101 | 95 | 103 | 98 |
| 1011026-02 | 101 | 94 | 102 | 98 |
| 1011026-03 | 100 | 96 | 102 | 100 |
| 1011026-04 | 104 | 93 | 104 | 97 |
| 1011026-05 | 107 | 97 | 106 | 98 |
| 1011026-06 | 109 | 98 | 109 | 96 |
| 1011026-07 | 107 | 97 | 106 | 97 |
| B047068-BLK1 | 98 | 88 | 96 | 101 |
| B047068-BS1 | 103 | 102 | 104 | 99 |
| B047068-BSD1 | 107 | 104 | 107 | 99 |

# SURROGATE SUMMARY SHEET

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-B |

| | 12DCE-D4 (70 - 120) | BFB (75 - 120) | DBFM (85 - 115) | TOL-D8 (85 - 120) |
|---|---|---|---|---|
| 1011026-08 | 157* | 86 | 152* | 84* |
| B049003-BLK1 | 102 | 95 | 100 | 99 |
| B049003-BS1 | 113 | 107 | 108 | 101 |
| B049003-MS1 | 102 | 105 | 105 | 99 |
| B049003-MSD1 | 100 | 104 | 104 | 98 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047043 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S047043-CCV1 )** | | | *Lab File ID: B02890359.D* | | | *Analyzed: 11/13/10 10:25* | | | |
| 1,4-Difluorobenzene | 14263660 | 4.122 | 1.714212E+07 | 4.121 | 83 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7265895 | 11.274 | 7318237 | 11.276 | 99 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2776138 | 7.577 | 3469404 | 7.576 | 80 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11002470 | 3.485 | 1.32552E+07 | 3.484 | 83 | 50 - 200 | 0.0010 | +/-0.50 | |
| **Blank (B047068-BLK1 )** | | | *Lab File ID: B02890360.D* | | | *Analyzed: 11/13/10 11:04* | | | |
| 1,4-Difluorobenzene | 14647940 | 4.121 | 14263660 | 4.122 | 103 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 4684484 | 11.281 | 7265895 | 11.274 | 64 | 50 - 200 | 0.0070 | +/-0.50 | |
| Chlorobenzene-d5 | 3082015 | 7.577 | 2776138 | 7.577 | 111 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11446190 | 3.484 | 11002470 | 3.485 | 104 | 50 - 200 | -0.0010 | +/-0.50 | |
| **LCS (B047068-BS1 )** | | | *Lab File ID: B02890361.D* | | | *Analyzed: 11/13/10 11:30* | | | |
| 1,4-Difluorobenzene | 12660440 | 4.12 | 14263660 | 4.122 | 89 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7076833 | 11.275 | 7265895 | 11.274 | 97 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2615907 | 7.576 | 2776138 | 7.577 | 94 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9918945 | 3.483 | 11002470 | 3.485 | 90 | 50 - 200 | -0.0020 | +/-0.50 | |
| **LCS Dup (B047068-BSD1 )** | | | *Lab File ID: B02890362.D* | | | *Analyzed: 11/13/10 11:57* | | | |
| 1,4-Difluorobenzene | 12095950 | 4.12 | 14263660 | 4.122 | 85 | 50 - 200 | -0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 7121123 | 11.275 | 7265895 | 11.274 | 98 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2526482 | 7.576 | 2776138 | 7.577 | 91 | 50 - 200 | -0.0010 | +/-0.50 | |
| Pentafluorobenzene | 9413026 | 3.483 | 11002470 | 3.485 | 86 | 50 - 200 | -0.0020 | +/-0.50 | |
| **G01-MW-01A-1010 (1011026-01 )** | | | *Lab File ID: B02890371.D* | | | *Analyzed: 11/13/10 15:59* | | | |
| 1,4-Difluorobenzene | 14524200 | 4.121 | 14263660 | 4.122 | 102 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6489734 | 11.277 | 7265895 | 11.274 | 89 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 2978544 | 7.577 | 2776138 | 7.577 | 107 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11025910 | 3.484 | 11002470 | 3.485 | 100 | 50 - 200 | -0.0010 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047043 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **G01-MW-03-1010 (1011026-02 )** | | | *Lab File ID: B02890372.D* | | | *Analyzed: 11/13/10 16:25* | | | |
| 1,4-Difluorobenzene | 13683310 | 4.121 | 14263660 | 4.122 | 96 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6183076 | 11.278 | 7265895 | 11.274 | 85 | 50 - 200 | 0.0040 | +/-0.50 | |
| Chlorobenzene-d5 | 2822162 | 7.577 | 2776138 | 7.577 | 102 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 10433920 | 3.484 | 11002470 | 3.485 | 95 | 50 - 200 | -0.0010 | +/-0.50 | |
| **G01-MW-07-1010 (1011026-03 )** | | | *Lab File ID: B02890373.D* | | | *Analyzed: 11/13/10 16:52* | | | |
| 1,4-Difluorobenzene | 15017100 | 4.119 | 14263660 | 4.122 | 105 | 50 - 200 | -0.0030 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 6863007 | 11.276 | 7265895 | 11.274 | 94 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3178885 | 7.577 | 2776138 | 7.577 | 115 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11556810 | 3.482 | 11002470 | 3.485 | 105 | 50 - 200 | -0.0030 | +/-0.50 | |
| **G01-MW-12-1010 (1011026-04 )** | | | *Lab File ID: B02890374.D* | | | *Analyzed: 11/13/10 17:19* | | | |
| 1,4-Difluorobenzene | 13237000 | 4.121 | 14263660 | 4.122 | 93 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5835066 | 11.275 | 7265895 | 11.274 | 80 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2728476 | 7.577 | 2776138 | 7.577 | 98 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene 1/3/11 | 10189050 | 3.484 | 11002470 | 3.485 | 93 | 50 - 200 | -0.0010 | +/-0.50 | |
| **G01-MW-02-1010 (1011026-05 )** | | | *Lab File ID: B02890375.D* | | | *Analyzed: 11/13/10 17:46* | | | |
| 1,4-Difluorobenzene | 13210280 | 4.121 | 14263660 | 4.122 | 93 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5643953 | 11.276 | 7265895 | 11.274 | 78 | 50 - 200 | 0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 2765438 | 7.577 | 2776138 | 7.577 | 100 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 10114790 | 3.483 | 11002470 | 3.485 | 92 | 50 - 200 | -0.0020 | +/-0.50 | |
| **G01-MW08-1010 (1011026-06 )** | | | *Lab File ID: B02890376.D* | | | *Analyzed: 11/13/10 18:12* | | | |
| 1,4-Difluorobenzene | 12355030 | 4.121 | 14263660 | 4.122 | 87 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5559367 | 11.275 | 7265895 | 11.274 | 77 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2547283 | 7.577 | 2776138 | 7.577 | 92 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 9414495 | 3.484 | 11002470 | 3.485 | 86 | 50 - 200 | -0.0010 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S047043 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| GKHMS-GW-FD04-1010 (1011026-07 ) | | | *Lab File ID: B02890377.D* | | | *Analyzed: 11/13/10 18:39* | | | |
| 1,4-Difluorobenzene | 12599550 | 4.121 | 14263660 | 4.122 | 88 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5424449 | 11.275 | 7265895 | 11.274 | 75 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 2627964 | 7.577 | 2776138 | 7.577 | 95 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 9599075 | 3.484 | 11002470 | 3.485 | 87 | 50 - 200 | -0.0010 | +/-0.50 | |

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# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048008 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048008-CCV1 )** | | | *Lab File ID: B02890379.D* | | | *Analyzed: 11/15/10 09:49* | | | |
| 1,4-Difluorobenzene | 15337070 | 4.12 | 1.714212E+07 | 4.121 | 89 | 50 - 200 | -0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 10149770 | 11.274 | 7318237 | 11.276 | 139 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chlorobenzene-d5 | 3456145 | 7.577 | 3469404 | 7.576 | 100 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 11796320 | 3.483 | 1.32552E+07 | 3.484 | 89 | 50 - 200 | -0.0010 | +/-0.50 | |
| **Blank (B049003-BLK1 )** | | | *Lab File ID: B02890380.D* | | | *Analyzed: 11/15/10 10:16* | | | |
| 1,4-Difluorobenzene | 13520040 | 4.122 | 15337070 | 4.12 | 88 | 50 - 200 | 0.0020 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 5634054 | 11.277 | 10149770 | 11.274 | 56 | 50 - 200 | 0.0030 | +/-0.50 | |
| Chlorobenzene-d5 | 2835212 | 7.578 | 3456145 | 7.577 | 82 | 50 - 200 | 0.0010 | +/-0.50 | |
| Pentafluorobenzene | 10359300 | 3.485 | 11796320 | 3.483 | 88 | 50 - 200 | 0.0020 | +/-0.50 | |
| **LCS (B049003-BS1 )** | | | *Lab File ID: B02890381.D* | | | *Analyzed: 11/15/10 10:43* | | | |
| 1,4-Difluorobenzene | 13293380 | 4.121 | 15337070 | 4.12 | 87 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 8554066 | 11.274 | 10149770 | 11.274 | 84 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 2894598 | 7.577 | 3456145 | 7.577 | 84 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 9495422 | 3.484 | 11796320 | 3.483 | 80 | 50 - 200 | 0.0010 | +/-0.50 | |
| **GKHMS-TB-06-1010 (1011026-08 )** | | | *Lab File ID: B02890383.D* | | | *Analyzed: 11/15/10 11:38* | | | |
| 1,4-Difluorobenzene | 10585880 | 4.121 | 15337070 | 4.12 | 69 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 2932444 | 11.277 | 10149770 | 11.274 | 29 | 50 - 200 | 0.0030 | +/-0.50 | * |
| Chlorobenzene-d5 | 1870742 | 7.577 | 3456145 | 7.577 | 54 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 7121206 | 3.484 | 11796320 | 3.483 | 60 | 50 - 200 | 0.0010 | +/-0.50 | |
| **Matrix Spike (B049003-MS1 )** | | | *Lab File ID: B02890384.D* | | | *Analyzed: 11/15/10 12:05* | | | |
| 1,4-Difluorobenzene | 15287470 | 4.12 | 15337070 | 4.12 | 100 | 50 - 200 | 0.0000 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 8982108 | 11.274 | 10149770 | 11.274 | 88 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chlorobenzene-d5 | 3154145 | 7.577 | 3456145 | 7.577 | 91 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 11836130 | 3.483 | 11796320 | 3.483 | 100 | 50 - 200 | 0.0000 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8260B

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048008 | Instrument: | GCMS-B |
| | | Calibration: | 0111803 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B049003-MSD1 )** | | | *Lab File ID: B02890385.D* | | | *Analyzed: 11/15/10 12:32* | | | |
| 1,4-Difluorobenzene | 15724620 | 4.121 | 15337070 | 4.12 | 103 | 50 - 200 | 0.0010 | +/-0.50 | |
| 1,4-Dichlorobenzene-d4 | 9007610 | 11.275 | 10149770 | 11.274 | 89 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chlorobenzene-d5 | 3201537 | 7.577 | 3456145 | 7.577 | 93 | 50 - 200 | 0.0000 | +/-0.50 | |
| Pentafluorobenzene | 12289900 | 3.484 | 11796320 | 3.483 | 104 | 50 - 200 | 0.0010 | +/-0.50 | |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 5/13/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B049003 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B049003-MS1 |
| Column: | | Sample Lab ID: | 1011026-05RE1 |

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | | 56.2 | 112 | 80 - 130 |
| 1,1,1-Trichloroethane | 50.0 | | 56.0 | 112 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 50.0 | | 54.2 | 108 | 65 - 130 |
| 1,1,2-Trichloroethane | 50.0 | | 51.6 | 103 | 75 - 125 |
| 1,1-Dichloroethane | 50.0 | | 49.6 | 99 | 70 - 135 |
| 1,1-Dichloroethene | 50.0 | | 53.1 | 106 | 70 - 130 |
| 1,1-Dichloropropene | 50.0 | | 53.5 | 107 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 50.0 | | 65.2 | 130 | 55 - 140 |
| 1,2,3-Trichloropropane | 50.0 | | 53.4 | 107 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 50.0 | | 62.0 | 124 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 50.0 | | 59.0 | 118 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 50.0 | | 56.6 | 113 | 50 - 130 |
| 1,2-Dibromoethane | 50.0 | | 52.9 | 106 | 80 - 120 |
| 1,2-Dichlorobenzene | 50.0 | | 49.2 | 98 | 70 - 120 |
| 1,2-Dichloroethane | 50.0 | | 50.4 | 101 | 70 - 130 |
| 1,2-Dichloropropane | 50.0 | | 51.6 | 103 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 50.0 | | 57.6 | 115 | 75 - 130 |
| 1,3-Dichlorobenzene | 50.0 | | 57.8 | 116 | 75 - 125 |
| 1,3-Dichloropropane | 50.0 | | 49.7 | 99 | 75 - 125 |
| 1,4-Dichlorobenzene | 50.0 | | 56.4 | 113 | 75 - 125 |
| 2,2-Dichloropropane | 50.0 | | 53.6 | 107 | 70 - 135 |
| 2-Chlorotoluene | 50.0 | | 55.6 | 111 | 75 - 125 |
| 2-Hexanone | 50.0 | | 48.6 | 97 | 55 - 130 |
| 4-Chlorotoluene | 50.0 | | 56.1 | 112 | 75 - 130 |
| 4-Methyl-2-pentanone | 50.0 | | 55.9 | 112 | 60 - 135 |
| Acetone | 50.0 | | 39.2 | 78 | 40 - 140 |

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# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 5' 1/3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B049003 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B049003-MS1 |
| Column: | | Sample Lab ID: | 1011026-05RE1 |

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| Acetonitrile | 500 | | 438 | 88 | 75 - 125 |
| Acrylonitrile | 50.0 | | 40.2 | 80 | 75 - 125 |
| Benzene | 50.0 | | 50.2 | 100 | 80 - 120 |
| Bromobenzene | 50.0 | | 52.6 | 105 | 75 - 125 |
| Bromochloromethane | 50.0 | | 45.6 | 91 | 65 - 130 |
| Bromodichloromethane | 50.0 | | 50.6 | 101 | 75 - 120 |
| Bromoform | 50.0 | | 52.8 | 106 | 70 - 130 |
| Bromomethane | 50.0 | | 115 | 231 * | 30 - 145 |
| Carbon disulfide | 50.0 | | 52.0 | 104 | 35 - 160 |
| Carbon tetrachloride | 50.0 | | 52.4 | 105 | 75 - 125 |
| Chlorobenzene | 50.0 | | 51.9 | 104 | 80 - 120 |
| Chlorodibromomethane | 50.0 | | 52.4 | 105 | 60 - 135 |
| Chloroethane | 50.0 | | 145 | 290 * | 60 - 135 |
| Chloroform | 50.0 | | 51.3 | 103 | 65 - 135 |
| Chloromethane | 50.0 | | 92.2 | 184 * | 40 - 125 |
| cis-1,2-Dichloroethene | 50.0 | | 56.8 | 114 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | | 46.4 | 93 | 70 - 130 |
| Cyclohexane | 50.0 | | 45.2 | 90 | 75 - 125 |
| Dibromomethane | 50.0 | | 50.8 | 102 | 75 - 125 |
| Dichlorodifluoromethane | 50.0 | | 41.8 | 84 | 30 - 155 |
| Ethyl methacrylate | 50.0 | | 48.6 | 97 | 75 - 125 |
| Ethylbenzene | 50.0 | | 53.4 | 107 | 75 - 125 |
| Freon 113 | 50.0 | | 41.8 | 84 | 75 - 125 |
| Hexachlorobutadiene | 50.0 | | 46.4 | 93 | 50 - 140 |
| Iodomethane | 50.0 | | 26.0 | 52 * | 75 - 125 |
| Isobutyl alcohol | 500 | | 505 | 101 | 75 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 5 1/3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B049003 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B049003-MS1 |
| Column: | | Sample Lab ID: | 1011026-05RE1 |

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | QC LIMITS REC. |
|---|---|---|---|---|---|
| Isopropylbenzene | 50.0 | | 58.4 | 117 | 75 - 125 |
| m,p-Xylenes | 100 | | 108 | 108 | 75 - 130 |
| Methacrylonitrile | 50.0 | | 48.2 | 96 | 75 - 125 |
| Methyl Acetate | 50.0 | | 35.4 | 71 * | 75 - 125 |
| Methyl tert-Butyl Ether | 50.0 | | 54.0 | 108 | 65 - 125 |
| Methylcyclohexane | 50.0 | | 51.6 | 103 | 75 - 125 |
| Methylene Chloride | 50.0 | | 7.70 | 15 * | 55 - 140 |
| Methylmethacrylate | 50.0 | | 45.3 | 91 | 75 - 125 |
| Naphthalene | 50.0 | | 68.8 | 138 | 55 - 140 |
| n-Butylbenzene | 50.0 | | 60.9 | 122 | 70 - 135 |
| n-Propylbenzene | 50.0 | | 52.1 | 104 | 70 - 130 |
| o-Xylene | 50.0 | | 53.8 | 108 | 80 - 120 |
| p-Isopropyltoluene | 50.0 | | 58.4 | 117 | 75 - 130 |
| Propionitrile | 50.0 | | 47.9 | 96 | 75 - 125 |
| sec-Butylbenzene | 50.0 | | 57.0 | 114 | 70 - 125 |
| Styrene | 50.0 | | 50.5 | 101 | 65 - 135 |
| tert-Butylbenzene | 50.0 | | 57.6 | 115 | 70 - 130 |
| Tetrachloroethene | 50.0 | | 55.6 | 111 | 45 - 150 |
| Toluene | 50.0 | | 50.4 | 101 | 75 - 120 |
| trans-1,2-Dichloroethene | 50.0 | | 45.8 | 92 | 60 - 140 |
| trans-1,3-Dichloropropene | 50.0 | | 46.4 | 93 | 55 - 140 |
| Trichloroethene | 50.0 | | 52.1 | 104 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | | 53.4 | 107 | 50 - 145 |
| Vinyl acetate | 100 | | 73.0 | 73 * | 75 - 125 |
| Vinyl chloride | 50.0 | | 60.6 | 121 | 50 - 145 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 1/3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B049003 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B049003-MS1 |
| Column: | | Sample Lab ID: | 1011026-05RE1 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 5 1/3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B049003 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B049003-MSD1 |
| Column: | | Sample Lab ID: | 1011026-05RE1 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 54.2 | 108 | 4 | 30 | 80 - 130 |
| 1,1,1-Trichloroethane | 50.0 | 54.0 | 108 | 4 | 30 | 65 - 130 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 52.0 | 104 | 4 | 30 | 65 - 130 |
| 1,1,2-Trichloroethane | 50.0 | 50.0 | 100 | 3 | 30 | 75 - 125 |
| 1,1-Dichloroethane | 50.0 | 47.4 | 95 | 5 | 30 | 70 - 135 |
| 1,1-Dichloroethene | 50.0 | 51.6 | 103 | 3 | 30 | 70 - 130 |
| 1,1-Dichloropropene | 50.0 | 52.0 | 104 | 3 | 30 | 75 - 130 |
| 1,2,3-Trichlorobenzene | 50.0 | 68.6 | 137 | 5 | 30 | 55 - 140 |
| 1,2,3-Trichloropropane | 50.0 | 51.2 | 102 | 4 | 30 | 75 - 125 |
| 1,2,4-Trichlorobenzene | 50.0 | 64.6 | 129 | 4 | 30 | 65 - 135 |
| 1,2,4-Trimethylbenzene | 50.0 | 55.5 | 111 | 6 | 30 | 75 - 130 |
| 1,2-Dibromo-3-chloropropane | 50.0 | 56.7 | 113 | 0.09 | 30 | 50 - 130 |
| 1,2-Dibromoethane | 50.0 | 52.2 | 104 | 1 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 50.0 | 47.2 | 94 | 4 | 30 | 70 - 120 |
| 1,2-Dichloroethane | 50.0 | 48.0 | 96 | 5 | 30 | 70 - 130 |
| 1,2-Dichloropropane | 50.0 | 50.0 | 100 | 3 | 30 | 75 - 125 |
| 1,3,5-Trimethylbenzene | 50.0 | 54.3 | 109 | 6 | 30 | 75 - 130 |
| 1,3-Dichlorobenzene | 50.0 | 54.4 | 109 | 6 | 30 | 75 - 125 |
| 1,3-Dichloropropane | 50.0 | 48.1 | 96 | 3 | 30 | 75 - 125 |
| 1,4-Dichlorobenzene | 50.0 | 53.6 | 107 | 5 | 30 | 75 - 125 |
| 2,2-Dichloropropane | 50.0 | 52.2 | 104 | 3 | 30 | 70 - 135 |
| 2-Chlorotoluene | 50.0 | 52.4 | 105 | 6 | 30 | 75 - 125 |
| 2-Hexanone | 50.0 | 47.9 | 96 | 2 | 30 | 55 - 130 |
| 4-Chlorotoluene | 50.0 | 52.9 | 106 | 6 | 30 | 75 - 130 |
| 4-Methyl-2-pentanone | 50.0 | 55.4 | 111 | 0.8 | 30 | 60 - 135 |
| Acetone | 50.0 | 35.5 | 71 | 10 | 30 | 40 - 140 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 5 1/3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B049003 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B049003-MSD1 |
| Column: | | Sample Lab ID: | 1011026-05RE1 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Acetonitrile | 500 | 409 | 82 | 7 | 30 | 75 - 125 |
| Acrylonitrile | 50.0 | 39.0 | 78 | 3 | 30 | 75 - 125 |
| Benzene | 50.0 | 48.8 | 98 | 3 | 30 | 80 - 120 |
| Bromobenzene | 50.0 | 50.0 | 100 | 5 | 30 | 75 - 125 |
| Bromochloromethane | 50.0 | 44.0 | 88 | 3 | 30 | 65 - 130 |
| Bromodichloromethane | 50.0 | 48.9 | 98 | 3 | 30 | 75 - 120 |
| Bromoform | 50.0 | 50.6 | 101 | 4 | 30 | 70 - 130 |
| Bromomethane | 50.0 | 114 | 228 * | 1 | 30 | 30 - 145 |
| Carbon disulfide | 50.0 | 49.4 | 99 | 5 | 30 | 35 - 160 |
| Carbon tetrachloride | 50.0 | 51.2 | 102 | 2 | 30 | 75 - 125 |
| Chlorobenzene | 50.0 | 49.9 | 100 | 4 | 30 | 80 - 120 |
| Chlorodibromomethane | 50.0 | 51.0 | 102 | 3 | 30 | 60 - 135 |
| Chloroethane | 50.0 | 176 | 352 * | 19 | 30 | 60 - 135 |
| Chloroform | 50.0 | 49.2 | 98 | 4 | 30 | 65 - 135 |
| Chloromethane | 50.0 | 84.3 | 169 * | 9 | 30 | 40 - 125 |
| cis-1,2-Dichloroethene | 50.0 | 54.7 | 109 | 4 | 30 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 45.8 | 92 | 1 | 30 | 70 - 130 |
| Cyclohexane | 50.0 | 44.3 | 89 | 2 | 30 | 75 - 125 |
| Dibromomethane | 50.0 | 48.8 | 98 | 4 | 30 | 75 - 125 |
| Dichlorodifluoromethane | 50.0 | 38.8 | 78 | 7 | 30 | 30 - 155 |
| Ethyl methacrylate | 50.0 | 46.6 | 93 | 4 | 30 | 75 - 125 |
| Ethylbenzene | 50.0 | 51.1 | 102 | 4 | 30 | 75 - 125 |
| Freon 113 | 50.0 | 40.5 | 81 | 3 | 30 | 75 - 125 |
| Hexachlorobutadiene | 50.0 | 46.4 | 93 | 0.1 | 30 | 50 - 140 |
| Iodomethane | 50.0 | 24.7 | 49 * | 5 | 30 | 75 - 125 |
| Isobutyl alcohol | 500 | 489 | 98 | 3 | 30 | 75 - 125 |

CENTAURI LABS™

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 5 1/3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8260B |
| Batch: | B049003 | Preparation: | EPA 5030B |
| % Solids: | | Laboratory ID: | B049003-MSD1 |
| Column: | | Sample Lab ID: | 1011026-05RE1 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Isopropylbenzene | 50.0 | 55.1 | 110 | 6 | 30 | 75 - 125 |
| m,p-Xylenes | 100 | 102 | 102 | 6 | 30 | 75 - 130 |
| Methacrylonitrile | 50.0 | 46.5 | 93 | 4 | 30 | 75 - 125 |
| Methyl Acetate | 50.0 | 34.4 | 69 * | 3 | 30 | 75 - 125 |
| Methyl tert-Butyl Ether | 50.0 | 52.1 | 104 | 3 | 30 | 65 - 125 |
| Methylcyclohexane | 50.0 | 50.1 | 100 | 3 | 30 | 75 - 125 |
| Methylene Chloride | 50.0 | 4.45 | 9 * | 53 * | 30 | 55 - 140 |
| Methylmethacrylate | 50.0 | 44.4 | 89 | 2 | 30 | 75 - 125 |
| Naphthalene | 50.0 | 76.7 | 153 * | 11 | 30 | 55 - 140 |
| n-Butylbenzene | 50.0 | 57.5 | 115 | 6 | 30 | 70 - 135 |
| n-Propylbenzene | 50.0 | 49.0 | 98 | 6 | 30 | 70 - 130 |
| o-Xylene | 50.0 | 51.2 | 102 | 5 | 30 | 80 - 120 |
| p-Isopropyltoluene | 50.0 | 55.0 | 110 | 6 | 30 | 75 - 130 |
| Propionitrile | 50.0 | 50.0 U | 0 * | | 30 | 75 - 125 |
| sec-Butylbenzene | 50.0 | 52.9 | 106 | 8 | 30 | 70 - 125 |
| Styrene | 50.0 | 48.5 | 97 | 4 | 30 | 65 - 135 |
| tert-Butylbenzene | 50.0 | 53.8 | 108 | 7 | 30 | 70 - 130 |
| Tetrachloroethene | 50.0 | 52.8 | 106 | 5 | 30 | 45 - 150 |
| Toluene | 50.0 | 48.0 | 96 | 5 | 30 | 75 - 120 |
| trans-1,2-Dichloroethene | 50.0 | 44.0 | 88 | 4 | 30 | 60 - 140 |
| trans-1,3-Dichloropropene | 50.0 | 45.8 | 92 | 1 | 30 | 55 - 140 |
| Trichloroethene | 50.0 | 50.0 | 100 | 4 | 30 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 50.0 | 100 | 7 | 30 | 50 - 145 |
| Vinyl acetate | 100 | 71.2 | 71 * | 2 | 30 | 75 - 125 |
| Vinyl chloride | 50.0 | 58.1 | 116 | 4 | 30 | 50 - 145 |

# SW8270C SIM

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46148.D | Injection Date: | 11/03/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:30 |
| Sequence: | S046039 | Lab Sample ID: | S046039-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 37.7 | PASS |
| 70 | Less than 2% of 69 | 0.514 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.2 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.73 | PASS |
| 275 | 10 - 30% of 198 | 18.8 | PASS |
| 365 | 1 - 200% of 198 | 2.27 | PASS |
| 443 | 17 - 23% of 442 | 19.5 | PASS |
| 441 | Less than 100% of 443 | 78.1 | PASS |
| 442 | 40 - 200% of 198 | 49.2 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Cal Standard | S046039-CAL5 | D46149.D | 11/03/2010 | 11:53:00 |
| Cal Standard | S046039-CAL1 | D46150.D | 11/03/2010 | 12:17:00 |
| Cal Standard | S046039-CAL2 | D46151.D | 11/03/2010 | 12:41:00 |
| Cal Standard | S046039-CAL3 | D46152.D | 11/03/2010 | 13:06:00 |
| Cal Standard | S046039-CAL4 | D46153.D | 11/03/2010 | 13:30:00 |
| Cal Standard | S046039-CAL6 | D46154.D | 11/03/2010 | 13:54:00 |
| Cal Standard | S046039-CAL7 | D46155.D | 11/03/2010 | 14:19:00 |
| Cal Standard | S046039-CAL8 | D46156.D | 11/03/2010 | 14:43:00 |
| Cal Standard | S046039-CAL9 | D46157.D | 11/03/2010 | 15:07:00 |
| Secondary Cal Check | S046039-SCV1 | D46158.D | 11/03/2010 | 15:49:00 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | Mean RF | RF RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | 15 | |
| 2-Methylnaphthalene | 0.6958117 | 7.359272 | | | 15 | |
| Acenaphthene | 1.324787 | 9.655765 | | | 15 | |
| Acenaphthylene | 2.222404 | 8.242361 | | | 15 | |
| Anthracene | 1.227584 | 8.854868 | | | 15 | |
| Benzo[a]anthracene | 1.605312 | 8.453409 | | | 15 | |
| Benzo[a]pyrene | 2.253927 | 5.30409 | | | 15 | |
| Benzo[b]fluoranthene | 2.546752 | 6.18101 | | | 15 | |
| Benzo[g,h,i]perylene | 1.707555 | 5.801264 | | | 15 | |
| Benzo[k]fluoranthene | 2.564201 | 7.174099 | | | 15 | |
| Carbazole | | | | | 15 | |
| Chrysene | 1.591607 | 9.970385 | | | 15 | |
| Dibenz[a,h]anthracene | 1.626379 | 6.624635 | | | 15 | |
| Fluoranthene | 1.235125 | 8.85727 | | | 15 | |
| Fluorene | 1.373122 | 8.049909 | | | 15 | |
| Indeno[1,2,3-cd]pyrene | 2.228926 | 6.693524 | | | 15 | |
| Naphthalene | 1.230131 | 4.386732 | | | 15 | |
| Phenanthrene | 1.255689 | 9.776624 | | | 15 | |
| Pyrene | 2.168287 | 9.729649 | | | 15 | |
| 2-Fluorobiphenyl | 1.591732 | 9.522341 | | | 15 | |
| Nitrobenzene-d5 | 0.3971127 | 6.700828 | | | 15 | |
| Terphenyl-d14 | 1.040014 | 9.645203 | | | 15 | |

# INITIAL CALIBRATION DATA

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 01 | CAL 02 | CAL 03 | CAL 04 | CAL 05 | CAL 06 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6998678 | 0.6928788 | 0.7861832 | 0.7182898 | 0.7454438 | 0.61871 |
| Acenaphthene | 1.35609 | 1.360759 | 1.542331 | 1.393121 | 1.417282 | 1.167548 |
| Acenaphthylene | 2.086527 | 2.173511 | 2.491196 | 2.304639 | 2.469502 | 2.015595 |
| Anthracene | 1.149397 | 1.195438 | 1.414392 | 1.285541 | 1.359337 | 1.083758 |
| Benzo[a]anthracene | 1.729219 | 1.635469 | 1.813508 | 1.628326 | 1.718838 | 1.44421 |
| Benzo[a]pyrene | 2.070213 | 2.152228 | 2.357776 | 2.177479 | 2.432008 | 2.360145 |
| Benzo[b]fluoranthene | 2.246619 | 2.450026 | 2.745016 | 2.563208 | 2.684552 | 2.708263 |
| Benzo[g,h,i]perylene | 1.621029 | 1.623379 | 1.846475 | 1.621483 | 1.867722 | 1.766085 |
| Benzo[k]fluoranthene | 2.554631 | 2.745418 | 2.750892 | 2.509434 | 2.719822 | 2.637611 |
| Carbazole | | | | | | |
| Chrysene | 1.633828 | 1.648224 | 1.866568 | 1.657847 | 1.728138 | 1.451514 |
| Dibenz[a,h]anthracene | 1.483124 | 1.483425 | 1.698972 | 1.573097 | 1.820535 | 1.690607 |
| Fluoranthene | 1.147919 | 1.226292 | 1.417924 | 1.322613 | 1.35443 | 1.086918 |
| Fluorene | 1.312635 | 1.311524 | 1.539282 | 1.413423 | 1.529181 | 1.220159 |
| Indeno[1,2,3-cd]pyrene | 2.025178 | 2.055117 | 2.35135 | 2.143138 | 2.49272 | 2.320363 |
| Naphthalene | 1.206408 | 1.218463 | 1.346238 | 1.232176 | 1.223558 | 1.165698 |
| Phenanthrene | 1.297902 | 1.313994 | 1.460657 | 1.328181 | 1.32559 | 1.074443 |
| Pyrene | 2.116627 | 2.296767 | 2.490596 | 2.333519 | 2.284912 | 2.077411 |
| 2-Fluorobiphenyl | 1.610498 | 1.620703 | 1.860345 | 1.676616 | 1.680071 | 1.416445 |
| Nitrobenzene-d5 | 0.3799167 | 0.3872439 | 0.4331469 | 0.3960707 | 0.4245936 | 0.3431777 |
| Terphenyl-d14 | 0.981781 | 1.066537 | 1.231772 | 1.108824 | 1.08851 | 0.9848726 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Calibration: | 0111602 | Instrument: | GCMS-D |
| | | Calibration Date: | 11/3/2010 11:30:50AM |

| COMPOUND | CAL 07 | CAL 08 | CAL 09 | CAL 10 | CAL 11 | CAL 12 |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | | | | |
| 2-Methylnaphthalene | 0.6906016 | 0.6715998 | 0.6387307 | | | |
| Acenaphthene | 1.308477 | 1.243833 | 1.133641 | | | |
| Acenaphthylene | 2.290065 | 2.191529 | 1.97907 | | | |
| Anthracene | 1.242426 | 1.185892 | 1.132079 | | | |
| Benzo[a]anthracene | 1.562415 | 1.496959 | 1.418862 | | | |
| Benzo[a]pyrene | 2.31118 | 2.256053 | 2.168264 | | | |
| Benzo[b]fluoranthene | 2.449553 | 2.584195 | 2.489339 | | | |
| Benzo[g,h,i]perylene | 1.715931 | 1.685418 | 1.62047 | | | |
| Benzo[k]fluoranthene | 2.595031 | 2.355483 | 2.209489 | | | |
| Carbazole | | | | | | |
| Chrysene | 1.530943 | 1.447942 | 1.359459 | | | |
| Dibenz[a,h]anthracene | 1.653509 | 1.640184 | 1.593958 | | | |
| Fluoranthene | 1.235483 | 1.171686 | 1.152857 | | | |
| Fluorene | 1.408747 | 1.358794 | 1.264352 | | | |
| Indeno[1,2,3-cd]pyrene | 2.265913 | 2.244316 | 2.162238 | | | |
| Naphthalene | 1.271896 | 1.232873 | 1.173873 | | | |
| Phenanthrene | 1.227056 | 1.161614 | 1.111768 | | | |
| Pyrene | 2.143779 | 1.993386 | 1.77759 | | | |
| 2-Fluorobiphenyl | 1.592496 | 1.52104 | 1.347374 | | | |
| Nitrobenzene-d5 | 0.3923432 | 0.4061396 | 0.4113819 | | | |
| Terphenyl-d14 | 1.036812 | 0.9830102 | 0.8780064 | | | |

# INITIAL CALIBRATION STANDARDS

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S046039 | Instrument: | GCMS-D |
| Calibration: | 0111602 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 0001979 | DFTPP050 WORKING STANDARD | S046039-TUN1 | D46148.D | 11/03/10 11:30 |
| 0001565 | SSTD001 8270LL 1/5ppm | S046039-CAL5 | D46149.D | 11/03/10 11:53 |
| 0001811 | SSTD00.05 8270LL 0.05/0.25ppm | S046039-CAL1 | D46150.D | 11/03/10 12:17 |
| 0001810 | SSTD00.1 8270LL 0.1/0.5ppm | S046039-CAL2 | D46151.D | 11/03/10 12:41 |
| 0001562 | SSTD00.2 8270LL 0.2/1ppm | S046039-CAL3 | D46152.D | 11/03/10 13:06 |
| 0001563 | SSTD00.5 8270LL 0.5/2.5ppm | S046039-CAL4 | D46153.D | 11/03/10 13:30 |
| 0001566 | SSTD02.5 8270LL 2.5/12.5ppm | S046039-CAL6 | D46154.D | 11/03/10 13:54 |
| 0001567 | SSTD005 8270LL 5/25ppm | S046039-CAL7 | D46155.D | 11/03/10 14:19 |
| 0001568 | SSTD010 8270LL 10/50ppm | S046039-CAL8 | D46156.D | 11/03/10 14:43 |
| 0001561 | SSTD020 8270LL 20/100ppm | S046039-CAL9 | D46157.D | 11/03/10 15:07 |
| 0002011 | SSTD02.5ICV 8270LL 2.5 PPM | S046039-SCV1 | D46158.D | 11/03/10 15:49 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46326.D | Injection Date: | 11/18/10 |
| Instrument ID: | GCMS-D | Injection Time: | 10:50 |
| Sequence: | S048011 | Lab Sample ID: | S048011-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 40.5 | PASS |
| 70 | Less than 2% of 69 | 0.483 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 52.8 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 199 | 5 - 9% of 198 | 6.35 | PASS |
| 275 | 10 - 30% of 198 | 21.4 | PASS |
| 365 | 1 - 200% of 198 | 3.1 | PASS |
| 443 | 17 - 23% of 442 | 19.2 | PASS |
| 441 | Less than 100% of 443 | 76.9 | PASS |
| 442 | 40 - 200% of 198 | 48.4 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| | S048011-CCV1 | D46328.D | 11/18/2010 | 11:30:00 |
| Blank | B048006-BLK1 | D46332.D | 11/18/2010 | 13:08:00 |
| LCS | B048006-BS1 | D46333.D | 11/18/2010 | 13:32:00 |
| Matrix Spike | B048006-MS1 | D46334.D | 11/18/2010 | 13:57:00 |
| Matrix Spike Dup | B048006-MSD1 | D46335.D | 11/18/2010 | 14:21:00 |
| G01-MW-01A-1010 | 1011026-01 | D46339.D | 11/18/2010 | 15:59:00 |
| G01-MW-03-1010 | 1011026-02 | D46340.D | 11/18/2010 | 16:23:00 |
| G01-MW-07-1010 | 1011026-03 | D46341.D | 11/18/2010 | 16:48:00 |
| G01-MW-12-1010 | 1011026-04 | D46342.D | 11/18/2010 | 17:12:00 |
| G01-MW-02-1010 | 1011026-05 | D46343.D | 11/18/2010 | 17:36:00 |
| G01-MW08-1010 | 1011026-06 | D46344.D | 11/18/2010 | 18:01:00 |
| GKHMS-GW-FD04-1010 | 1011026-07 | D46345.D | 11/18/2010 | 18:25:00 |

15 OK 1/3/11

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46328.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S048011 | Injection Date: | 11/18/10 |
| Lab Sample ID: | S048011-CCV1 | Injection Time: | 11:30 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2-Methylnaphthalene | A | 1000 | 1040 | 0.6958117 | 0.7261758 | | 4.4 | 20 |
| Acenaphthene | A | 1000 | 1020 | 1.324787 | 1.350579 | | 1.9 | 20 |
| Acenaphthylene | A | 1000 | 1000 | 2.222404 | 2.223839 | | 0.06 | 20 |
| Anthracene | A | 1000 | 1060 | 1.227584 | 1.306923 | | 6.5 | 20 |
| Benzo[a]anthracene | A | 1000 | 1100 | 1.605312 | 1.758824 | | 9.6 | 20 |
| Benzo[a]pyrene | A | 1000 | 1120 | 2.253927 | 2.534103 | | 12.4 | 20 |
| Benzo[b]fluoranthene | A | 1000 | 1140 | 2.546752 | 2.897609 | | 13.8 | 20 |
| Benzo[g,h,i]perylene | A | 1000 | 918 | 1.707555 | 1.566834 | | -8.2 | 20 |
| Benzo[k]fluoranthene | A | 1000 | 1130 | 2.564201 | 2.887644 | | 12.6 | 20 |
| Chrysene | A | 1000 | 1100 | 1.591607 | 1.745121 | | 9.6 | 20 |
| Dibenz[a,h]anthracene | A | 1000 | 918 | 1.626379 | 1.493027 | | -8.2 | 20 |
| Fluoranthene | A | 1000 | 995 | 1.235125 | 1.229038 | | -0.5 | 20 |
| Fluorene | A | 1000 | 965 | 1.373122 | 1.325718 | | -3.5 | 20 |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 947 | 2.228926 | 2.109996 | | -5.3 | 20 |
| Naphthalene | A | 1000 | 870 | 1.230131 | 1.070101 | | -13.0 | 20 |
| Phenanthrene | A | 1000 | 1040 | 1.255689 | 1.309617 | | 4.3 | 20 |
| Pyrene | A | 1000 | 1170 | 2.168287 | 2.544271 | | 17.3 | 20 |
| 2-Fluorobiphenyl | A | 1000 | 1130 | 1.591732 | 1.801738 | | 13.2 | 20 |
| Nitrobenzene-d5 | A | 1000 | 1020 | 0.3971127 | 0.4037676 | | 1.7 | 20 |
| Terphenyl-d14 | A | 1000 | 1110 | 1.040014 | 1.158106 | | 11.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Lab File ID: | D46375.D | Injection Date: | 11/24/10 |
| Instrument ID: | GCMS-D | Injection Time: | 11:37 |
| Sequence: | S048013 | Lab Sample ID: | S048013-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | PASS/FAIL |
|---|---|---|---|
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 51 | 30 - 60% of 198 | 53.6 | PASS |
| 70 | Less than 2% of 69 | 0.438 | PASS |
| 68 | Less than 2% of 69 | 0.0944 | PASS |
| 69 | Base peak, 100% relative abundance | 100 | PASS |
| 127 | 40 - 60% of 198 | 50.1 | PASS |
| 197 | Less than 1% of 198 | 0.493 | PASS |
| 199 | 5 - 9% of 198 | 6.49 | PASS |
| 275 | 10 - 30% of 198 | 22.1 | PASS |
| 365 | 1 - 200% of 198 | 3.99 | PASS |
| 443 | 17 - 23% of 442 | 19 | PASS |
| 441 | Less than 100% of 443 | 77.1 | PASS |
| 442 | 40 - 200% of 198 | 49 | PASS |

| Client ID | Sample ID | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Calibration Check | S048013-CCV1 | D46376.D | 11/24/2010 | 11:51:00 |
| G01-MW-02-1010 | 1011026-05RE1 | D46377.D | 11/24/2010 | 12:21:00 |

# CONTINUING CALIBRATION VERIFICATION

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Instrument ID: | GCMS-D | Calibration: | 0111602 |
| Lab File ID: | D46376.D | Calibration Date: | 11/03/10 11:30 |
| Sequence: | S048013 | Injection Date: | 11/24/10 |
| Lab Sample ID: | S048013-CCV1 | Injection Time: | 11:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 2-Methylnaphthalene | A | 1000 | 1000 | 0.6958117 | 0.6989045 | | 0.4 | 20 | |
| Acenaphthene | A | 1000 | 964 | 1.324787 | 1.277528 | | -3.6 | 20 | |
| Acenaphthylene | A | 1000 | 968 | 2.222404 | 2.151045 | | -3.2 | 20 | |
| Anthracene | A | 1000 | 1000 | 1.227584 | 1.227548 | | -0.003 | 20 | |
| Benzo[a]anthracene | A | 1000 | 926 | 1.605312 | 1.486592 | | -7.4 | 20 | |
| Benzo[a]pyrene | A | 1000 | 969 | 2.253927 | 2.18346 | | -3.1 | 20 | |
| Benzo[b]fluoranthene | A | 1000 | 912 | 2.546752 | 2.323602 | | -8.8 | 20 | |
| Benzo[g,h,i]perylene | A | 1000 | 978 | 1.707555 | 1.669709 | | -2.2 | 20 | |
| Benzo[k]fluoranthene | A | 1000 | 986 | 2.564201 | 2.529528 | | -1.4 | 20 | |
| Chrysene | A | 1000 | 940 | 1.591607 | 1.496401 | | -6.0 | 20 | |
| Dibenz[a,h]anthracene | A | 1000 | 998 | 1.626379 | 1.623195 | | -0.2 | 20 | |
| Fluoranthene | A | 1000 | 923 | 1.235125 | 1.14043 | | -7.7 | 20 | |
| Fluorene | A | 1000 | 973 | 1.373122 | 1.335574 | | -2.7 | 20 | |
| Indeno[1,2,3-cd]pyrene | A | 1000 | 977 | 2.228926 | 2.178386 | | -2.3 | 20 | |
| Naphthalene | A | 1000 | 1110 | 1.230131 | 1.36463 | | 10.9 | 20 | |
| Phenanthrene | A | 1000 | 988 | 1.255689 | 1.240214 | | -1.2 | 20 | |
| Pyrene | A | 1000 | 994 | 2.168287 | 2.155555 | | -0.6 | 20 | |
| 2-Fluorobiphenyl | A | 1000 | 1010 | 1.591732 | 1.60256 | | 0.7 | 20 | |
| Nitrobenzene-d5 | A | 1000 | 1290 | 0.3971127 | 0.511675 | | 28.8 | 20 | * |
| Terphenyl-d14 | A | 1000 | 1070 | 1.040014 | 1.112728 | | 7.0 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD BLANK SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Blank ID: | B048006-BLK1 | Batch: | B048006 |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|---|---|---|---|
| Matrix Spike Dup | B048006-MSD1 | D46335.D | 14:21 |
| Matrix Spike | B048006-MS1 | D46334.D | 13:57 |
| LCS | B048006-BS1 | D46333.D | 13:32 |
| GKHMS-GW-FD04-1010 | 1011026-07 | D46345.D | 18:25 |
| G01-MW08-1010 | 1011026-06 | D46344.D | 18:01 |
| G01-MW-02-1010 | 1011026-05RE1 | D46377.D | 12:21 |
| G01-MW-02-1010 | 1011026-05 | D46343.D | 17:36 |
| G01-MW-12-1010 | 1011026-04 | D46342.D | 17:12 |
| G01-MW-07-1010 | 1011026-03 | D46341.D | 16:48 |
| G01-MW-03-1010 | 1011026-02 | D46340.D | 16:23 |
| G01-MW-01A-1010 | 1011026-01 | D46339.D | 15:59 |

# ANALYSIS DATA SHEET

## Blank

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | | | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | | | Project: | KEY WEST NAS |
| Matrix: | Water | Laboratory ID: | B048006-BLK1 | File ID: | D46332.D |
| Sampled: | | Prepared: | 11/12/10 09:30 | Analyzed: | 11/18/10 13:08 |
| Solids: | | Preparation: | 3520C Cont. | Dilution: | |
| Batch: | B048006 | Sequence: | S048011 | Calibration: | 0111602 |
| Column: | 1 | | | | |

| CAS NO. | COMPOUND | CONC. (ng/L) | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 50.0 | U |
| 83-32-9 | Acenaphthene | 50.0 | U |
| 208-96-8 | Acenaphthylene | 50.0 | U |
| 120-12-7 | Anthracene | 50.0 | U |
| 56-55-3 | Benzo[a]anthracene | 50.0 | U |
| 50-32-8 | Benzo[a]pyrene | 50.0 | U |
| 205-99-2 | Benzo[b]fluoranthene | 50.0 | U |
| 191-24-2 | Benzo[g,h,i]perylene | 50.0 | U |
| 207-08-9 | Benzo[k]fluoranthene | 50.0 | U |
| 218-01-9 | Chrysene | 50.0 | U |
| 53-70-3 | Dibenz[a,h]anthracene | 50.0 | U |
| 206-44-0 | Fluoranthene | 50.0 | U |
| 86-73-7 | Fluorene | 50.0 | U |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | 50.0 | U |
| 91-20-3 | Naphthalene | 50.0 | U |
| 85-01-8 | Phenanthrene | 50.0 | U |
| 129-00-0 | Pyrene | 50.0 | U |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Preparation: | 3520C Cont. |
| Batch: | B048006 | Laboratory ID: | B048006-BS1 |
| Column: | | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5020 | 100 | 45 - 105 |
| Acenaphthene | 5000 | 4720 | 94 | 45 - 110 |
| Acenaphthylene | 5000 | 4320 | 86 | 50 - 105 |
| Anthracene | 5000 | 4660 | 93 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4660 | 93 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5190 | 104 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5700 | 114 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 5220 | 104 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 5070 | 101 | 45 - 125 |
| Chrysene | 5000 | 4630 | 93 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 5130 | 103 | 40 - 125 |
| Fluoranthene | 5000 | 4690 | 94 | 55 - 115 |
| Fluorene | 5000 | 4570 | 91 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 4920 | 98 | 45 - 125 |
| Naphthalene | 5000 | 4540 | 91 | 40 - 100 |
| Phenanthrene | 5000 | 4680 | 94 | 50 - 115 |
| Pyrene | 5000 | 4570 | 91 | 50 - 130 |

# SURROGATE SUMMARY SHEET

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | SDG: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Instrument: | GCMS-D |

| | 2FBPL (50 - 110) | NB-d5 (40 - 110) | TRPL-D14 (50 - 135) | |
|---|---|---|---|---|
| 1011026-01 | 77 | 84 | 95 | |
| 1011026-02 | 84 | 88 | 92 | |
| 1011026-03 | 81 | 95 | 98 | |
| 1011026-04 | 75 | 92 | 86 | |
| 1011026-05 | 82 | 92 | 95 | |
| 1011026-05RE1 | 86 | 113* | 105 | 10X dilution |
| 1011026-06 | 79 | 96 | 90 | |
| 1011026-07 | 78 | 96 | 78 | |
| B048006-BLK1 | 92 | 100 | 89 | |
| B048006-BS1 | 93 | 100 | 93 | |
| B048006-MS1 | 96 | 113* | 90 | |
| B048006-MSD1 | 89 | 107 | 104 | |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 JK 1/3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048006 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048006-MS1 |
| Column: | | Sample Lab ID: | 1011026-05 |

| ANALYTE | SPIKE ADDED (ng/L) | SAMPLE CONCENTRATION (ng/L) | MS CONCENTRATION (ng/L) | MS % REC. | | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 26.6 | 4880 | 97 | | 45 - 105 |
| Acenaphthene | 5000 | 75000 | 70800 | -84 | * | 45 - 110 |
| Acenaphthylene | 5000 | 988 | 5350 | 87 | | 50 - 105 |
| Anthracene | 5000 | 1800 | 5550 | 75 | | 55 - 110 |
| Benzo[a]anthracene | 5000 | 50.0 U | 4540 | 91 | | 55 - 110 |
| Benzo[a]pyrene | 5000 | 50.0 U | 5060 | 101 | | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 50.0 U | 5980 | 120 | | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 50.0 U | 4390 | 88 | | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 50.0 U | 5210 | 104 | | 45 - 125 |
| Chrysene | 5000 | 50.0 U | 4480 | 90 | | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 50.0 U | 4320 | 86 | | 40 - 125 |
| Fluoranthene | 5000 | 1390 | 6530 | 103 | | 55 - 115 |
| Fluorene | 5000 | 1730 | 5740 | 80 | | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 50.0 U | 4180 | 84 | | 45 - 125 |
| Naphthalene | 5000 | 95.0 | 4420 | 86 | | 40 - 100 |
| Phenanthrene | 5000 | 173 | 4660 | 90 | | 50 - 115 |
| Pyrene | 5000 | 483 | 4400 | 78 | | 50 - 130 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

G01-MW-02-1010 5 3/11

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Matrix: | Water | Analysis: | SW8270C SIM |
| Batch: | B048006 | Preparation: | 3520C Cont. |
| % Solids: | | Laboratory ID: | B048006-MSD1 |
| Column: | | Sample Lab ID: | 1011026-05 |

| ANALYTE | SPIKE ADDED (ng/L) | MSD CONCENTRATION (ng/L) | MSD % REC. # | % RPD | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | 5000 | 5310 | 106 * | 8 | 20 | 45 - 105 |
| Acenaphthene | 5000 | 70700 | 85 * | 0.08 | 20 | 45 - 110 |
| Acenaphthylene | 5000 | 5320 | 87 | 0.5 | 20 | 50 - 105 |
| Anthracene | 5000 | 5670 | 77 | 2 | 20 | 55 - 110 |
| Benzo[a]anthracene | 5000 | 4900 | 98 | 8 | 20 | 55 - 110 |
| Benzo[a]pyrene | 5000 | 5280 | 106 | 4 | 20 | 55 - 110 |
| Benzo[b]fluoranthene | 5000 | 5870 | 117 | 2 | 20 | 45 - 120 |
| Benzo[g,h,i]perylene | 5000 | 4780 | 96 | 8 | 20 | 40 - 125 |
| Benzo[k]fluoranthene | 5000 | 5720 | 114 | 9 | 20 | 45 - 125 |
| Chrysene | 5000 | 4710 | 94 | 5 | 20 | 55 - 110 |
| Dibenz[a,h]anthracene | 5000 | 4720 | 94 | 9 | 20 | 40 - 125 |
| Fluoranthene | 5000 | 6120 | 95 | 6 | 20 | 55 - 115 |
| Fluorene | 5000 | 6120 | 88 | 6 | 20 | 50 - 110 |
| Indeno[1,2,3-cd]pyrene | 5000 | 4540 | 91 | 8 | 20 | 45 - 125 |
| Naphthalene | 5000 | 4720 | 92 | 7 | 20 | 40 - 100 |
| Phenanthrene | 5000 | 4950 | 96 | 6 | 20 | 50 - 115 |
| Pyrene | 5000 | 5590 | 102 | 24 * | 20 | 50 - 130 |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048011 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048011-CCV1 )** | | | *Lab File ID: D46328.D* | | | *Analyzed: 11/18/10 11:30* | | | |
| 1,4-Dichlorobenzene-d4 | 145296 | 3.7 | 524277 | 3.79 | 28 | 50 - 200 | -0.0900 | +/-30.00 | |
| Acenaphthene-d10 | 240208 | 6.82 | 890160 | 6.91 | 27 | 50 - 200 | -0.0900 | +/-30.00 | |
| Chrysene-d12 | 163764 | 11.25 | 837431 | 11.37 | 20 | 50 - 200 | -0.1200 | +/-30.00 | |
| Naphthalene-d8 | 559936 | 4.99 | 1909751 | 5.08 | 29 | 50 - 200 | -0.0900 | +/-30.00 | |
| Perylene-d12 | 83894 | 13.9 | 457505 | 14.11 | 18 | 50 - 200 | -0.2100 | +/-30.00 | |
| Phenanthrene-d10 | 335469 | 8.35 | 1402237 | 8.45 | 24 | 50 - 200 | -0.1000 | +/-30.00 | |
| **Blank (B048006-BLK1 )** | | | *Lab File ID: D46332.D* | | | *Analyzed: 11/18/10 13:08* | | | |
| 1,4-Dichlorobenzene-d4 | 146239 | 3.71 | 145296 | 3.7 | 101 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 229658 | 6.82 | 240208 | 6.82 | 96 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 170120 | 11.25 | 163764 | 11.25 | 104 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 522704 | 5 | 559936 | 4.99 | 93 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 99575 | 13.91 | 83894 | 13.9 | 119 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 302080 | 8.36 | 335469 | 8.35 | 90 | 50 - 200 | 0.0100 | +/-30.00 | |
| **LCS (B048006-BS1 )** | | | *Lab File ID: D46333.D* | | | *Analyzed: 11/18/10 13:32* | | | |
| 1,4-Dichlorobenzene-d4 | 142285 | 3.71 | 145296 | 3.7 | 98 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 218465 | 6.83 | 240208 | 6.82 | 91 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 190421 | 11.25 | 163764 | 11.25 | 116 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 484401 | 5 | 559936 | 4.99 | 87 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 108943 | 13.9 | 83894 | 13.9 | 130 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 316174 | 8.36 | 335469 | 8.35 | 94 | 50 - 200 | 0.0100 | +/-30.00 | |
| **Matrix Spike (B048006-MS1 )** | | | *Lab File ID: D46334.D* | | | *Analyzed: 11/18/10 13:57* | | | |
| 1,4-Dichlorobenzene-d4 | 102623 | 3.72 | 145296 | 3.7 | 71 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 145784 | 6.83 | 240208 | 6.82 | 61 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 156532 | 11.25 | 163764 | 11.25 | 96 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 340184 | 5 | 559936 | 4.99 | 61 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 72094 | 13.91 | 83894 | 13.9 | 86 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 202312 | 8.36 | 335469 | 8.35 | 60 | 50 - 200 | 0.0100 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048011 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (B048006-MSD1 )** | | | *Lab File ID: D46335.D* | | | *Analyzed: 11/18/10 14:21* | | | |
| 1,4-Dichlorobenzene-d4 | 124376 | 3.72 | 145296 | 3.7 | 86 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 193451 | 6.83 | 240208 | 6.82 | 81 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 155226 | 11.25 | 163764 | 11.25 | 95 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 421761 | 5 | 559936 | 4.99 | 75 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 76894 | 13.91 | 83894 | 13.9 | 92 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 280691 | 8.36 | 335469 | 8.35 | 84 | 50 - 200 | 0.0100 | +/-30.00 | |
| **G01-MW-01A-1010 (1011026-01 )** | | | *Lab File ID: D46339.D* | | | *Analyzed: 11/18/10 15:59* | | | |
| 1,4-Dichlorobenzene-d4 | 132078 | 3.72 | 145296 | 3.7 | 91 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 222207 | 6.83 | 240208 | 6.82 | 93 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 176590 | 11.25 | 163764 | 11.25 | 108 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 467097 | 5 | 559936 | 4.99 | 83 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 86357 | 13.91 | 83894 | 13.9 | 103 | 50 - 200 | 0.0100 | +/-30.00 | |
| Phenanthrene-d10 | 317104 | 8.36 | 335469 | 8.35 | 95 | 50 - 200 | 0.0100 | +/-30.00 | |
| **G01-MW-03-1010 (1011026-02 )** | | | *Lab File ID: D46340.D* | | | *Analyzed: 11/18/10 16:23* | | | |
| 1,4-Dichlorobenzene-d4 | 122497 | 3.72 | 145296 | 3.7 | 84 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 196708 | 6.83 | 240208 | 6.82 | 82 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 158015 | 11.25 | 163764 | 11.25 | 96 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 420856 | 5 | 559936 | 4.99 | 75 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 77525 | 13.92 | 83894 | 13.9 | 92 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 280873 | 8.36 | 335469 | 8.35 | 84 | 50 - 200 | 0.0100 | +/-30.00 | |
| **G01-MW-07-1010 (1011026-03 )** | | | *Lab File ID: D46341.D* | | | *Analyzed: 11/18/10 16:48* | | | |
| 1,4-Dichlorobenzene-d4 | 136158 | 3.72 | 145296 | 3.7 | 94 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 226118 | 6.83 | 240208 | 6.82 | 94 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 188988 | 11.26 | 163764 | 11.25 | 115 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 474164 | 5 | 559936 | 4.99 | 85 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 84845 | 13.92 | 83894 | 13.9 | 101 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 336433 | 8.36 | 335469 | 8.35 | 100 | 50 - 200 | 0.0100 | +/-30.00 | |

CENTAURI LABS™

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048011 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **G01-MW-12-1010 (1011026-04 )** | | | *Lab File ID: D46342.D* | | | *Analyzed: 11/18/10 17:12* | | | |
| 1,4-Dichlorobenzene-d4 | 132315 | 3.72 | 145296 | 3.7 | 91 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 228668 | 6.84 | 240208 | 6.82 | 95 | 50 - 200 | 0.0200 | +/-30.00 | |
| Chrysene-d12 | 191581 | 11.26 | 163764 | 11.25 | 117 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 459004 | 5 | 559936 | 4.99 | 82 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 89430 | 13.93 | 83894 | 13.9 | 107 | 50 - 200 | 0.0300 | +/-30.00 | |
| Phenanthrene-d10 | 316817 | 8.37 | 335469 | 8.35 | 94 | 50 - 200 | 0.0200 | +/-30.00 | |
| **G01-MW-02-1010 (1011026-05 )** | | | *Lab File ID: D46343.D* | | | *Analyzed: 11/18/10 17:36* | | | |
| 1,4-Dichlorobenzene-d4 | 127612 | 3.72 | 145296 | 3.7 | 88 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 207170 | 6.83 | 240208 | 6.82 | 86 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 189053 | 11.26 | 163764 | 11.25 | 115 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 438431 | 5 | 559936 | 4.99 | 78 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 89165 | 13.92 | 83894 | 13.9 | 106 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 315618 | 8.37 | 335469 | 8.35 | 94 | 50 - 200 | 0.0200 | +/-30.00 | |
| **G01-MW08-1010 (1011026-06 )** | | | *Lab File ID: D46344.D* | | | *Analyzed: 11/18/10 18:01* | | | |
| 1,4-Dichlorobenzene-d4 | 122958 | 3.72 | 145296 | 3.7 | 85 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 200771 | 6.83 | 240208 | 6.82 | 84 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 170422 | 11.26 | 163764 | 11.25 | 104 | 50 - 200 | 0.0100 | +/-30.00 | |
| Naphthalene-d8 | 409258 | 5.01 | 559936 | 4.99 | 73 | 50 - 200 | 0.0200 | +/-30.00 | |
| Perylene-d12 | 83843 | 13.92 | 83894 | 13.9 | 100 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 285910 | 8.37 | 335469 | 8.35 | 85 | 50 - 200 | 0.0200 | +/-30.00 | |
| **GKHMS-GW-FD04-1010 (1011026-07 )** | | | *Lab File ID: D46345.D* | | | *Analyzed: 11/18/10 18:25* | | | |
| 1,4-Dichlorobenzene-d4 | 109087 | 3.72 | 145296 | 3.7 | 75 | 50 - 200 | 0.0200 | +/-30.00 | |
| Acenaphthene-d10 | 161730 | 6.83 | 240208 | 6.82 | 67 | 50 - 200 | 0.0100 | +/-30.00 | |
| Chrysene-d12 | 160442 | 11.25 | 163764 | 11.25 | 98 | 50 - 200 | 0.0000 | +/-30.00 | |
| Naphthalene-d8 | 351377 | 5 | 559936 | 4.99 | 63 | 50 - 200 | 0.0100 | +/-30.00 | |
| Perylene-d12 | 79146 | 13.92 | 83894 | 13.9 | 94 | 50 - 200 | 0.0200 | +/-30.00 | |
| Phenanthrene-d10 | 226440 | 8.37 | 335469 | 8.35 | 67 | 50 - 200 | 0.0200 | +/-30.00 | |

# INTERNAL STANDARD AREA AND RT SUMMARY

## SW8270C SIM

| | | | |
|---|---|---|---|
| Laboratory: | Centauri Labs, LLC | Work Order: | 1011026 |
| Client: | Tetra Tech NUS, Inc | Project: | KEY WEST NAS |
| Sequence: | S048013 | Instrument: | GCMS-D |
| | | Calibration: | 0111602 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (S048013-CCV1 )** | | | *Lab File ID: D46376.D* | | | *Analyzed: 11/24/10 11:51* | | | |
| 1,4-Dichlorobenzene-d4 | 455225 | 3.65 | 524277 | 3.79 | 87 | 50 - 200 | -0.1400 | +/-30.00 | |
| Acenaphthene-d10 | 826590 | 6.77 | 890160 | 6.91 | 93 | 50 - 200 | -0.1400 | +/-30.00 | |
| Chrysene-d12 | 714036 | 11.16 | 837431 | 11.37 | 85 | 50 - 200 | -0.2100 | +/-30.00 | |
| Naphthalene-d8 | 1751690 | 4.94 | 1909751 | 5.08 | 92 | 50 - 200 | -0.1400 | +/-30.00 | |
| Perylene-d12 | 366598 | 13.74 | 457505 | 14.11 | 80 | 50 - 200 | -0.3700 | +/-30.00 | |
| Phenanthrene-d10 | 1314686 | 8.29 | 1402237 | 8.45 | 94 | 50 - 200 | -0.1600 | +/-30.00 | |
| **G01-MW-02-1010 (1011026-05RE1 )** | | | *Lab File ID: D46377.D* | | | *Analyzed: 11/24/10 12:21* | | | |
| 1,4-Dichlorobenzene-d4 | 367968 | 3.66 | 455225 | 3.65 | 81 | 50 - 200 | 0.0100 | +/-30.00 | |
| Acenaphthene-d10 | 669509 | 6.77 | 826590 | 6.77 | 81 | 50 - 200 | 0.0000 | +/-30.00 | |
| Chrysene-d12 | 552792 | 11.15 | 714036 | 11.16 | 77 | 50 - 200 | -0.0100 | +/-30.00 | |
| Naphthalene-d8 | 1387290 | 4.94 | 1751690 | 4.94 | 79 | 50 - 200 | 0.0000 | +/-30.00 | |
| Perylene-d12 | 279166 | 13.74 | 366598 | 13.74 | 76 | 50 - 200 | 0.0000 | +/-30.00 | |
| Phenanthrene-d10 | 1015483 | 8.29 | 1314686 | 8.29 | 77 | 50 - 200 | 0.0000 | +/-30.00 | |

# NAS KEY WEST
# WATER DATA
# 1011026

| FRACTION | CHEMICAL | GKHMS-GW-FD04-1010 | UNITS | G01-MW-08-1010 | RPD | D |
|---|---|---|---|---|---|---|
| PAH | 2-METHYLNAPHTHALENE | 11100 | NG/L | 10600 | 4.61 | 500.00 |
| PAH | ACENAPHTHENE | 1470 | NG/L | 1410 | 4.17 | 60.00 |
| PAH | ACENAPHTHYLENE | 231 | NG/L | 213 | 8.11 | 18.00 |
| PAH | ANTHRACENE | 76.5 | NG/L | 54.4 | 33.77 | 22.10 |
| PAH | FLUORENE | 1530 | NG/L | 1430 | 6.76 | 100.00 |
| PAH | NAPHTHALENE | 13700 | NG/L | 14000 | 2.17 | 300.00 |
| PAH | PHENANTHRENE | 671 | NG/L | 569 | 16.45 | 102.00 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# NAS KEY WEST
# WATER DATA
# 1011026

| FRACTION | CHEMICAL | GKHMS-GW-FD04-1010 | UNITS | G01-MW-08-1010 | RPD | D |
|---|---|---|---|---|---|---|
| OV | NAPHTHALENE | 42.2 | UG/L | 42.4 | 0.47 | 0.20 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: FEBRUARY 14, 2011**

**FROM:** **DANIELLE M. BAUGHMAN** **COPIES: DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – TAL METALS**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_002**

**SAMPLES:** 12/Aqueous/

| | | |
|---|---|---|
| GKHMS-GW-002-1010 | GKHMS-GW-003-1010 | GKHMS-GW-004-1010 |
| GKHMS-GW-005-1010 | GKHMS-GW-006-1010 | GKHMS-GW-007-1010 |
| GKHMS-GW-008-1010 | GKHMS-GW-009-1010 | GKHMS-GW-010-1010 |
| GKHMS-GW-011-1010 | GKHMS-GW-012-1010 | GKHMS-GW-013-1010 |

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_002, consists of twelve (12) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc. The samples were collected by Tetra Tech NUS on October 28 and 29, 2010 and analyzed by Empirical Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metal analyses were conducted using SW-846 method 6010C.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
• Initial / Continuing Calibration Verification Results
* • Laboratory Method Blank Analyses
* • Matrix Spike Recoveries
* • Laboratory Control Sample Recoveries
* • Serial Dilution Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

The CCV % recovery on 12/7/10 for magnesium and potassium were outside of the 90-110% quality control limit. Sample GKHMS-GW-013-1010 was affected. Results reported for magnesium and potassium were qualified as estimated "J".

Notes

The CCV % recoveries on 12/7/10 for sodium were outside of the 90-110% quality control limit. No action was required because all sodium results were reported from 12/8/10.

The CCV % recovery on 12/9/10 for aluminum was outside of the 90-110% quality control limit. No action was required because all aluminum results were reported on 12/7/10 and 12/8/10.

Positive results greater than the method detection limit (MDL), but less than the reporting limit (RL) were qualified as estimated "J".

No matrix spike analysis was performed on samples included in this SDG.

Form I's contained lab IDs. Field sample IDs needed to be determined and were hand written on all Form I's.

Executive Summary

**Laboratory Performance:** The CCV % recoveries for potassium and magnesium were outside of the 90-110% quality control limit.

**Other Factors Affecting Data Quality:** Positive results greater than the method detection limit (MDL), but less than the reporting limit (RL) were qualified.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Danielle M. Baughman
Project Engineer

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_002 | LAB_ID | 1011256-01 | | | 1011256-02 | | | 1011256-03 | | | 1011256-04 | | |
| FRACTION: M | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 60.1 | J | P | 115 | J | P | 58.8 | J | P | 475 | J | P |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | | 5.33 | J | P | 3 | U | |
| BARIUM | | 5.61 | J | P | 12.8 | J | P | 16.4 | J | P | 35.9 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 4.13 | J | P | 4.9 | J | P | 6.44 | | | 22.2 | J | P |
| CALCIUM | | 143000 | | | 143000 | | | 251000 | | | 604000 | | |
| CHROMIUM | | 2 | U | | 2 | U | | 2 | U | | 10 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | | 9 | U | |
| IRON | | 184 | | | 245 | | | 437 | | | 900 | | |
| LEAD | | 1.5 | U | | 3 | U | | 2 | U | | 7.5 | U | |
| MAGNESIUM | | 172000 | | | 212000 | | | 358000 | | | 1110000 | | |
| MANGANESE | | 4.7 | J | P | 14.1 | J | P | 8.06 | J | P | 73.5 | | |
| NICKEL | | 3 | U | | 3 | U | | 3 | U | | 6 | U | |
| POTASSIUM | | 58300 | | | 78900 | | | 125000 | | | 351000 | | |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 1310000 | | | 1710000 | | | 3200000 | | | 8870000 | | |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 5 | U | | 14.5 | J | P | 5 | U | | 25 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_002 | LAB_ID | 1011256-05 | | | 1011256-06 | | | 1011256-07 | | | 1011256-08 | | |
| FRACTION: M | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 426 | J | P | 76.7 | J | P | 85.5 | J | P | 82.5 | J | P |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| BARIUM | | 45 | | | 9.54 | J | P | 7.39 | J | P | 11.8 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 12 | J | P | 2.91 | J | P | 1.85 | J | P | 2.79 | J | P |
| CALCIUM | | 611000 | | | 191000 | | | 185000 | | | 267000 | | |
| CHROMIUM | | 10 | U | | 2 | U | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 20 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 1440 | | | 142 | | | 358 | | | 770 | | |
| LEAD | | 7.5 | U | | 1.5 | U | | 1.5 | U | | 1.5 | U | |
| MAGNESIUM | | 1420000 | | | 239000 | | | 173000 | | | 320000 | | |
| MANGANESE | | 131 | | | 6.18 | J | P | 8.42 | J | P | 8.54 | J | P |
| NICKEL | | 15 | U | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 442000 | | | 68300 | | | 49200 | | | 84200 | | |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 10600000 | | | 1790000 | | | 1220000 | | | 2460000 | | |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 25 | U | | 6.93 | J | P | 5 | U | | 5 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_002 | LAB_ID | 1011256-09 | | | 1011256-10 | | | 1011256-11 | | | 1011256-12 | | |
| FRACTION: M | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 356 | J | P | 616 | J | P | 281 | J | P | 50 | U | |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 17 | | | 53 | | | 3 | U | |
| BARIUM | | 40.5 | | | 25 | J | P | 26.6 | J | P | 11.5 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 12.8 | J | P | 8.37 | | | 20.7 | J | P | 4.81 | J | P |
| CALCIUM | | 684000 | | | 590000 | | | 583000 | | | 276000 | | |
| CHROMIUM | | 10 | U | | 2.27 | J | P | 10 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 20 | U | | 4 | U | | 20 | U | | 4 | U | |
| IRON | | 1700 | | | 766 | | | 363 | | | 339 | | |
| LEAD | | 7.5 | U | | 7.5 | U | | 7.5 | U | | 7.5 | U | |
| MAGNESIUM | | 1580000 | | | 441000 | | | 1180000 | | | 401000 | J | C |
| MANGANESE | | 42.9 | | | 22.5 | | | 9.65 | J | P | 8.67 | J | P |
| NICKEL | | 15 | U | | 3 | U | | 5 | U | | 3 | U | |
| POTASSIUM | | 495000 | | | 124000 | | | 454000 | | | 109000 | J | C |
| SELENIUM | | 4.95 | J | P | 3 | U | | 3.59 | J | P | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 11600000 | | | 3340000 | | | 9050000 | | | 3050000 | | |
| THALLIUM | | 3 | U | | 3 | U | | 5 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 25 | U | | 25 | U | | 25 | U | | 5 | U | |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

GKHMS-GW-002-1010

# ANALYSIS DATA SHEET

1010098-01

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/28/10 09:50
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 60.1 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-39-3 | Barium | 5.61 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-43-9 | Cadmium | 4.13 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-70-2 | Calcium | 143000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7439-89-6 | Iron | 184 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7439-95-4 | Magnesium | 172000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7439-96-5 | Manganese | 4.70 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-09-7 | Potassium | 58300 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-23-5 | Sodium | 1310000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 21:29 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:23 |

GKHNS-GW-003-1010

# ANALYSIS DATA SHEET

1010098-02

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/28/10 09:20
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-02
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 115 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-39-3 | Barium | 12.8 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-43-9 | Cadmium | 4.90 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-70-2 | Calcium | 143000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7439-89-6 | Iron | 245 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7439-92-1 | Lead | | 3.00 | 3.00 | 3.00 | 1 | M U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7439-95-4 | Magnesium | 212000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7439-96-5 | Manganese | 14.1 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-09-7 | Potassium | 78900 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-23-5 | Sodium | 1710000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 21:34 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:50 |
| 7440-66-6 | Zinc | 14.5 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:50 |

GKHMS-GW-004-1010

# ANALYSIS DATA SHEET

1010098-03

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/28/10 11:20
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-03
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 58.8 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-38-2 | Arsenic | 5.33 | 3.00 | 5.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-39-3 | Barium | 16.4 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-43-9 | Cadmium | 6.44 | 1.00 | 2.00 | 5.00 | 1 | | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-70-2 | Calcium | 251000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7439-89-6 | Iron | 437 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7439-92-1 | Lead | | 2.00 | 3.00 | 3.00 | 1 | M U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7439-95-4 | Magnesium | 358000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7439-96-5 | Manganese | 8.06 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-09-7 | Potassium | 125000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 21:39 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-23-5 | Sodium | 3200000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 21:44 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:55 |

GKHMS-GW-005-1010

# ANALYSIS DATA SHEET

1010098-04

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/28/10 12:00
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-04
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 475 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06009 | 12/08/10 21:49 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-39-3 | Barium | 35.9 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-43-9 | Cadmium | 22.2 | 5.00 | 10.0 | 25.0 | 5 | D I | SW6010C | 0L06009 | 12/08/10 21:49 |
| 7440-70-2 | Calcium | 604000 | 5000 | 10000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 21:49 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 21:49 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-50-8 | Copper | | 9.00 | 9.00 | 10.0 | 1 | M U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7439-89-6 | Iron | 900 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 21:49 |
| 7439-95-4 | Magnesium | 1110000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 21:49 |
| 7439-96-5 | Manganese | 73.5 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-02-0 | Nickel | | 6.00 | 6.00 | 10.0 | 1 | M U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-09-7 | Potassium | 351000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 21:49 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-23-5 | Sodium | 8870000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 21:53 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:00 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06009 | 12/08/10 21:49 |

GKHMS - GW-0006 - 1010

# ANALYSIS DATA SHEET

1010098-05

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/28/10 14:30
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-05
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 426 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-39-3 | Barium | 45.0 | 5.00 | 10.0 | 40.0 | 1 | | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-43-9 | Cadmium | 12.0 | 5.00 | 10.0 | 25.0 | 5 | D I | SW6010C | 0L06009 | 12/17/10 18:25 |
| 7440-70-2 | Calcium | 611000 | 5000 | 10000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-50-8 | Copper | | 20.0 | 40.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7439-89-6 | Iron | 1440 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7439-95-4 | Magnesium | 1420000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7439-96-5 | Manganese | 131 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-02-0 | Nickel | | 15.0 | 30.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7440-09-7 | Potassium | 442000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:11 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-23-5 | Sodium | 10600000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 22:16 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:05 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:11 |

GKHMS-GW-007-1010

# ANALYSIS DATA SHEET

1010098-06

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/28/10 15:40
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-06
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 76.7 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-39-3 | Barium | 9.54 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-43-9 | Cadmium | 2.91 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-70-2 | Calcium | 191000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7439-89-6 | Iron | 142 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7439-95-4 | Magnesium | 239000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7439-96-5 | Manganese | 6.18 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-09-7 | Potassium | 68300 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-23-5 | Sodium | 1790000 | 1000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:21 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:10 |
| 7440-66-6 | Zinc | 6.93 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:10 |

GKHMS - GW-006-1010

# ANALYSIS DATA SHEET

1010098-08

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/29/10 08:40
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-07
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 85.5 | 50.0 | 100 | 200 | 1 | J | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-39-3 | Barium | 7.39 | 5.00 | 10.0 | 40.0 | 1 | J | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-43-9 | Cadmium | 1.85 | 1.00 | 2.00 | 5.00 | 1 | J | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-70-2 | Calcium | 185000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7439-89-6 | Iron | 358 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7439-95-4 | Magnesium | 173000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7439-96-5 | Manganese | 8.42 | 3.00 | 6.00 | 15.0 | 1 | J | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-09-7 | Potassium | 49200 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-23-5 | Sodium | 1220000 | 1000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:25 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:15 |

GKHMS-GW-009-1010

# ANALYSIS DATA SHEET

1010098-09

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/29/10 09:20
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-08
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 82.5 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-39-3 | Barium | 11.8 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-43-9 | Cadmium | 2.79 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-70-2 | Calcium | 267000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7439-89-6 | Iron | 770 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7439-95-4 | Magnesium | 320000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7439-96-5 | Manganese | 8.54 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-09-7 | Potassium | 84200 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-23-5 | Sodium | 2460000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 22:30 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:20 |

GKHMS-GW-010-1010

# ANALYSIS DATA SHEET

1010098-10

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/29/10 11:30
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-09
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 356 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06009 | 12/08/10 22:35 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-39-3 | Barium | 40.5 | 5.00 | 10.0 | 40.0 | 1 | | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-43-9 | Cadmium | 12.8 | 5.00 | 10.0 | 25.0 | 5 | D I | SW6010C | 0L06009 | 12/17/10 18:30 |
| 7440-70-2 | Calcium | 684000 | 5000 | 10000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:35 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:35 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-50-8 | Copper | | 20.0 | 40.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:35 |
| 7439-89-6 | Iron | 1700 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:35 |
| 7439-95-4 | Magnesium | 1580000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:35 |
| 7439-96-5 | Manganese | 42.9 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-02-0 | Nickel | | 15.0 | 30.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:35 |
| 7440-09-7 | Potassium | 495000 | 25000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 22:40 |
| 7782-49-2 | Selenium | 4.95 | 3.00 | 5.00 | 10.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-23-5 | Sodium | 11600000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 22:40 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:25 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:35 |

GKHMS-GW-011-1010

# ANALYSIS DATA SHEET

1010098-11

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/29/10 10:40
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-10
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 616 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06009 | 12/08/10 22:45 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-38-2 | Arsenic | 17.0 | 3.00 | 5.00 | 5.00 | 1 | | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-39-3 | Barium | 25.0 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-43-9 | Cadmium | 8.37 | 1.00 | 2.00 | 5.00 | 1 | | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-70-2 | Calcium | 590000 | 5000 | 10000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:45 |
| 7440-47-3 | Chromium | 2.27 | 2.00 | 4.00 | 10.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7439-89-6 | Iron | 766 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:45 |
| 7439-95-4 | Magnesium | 441000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7439-96-5 | Manganese | 22.5 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-09-7 | Potassium | 124000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:45 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-23-5 | Sodium | 3340000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 22:50 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:30 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:45 |

GKHNS-GW-012-1010

# ANALYSIS DATA SHEET

1010098-12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/29/10 10:00
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-11
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 281 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06009 | 12/08/10 22:54 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-38-2 | Arsenic | 53.0 | 3.00 | 5.00 | 5.00 | 1 | | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-39-3 | Barium | 26.6 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-43-9 | Cadmium | 20.7 | 5.00 | 10.0 | 25.0 | 5 | D I | SW6010C | 0L06009 | 12/08/10 22:54 |
| 7440-70-2 | Calcium | 583000 | 5000 | 10000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:54 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:54 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-50-8 | Copper | | 20.0 | 40.0 | 50.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:54 |
| 7439-89-6 | Iron | 363 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:54 |
| 7439-95-4 | Magnesium | 1180000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/08/10 22:54 |
| 7439-96-5 | Manganese | 9.65 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-02-0 | Nickel | | 5.00 | 6.00 | 10.0 | 1 | M U | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-09-7 | Potassium | 454000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06009 | 12/17/10 18:35 |
| 7782-49-2 | Selenium | 3.59 | 3.00 | 5.00 | 10.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-23-5 | Sodium | 9050000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06009 | 12/08/10 22:59 |
| 7440-28-0 | Thallium | | 5.00 | 5.00 | 8.00 | 1 | M U | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 15:35 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06009 | 12/08/10 22:54 |

GKHMS-GW-013-1010

# ANALYSIS DATA SHEET

1010098-13

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/29/10 13:50
% Solids: 0.00

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Laboratory ID: 1011256-12
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | | 50.0 | 100 | 200 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-39-3 | Barium | 11.5 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-43-9 | Cadmium | 4.81 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-70-2 | Calcium | 276000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7439-89-6 | Iron | 339 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06016 | 12/08/10 23:17 |
| 7439-95-4 | Magnesium | 401000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7439-96-5 | Manganese | 8.67 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-09-7 | Potassium | 109000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/08/10 23:17 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-23-5 | Sodium | 3050000 | 5000 | 75000 | 125000 | 25 | D V | SW6010C | 0L06016 | 12/08/10 23:22 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:09 |

# APPENDIX C
# SUPPORT DOCUMENTATION

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

| SENDING LABORATORY: | RECEIVING LABORATORY: |
|---|---|
| Centauri Labs, LLC<br>7210 Corporate Court<br>Frederick, MD 21703<br>Phone: 301.694.5310<br>Fax: 301.620.0731<br>Project Manager: Chino Ortiz | EMPERICAL LABS<br>621 MAINSTREAM DR SUITE 270<br>NASHVILLE, TN 37228<br>Phone :(615) 345-1115<br>Fax: (000) 000-0000 |

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-01** | **Water** | **Sampled:10/28/10 09:50** | 1011256-01 |
| 6020A QSM TAL | | 04/26/11 09:50 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-02** | **Water** | **Sampled:10/28/10 09:20** | -02 |
| 6020A QSM TAL | | 04/26/11 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-03** | **Water** | **Sampled:10/28/10 11:20** | -03 |
| 6020A QSM TAL | | 04/26/11 11:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-04** | **Water** | **Sampled:10/28/10 12:00** | -04 |
| 6020A QSM TAL | | 04/26/11 12:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-05** | **Water** | **Sampled:10/28/10 14:30** | -05 |
| 6020A QSM TAL | | 04/26/11 14:30 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-06** | **Water** | **Sampled:10/28/10 15:40** | -06 |
| 6020A QSM TAL | | 04/26/11 15:40 | |
| *Containers Supplied:* | | | |

2.4°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 11/29 | [signature] | 11/30/10 08:25 |
| Released By | Date | Received By | Date |

HOLD TIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1010098-04 | 1011256-04 | NM | 10/28/2010 | 12/06/2010 | 12/07/2010 | 39 | 1 | 40 |
| M | UG/L | 1010098-01 | 1011256-01 | NM | 10/28/2010 | 12/06/2010 | 12/07/2010 | 39 | 1 | 40 |
| M | UG/L | 1010098-06 | 1011256-06 | NM | 10/28/2010 | 12/06/2010 | 12/07/2010 | 39 | 1 | 40 |
| M | UG/L | 1010098-05 | 1011256-05RE3 | NM | 10/28/2010 | 12/06/2010 | 12/17/2010 | 39 | 11 | 50 |
| M | UG/L | 1010098-05 | 1011256-05RE2 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-05 | 1011256-05RE1 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-05 | 1011256-05 | NM | 10/28/2010 | 12/06/2010 | 12/07/2010 | 39 | 1 | 40 |
| M | UG/L | 1010098-08 | 1011256-07 | NM | 10/29/2010 | 12/06/2010 | 12/07/2010 | 38 | 1 | 39 |
| M | UG/L | 1010098-04 | 1011256-04RE1 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-08 | 1011256-07RE1 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-03 | 1011256-03RE2 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-03 | 1011256-03RE1 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-03 | 1011256-03 | NM | 10/28/2010 | 12/06/2010 | 12/07/2010 | 39 | 1 | 40 |
| M | UG/L | 1010098-02 | 1011256-02RE1 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-02 | 1011256-02 | NM | 10/28/2010 | 12/06/2010 | 12/07/2010 | 39 | 1 | 40 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1010098-01 | 1011256-01RE1 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-04 | 1011256-04RE2 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-11 | 1011256-10 | NM | 10/29/2010 | 12/06/2010 | 12/07/2010 | 38 | 1 | 39 |
| M | UG/L | 1010098-13 | 1011256-12RE1 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-13 | 1011256-12 | NM | 10/29/2010 | 12/06/2010 | 12/07/2010 | 38 | 1 | 39 |
| M | UG/L | 1010098-12 | 1011256-11RE3 | NM | 10/29/2010 | 12/06/2010 | 12/17/2010 | 38 | 11 | 49 |
| M | UG/L | 1010098-12 | 1011256-11RE2 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-12 | 1011256-11RE1 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-12 | 1011256-11 | NM | 10/29/2010 | 12/06/2010 | 12/07/2010 | 38 | 1 | 39 |
| M | UG/L | 1010098-06 | 1011256-06RE1 | NM | 10/28/2010 | 12/06/2010 | 12/08/2010 | 39 | 2 | 41 |
| M | UG/L | 1010098-11 | 1011256-10RE1 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-13 | 1011256-12RE2 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-10 | 1011256-09RE3 | NM | 10/29/2010 | 12/06/2010 | 12/17/2010 | 38 | 11 | 49 |
| M | UG/L | 1010098-10 | 1011256-09RE2 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-10 | 1011256-09RE1 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-10 | 1011256-09 | NM | 10/29/2010 | 12/06/2010 | 12/07/2010 | 38 | 1 | 39 |
| M | UG/L | 1010098-09 | 1011256-08RE1 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |
| M | UG/L | 1010098-09 | 1011256-08 | NM | 10/29/2010 | 12/06/2010 | 12/07/2010 | 38 | 1 | 39 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1010098-11 | 1011256-10RE2 | NM | 10/29/2010 | 12/06/2010 | 12/08/2010 | 38 | 2 | 40 |

CENTAURI LABS™

WORK ORDER

**1010098**

**Approved**

Printed: 11/2/2010 3:02:11PM

*Due Date: 11/13/10 00:00 (14 day TAT)*

*Date Received: 10/30/10 10:55*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!!

| Analysis | Expires | Comments |
|---|---|---|
| **1010098-01 GKHMS-GW-002-1010 [Water] Sampled 10/28/10 09:50 Eastern** | | |
| 8260B LL VOA | 11/11/10 09:50 | |
| 8270D LL SVOC TCL | 11/04/10 09:50 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 09:50 | |
| 6020A QSM TAL | 04/26/11 09:50 | |
| **1010098-02 GKHMS-GW-003-1010 [Water] Sampled 10/28/10 09:20 Eastern** | | |
| 6020A QSM TAL | 04/26/11 09:20 | |
| 8260B LL VOA | 11/11/10 09:20 | |
| 8270D LL SVOC TCL | 11/04/10 09:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 09:20 | |
| **1010098-03 GKHMS-GW-004-1010 [Water] Sampled 10/28/10 11:20 Eastern** | | |
| 6020A QSM TAL | 04/26/11 11:20 | |
| 8260B LL VOA | 11/11/10 11:20 | |
| 8270D LL SVOC TCL | 11/04/10 11:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 11:20 | |
| **1010098-04 GKHMS-GW-005-1010 [Water] Sampled 10/28/10 12:00 Eastern** | | |
| 6020A QSM TAL | 04/26/11 12:00 | |
| Mercury, Total 7470A | 11/25/10 12:00 | |
| 8270D LL SVOC TCL | 11/04/10 12:00 | PLUS SIM PAHs |
| 8260B LL VOA | 11/11/10 12:00 | |
| 8081B Pesticides | 11/04/10 12:00 | |
| 8082 PCBs | 11/04/10 12:00 | |
| **1010098-05 GKHMS-GW-006-1010 [Water] Sampled 10/28/10 14:30 Eastern** | | |
| 6020A QSM TAL | 04/26/11 14:30 | |
| 8260B LL VOA | 11/11/10 14:30 | |
| 8270D LL SVOC TCL | 11/04/10 14:30 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 14:30 | |

CENTAURI LABS™

WORK ORDER

1010098

Approved

Printed: 11/2/2010 3:02:11PM

*Due Date: 11/13/10 00:00 (14 day TAT)*

*Date Received: 10/30/10 10:55*

| Analysis | Expires | Comments |
|---|---|---|
| 1010098-06 GKHMS-GW-007-1010 [Water] | Sampled 10/28/10 15:40 Eastern | |
| 6020A QSM TAL | 04/26/11 15:40 | |
| 8260B LL VOA | 11/11/10 15:40 | |
| 8270D LL SVOC TCL | 11/04/10 15:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 15:40 | |
| 1010098-07 GKHMS-TB-01 [Water] | Sampled 10/28/10 08:00 Eastern | |
| 8260B LL VOA | 11/11/10 08:00 | |
| 1010098-08 GKHMS-GW-008-1010 [Water] | Sampled 10/29/10 08:40 Eastern | |
| 6020A QSM TAL | 04/27/11 08:40 | |
| 8270D LL SVOC TCL | 11/05/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 08:40 | |
| 8260B LL VOA | 11/12/10 08:40 | |
| 1010098-09 GKHMS-GW-009-1010 [Water] | Sampled 10/29/10 09:20 Eastern | |
| Mercury, Total 7470A | 11/26/10 09:20 | |
| 6020A QSM TAL | 04/27/11 09:20 | |
| 8260B LL VOA | 11/12/10 09:20 | |
| 8270D LL SVOC TCL | 11/05/10 09:20 | PLUS SIM PAHs |
| 1010098-10 GKHMS-GW-010-1010 [Water] | Sampled 10/29/10 11:30 Eastern | |
| 8270D LL SVOC TCL | 11/05/10 11:30 | PLUS SIM PAHs |
| 8260B LL VOA | 11/12/10 11:30 | |
| 8082 PCBs | 11/05/10 11:30 | |
| 6020A QSM TAL | 04/27/11 11:30 | |
| Mercury, Total 7470A | 11/26/10 11:30 | |
| 8081B Pesticides | 11/05/10 11:30 | |
| 1010098-11 GKHMS-GW-011-1010 [Water] | Sampled 10/29/10 10:40 Eastern | |
| 8260B LL VOA | 11/12/10 10:40 | |
| 8270D LL SVOC TCL | 11/05/10 10:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 10:40 | |
| 8082 PCBs | 11/05/10 10:40 | |
| 6020A QSM TAL | 04/27/11 10:40 | |
| 8081B Pesticides | 11/05/10 10:40 | |

CENTAURI LABS™

WORK ORDER

1010098

Approved

Printed: 11/2/2010 3:02:11PM

*Due Date: 11/13/10 00:00 (14 day TAT)*

*Date Received: 10/30/10 10:55*

| Analysis | Expires | Comments |
|---|---|---|
| **1010098-12 GKHMS-GW-012-1010 [Water]** | **Sampled 10/29/10 10:00 Eastern** | |
| Mercury, Total 7470A | 11/26/10 10:00 | |
| 8270D LL SVOC TCL | 11/05/10 10:00 | PLUS SIM PAHs |
| 6020A QSM TAL | 04/27/11 10:00 | |
| 8260B LL VOA | 11/12/10 10:00 | |
| **1010098-13 GKHMS-GW-013-1010 [Water]** | **Sampled 10/29/10 13:50 Eastern** | |
| 6020A QSM TAL | 04/27/11 13:50 | |
| 8260B LL VOA | 11/12/10 13:50 | |
| 8270D LL SVOC TCL | 11/05/10 13:50 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 13:50 | |

Container Locations

| | |
|---|---|
| 32oz Am | WH-2 |
| 32oz HDPE w/ HNO3 | WH-2 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11-2-10
Date

## Sample Delivery Group Case Narrative

### Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

SW7470A completed by Centauri Labs.

### Changes to the Revision

This is an original submittal of the final report package.

### Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

### Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

### SW6010C:

The continuing calibration verifications exceeded criteria in 0L34305-CCV2 with a positive bias for Sodium, in 0L34305-CCV4 with a positive bias for Magnesium, Potassium and Sodium and in 0L34704-CCV8 with a negative bias for Aluminum.

Samples 1011256-02 and -03 are qualified with an M for Lead to indicate that the DL was raised due to interference. Sample 1011256-04 is qualified with an M for Nickel to indicate the DL was raised due to interference and for Copper to indicate that the DL

and LOD were raised. Sample 1011256-11 is qualified with an M for Nickel to indicate that the DL was raised due to interference and for Thallium to indicate that the DL and LOD were raised.

The continuing calibration blank 0L34305-CCB3 and digestion blank 0L06016-BLK1 have positive results for Sodium.

0L34704-IFB1 exceeded criteria with a positive bias for Cadmium.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

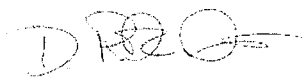
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-ICV1 | Aluminum | 10000 | 9592 | 95.9 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 977.2 | 97.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 982.8 | 98.3 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1090 | 109 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 963.7 | 96.4 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47900 | 95.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 958.0 | 95.8 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 966.4 | 96.6 | ug/L | +/- 10.00% |
| | Copper | 1000 | 958.6 | 95.9 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9772 | 97.7 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.8 | 97.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 52330 | 105 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 957.9 | 95.8 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 960.6 | 96.1 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9476 | 94.8 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 986.2 | 98.6 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 468.8 | 93.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50550 | 101 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 939.5 | 93.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 953.1 | 95.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 972.5 | 97.2 | ug/L | +/- 10.00% |
| 0L34305-CCV1 | Aluminum | 10000 | 9799 | 98.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 987.0 | 98.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1012 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1046 | 105 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1037 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50720 | 101 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 999.4 | 99.9 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 960.8 | 96.1 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1018 | 102 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10380 | 104 | ug/L | +/- 10.00% |
| | Lead | 1000 | 957.7 | 95.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54130 | 108 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.0 | 98.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10060 | 101 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV1 | Selenium | 1000 | 972.7 | 97.3 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 501.7 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 54310 | 109 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.7 | 99.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 968.6 | 96.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| 0L34305-CCV2 | Aluminum | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 999.2 | 99.9 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1013 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1032 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 46890 | 93.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 982.5 | 98.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 956.9 | 95.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 962.2 | 96.2 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54390 | 109 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 995.2 | 99.5 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 976.0 | 97.6 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10810 | 108 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 980.7 | 98.1 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 483.4 | 96.7 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **56400** | **113** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 931.0 | 93.1 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 995.1 | 99.5 | ug/L | +/- 10.00% |
| 0L34305-CCV3 | Aluminum | 10000 | 10070 | 101 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 988.6 | 98.9 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1015 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1005 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1028 | 103 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1026 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 49280 | 98.6 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 973.8 | 97.4 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 950.1 | 95.0 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1026 | 103 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV3 | Iron | 10000 | 10150 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 949.9 | 95.0 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54440 | 109 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1025 | 103 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 980.5 | 98.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10860 | 109 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 964.1 | 96.4 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 497.1 | 99.4 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 55080 | 110 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.2 | 99.2 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 937.2 | 93.7 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1008 | 101 | ug/L | +/- 10.00% |
| 0L34305-CCV4 | Aluminum | 10000 | 10530 | 105 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1027 | 103 | ug/L | +/- 10.00% |
| | Barium | 1000 | 998.2 | 99.8 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1043 | 104 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1035 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 48280 | 96.6 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 971.0 | 97.1 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 957.3 | 95.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1074 | 107 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10050 | 100 | ug/L | +/- 10.00% |
| | Lead | 1000 | 962.9 | 96.3 | ug/L | +/- 10.00% |
| | **Magnesium** | **50000** | **56360** | **113** | **ug/L** | +/- 10.00% |
| | Manganese | 1000 | 1039 | 104 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.5 | 98.9 | ug/L | +/- 10.00% |
| | **Potassium** | **10000** | **11760** | **118** | **ug/L** | +/- 10.00% |
| | Selenium | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 503.6 | 101 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **60530** | **121** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 961.9 | 96.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 994.1 | 99.4 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Calibration: 0347001
Sequence: 0L34704

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34704-ICV1 | Aluminum | 10000 | 9638 | 96.4 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1064 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 48870 | 97.7 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 1007 | 101 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1008 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 990.4 | 99.0 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54370 | 109 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 986.3 | 98.6 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10300 | 103 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 51210 | 102 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1013 | 101 | ug/L | +/- 10.00% |
| 0L34704-CCV1 | Aluminum | 10000 | 9730 | 97.3 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1056 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 48060 | 96.1 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 991.6 | 99.2 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1017 | 102 | ug/L | +/- 10.00% |
| | Lead | 1000 | 984.0 | 98.4 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54840 | 110 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 990.1 | 99.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10470 | 105 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 52800 | 106 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1006 | 101 | ug/L | +/- 10.00% |
| 0L34704-CCV5 | Aluminum | 10000 | 9561 | 95.6 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1045 | 105 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 45950 | 91.9 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 955.7 | 95.6 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1009 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 982.4 | 98.2 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 52160 | 104 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 973.9 | 97.4 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10500 | 105 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 53340 | 107 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 981.7 | 98.2 | ug/L | +/- 10.00% |
| 0L34704-CCV6 | Aluminum | 10000 | 9509 | 95.1 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1019 | 102 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 45040 | 90.1 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 959.1 | 95.9 | ug/L | +/- 10.00% |
| | Copper | 1000 | 994.3 | 99.4 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Calibration: 0347001
Sequence: 0L34704

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34704-CCV6 | Lead | 1000 | 953.5 | 95.4 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 51790 | 104 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 955.3 | 95.5 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10440 | 104 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 52120 | 104 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 964.8 | 96.5 | ug/L | +/- 10.00% |
| 0L34704-CCV7 | Aluminum | 10000 | 9297 | 93.0 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47060 | 94.1 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 963.3 | 96.3 | ug/L | +/- 10.00% |
| | Copper | 1000 | 987.2 | 98.7 | ug/L | +/- 10.00% |
| | Lead | 1000 | 969.3 | 96.9 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 51000 | 102 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 957.7 | 95.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9923 | 99.2 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50250 | 100 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 986.6 | 98.7 | ug/L | +/- 10.00% |
| **0L34704-CCV8** | **Aluminum** | **10000** | **8782** | **87.8** | **ug/L** | +/- 10.00% |
| | Cadmium | 1000 | 1040 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47410 | 94.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 957.1 | 95.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 971.7 | 97.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 968.5 | 96.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48600 | 97.2 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 935.4 | 93.5 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9181 | 91.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 48320 | 96.6 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 982.3 | 98.2 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_002
Project: CTOJM16 Key West 2010
Calibration: 0354001
Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35301-ICV1 | Cadmium | 1000 | 1063 | 106 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10080 | 101 | ug/L | +/- 10.00% |
| 0L35301-CCV1 | Cadmium | 1000 | 1066 | 107 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9854 | 98.5 | ug/L | +/- 10.00% |
| 0L35301-CCV5 | Cadmium | 1000 | 1051 | 105 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10640 | 106 | ug/L | +/- 10.00% |
| 0L35301-CCV6 | Cadmium | 1000 | 1070 | 107 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10780 | 108 | ug/L | +/- 10.00% |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_002

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34305-CRL1 | Aluminum | 100.0 | 99.73 | 99.7 | ug/L | 80 - 120 |
| | Antimony | 8.000 | 6.500 | 81.2 | ug/L | 80 - 120 |
| | Barium | 10.00 | 10.07 | 101 | ug/L | 80 - 120 |
| | Beryllium | 2.000 | 2.054 | 103 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 1.846 | 92.3 | ug/L | 80 - 120 |
| | Calcium | 2000 | 1966 | 98.3 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.982 | 99.6 | ug/L | 80 - 120 |
| | Cobalt | 10.00 | 9.079 | 90.8 | ug/L | 80 - 120 |
| | Copper | 8.000 | 7.542 | 94.3 | ug/L | 80 - 120 |
| | Iron | 60.00 | 64.06 | 107 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.566 | 85.5 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 3113 | 104 | ug/L | 80 - 120 |
| | Manganese | 6.000 | 6.735 | 112 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.898 | 98.3 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3020 | 101 | ug/L | 80 - 120 |
| | Silver | 2.000 | 1.893 | 94.7 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3298 | 110 | ug/L | 80 - 120 |
| | Thallium | 4.000 | 4.272 | 107 | ug/L | 80 - 120 |
| | Vanadium | 10.00 | 9.529 | 95.3 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.414 | 94.1 | ug/L | 80 - 120 |
| 0L34305-CRL2 | Arsenic | 5.000 | 4.042 | 80.8 | ug/L | 80 - 120 |
| | Selenium | 5.000 | 4.812 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_002

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0347001

Sequence: 0L34704

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34704-CRL1 | Aluminum | 100.0 | 104.3 | 104 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 2.320 | 116 | ug/L | 80 - 120 |
| | Calcium | 2000 | 1910 | 95.5 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 4.165 | 104 | ug/L | 80 - 120 |
| | Copper | 8.000 | 7.804 | 97.5 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.514 | 83.8 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 3306 | 110 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 6.608 | 110 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3181 | 106 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3455 | 115 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.617 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_002

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0354001

Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35301-CRL1 | Cadmium | 2.000 | 2.242 | 112 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3002 | 100 | ug/L | 80 - 120 |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-ICB1 | Aluminum | 1.815 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.0008800 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.4936 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.04896 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.1662 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.09110 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 10.71 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.06206 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.2396 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.006120 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.525 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.2232 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -0.1900 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.1529 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.3307 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 4.330 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.4155 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.1294 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 11.82 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.3133 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.09286 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.06542 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB1 | Aluminum | 4.29 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.141 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.226 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00225 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | -0.000740 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.0220 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.134 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.110 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.235 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.54 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB1 | Lead | -0.0467 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -1.90 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.120 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.488 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.671 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0628 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 8.23 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.0416 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.176 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 2.27 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L06009-BLK1 | Aluminum | 3.34 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.399 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.158 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | -0.00804 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | -0.0128 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.0964 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 6.56 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.0606 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.112 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.305 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.63 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.00902 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -5.25 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0827 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.410 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 6.17 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.898 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0819 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 4.16 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.477 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.00932 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.297 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB2 | Aluminum | 2.36 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.137 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.797 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | -0.0616 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0689 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.416 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 2.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.214 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | -0.00589 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0684 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.276 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.391 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.05 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0433 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.125 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 5.44 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.259 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.203 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 21.8 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 1.07 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.0689 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0667 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB3 | Aluminum | 2.22 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.392 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -1.01 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0236 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.200 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.256 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 36.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.122 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0870 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0977 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.68 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB3 | Lead | 0.0672 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 43.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.143 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.253 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 47.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.195 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.111 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 657 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.404 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.00779 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0353 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L06016-BLK1 | Aluminum | 2.27 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.693 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.0877 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0382 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0306 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.0747 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 17.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.116 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0301 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0758 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 1.18 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.507 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 4.83 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.114 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.326 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 34.0 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.971 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0703 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 389 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.355 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.213 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.263 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB4 | Aluminum | 0.0923 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.208 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -1.05 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00574 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0383 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.463 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 6.92 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.161 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0575 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.134 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | -0.499 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.0754 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -7.85 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0545 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.0630 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 26.9 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.167 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.106 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 184 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.836 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.248 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0227 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34704
Calibration: 0347001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34704-ICB1 | Aluminum | 3.396 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.4338 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 10.18 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.2560 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Copper | -0.1710 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -1.150 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 3.870 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | 1.098 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 0.4200 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 8.560 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | 0.2063 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34704-CCB1 | Aluminum | 1.60 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.166 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 5.58 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.000650 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Copper | -0.0522 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.481 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -0.820 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | 0.597 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 5.52 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 9.13 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0900 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34704-CCB5 | Aluminum | 3.80 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | -0.0642 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 6.68 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.165 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Copper | 0.134 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | 0.177 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 5.88 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | 0.145 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | -3.82 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 0.220 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | 0.0288 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34704
Calibration: 0347001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34704-CCB6 | Aluminum | 0.0730 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.180 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 1.27 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.279 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Copper | -0.0853 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | 0.262 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -3.80 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | 0.201 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 1.04 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 26.6 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.136 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34704-CCB7 | Aluminum | 1.88 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | -0.0429 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 3.60 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.0535 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Copper | -0.619 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | 0.605 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 1.54 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | 0.274 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 3.81 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 89.8 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0709 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34704-CCB8 | Aluminum | 2.02 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | -0.158 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 3.71 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.0939 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Copper | -1.04 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.239 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.68 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | 0.634 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | -5.02 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 27.0 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0698 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35301
Calibration: 0354001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35301-ICB1 | Cadmium | 0.2230 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Potassium | -3.010 | 1000 | 5000 | ug/L | U | SW6010C |
| 0L35301-CCB1 | Cadmium | 0.197 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Potassium | 8.69 | 1000 | 5000 | ug/L | U | SW6010C |
| 0L35301-CCB5 | Cadmium | 0.500 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Potassium | -3.96 | 1000 | 5000 | ug/L | U | SW6010C |
| 0L35301-CCB6 | Cadmium | 0.520 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Potassium | 30.9 | 1000 | 5000 | ug/L | U | SW6010C |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L06009
Laboratory ID: 0L06009-BS1
Preparation: MET_3005A
Initial/Final: 50 mL / 50 mL

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 2000 | 1972 | 98.6 | 80 - 120 |
| Antimony | 250.0 | 237.7 | 95.1 | 80 - 120 |
| Arsenic | 250.0 | 241.6 | 96.6 | 80 - 120 |
| Barium | 2000 | 2061 | 103 | 80 - 120 |
| Beryllium | 50.00 | 55.06 | 110 | 80 - 120 |
| Cadmium | 125.0 | 124.4 | 99.5 | 80 - 120 |
| Calcium | 5000 | 4873 | 97.5 | 80 - 120 |
| Chromium | 200.0 | 209.4 | 105 | 80 - 120 |
| Cobalt | 500.0 | 483.4 | 96.7 | 80 - 120 |
| Copper | 250.0 | 254.2 | 102 | 80 - 120 |
| Iron | 1000 | 1085 | 108 | 80 - 120 |
| Lead | 250.0 | 246.1 | 98.4 | 80 - 120 |
| Magnesium | 5000 | 5223 | 104 | 80 - 120 |
| Manganese | 500.0 | 567.2 | 113 | 80 - 120 |
| Nickel | 500.0 | 504.9 | 101 | 80 - 120 |
| Potassium | 5000 | 5179 | 104 | 80 - 120 |
| Selenium | 250.0 | 223.0 | 89.2 | 80 - 120 |
| Silver | 250.0 | 252.9 | 101 | 80 - 120 |
| Sodium | 5000 | 5723 | 114 | 80 - 120 |
| Thallium | 250.0 | 245.6 | 98.2 | 80 - 120 |
| Vanadium | 500.0 | 496.2 | 99.2 | 80 - 120 |
| Zinc | 500.0 | 521.1 | 104 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_002 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06016 | Laboratory ID: | 0L06016-BS1 |
| Preparation: | MET_3005A | Initial/Final: | 50 mL / 50 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 2000 | 1956 | 97.8 | 80 - 120 |
| Antimony | 250.0 | 231.2 | 92.5 | 80 - 120 |
| Arsenic | 250.0 | 235.9 | 94.3 | 80 - 120 |
| Barium | 2000 | 2016 | 101 | 80 - 120 |
| Beryllium | 50.00 | 54.42 | 109 | 80 - 120 |
| Cadmium | 125.0 | 121.3 | 97.0 | 80 - 120 |
| Calcium | 5000 | 4635 | 92.7 | 80 - 120 |
| Chromium | 200.0 | 198.6 | 99.3 | 80 - 120 |
| Cobalt | 500.0 | 472.7 | 94.5 | 80 - 120 |
| Copper | 250.0 | 247.8 | 99.1 | 80 - 120 |
| Iron | 1000 | 1042 | 104 | 80 - 120 |
| Lead | 250.0 | 241.0 | 96.4 | 80 - 120 |
| Magnesium | 5000 | 5197 | 104 | 80 - 120 |
| Manganese | 500.0 | 533.0 | 107 | 80 - 120 |
| Nickel | 500.0 | 489.9 | 98.0 | 80 - 120 |
| Potassium | 5000 | 5193 | 104 | 80 - 120 |
| Selenium | 250.0 | 222.9 | 89.2 | 80 - 120 |
| Silver | 250.0 | 234.8 | 93.9 | 80 - 120 |
| Sodium | 5000 | 5776 | 116 | 80 - 120 |
| Thallium | 250.0 | 241.0 | 96.4 | 80 - 120 |
| Vanadium | 500.0 | 481.8 | 96.4 | 80 - 120 |
| Zinc | 500.0 | 494.9 | 99.0 | 80 - 120 |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_002

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-ICP

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aluminum | 50.0 | 200 | ug/L | SW6010C |
| Antimony | 5.00 | 10.0 | ug/L | SW6010C |
| Arsenic | 3.00 | 10.0 | ug/L | SW6010C |
| Barium | 5.00 | 40.0 | ug/L | SW6010C |
| Beryllium | 1.00 | 5.00 | ug/L | SW6010C |
| Cadmium | 1.00 | 5.00 | ug/L | SW6010C |
| Calcium | 1000 | 5000 | ug/L | SW6010C |
| Chromium | 2.00 | 10.0 | ug/L | SW6010C |
| Cobalt | 5.00 | 12.5 | ug/L | SW6010C |
| Copper | 4.00 | 10.0 | ug/L | SW6010C |
| Iron | 30.0 | 100 | ug/L | SW6010C |
| Lead | 1.50 | 3.00 | ug/L | SW6010C |
| Magnesium | 1000 | 5000 | ug/L | SW6010C |
| Manganese | 3.00 | 15.0 | ug/L | SW6010C |
| Nickel | 3.00 | 10.0 | ug/L | SW6010C |
| Potassium | 1000 | 5000 | ug/L | SW6010C |
| Selenium | 3.00 | 10.0 | ug/L | SW6010C |
| Silver | 1.00 | 10.0 | ug/L | SW6010C |
| Sodium | 200 | 5000 | ug/L | SW6010C |
| Thallium | 3.00 | 8.00 | ug/L | SW6010C |
| Vanadium | 5.00 | 12.5 | ug/L | SW6010C |
| Zinc | 5.00 | 20.0 | ug/L | SW6010C |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_002

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06009 Batch Matrix: Water Preparation: MET_3005A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06009-BLK1 | 12/06/10 07:53 | 50.00 | 50.00 |
| LCS | 0L06009-BS1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-01 | 1011256-01 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-01 | 1011256-01RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-02 | 1011256-02 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-02 | 1011256-02RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-03 | 1011256-03 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-03 | 1011256-03RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-03 | 1011256-03RE2 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-04 | 1011256-04 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-04 | 1011256-04RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-04 | 1011256-04RE2 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-05 | 1011256-05 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-05 | 1011256-05RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-05 | 1011256-05RE2 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-05 | 1011256-05RE3 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-06 | 1011256-06 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-06 | 1011256-06RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-08 | 1011256-07 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-08 | 1011256-07RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-09 | 1011256-08 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-09 | 1011256-08RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-10 | 1011256-09 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-10 | 1011256-09RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-10 | 1011256-09RE2 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-10 | 1011256-09RE3 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-11 | 1011256-10 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-11 | 1011256-10RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-11 | 1011256-10RE2 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-12 | 1011256-11 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-12 | 1011256-11RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-12 | 1011256-11RE2 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1010098-12 | 1011256-11RE3 | 12/06/10 07:53 | 50.00 | 50.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_002

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06016 Batch Matrix: Water Preparation: MET_3005A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06016-BLK1 | 12/06/10 11:05 | 50.00 | 50.00 |
| LCS | 0L06016-BS1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1010098-13 | 1011256-12 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1010098-13 | 1011256-12RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1010098-13 | 1011256-12RE2 | 12/06/10 11:05 | 50.00 | 50.00 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Instrument: ME-ICP
Calibration: 0350004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34305-CAL1 | 120710A-001 | 12/07/10 10:19 |
| Cal Standard | 0L34305-CAL2 | 120710A-002 | 12/07/10 10:24 |
| Cal Standard | 0L34305-CAL3 | 120710A-003 | 12/07/10 10:28 |
| Cal Standard | 0L34305-CAL4 | 120710A-004 | 12/07/10 10:32 |
| Cal Standard | 0L34305-CAL5 | 120710A-005 | 12/07/10 10:37 |
| Cal Standard | 0L34305-CAL6 | 120710A-006 | 12/07/10 10:41 |
| Cal Standard | 0L34305-CAL7 | 120710A-007 | 12/07/10 10:46 |
| Cal Standard | 0L34305-CAL8 | 120710A-008 | 12/07/10 10:51 |
| Initial Cal Check | 0L34305-ICV1 | 120710B-001 | 12/07/10 11:44 |
| Initial Cal Blank | 0L34305-ICB1 | 120710B-002 | 12/07/10 11:51 |
| Instrument RL Check | 0L34305-CRL1 | 120710B-004 | 12/07/10 12:01 |
| Instrument RL Check | 0L34305-CRL2 | 120710B-006 | 12/07/10 12:13 |
| Interference Check A | 0L34305-IFA1 | 120710B-007 | 12/07/10 12:18 |
| Interference Check B | 0L34305-IFB1 | 120710B-008 | 12/07/10 12:25 |
| Interference Check B | 0L34305-IFB2 | 120710B-009 | 12/07/10 12:32 |
| Calibration Check | 0L34305-CCV1 | 120710B-011 | 12/07/10 12:52 |
| Calibration Blank | 0L34305-CCB1 | 120710B-012 | 12/07/10 13:04 |
| Blank | 0L06009-BLK1 | 120710B-013 | 12/07/10 13:08 |
| LCS | 0L06009-BS1 | 120710B-014 | 12/07/10 13:13 |
| 1010098-01 GKHMS-GW-002-1010 | 1011256-01 | 120710B-028 | 12/07/10 14:23 |
| Calibration Check | 0L34305-CCV2 | 120710B-029 | 12/07/10 14:38 |
| Calibration Blank | 0L34305-CCB2 | 120710B-030 | 12/07/10 14:46 |
| 1010098-02 003-1010 | 1011256-02 | 120710B-031 | 12/07/10 14:50 |
| 1010098-03 004-1010 | 1011256-03 | 120710B-032 | 12/07/10 14:55 |
| 1010098-04 005-1010 | 1011256-04 | 120710B-033 | 12/07/10 15:00 |
| 1010098-05 006-1010 | 1011256-05 | 120710B-034 | 12/07/10 15:05 |
| 1010098-06 007-1010 | 1011256-06 | 120710B-035 | 12/07/10 15:10 |
| 1010098-08 008-1010 | 1011256-07 | 120710B-036 | 12/07/10 15:15 |
| 1010098-09 009-1010 | 1011256-08 | 120710B-037 | 12/07/10 15:20 |
| 1010098-10 010-1010 | 1011256-09 | 120710B-038 | 12/07/10 15:25 |
| 1010098-11 011-1010 | 1011256-10 | 120710B-039 | 12/07/10 15:30 |
| 1010098-12 012-1010 | 1011256-11 | 120710B-040 | 12/07/10 15:35 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_002 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34305 | Instrument: | ME-ICP |
| Calibration: | 0350004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L34305-CCV3 | 120710B-041 | 12/07/10 15:46 |
| Calibration Blank | 0L34305-CCB3 | 120710B-042 | 12/07/10 15:54 |
| Blank | 0L06016-BLK1 | 120710B-043 | 12/07/10 15:58 |
| LCS | 0L06016-BS1 | 120710B-044 | 12/07/10 16:03 |
| 1010098-13 013-1010 | 1011256-12 | 120710B-045 | 12/07/10 16:09 |
| Calibration Check | 0L34305-CCV4 | 120710B-055 | 12/07/10 17:02 |
| Calibration Blank | 0L34305-CCB4 | 120710B-056 | 12/07/10 17:09 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34704
Instrument: ME-ICP
Calibration: 0347001

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34704-CAL1 | 120810A-001 | 12/08/10 13:09 |
| Cal Standard | 0L34704-CAL2 | 120810A-002 | 12/08/10 13:13 |
| Cal Standard | 0L34704-CAL3 | 120810A-003 | 12/08/10 13:18 |
| Cal Standard | 0L34704-CAL5 | 120810A-005 | 12/08/10 13:28 |
| Cal Standard | 0L34704-CAL6 | 120810A-006 | 12/08/10 13:33 |
| Cal Standard | 0L34704-CAL7 | 120810A-007 | 12/08/10 13:38 |
| Cal Standard | 0L34704-CAL8 | 120810A-008 | 12/08/10 13:43 |
| Initial Cal Check | 0L34704-ICV1 | 120810B-001 | 12/08/10 14:34 |
| Initial Cal Blank | 0L34704-ICB1 | 120810B-002 | 12/08/10 14:41 |
| Instrument RL Check | 0L34704-CRL1 | 120810B-003 | 12/08/10 14:46 |
| Interference Check A | 0L34704-IFA1 | 120810B-008 | 12/08/10 15:12 |
| Interference Check B | 0L34704-IFB1 | 120810B-009 | 12/08/10 15:17 |
| Calibration Check | 0L34704-CCV1 | 120810B-011 | 12/08/10 15:29 |
| Calibration Blank | 0L34704-CCB1 | 120810B-012 | 12/08/10 15:37 |
| Calibration Check | 0L34704-CCV5 | 120810B-071 | 12/08/10 20:24 |
| Calibration Blank | 0L34704-CCB5 | 120810B-072 | 12/08/10 20:32 |
| 1010098-01 002-1010 | 1011256-01RE1 | 120810B-084 | 12/08/10 21:29 |
| 1010098-02 003-1010 | 1011256-02RE1 | 120810B-085 | 12/08/10 21:34 |
| 1010098-03 004-1010 | 1011256-03RE1 | 120810B-086 | 12/08/10 21:39 |
| 1010098-03 [illegible] | 1011256-03RE2 | 120810B-087 | 12/08/10 21:44 |
| 1010098-04 005-1010 | 1011256-04RE1 | 120810B-088 | 12/08/10 21:49 |
| 1010098-04 | 1011256-04RE2 | 120810B-089 | 12/08/10 21:53 |
| Calibration Check | 0L34704-CCV6 | 120810B-090 | 12/08/10 21:59 |
| Calibration Blank | 0L34704-CCB6 | 120810B-091 | 12/08/10 22:06 |
| 1010098-05 006-1010 | 1011256-05RE1 | 120810B-092 | 12/08/10 22:11 |
| 1010098-05 | 1011256-05RE2 | 120810B-093 | 12/08/10 22:16 |
| 1010098-06 007-1010 | 1011256-06RE1 | 120810B-094 | 12/08/10 22:21 |
| 1010098-08 008-1010 | 1011256-07RE1 | 120810B-095 | 12/08/10 22:25 |
| 1010098-09 009-1010 | 1011256-08RE1 | 120810B-096 | 12/08/10 22:30 |
| 1010098-10 010-1010 | 1011256-09RE1 | 120810B-097 | 12/08/10 22:35 |
| 1010098-10 | 1011256-09RE2 | 120810B-098 | 12/08/10 22:40 |
| 1010098-11 011-1010 | 1011256-10RE1 | 120810B-099 | 12/08/10 22:45 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_002
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34704
Instrument: ME-ICP
Calibration: 0347001

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| 1010098-11 | 1011256-10RE2 | 120810B-100 | 12/08/10 22:50 |
| 1010098-12 012-1010 | 1011256-11RE1 | 120810B-101 | 12/08/10 22:54 |
| 1010098-12 | 1011256-11RE2 | 120810B-102 | 12/08/10 22:59 |
| Calibration Check | 0L34704-CCV7 | 120810B-103 | 12/08/10 23:05 |
| Calibration Blank | 0L34704-CCB7 | 120810B-104 | 12/08/10 23:12 |
| 1010098-13 013-1010 | 1011256-12RE1 | 120810B-105 | 12/08/10 23:17 |
| 1010098-13 | 1011256-12RE2 | 120810B-106 | 12/08/10 23:22 |
| Calibration Check | 0L34704-CCV8 | 120810B-116 | 12/09/10 00:12 |
| Calibration Blank | 0L34704-CCB8 | 120810B-117 | 12/09/10 00:19 |

Al-high

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_002 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35301 | Instrument: | ME-ICP |
| Calibration: | 0354001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35301-CAL1 | 121710A-001 | 12/17/10 09:50 |
| Cal Standard | 0L35301-CAL2 | 121710A-002 | 12/17/10 09:54 |
| Cal Standard | 0L35301-CAL3 | 121710A-003 | 12/17/10 09:59 |
| Cal Standard | 0L35301-CAL6 | 121710A-006 | 12/17/10 10:16 |
| Cal Standard | 0L35301-CAL7 | 121710A-007 | 12/17/10 10:23 |
| Initial Cal Check | 0L35301-ICV1 | 121710C-001 | 12/17/10 11:19 |
| Initial Cal Blank | 0L35301-ICB1 | 121710C-002 | 12/17/10 11:27 |
| Instrument RL Check | 0L35301-CRL1 | 121710C-003 | 12/17/10 11:31 |
| Interference Check A | 0L35301-IFA1 | 121710C-006 | 12/17/10 11:47 |
| Interference Check B | 0L35301-IFB1 | 121710C-007 | 12/17/10 11:55 |
| Calibration Check | 0L35301-CCV1 | 121710C-009 | 12/17/10 12:15 |
| Calibration Blank | 0L35301-CCB1 | 121710C-010 | 12/17/10 12:23 |
| Calibration Check | 0L35301-CCV5 | 121710D-025 | 12/17/10 17:54 |
| Calibration Blank | 0L35301-CCB5 | 121710D-026 | 12/17/10 18:02 |
| 1010098-05 006-1010 | 1011256-05RE3 | 121710D-031 | 12/17/10 18:25 |
| 1010098-10 010-1010 | 1011256-09RE3 | 121710D-032 | 12/17/10 18:30 |
| 1010098-12 012-1010 | 1011256-11RE3 | 121710D-033 | 12/17/10 18:35 |
| Calibration Check | 0L35301-CCV6 | 121710D-035 | 12/17/10 18:45 |
| Calibration Blank | 0L35301-CCB6 | 121710D-036 | 12/17/10 18:53 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **JANUARY 13, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – PEST**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_003**

**SAMPLES:** 1 / Soil / PEST

GKHMS-SO-018-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_003 consisted of one (1) soil environmental sample. The sample was analyzed for the organochloride pesticides (PEST) as indicated above. No field duplicate pair samples were included in the Sample Delivery Group (SDG).

The samples were collected by Tetra Tech NUS on November 2, 2010 and analyzed by Empirical Laboratories LLC upon transfer from Centauri Labs who performed the initial sample method extraction. The analysis was conducted in accordance with SW-846 Method 8081A analytical and reporting protocols. The data contained in this SDG were fully validated with regard to the following parameters:

- Data Completeness
- * Holding Times
- Initial and Continuing Calibration
- * Laboratory Blank Analyses
- Blank Spike Results
- * System Monitoring Compound/Surrogate Recovery
- Compound Quantitation
- * Compound Identification
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

PEST

The opening CCV percent difference (%D) was greater than 15% quality control limit for delta-BHC for instrument GL-ECD3 on 12/10/10 @ 20:51 for the column ZB-MR-2 and @ 21:28 for toxaphene for the column ZB-MR-2. The closing CCV %D was greater than the 15% quality control limit for delta-BHC and heptachlor for instrument GL-ECD3 on 12/11/10 @ 00:34 for both analytical columns, and @ 01:11 for toxaphene for both analytical columns. The non-detected results for delta-BHC, heptachlor, and toxaphene were qualified estimated, (UJ), for the sample.

The closing CCV %D was greater than the 15% quality control limit for beta-BHC for instrument GL-ECD3 on 12/11/10 @ 00:34 for the column ZB-MR-2. The positive result for beta-BHC for sample GKHMS-SO-018-1010 was qualified estimated, (J), as it was reported from the ZB-MR-2 column.

The laboratory control sample (LCS) %Rs were greater than the quality control limits for many of the PEST analytes. The samples were not re-analyzed. The non-detected sample analytes for which the LCS %Rs exceeded the quality control limit were not qualified. The positive sample beta-BHC result was qualified estimated, (J), due to the LCS %R quality control limit non-compliance for beta-BHC.

The relative percent difference (RPD) between the two analytical column results was greater than the 40% quality control limit for beta-BHC. The beta-BHC result was qualified estimated, (J).

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Additional Comments

The higher of the two column PEST results was reported.

The sample was initially sent to Centauri Labs for analysis but the laboratory closed prior to sample analysis completion. The laboratory extracted the sample for PESTs prior to closure. The extract was sent to Empirical for the completion of the analysis. The sample was logged in to Empirical Laboratories using the Centauri Labs identification instead of the sample identification. The Form I result for this SDG has been manually edited to indicate the actually sample name.

The opening CCV %D was greater than 15% quality control limit for 4,4'-DDT, alpha-BHC, and gamma-BHC for instrument GL-ECD3 on 12/10/10 @ 20:51 for the column ZB-MR-2, for heptachlor for the column ZB-MR-1, and on 12/10/10 @ 21:28 for toxaphene for the column ZB-MR-2, affecting the SDG sample. The closing CCV %D was greater than 15% quality control limit for alpha-BHC, gamma-BHC, and endrin for instrument GL-ECD3 on 12/11/10 @ 00:34 for the column ZB-MR-2 affecting the SDG sample. The 4,4'-DDT, alpha-BHC, gamma-BHC, endrin, and toxaphene results for all the samples were non-detected and the %R was within the quality control limits for both the opening and closing CCVs for the alternate columns. No validation action was taken for the non-detected sample results for 4,4'-DDT, alpha-BHC, gamma-BHC, endrin, and toxaphene.

## Executive Summary

**Laboratory Performance:** PEST continuing calibration verification %Ds which exceeded the quality control limits resulted in the qualification of pesticide positive and non-detected results. The beta-BHC result was qualified due to a LCS quality control limit non-compliance.

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J). The RPD quality control limit exceedance between analytical column results resulted in a data qualification for beta-BHC for the sample.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site Sample Analysis Plan (SAP), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

**Appendix A**

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations, correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-018-1010 |
|---|---|---|
| SDG: CTOJM16KW_003 | LAB_ID | 1011258-01 |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 |
| MEDIA: SOIL | QC_TYPE | NM |
| | UNITS | UG/KG |
| | PCT_SOLIDS | 87.1 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 4,4'-DDD | 0.195 | U | |
| 4,4'-DDE | 0.195 | U | |
| 4,4'-DDT | 0.195 | U | |
| ALDRIN | 0.126 | U | |
| ALPHA-BHC | 0.126 | U | |
| ALPHA-CHLORDANE | 0.126 | U | |
| BETA-BHC | 1.03 | J | CEPU |
| DELTA-BHC | 0.126 | UJ | C |
| DIELDRIN | 0.195 | U | |
| ENDOSULFAN I | 0.126 | U | |
| ENDOSULFAN II | 0.758 | J | P |
| ENDOSULFAN SULFATE | 0.195 | U | |
| ENDRIN | 0.195 | U | |
| ENDRIN ALDEHYDE | 0.195 | U | |
| ENDRIN KETONE | 0.195 | U | |
| GAMMA-BHC (LINDANE) | 0.126 | U | |
| GAMMA-CHLORDANE | 0.126 | U | |
| HEPTACHLOR | 0.126 | UJ | C |
| HEPTACHLOR EPOXIDE | 0.126 | U | |
| METHOXYCHLOR | 0.126 | U | |
| TOXAPHENE | 12.6 | UJ | C |

## Appendix B

Results as Reported by the Laboratory

# ANALYSIS DATA SHEET

1011014-01

GKHMS-SO-D18-1018

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1011258-01 File ID: 038R3801.D

Sampled: 11/02/10 11:40 Prepared: 11/10/10 11:40 Analyzed: 12/10/10 23:01

Solids: 87.09 Preparation: EXT_3546 Dilution: 1

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg dry | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE [2C] | | 0.195 | 0.390 | 0.769 | UO |
| 72-54-8 | 4,4'-DDD | | 0.195 | 0.390 | 0.769 | U |
| 50-29-3 | 4,4'-DDT | | 0.195 | 0.390 | 0.769 | UO |
| 309-00-2 | Aldrin | | 0.126 | 0.390 | 0.769 | U |
| 319-84-6 | alpha-BHC | | 0.126 | 0.390 | 0.769 | UO |
| 5103-71-9 | alpha-Chlordane | | 0.126 | 0.390 | 0.769 | UO |
| 319-85-7 | beta-BHC [2C] | 1.03 | 0.126 | 0.390 | 0.769 | PO |
| 319-86-8 | delta-BHC | | 0.126 | 0.390 | 0.769 | UO |
| 60-57-1 | Dieldrin | | 0.195 | 0.390 | 0.769 | UO |
| 959-98-8 | Endosulfan I | | 0.126 | 0.390 | 0.769 | U |
| 33213-65-9 | Endosulfan II | 0.758 | 0.195 | 0.390 | 0.769 | I |
| 1031-07-8 | Endosulfan sulfate | | 0.195 | 0.390 | 0.769 | U |
| 72-20-8 | Endrin | | 0.195 | 0.390 | 0.769 | UO |
| 7421-93-4 | Endrin aldehyde | | 0.195 | 0.390 | 0.769 | U |
| 53494-70-5 | Endrin ketone [2C] | | 0.195 | 0.390 | 0.769 | U |
| 58-89-9 | gamma-BHC (Lindane) [2C] | | 0.126 | 0.390 | 0.769 | UO |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.126 | 0.390 | 0.769 | UO |
| 76-44-8 | Heptachlor [2C] | | 0.126 | 0.390 | 0.769 | UO |
| 1024-57-3 | Heptachlor epoxide | | 0.126 | 0.390 | 0.769 | UO |
| 72-43-5 | Methoxychlor | | 0.126 | 0.390 | 0.769 | U |
| 8001-35-2 | Toxaphene | | 12.6 | 25.3 | 37.9 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg dry) | CONC (ug/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 7.655 | 7.534 | 98.4 | 70 - 125 | |
| Tetrachloro-m-xylene [2C] | 7.655 | 8.743 | 114 | 70 - 125 | |
| Decachlorobiphenyl | 7.655 | 7.955 | 104 | 55 - 130 | |
| Decachlorobiphenyl [2C] | 7.655 | 8.390 | 110 | 55 - 130 | |

* Values outside of QC limits

**Appendix C**

Support Documentation

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1011002-06 | 1011257-06RE3 | NM | 10/30/2010 | 12/06/2010 | 12/17/2010 | 37 | 11 | 48 |
| M | UG/L | 1011002-06 | 1011257-06RE2 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-12 | 1011257-12RE2 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| PEST | UG/KG | 1011014-01 | 1011258-01 | SUR | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |
| PEST | UG/KG | 1011014-01 | 1011258-01 | NM | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-9

WO# 1011014

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Centauri Labs**<br>**7210 Corporate Court**<br>**Fredrick, MD 21703** |
| Task No:<br>**JM16** | Turn Around Time:<br>**Standard** | Field Ops Leader:<br>**Gary Braganza** | Carrier/Waybill No. | Point of Contact:<br>**Chino Ortiz**<br>**301-694-5310** |

| Date | Sample ID | Time | Analysis | Lab ID | Matrix | Description | Preservative | Container Count | Container Type | Container Req. | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8260B** | GKHMS-SO018 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO018 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By:<br>**Gary Braganza** | Date:<br>11/03/2010 | Time:<br>15:14 | Received By:<br>**Federal Express** | Date:<br>11/03/2010 | Time:<br>16:14 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date:<br>11/4/10 | Time:<br>12:50 pm |

Comments:

CENTAURI LABS™

WORK ORDER

1011014

Approved

Printed: 11/5/2010 10:45:26AM

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: Copy/Relog from 1011013. LEVEL 3

EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!!

| Analysis | Expires | Comments |
|---|---|---|
| 1011014-01 GKHMS-SO-018-1010 [Solid] | Sampled 11/02/10 11:40 Eastern | |
| Solids, Dry Weight | 01/31/11 11:40 | |
| Mercury, Total 7471B | 11/30/10 11:40 | |
| 8270D LL SVOC TCL | 11/16/10 11:40 | PLUS SIMs PAHs |
| 8260B VOA | 11/16/10 11:40 | |
| 8082 PCBs | 11/16/10 11:40 | |
| 8081A Pesticides | 11/16/10 11:40 | |
| 6010C Full | 05/01/11 11:40 | |

Container Locations

| | |
|---|---|
| 16oz jar | WG-4 |
| VOA 40mL Vial w/ NaBiSO4 | VW-6 |

Chino

Reviewed By

11/5/10

Date

HOLD TIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | 1011014-01 | 1011258-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | UG/L | 1011002-13 | 1011257-13 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |
| HG | UG/L | 1011002-16 | 1011257-16 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |
| HG | UG/L | 1011002-14 | 1011257-14 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |
| HG | UG/L | 1011002-12 | 1011257-12 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-11 | 1011257-11 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-10 | 1011257-10 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-09 | 1011257-09 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-07 | 1011257-07 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-06 | 1011257-06 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-05 | 1011257-05 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-04 | 1011257-04 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-01 | 1011257-01 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-03 | 1011257-03 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-15 | 1011257-15 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | 1011002-02 | 1011257-02 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-08 | 1011257-08 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| M | MG/KG | 1011014-01 | 1011258-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011014-01 | 1011258-01RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | UG/L | 1011002-06 | 1011257-06 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-01 | 1011257-01RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-02 | 1011257-02 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-03 | 1011257-03 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-04 | 1011257-04 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-04 | 1011257-04RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-05 | 1011257-05 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-06 | 1011257-06RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-01 | 1011257-01 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-12 | 1011257-12 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-16 | 1011257-16RE2 | NM | 11/01/2010 | 12/06/2010 | 12/09/2010 | 35 | 3 | 38 |
| M | UG/L | 1011002-16 | 1011257-16RE1 | NM | 11/01/2010 | 12/06/2010 | 12/09/2010 | 35 | 3 | 38 |
| M | UG/L | 1011002-16 | 1011257-16 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-15 | 1011257-15RE3 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1011002-15 | 1011257-15RE2 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |
| M | UG/L | 1011002-15 | 1011257-15 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-14 | 1011257-14RE1 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |
| M | UG/L | 1011002-14 | 1011257-14 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-13 | 1011257-13RE1 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |
| M | UG/L | 1011002-13 | 1011257-13 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-05 | 1011257-05RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-12 | 1011257-12RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-11 | 1011257-11RE1 | NM | 10/31/2010 | 12/06/2010 | 12/17/2010 | 36 | 11 | 47 |
| M | UG/L | 1011002-11 | 1011257-11 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-10 | 1011257-10RE2 | NM | 10/31/2010 | 12/06/2010 | 12/17/2010 | 36 | 11 | 47 |
| M | UG/L | 1011002-10 | 1011257-10RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-10 | 1011257-10 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-09 | 1011257-09RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-09 | 1011257-09 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-08 | 1011257-08RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-08 | 1011257-08 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-07 | 1011257-07 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011014**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011014-01** | **Solid** | **Sampled: 11/02/10 11:40** | 10/1258 -01 |
| Mercury, Total 7471B | | 11/30/10 11:40 | |
| 8081A Pesticides | | 11/16/10 11:40 | |
| 6010C Full | | 05/01/11 11:40 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/18/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

4.5°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| RKW | 11/29 | | 4/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

WORK ORDER

**1011258**

Printed: 12/21/2010 2:40:36PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/21/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 11/30/2010 08:25
Date Logged In 11/30/2010 15:30

Samples Received at: 4.5°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011258-01 1011014-01 [Solid] Sampled 11/02/2010 11:40 Eastern** | | | | | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 10:40 | | |
| SW8081A | 12/16/2010 14:00 | 15 | 11/16/2010 10:40 | | Sample is an extract!! |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 10:40 | client list | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 10:40 | | |



CTOJM16KW_003 Summ Package

# Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: CTOJM16 Key West 2010
SDG #: CTOJM16KW_003
MATRIX: Solid

QC LEVEL: EDD/IVQSM
Report Due: 12/21/2010
Client Sample Count: 17

| Sample Type | Sampled | Received | Lab ID | Client ID | SM2540B | SW6010C | SW7470A | SW7471A | SW8081A |
|---|---|---|---|---|---|---|---|---|---|
| Client Sample | 10/30/2010 | 11/30/2010 | 1011257-01 | 1011002-01 | | X | X | | |
| Client Sample | 10/30/2010 | 11/30/2010 | 1011257-02 | 1011002-02 | | X | X | | |
| Client Sample | 10/30/2010 | 11/30/2010 | 1011257-03 | 1011002-03 | | X | X | | |
| Client Sample | 10/30/2010 | 11/30/2010 | 1011257-04 | 1011002-04 | | X | X | | |
| Client Sample | 10/30/2010 | 11/30/2010 | 1011257-05 | 1011002-05 | | X | X | | |
| Client Sample | 10/30/2010 | 11/30/2010 | 1011257-06 | 1011002-06 | | X | X | | |
| Client Sample | 10/31/2010 | 11/30/2010 | 1011257-07 | 1011002-07 | | X | X | | |
| Client Sample | 10/31/2010 | 11/30/2010 | 1011257-08 | 1011002-08 | | X | X | | |
| Client Sample | 10/31/2010 | 11/30/2010 | 1011257-09 | 1011002-09 | | X | X | | |
| Client Sample | 10/31/2010 | 11/30/2010 | 1011257-10 | 1011002-10 | | X | X | | |
| Client Sample | 10/31/2010 | 11/30/2010 | 1011257-11 | 1011002-11 | | X | X | | |
| Client Sample | 10/31/2010 | 11/30/2010 | 1011257-12 | 1011002-12 | | X | X | | |
| Client Sample | 11/1/2010 | 11/30/2010 | 1011257-13 | 1011002-13 | | X | X | | |
| Client Sample | 11/1/2010 | 11/30/2010 | 1011257-14 | 1011002-14 | | X | X | | |
| Client Sample | 11/1/2010 | 11/30/2010 | 1011257-15 | 1011002-15 | | X | X | | |
| Client Sample | 11/1/2010 | 11/30/2010 | 1011257-16 | 1011002-16 | | X | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011258-01 | 1011014-01 | X | X | | X | X |

## Sample Delivery Group Case Narrative

**Receipt Information**
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

All samples for SW7470A and SW7471A were received in the laboratory out of the EPA recommending holding time.

**Changes to the Revision**
This is an original submittal of the final report package.

**Analytical Information**
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

**Chromatographic Flags for Manual Integration:**
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

**SW6010C/SW7470A/SW7471A:**
Samples 1011257-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15, -16 and 1011258-01 were received after the EPA recommended holding time for SW7470A and SW7471A.

Samples 1011257-04 and -07 are qualified with an M for Lead to indicate that the DL was raised due to interference, samples 1011257-06 and -12 are qualified with an M for

Copper to indicate that the DL was raised due to interference and sample 1011257-12 is qualified with an M for Nickel to indicate that the DL was raised due to interference.

The continuing calibration verifications exceeded criteria in 0L34305-CCV2 with a positive bias for Sodium, in 0L34305-CCV4 with a positive bias for Magnesium, Potassium and Sodium, in 0L34305-CCV5 with a positive bias for Aluminum, Magnesium Potassium and Sodium and with a negative bias for Calcium and in 0L34704-CCV8 with a negative bias for Aluminum.

The continuing calibration blanks 0L34305-CCB3 and –CCB5 and digestion blank 0L06016-BLK1 have positive results for Sodium. The digestion blank 0L15009-BLK1 has a positive result for Zinc.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The batch spike associated to batch 0L06022 exceeded criteria with a positive bias on both columns for 4,4'-DDE, 4,4'-DDT, Alpha-BHC, Alpha-Chlordane, Beta-BHC, Gamma-BHC, Dieldrin, Endrin, Gamma-BHC, Gamma-Chlordane, Heptachlor and Heptachlor Epoxide and on column 2 with a positive bias for 4,4'-DDD, Aldrin and Endosulfan Sulfate.

The surrogates Tetrachloro-m-xylene and Decachlorobiphenyl exceeded criteria with a positive bias in 0L35009-BS1.

The continuing calibration verifications exceeded criteria in 0L35009-CCV6 with a positive bias on column 2 for Delta-BHC, in 0L35009-CCV8 and –CCVD with a positive bias on column 2 for Toxaphene and in 0L35009-CCVB with a positive bias on column 2 for Alpha-BHC and Delta-BHC.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

**Analytical Report Terms and Qualifiers**

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

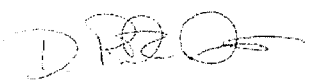
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

# Data for SW8081A Forms

# HOLDING TIME SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011014-01 | 11/02/10 11:40 | 11/30/10 08:25 | 11/10/10 11:40 | 8.04 | 14.00 | 12/10/10 23:01 | 30.47 | 40.00 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | 0K32715-PEM1 | 002F0201.D | 11/19/10 13:08 |
| Performance Mix | 0K32715-PEM1 | 002R0201.D | 11/19/10 13:08 |
| Cal Standard | 0K32715-CAL7 | 011R1101.D | 11/19/10 15:56 |
| Cal Standard | 0K32715-CAL7 | 011F1101.D | 11/19/10 15:56 |
| Cal Standard | 0K32715-CAL8 | 012F1201.D | 11/19/10 16:14 |
| Cal Standard | 0K32715-CAL8 | 012R1201.D | 11/19/10 16:14 |
| Cal Standard | 0K32715-CAL9 | 013R1301.D | 11/19/10 16:33 |
| Cal Standard | 0K32715-CAL9 | 013F1301.D | 11/19/10 16:33 |
| Cal Standard | 0K32715-CALA | 014F1401.D | 11/19/10 16:52 |
| Cal Standard | 0K32715-CALA | 014R1401.D | 11/19/10 16:52 |
| Cal Standard | 0K32715-CALB | 015F1501.D | 11/19/10 17:10 |
| Cal Standard | 0K32715-CALB | 015R1501.D | 11/19/10 17:10 |
| Cal Standard | 0K32715-CALC | 016F1601.D | 11/19/10 17:29 |
| Cal Standard | 0K32715-CALC | 016R1601.D | 11/19/10 17:29 |
| Initial Cal Check | 0K32715-ICV2 | 017F1701.D | 11/19/10 17:47 |
| Initial Cal Check | 0K32715-ICV2 | 017R1701.D | 11/19/10 17:47 |
| Cal Standard | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |
| Cal Standard | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| Initial Cal Check | 0K32715-ICV3 | 025F2501.D | 11/19/10 20:16 |
| Initial Cal Check | 0K32715-ICV3 | 025R2501.D | 11/19/10 20:16 |

# INITIAL CALIBRATION STANDARDS

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011R1101.D | 11/19/10 15:56 |
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011F1101.D | 11/19/10 15:56 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012F1201.D | 11/19/10 16:14 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012R1201.D | 11/19/10 16:14 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013F1301.D | 11/19/10 16:33 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013R1301.D | 11/19/10 16:33 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014F1401.D | 11/19/10 16:52 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014R1401.D | 11/19/10 16:52 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015F1501.D | 11/19/10 17:10 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015R1501.D | 11/19/10 17:10 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016R1601.D | 11/19/10 17:29 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016F1601.D | 11/19/10 17:29 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 33546.52 | 6.000484 | 8.184572 | 2.267959E-02 | | | 20 | |
| 4,4'-DDE [2C] | 21057.32 | 11.07954 | 6.824143 | 2.103318E-02 | | | 20 | |
| 4,4'-DDD | 27664.89 | 7.540731 | 8.810143 | 5.248612E-03 | | | 20 | |
| 4,4'-DDD [2C] | 18693.78 | 11.44265 | 7.438286 | 2.802734E-02 | | | 20 | |
| 4,4'-DDT | 24740.67 | 14.5165 | 9.189857 | 7.068491E-03 | | | 20 | |
| 4,4'-DDT [2C] | 15729.51 | 4.871312 | 7.721286 | 1.954911E-02 | | | 20 | |
| Aldrin | 36147.13 | 7.456226 | 7.128143 | 1.296638E-02 | | | 20 | |
| Aldrin [2C] | 22656.45 | 9.98282 | 5.819 | 1.806906E-02 | | | 20 | |
| alpha-BHC | 40409.75 | 10.16852 | 5.832857 | 2.119288E-02 | | | 20 | |
| alpha-BHC [2C] | 26238.33 | 5.215596 | 4.972572 | 0.0158976 | | | 20 | |
| alpha-Chlordane | 32821.21 | 4.761104 | 7.986286 | 3.589714E-03 | | | 20 | |
| alpha-Chlordane [2C] | 21675.65 | 14.21858 | 6.625714 | 1.577067E-02 | | | 20 | |
| beta-BHC | 15846.9 | 4.976926 | 6.370286 | 1.550503E-02 | | | 20 | |
| beta-BHC [2C] | 9658.734 | 12.56008 | 5.537714 | 3.655615E-02 | | | 20 | |
| delta-BHC | 33539.38 | 10.83928 | 6.629143 | 1.181652E-02 | | | 20 | |
| delta-BHC [2C] | 20704.78 | 4.437113 | 5.747714 | 3.745169E-02 | | | 20 | |
| Dieldrin | 33895.65 | 7.310364 | 8.373143 | 1.230849E-02 | | | 20 | |
| Dieldrin [2C] | 22375.56 | 11.72956 | 6.969286 | 1.351574E-02 | | | 20 | |
| Endosulfan I | 31729.01 | 5.810311 | 8.049428 | 2.163559E-02 | | | 20 | |
| Endosulfan I [2C] | 20934.91 | 11.92243 | 6.689286 | 0.0156653 | | | 20 | |
| Endosulfan II | 29666.08 | 4.320259 | 8.922857 | 9.499018E-03 | | | 20 | |
| Endosulfan II [2C] | 19402.61 | 13.50319 | 7.609286 | 1.172058E-02 | | | 20 | |
| Endosulfan sulfate | 25616.99 | 5.703931 | 9.372 | 2.124432E-02 | | | 20 | |
| Endosulfan sulfate [2C] | 16791.83 | 11.98722 | 8.077286 | 1.600537E-02 | | | 20 | |
| Endrin | 24735.1 | 8.585635 | 8.649143 | 0.0197868 | | | 20 | |
| Endrin [2C] | 16756.72 | 11.09602 | 7.271286 | 0.0204429 | | | 20 | |
| Endrin aldehyde | 24109.03 | 3.96554 | 9.082714 | 8.921441E-03 | | | 20 | |
| Endrin aldehyde [2C] | 17038.67 | 16.23379 | 7.816857 | 2.146648E-02 | | | 20 | |
| Endrin ketone | 34636.65 | 4.514572 | 9.976571 | 1.195761E-02 | | | 20 | |
| Endrin ketone [2C] | 23263.99 | 13.77737 | 8.678857 | 2.201704E-02 | | | 20 | |
| gamma-BHC (Lindane) | 36031.77 | 8.801481 | 6.163429 | 8.315358E-03 | | | 20 | |
| gamma-BHC (Lindane) [2C] | 24013.09 | 7.287553 | 5.262857 | 1.952569E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | 33961.2 | 5.579594 | 7.897286 | 4.623527E-03 | | | 20 | |
| gamma-Chlordane [2C] | 21621.04 | 13.53738 | 6.561 | 1.259477E-02 | | | 20 | |
| Heptachlor | 29722.9 | 11.59268 | 6.759857 | 1.171619E-02 | | | 20 | |
| Heptachlor [2C] | 21682.7 | 10.66915 | 5.559143 | 1.004687E-02 | | | 20 | |
| Heptachlor epoxide | 33684.73 | 4.993924 | 7.605 | 3.240937E-03 | | | 20 | |
| Heptachlor epoxide [2C] | 21633.25 | 13.96005 | 6.309286 | 1.977155E-02 | | | 20 | |
| Methoxychlor | 12781.08 | 8.3161 | 9.791 | 1.095047E-02 | | | 20 | |
| Methoxychlor [2C] | 8700.811 | 14.35167 | 8.413714 | 0.0173794 | | | 20 | |
| Chlordane (tech) | 2265.814 | 2.036435 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (1) | 4560.136 | 2.206321 | 7.989 | 1.416297E-02 | | | 20 | |
| Chlordane (2) | 1011.213 | 4.748592 | 6.536 | 1.188001E-02 | | | 20 | |
| Chlordane (3) | 1003.996 | 8.624511 | 6.760834 | 8.797502E-03 | | | 20 | |
| Chlordane (4) | 3753.811 | 2.957383 | 7.897833 | 8.880134E-03 | | | 20 | |
| Chlordane (5) | 999.9125 | 4.559042 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (tech) [2C] | 1234.277 | 10.59888 | 7.605 | 3.28691E-03 | | | 20 | |
| Chlordane (1) [2C] | 2188.726 | 14.89601 | 6.6265 | 1.838167E-02 | | | 20 | |
| Chlordane (2) [2C] | 750.7542 | 8.135717 | 5.401333 | 1.394675E-02 | | | 20 | |
| Chlordane (3) [2C] | 797.21 | 5.579656 | 5.56 | 3.498735E-03 | | | 20 | |
| Chlordane (4) [2C] | 1630.041 | 13.84368 | 6.581167 | 8.453161E-03 | | | 20 | |
| Chlordane (5) [2C] | 804.6533 | 7.142321 | 7.605 | 3.28691E-03 | | | 20 | |
| Toxaphene (1) | 1251.284 | 13.26694 | 9.874667 | 1.008505E-02 | | | 20 | |
| Toxaphene (2) | 499.794 | 18.79183 | 8.578 | 1.896147E-02 | | | 20 | |
| Toxaphene (3) | 983.0718 | 13.15648 | 9.2395 | 1.502643E-02 | | | 20 | |
| Toxaphene (4) | 1115.536 | 19.14758 | 9.35 | 0.0145175 | | | 20 | |
| Toxaphene (5) | 582.2432 | 13.0691 | 10.32517 | 1.365035E-02 | | | 20 | |
| Toxaphene (1) [2C] | 1311.742 | 9.570442 | 8.5295 | 5.472725E-03 | | | 20 | |
| Toxaphene (2) [2C] | 357.144 | 23.44747 | 7.601 | 1.768119E-02 | | | 20 | * |
| Toxaphene (3) [2C] | 863.2383 | 11.36044 | 7.942333 | 2.059764E-02 | | | 20 | |
| Toxaphene (4) [2C] | 613.1725 | 12.22375 | 8.908834 | 1.237003E-02 | | | 20 | |
| Toxaphene (5) [2C] | 327.2323 | 16.07536 | 9.074667 | 1.398232E-02 | | | 20 | |
| Tetrachloro-m-xylene | 28765.14 | 2.541019 | 5.388857 | 1.804526E-02 | | | 20 | |
| Tetrachloro-m-xylene [2C] | 21379.77 | 11.06958 | 4.526 | 6.298631E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Decachlorobiphenyl | 29956.87 | 5.97861 | 11.62329 | 1.578512E-02 | | | 20 | |
| Decachlorobiphenyl [2C] | 17512.73 | 17.45123 | 10.00071 | 1.794087E-02 | | | 20 | |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 200 | 37513.33 | 100 | 33730.93 | 50 | 34388.64 | 25 | 33301.96 | 10 | 32327.8 | 5 | 31612 |
| 4,4'-DDE [2C] | 200 | 18257.3 | 100 | 18338.82 | 50 | 20151.58 | 25 | 21368.44 | 10 | 22221.1 | 5 | 22326 |
| 4,4'-DDD | 200 | 31518.02 | 100 | 28321.8 | 50 | 28748.18 | 25 | 27328.36 | 10 | 26325.1 | 5 | 25505.8 |
| 4,4'-DDD [2C] | 200 | 16513.82 | 100 | 16419.14 | 50 | 17910.14 | 25 | 18290.88 | 10 | 19251.5 | 5 | 19909 |
| 4,4'-DDT | 200 | 31197.69 | 100 | 26071.43 | 50 | 25942.18 | 25 | 24957.56 | 10 | 22888.2 | 5 | 22055.6 |
| 4,4'-DDT [2C] | 200 | 15542.91 | 100 | 14446.41 | 50 | 15476.54 | 25 | 15916.8 | 10 | 16093.1 | 5 | 15635.8 |
| Aldrin | 200 | 40767.94 | 100 | 37299.45 | 50 | 37537.34 | 25 | 36051.2 | 10 | 34777 | 5 | 33953 |
| Aldrin [2C] | 200 | 19617.71 | 100 | 20294.77 | 50 | 21953.9 | 25 | 22503.8 | 10 | 23712.4 | 5 | 24651.6 |
| alpha-BHC | 200 | 47167.84 | 100 | 42289.44 | 50 | 42861.2 | 25 | 40287.04 | 10 | 38376.7 | 5 | 36953 |
| alpha-BHC [2C] | 200 | 25165.1 | 100 | 24453.88 | 50 | 26202.34 | 25 | 25862.96 | 10 | 26405.8 | 5 | 26809.2 |
| alpha-Chlordane | 200 | 36000.86 | 100 | 32733.34 | 50 | 33417.76 | 25 | 32553 | 10 | 32043.1 | 5 | 31429.4 |
| alpha-Chlordane [2C] | 200 | 18546.3 | 100 | 18517.16 | 50 | 20113.24 | 25 | 21125.88 | 10 | 22565.8 | 5 | 23774.2 |
| beta-BHC | 200 | 16661.48 | 100 | 15277.28 | 50 | 15642.24 | 25 | 15286.52 | 10 | 15203.2 | 5 | 15623.6 |
| beta-BHC [2C] | 200 | 9426.75 | 100 | 8924.51 | 50 | 9284.36 | 25 | 9176.12 | 10 | 9017.8 | 5 | 9404.6 |
| delta-BHC | 200 | 39647.29 | 100 | 35123.66 | 50 | 36041.72 | 25 | 33068.12 | 10 | 31230.7 | 5 | 29532.2 |
| delta-BHC [2C] | 200 | 21031.8 | 100 | 19998.31 | 50 | 21501.58 | 25 | 20358.56 | 10 | 19943.4 | 5 | 19848.8 |
| Dieldrin | 200 | 38496.14 | 100 | 34608.85 | 50 | 35074.08 | 25 | 33560.2 | 10 | 32585.1 | 5 | 31793.2 |
| Dieldrin [2C] | 200 | 19662.69 | 100 | 19504.01 | 50 | 21226.14 | 25 | 22038.96 | 10 | 23246.3 | 5 | 24006.8 |
| Endosulfan I | 200 | 35075.56 | 100 | 31932.15 | 50 | 32708.06 | 25 | 31682.4 | 10 | 31095.7 | 5 | 30242.2 |
| Endosulfan I [2C] | 200 | 17977.4 | 100 | 18059.23 | 50 | 20018.4 | 25 | 21082.56 | 10 | 21729.4 | 5 | 22837.4 |
| Endosulfan II | 200 | 32415.48 | 100 | 29233.23 | 50 | 29896.28 | 25 | 29325.6 | 10 | 28538 | 5 | 28919 |
| Endosulfan II [2C] | 200 | 16730.24 | 100 | 16636.04 | 50 | 17930.88 | 25 | 19021.6 | 10 | 20551.5 | 5 | 21079 |
| Endosulfan sulfate | 200 | 28655.84 | 100 | 25484.04 | 50 | 26055.9 | 25 | 24786.24 | 10 | 24957.3 | 5 | 24179.6 |
| Endosulfan sulfate [2C] | 200 | 15083.04 | 100 | 14820.32 | 50 | 15997.64 | 25 | 16290.4 | 10 | 17059 | 5 | 17493.4 |
| Endrin | 200 | 28873.78 | 100 | 24723.13 | 50 | 25349.54 | 25 | 25170.56 | 10 | 23415.3 | 5 | 23110.4 |
| Endrin [2C] | 200 | 15221.71 | 100 | 14379.04 | 50 | 15716.62 | 25 | 16628 | 10 | 17495.9 | 5 | 18016.8 |
| Endrin aldehyde | 200 | 26063.46 | 100 | 23971.36 | 50 | 23857.48 | 25 | 23122.04 | 10 | 23556.1 | 5 | 23707.8 |
| Endrin aldehyde [2C] | 200 | 14492.01 | 100 | 14601.62 | 50 | 15568 | 25 | 16051.84 | 10 | 17817.6 | 5 | 18427.6 |
| Endrin ketone | 200 | 37851.39 | 100 | 34261.26 | 50 | 34676.24 | 25 | 33902.16 | 10 | 33884.3 | 5 | 32911.2 |
| Endrin ketone [2C] | 200 | 19946.04 | 100 | 19965.76 | 50 | 21730.44 | 25 | 22773.36 | 10 | 24427.3 | 5 | 25021 |
| gamma-BHC (Lindane) | 200 | 41557.52 | 100 | 37289.21 | 50 | 37763.9 | 25 | 35892.32 | 10 | 34220.6 | 5 | 33185.8 |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 200 | 22560.79 | 100 | 22019.83 | 50 | 23457.66 | 25 | 23621.84 | 10 | 24180.3 | 5 | 24926.2 |
| gamma-Chlordane | 200 | 37678.01 | 100 | 34110.69 | 50 | 34834.82 | 25 | 33600.4 | 10 | 32976.7 | 5 | 32060.8 |
| gamma-Chlordane [2C] | 200 | 18741.21 | 100 | 18638.62 | 50 | 20193.42 | 25 | 21045.52 | 10 | 22343.3 | 5 | 23488.2 |
| Heptachlor | 200 | 35954.45 | 100 | 31207.27 | 50 | 31243.86 | 25 | 29497.2 | 10 | 27414.9 | 5 | 26224.6 |
| Heptachlor [2C] | 200 | 19133.32 | 100 | 18879.69 | 50 | 20417.26 | 25 | 21733.52 | 10 | 22929.1 | 5 | 23873 |
| Heptachlor epoxide | 200 | 37029.96 | 100 | 33434.91 | 50 | 34511.94 | 25 | 33438.32 | 10 | 33013.2 | 5 | 32270.8 |
| Heptachlor epoxide [2C] | 200 | 18183.73 | 100 | 18799.95 | 50 | 20518.56 | 25 | 20888.88 | 10 | 22351.8 | 5 | 23774.8 |
| Methoxychlor | 200 | 14869.25 | 100 | 12633.48 | 50 | 12981.86 | 25 | 12793.56 | 10 | 12299.8 | 5 | 11342.6 |
| Methoxychlor [2C] | 200 | 7716.485 | 100 | 7239.67 | 50 | 8103.94 | 25 | 8548.48 | 10 | 9115.5 | 5 | 9132.6 |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 200 | 30396.38 | 100 | 28270.71 | 50 | 28442.38 | 25 | 28656.12 | 10 | 28496 | 5 | 28638.4 |
| Tetrachloro-m-xylene [2C] | 200 | 19072.68 | 100 | 19248.97 | 50 | 20109.36 | 25 | 20564.48 | 10 | 22076.7 | 5 | 22878.2 |
| Decachlorobiphenyl | 200 | 29960.3 | 100 | 27340.04 | 50 | 28005.84 | 25 | 29560.24 | 10 | 31558.5 | 5 | 31300.2 |
| Decachlorobiphenyl [2C] | 200 | 14811.62 | 100 | 14456.54 | 50 | 15435.18 | 25 | 16877.6 | 10 | 18462 | 5 | 19614.2 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 1 | 31951 | | | | | | | | | | |
| 4,4'-DDE [2C] | 1 | 24738 | | | | | | | | | | |
| 4,4'-DDD | 1 | 25907 | | | | | | | | | | |
| 4,4'-DDD [2C] | 1 | 22562 | | | | | | | | | | |
| 4,4'-DDT | 1 | 20072 | | | | | | | | | | |
| 4,4'-DDT [2C] | 1 | 16995 | | | | | | | | | | |
| Aldrin | 1 | 32644 | | | | | | | | | | |
| Aldrin [2C] | 1 | 25861 | | | | | | | | | | |
| alpha-BHC | 1 | 34933 | | | | | | | | | | |
| alpha-BHC [2C] | 1 | 28769 | | | | | | | | | | |
| alpha-Chlordane | 1 | 31571 | | | | | | | | | | |
| alpha-Chlordane [2C] | 1 | 27087 | | | | | | | | | | |
| beta-BHC | 1 | 17234 | | | | | | | | | | |
| beta-BHC [2C] | 1 | 12377 | | | | | | | | | | |
| delta-BHC | 1 | 30132 | | | | | | | | | | |
| delta-BHC [2C] | 1 | 22251 | | | | | | | | | | |
| Dieldrin | 1 | 31152 | | | | | | | | | | |
| Dieldrin [2C] | 1 | 26944 | | | | | | | | | | |
| Endosulfan I | 1 | 29367 | | | | | | | | | | |
| Endosulfan I [2C] | 1 | 24840 | | | | | | | | | | |
| Endosulfan II | 1 | 29335 | | | | | | | | | | |
| Endosulfan II [2C] | 1 | 23869 | | | | | | | | | | |
| Endosulfan sulfate | 1 | 25200 | | | | | | | | | | |
| Endosulfan sulfate [2C] | 1 | 20799 | | | | | | | | | | |
| Endrin | 1 | 22503 | | | | | | | | | | |
| Endrin [2C] | 1 | 19839 | | | | | | | | | | |
| Endrin aldehyde | 1 | 24485 | | | | | | | | | | |
| Endrin aldehyde [2C] | 1 | 22312 | | | | | | | | | | |
| Endrin ketone | 1 | 34970 | | | | | | | | | | |
| Endrin ketone [2C] | 1 | 28984 | | | | | | | | | | |
| gamma-BHC (Lindane) | 1 | 32313 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 1 | 27325 | | | | | | | | | | |
| gamma-Chlordane | 1 | 32467 | | | | | | | | | | |
| gamma-Chlordane [2C] | 1 | 26897 | | | | | | | | | | |
| Heptachlor | 1 | 26518 | | | | | | | | | | |
| Heptachlor [2C] | 1 | 24813 | | | | | | | | | | |
| Heptachlor epoxide | 1 | 32094 | | | | | | | | | | |
| Heptachlor epoxide [2C] | 1 | 26915 | | | | | | | | | | |
| Methoxychlor | 1 | 12547 | | | | | | | | | | |
| Methoxychlor [2C] | 1 | 11049 | | | | | | | | | | |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | 100 | 1011.74 | 250 | 1138.296 | 500 | 1329.082 | 750 | 1350.244 | 1000 | 1473.986 |
| Toxaphene (2) | | | 100 | 355.43 | 250 | 435.488 | 500 | 522.674 | 750 | 553.6027 | 1000 | 624.948 |
| Toxaphene (3) | | | 100 | 802.53 | 250 | 873.748 | 500 | 1043.166 | 750 | 1063.331 | 1000 | 1152.338 |
| Toxaphene (4) | | | 100 | 764.03 | 250 | 1017.328 | 500 | 1190.532 | 750 | 1224.499 | 1000 | 1393.516 |
| Toxaphene (5) | | | 100 | 505.48 | 250 | 515.472 | 500 | 613.14 | 750 | 609.9133 | 1000 | 706.184 |
| Toxaphene (1) [2C] | | | 100 | 1099.76 | 250 | 1365.06 | 500 | 1316.87 | 750 | 1459.457 | 1000 | 1382.324 |
| Toxaphene (2) [2C] | | | 100 | 281.3 | 250 | 293.268 | 500 | 391.276 | 750 | 486.7773 | 1000 | 404.162 |
| Toxaphene (3) [2C] | | | 100 | 795.76 | 250 | 866.04 | 500 | 961.43 | 750 | 762.968 | 1000 | 1000.542 |
| Toxaphene (4) [2C] | | | 100 | 538.2 | 250 | 581.584 | 500 | 642.586 | 750 | 715.0347 | 1000 | 671.258 |
| Toxaphene (5) [2C] | | | 100 | 267.14 | 250 | 287.752 | 500 | 344.098 | 750 | 400.944 | 1000 | 369.859 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 1 | 28456 | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | 1 | 25708 | | | | | | | | | | |
| Decachlorobiphenyl | 1 | 31973 | | | | | | | | | | |
| Decachlorobiphenyl [2C] | 1 | 22932 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | | | 5 | 2280.04 | 10 | 2255.94 | 20 | 2254.73 | 50 | 2214.676 | 100 | 2349.214 |
| Chlordane (1) | | | 5 | 4651.4 | 10 | 4498 | 20 | 4586.1 | 50 | 4440.14 | 100 | 4695.65 |
| Chlordane (2) | | | 5 | 961 | 10 | 953.3 | 20 | 1010.75 | 50 | 1015.74 | 100 | 1073.7 |
| Chlordane (3) | | | 5 | 924.8 | 10 | 1165.8 | 20 | 984 | 50 | 956.96 | 100 | 1030.14 |
| Chlordane (4) | | | 5 | 3814.6 | 10 | 3608.6 | 20 | 3721.45 | 50 | 3693.02 | 100 | 3932.96 |
| Chlordane (5) | | | 5 | 1048.4 | 10 | 1054 | 20 | 971.35 | 50 | 967.52 | 100 | 1013.62 |
| Chlordane (tech) [2C] | | | 5 | 1214.8 | 10 | 1413.52 | 20 | 1337.26 | 50 | 1235.78 | 100 | 1163.546 |
| Chlordane (1) [2C] | | | 5 | 2063.8 | 10 | 2727.2 | 20 | 2329.95 | 50 | 2229.98 | 100 | 2006.16 |
| Chlordane (2) [2C] | | | 5 | 804.6 | 10 | 805.6 | 20 | 793.6 | 50 | 731.02 | 100 | 715.14 |
| Chlordane (3) [2C] | | | 5 | 810.6 | 10 | 832.3 | 20 | 797.25 | 50 | 816.9 | 100 | 816.81 |
| Chlordane (4) [2C] | | | 5 | 1539.2 | 10 | 1853.8 | 20 | 1945.95 | 50 | 1608.14 | 100 | 1465.95 |
| Chlordane (5) [2C] | | | 5 | 855.8 | 10 | 848.7 | 20 | 819.55 | 50 | 792.86 | 100 | 813.67 |
| Toxaphene (1) | 2000 | 1204.354 | | | | | | | | | | |
| Toxaphene (2) | 2000 | 506.6215 | | | | | | | | | | |
| Toxaphene (3) | 2000 | 963.318 | | | | | | | | | | |
| Toxaphene (4) | 2000 | 1103.312 | | | | | | | | | | |
| Toxaphene (5) | 2000 | 543.27 | | | | | | | | | | |
| Toxaphene (1) [2C] | 2000 | 1246.983 | | | | | | | | | | |
| Toxaphene (2) [2C] | 2000 | 286.0805 | | | | | | | | | | |
| Toxaphene (3) [2C] | 2000 | 792.6895 | | | | | | | | | | |
| Toxaphene (4) [2C] | 2000 | 530.3725 | | | | | | | | | | |
| Toxaphene (5) [2C] | 2000 | 293.6005 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | 200 | 2240.281 | | | | | | | | | | |
| Chlordane (1) | 200 | 4489.525 | | | | | | | | | | |
| Chlordane (2) | 200 | 1052.785 | | | | | | | | | | |
| Chlordane (3) | 200 | 962.275 | | | | | | | | | | |
| Chlordane (4) | 200 | 3752.235 | | | | | | | | | | |
| Chlordane (5) | 200 | 944.585 | | | | | | | | | | |
| Chlordane (tech) [2C] | 200 | 1040.755 | | | | | | | | | | |
| Chlordane (1) [2C] | 200 | 1775.265 | | | | | | | | | | |
| Chlordane (2) [2C] | 200 | 654.565 | | | | | | | | | | |
| Chlordane (3) [2C] | 200 | 709.4 | | | | | | | | | | |
| Chlordane (4) [2C] | 200 | 1367.205 | | | | | | | | | | |
| Chlordane (5) [2C] | 200 | 697.34 | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Tetrachloro-m-xylene [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 017F1701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV2 | Injection Time: | 17:47 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1110 | 1251.284 | 1389.576 | | 11.1 | 20 | |
| Toxaphene (2) | A | 1000 | 1136 | 499.794 | 567.613 | | 13.6 | 20 | |
| Toxaphene (3) | A | 1000 | 1110 | 983.0718 | 1091.295 | | 11.0 | 20 | |
| Toxaphene (4) | A | 1000 | 1150 | 1115.536 | 1283.494 | | 15.1 | 20 | |
| Toxaphene (5) | A | 1000 | 1129 | 582.2432 | 657.346 | | 12.9 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 1006 | 1311.742 | 1318.988 | | 0.6 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1214 | 357.144 | 433.465 | | 21.4 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1153 | 863.2383 | 995.34 | | 15.3 | 20 | |
| Toxaphene (4) [2C] | A | 1000 | 1033 | 613.1725 | 633.434 | | 3.3 | 20 | |
| Toxaphene (5) [2C] | A | 1000 | 1003 | 327.2323 | 328.351 | | 0.3 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025F2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 104.8 | 33546.52 | 35173.04 | | 4.8 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 91.21 | 21057.32 | 19206.02 | | -8.8 | 20 |
| 4,4'-DDD | A | 100.0 | 104.0 | 27664.89 | 28779.14 | | 4.0 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 89.33 | 18693.78 | 16698.8 | | -10.7 | 20 |
| 4,4'-DDT | A | 100.0 | 106.8 | 24740.67 | 26437.44 | | 6.9 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 92.11 | 15729.51 | 14489.01 | | -7.9 | 20 |
| Aldrin | A | 100.0 | 105.8 | 36147.13 | 38246.73 | | 5.8 | 20 |
| Aldrin [2C] | A | 100.0 | 92.49 | 22656.45 | 20955.53 | | -7.5 | 20 |
| alpha-BHC | A | 100.0 | 109.5 | 40409.75 | 44244.95 | | 9.5 | 20 |
| alpha-BHC [2C] | A | 100.0 | 97.38 | 26238.33 | 25550.97 | | -2.6 | 20 |
| alpha-Chlordane | A | 100.0 | 104.0 | 32821.21 | 34128.09 | | 4.0 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 88.98 | 21675.65 | 19286.5 | | -11.0 | 20 |
| beta-BHC | A | 100.0 | 104.2 | 15846.9 | 16511.38 | | 4.2 | 20 |
| beta-BHC [2C] | A | 100.0 | 102.0 | 9658.734 | 9850.8 | | 2.0 | 20 |
| delta-BHC | A | 100.0 | 109.9 | 33539.38 | 36866.04 | | 9.9 | 20 |
| delta-BHC [2C] | A | 100.0 | 101.0 | 20704.78 | 20920.6 | | 1.0 | 20 |
| Dieldrin | A | 100.0 | 103.6 | 33895.65 | 35122.84 | | 3.6 | 20 |
| Dieldrin [2C] | A | 100.0 | 88.17 | 22375.56 | 19728.31 | | -11.8 | 20 |
| Endosulfan I | A | 100.0 | 105.5 | 31729.01 | 33463.25 | | 5.5 | 20 |
| Endosulfan I [2C] | A | 100.0 | 90.93 | 20934.91 | 19035.91 | | -9.1 | 20 |
| Endosulfan II | A | 100.0 | 99.65 | 29666.08 | 29561.55 | | -0.4 | 20 |
| Endosulfan II [2C] | A | 100.0 | 86.57 | 19402.61 | 16796.12 | | -13.4 | 20 |
| Endosulfan sulfate | A | 100.0 | 102.5 | 25616.99 | 26259 | | 2.5 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 90.41 | 16791.83 | 15181.22 | | -9.6 | 20 |
| Endrin | A | 100.0 | 96.91 | 24735.1 | 23971.57 | | -3.1 | 20 |
| Endrin [2C] | A | 100.0 | 84.35 | 16756.72 | 14134.37 | | -15.6 | 20 |
| Endrin aldehyde | A | 100.0 | 99.85 | 24109.03 | 24072.34 | | -0.2 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 85.73 | 17038.67 | 14606.93 | | -14.3 | 20 |
| Endrin ketone | A | 100.0 | 100.7 | 34636.65 | 34880.58 | | 0.7 | 20 |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025R2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 87.14 | 23263.99 | 20271.19 | | -12.9 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 109.0 | 36031.77 | 39277 | | 9.0 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 95.47 | 24013.09 | 22925.86 | | -4.5 | 20 |
| gamma-Chlordane | A | 100.0 | 105.1 | 33961.2 | 35701.47 | | 5.1 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 89.96 | 21621.04 | 19451 | | -10.0 | 20 |
| Heptachlor | A | 100.0 | 110.8 | 29722.9 | 32936.84 | | 10.8 | 20 |
| Heptachlor [2C] | A | 100.0 | 89.51 | 21682.7 | 19408.4 | | -10.5 | 20 |
| Heptachlor epoxide | A | 100.0 | 104.2 | 33684.73 | 35102.63 | | 4.2 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 89.32 | 21633.25 | 19321.83 | | -10.7 | 20 |
| Methoxychlor | A | 100.0 | 104.1 | 12781.08 | 13303.99 | | 4.1 | 20 |
| Methoxychlor [2C] | A | 100.0 | 87.23 | 8700.811 | 7589.37 | | -12.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

## BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM1 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 0.00 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.83 |
| Endrin | 6.09 |

## BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM2 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.24 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.32 |

## BREAKDOWN REPORT

**Lab Sample ID:** 0K32715-PEM1 **Analyzed:** 11/19/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.85 |
| Endrin | 9.88 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 5.52 |
| Endrin | 10.41 |

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35009 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | 0L35009-PEM1 | 002R0201.D | 12/10/10 11:47 |
| Performance Mix | 0L35009-PEM1 | 002F0201.D | 12/10/10 11:47 |
| Calibration Check | 0L35009-CCV1 | 003F0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV1 | 003R0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV3 | 005R0501.D | 12/10/10 12:44 |
| Calibration Check | 0L35009-CCV3 | 005F0501.D | 12/10/10 12:44 |
| Performance Mix | 0L35009-PEM2 | 008F0801.D | 12/10/10 13:40 |
| Performance Mix | 0L35009-PEM2 | 008R0801.D | 12/10/10 13:40 |
| Calibration Check | 0L35009-CCV6 | 031R3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV6 | 031F3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV8 | 033F3301.D | 12/10/10 21:28 |
| Calibration Check | 0L35009-CCV8 | 033R3301.D | 12/10/10 21:28 |
| Blank | 0L06022-BLK1 | 036R3601.D | 12/10/10 22:24 |
| Blank | 0L06022-BLK1 | 036F3601.D | 12/10/10 22:24 |
| LCS | 0L06022-BS1 | 037R3701.D | 12/10/10 22:43 |
| LCS | 0L06022-BS1 | 037F3701.D | 12/10/10 22:43 |
| 1011014-01 | 1011258-01 | 038F3801.D | 12/10/10 23:01 |
| 1011014-01 | 1011258-01 | 038R3801.D | 12/10/10 23:01 |
| Calibration Check | 0L35009-CCVB | 043F4301.D | 12/11/10 00:34 |
| Calibration Check | 0L35009-CCVB | 043R4301.D | 12/11/10 00:34 |
| Calibration Check | 0L35009-CCVD | 045F4501.D | 12/11/10 01:11 |
| Calibration Check | 0L35009-CCVD | 045R4501.D | 12/11/10 01:11 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031F3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4,4'-DDE | A | 100.0 | 100.3 | 33546.52 | 33639.75 | | 0.3 | 20 | |
| 4,4'-DDE [2C] | A | 100.0 | 101.4 | 21057.32 | 21355.1 | | 1.4 | 20 | |
| 4,4'-DDD | A | 100.0 | 103.3 | 27664.89 | 28570.6 | | 3.3 | 20 | |
| 4,4'-DDD [2C] | A | 100.0 | 104.6 | 18693.78 | 19546.39 | | 4.6 | 20 | |
| 4,4'-DDT | A | 100.0 | 110.4 | 24740.67 | 27324.32 | | 10.4 | 20 | |
| 4,4'-DDT [2C] | A | 100.0 | 115.8 | 15729.51 | 18223.18 | | 15.9 | 20 | |
| Aldrin | A | 100.0 | 106.0 | 36147.13 | 38328 | | 6.0 | 20 | |
| Aldrin [2C] | A | 100.0 | 106.8 | 22656.45 | 24201.48 | | 6.8 | 20 | |
| alpha-BHC | A | 100.0 | 114.1 | 40409.75 | 46112.18 | | 14.1 | 20 | |
| alpha-BHC [2C] | A | 100.0 | 119.7 | 26238.33 | 31413.67 | | 19.7 | 20 | |
| alpha-Chlordane | A | 100.0 | 99.88 | 32821.21 | 32782.2 | | -0.1 | 20 | |
| alpha-Chlordane [2C] | A | 100.0 | 102.2 | 21675.65 | 22144.07 | | 2.2 | 20 | |
| beta-BHC | A | 100.0 | 100.7 | 15846.9 | 15956.51 | | 0.7 | 20 | |
| beta-BHC [2C] | A | 100.0 | 110.0 | 9658.734 | 10622 | | 10.0 | 20 | |
| delta-BHC | A | 100.0 | 115.0 | 33539.38 | 38572.21 | | 15.0 | 20 | |
| delta-BHC [2C] | A | 100.0 | 128.2 | 20704.78 | 26539.96 | | 28.2 | 20 | * |
| Dieldrin | A | 100.0 | 104.1 | 33895.65 | 35280.86 | | 4.1 | 20 | |
| Dieldrin [2C] | A | 100.0 | 102.4 | 22375.56 | 22908.72 | | 2.4 | 20 | |
| Endosulfan I | A | 100.0 | 101.0 | 31729.01 | 32059.15 | | 1.0 | 20 | |
| Endosulfan I [2C] | A | 100.0 | 101.2 | 20934.91 | 21180.75 | | 1.2 | 20 | |
| Endosulfan II | A | 100.0 | 98.86 | 29666.08 | 29327.82 | | -1.1 | 20 | |
| Endosulfan II [2C] | A | 100.0 | 102.3 | 19402.61 | 19847.8 | | 2.3 | 20 | |
| Endosulfan sulfate | A | 100.0 | 101.5 | 25616.99 | 26009.05 | | 1.5 | 20 | |
| Endosulfan sulfate [2C] | A | 100.0 | 107.4 | 16791.83 | 18029.59 | | 7.4 | 20 | |
| Endrin | A | 100.0 | 107.6 | 24735.1 | 26624.33 | | 7.6 | 20 | |
| Endrin [2C] | A | 100.0 | 110.5 | 16756.72 | 18517.45 | | 10.5 | 20 | |
| Endrin aldehyde | A | 100.0 | 101.5 | 24109.03 | 24470.41 | | 1.5 | 20 | |
| Endrin aldehyde [2C] | A | 100.0 | 103.7 | 17038.67 | 17671.18 | | 3.7 | 20 | |
| Endrin ketone | A | 100.0 | 101.0 | 34636.65 | 34989.36 | | 1.0 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031R3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 102.5 | 23263.99 | 23853.72 | | 2.5 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 111.4 | 36031.77 | 40125.7 | | 11.4 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 116.3 | 24013.09 | 27934.94 | | 16.3 | 20 |
| gamma-Chlordane | A | 100.0 | 100.2 | 33961.2 | 34043.75 | | 0.2 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 103.8 | 21621.04 | 22450.69 | | 3.8 | 20 |
| Heptachlor | A | 100.0 | 118.7 | 29722.9 | 35283.51 | | 18.7 | 20 |
| Heptachlor [2C] | A | 100.0 | 112.9 | 21682.7 | 24487.38 | | 12.9 | 20 |
| Heptachlor epoxide | A | 100.0 | 103.6 | 33684.73 | 34912.7 | | 3.6 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 103.0 | 21633.25 | 22288.54 | | 3.0 | 20 |
| Methoxychlor | A | 100.0 | 106.7 | 12781.08 | 13635.6 | | 6.7 | 20 |
| Methoxychlor [2C] | A | 100.0 | 105.5 | 8700.811 | 9183.64 | | 5.5 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 94.61 | 28765.14 | 27215.45 | | -5.4 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 100.5 | 21379.77 | 21496.84 | | 0.5 | 20 |
| Decachlorobiphenyl | A | 100.0 | 93.78 | 29956.87 | 28094.31 | | -6.2 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 101.0 | 17512.73 | 17696.02 | | 1.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 033F3301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV8 | Injection Time: | 21:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1034 | 1251.284 | 1293.902 | | 3.4 | 20 | |
| Toxaphene (2) | A | 1000 | 1084 | 499.794 | 541.667 | | 8.4 | 20 | |
| Toxaphene (3) | A | 1000 | 1049 | 983.0718 | 1031.635 | | 4.9 | 20 | |
| Toxaphene (4) | A | 1000 | 1028 | 1115.536 | 1147.046 | | 2.8 | 20 | |
| Toxaphene (5) | A | 1000 | 906.7 | 582.2432 | 527.931 | | -9.3 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 964.9 | 1311.742 | 1265.7 | | -3.5 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1301 | 357.144 | 464.811 | | 30.1 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1335 | 863.2383 | 1152.173 | | 33.5 | 20 | * |
| Toxaphene (4) [2C] | A | 1000 | 1280 | 613.1725 | 785.22 | | 28.1 | 20 | * |
| Toxaphene (5) [2C] | A | 1000 | 1278 | 327.2323 | 418.067 | | 27.8 | 20 | * |

AVG 24.6%

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 043F4301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVB | Injection Time: | 00:34 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 99.99 | 33546.52 | 33542.27 | | -0.01 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 101.8 | 21057.32 | 21430.77 | | 1.8 | 20 |
| 4,4'-DDD | A | 100.0 | 106.4 | 27664.89 | 29426.51 | | 6.4 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 107.4 | 18693.78 | 20072.43 | | 7.4 | 20 |
| 4,4'-DDT | A | 100.0 | 105.2 | 24740.67 | 26040.29 | | 5.3 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 111.2 | 15729.51 | 17484.87 | | 11.2 | 20 |
| Aldrin | A | 100.0 | 104.5 | 36147.13 | 37767.61 | | 4.5 | 20 |
| Aldrin [2C] | A | 100.0 | 104.5 | 22656.45 | 23685.36 | | 4.5 | 20 |
| alpha-BHC | A | 100.0 | 114.0 | 40409.75 | 46050.99 | | 14.0 | 20 |
| alpha-BHC [2C] | A | 100.0 | 120.7 | 26238.33 | 31670.06 | | 20.7 | 20 * |
| alpha-Chlordane | A | 100.0 | 98.07 | 32821.21 | 32188.98 | | -1.9 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 100.4 | 21675.65 | 21753.72 | | 0.4 | 20 |
| beta-BHC | A | 100.0 | 100.7 | 15846.9 | 15956.92 | | 0.7 | 20 |
| beta-BHC [2C] | A | 100.0 | 118.8 | 9658.734 | 11476.18 | | 18.8 | 20 |
| delta-BHC | A | 100.0 | 117.0 | 33539.38 | 39242.77 | | 17.0 | 20 |
| delta-BHC [2C] | A | 100.0 | 131.0 | 20704.78 | 27129.21 | | 31.0 | 20 * |
| Dieldrin | A | 100.0 | 102.3 | 33895.65 | 34667.68 | | 2.3 | 20 |
| Dieldrin [2C] | A | 100.0 | 104.9 | 22375.56 | 23469.09 | | 4.9 | 20 |
| Endosulfan I | A | 100.0 | 99.39 | 31729.01 | 31534.29 | | -0.6 | 20 |
| Endosulfan I [2C] | A | 100.0 | 99.36 | 20934.91 | 20802.07 | | -0.6 | 20 |
| Endosulfan II | A | 100.0 | 97.54 | 29666.08 | 28936.2 | | -2.5 | 20 |
| Endosulfan II [2C] | A | 100.0 | 100.6 | 19402.61 | 19519.8 | | 0.6 | 20 |
| Endosulfan sulfate | A | 100.0 | 103.0 | 25616.99 | 26375.42 | | 3.0 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 108.9 | 16791.83 | 18283.74 | | 8.9 | 20 |
| Endrin | A | 100.0 | 114.2 | 24735.1 | 28255.66 | | 14.2 | 20 |
| Endrin [2C] | A | 100.0 | 117.7 | 16756.72 | 19718.66 | | 17.7 | 20 |
| Endrin aldehyde | A | 100.0 | 98.41 | 24109.03 | 23725.17 | | -1.6 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 98.51 | 17038.67 | 16784.56 | | -1.5 | 20 |
| Endrin ketone | A | 100.0 | 98.67 | 34636.65 | 34176.27 | | -1.3 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 043R4301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVB | Injection Time: | 00:34 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 99.24 | 23263.99 | 23088.42 | | -0.8 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 111.4 | 36031.77 | 40138.63 | | 11.4 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 117.1 | 24013.09 | 28109.79 | | 17.1 | 20 |
| gamma-Chlordane | A | 100.0 | 98.55 | 33961.2 | 33468.99 | | -1.4 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 102.4 | 21621.04 | 22140.02 | | 2.4 | 20 |
| Heptachlor | A | 100.0 | 118.9 | 29722.9 | 35352.26 | | 18.9 | 20 |
| Heptachlor [2C] | A | 100.0 | 115.3 | 21682.7 | 25009.74 | | 15.3 | 20 |
| Heptachlor epoxide | A | 100.0 | 102.2 | 33684.73 | 34444.28 | | 2.3 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 102.1 | 21633.25 | 22082.06 | | 2.1 | 20 |
| Methoxychlor | A | 100.0 | 102.8 | 12781.08 | 13132.89 | | 2.8 | 20 |
| Methoxychlor [2C] | A | 100.0 | 102.3 | 8700.811 | 8900.06 | | 2.3 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 94.42 | 28765.14 | 27159.06 | | -5.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 102.3 | 21379.77 | 21880.2 | | 2.3 | 20 |
| Decachlorobiphenyl | A | 100.0 | 90.52 | 29956.87 | 27118.33 | | -9.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 92.76 | 17512.73 | 16244.24 | | -7.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 045F4501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVD | Injection Time: | 01:11 |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1126 | 1251.284 | 1408.672 | | 12.6 | 20 | |
| Toxaphene (2) | A | 1000 | 1284 | 499.794 | 641.488 | | 28.4 | 20 | * |
| Toxaphene (3) | A | 1000 | 1293 | 983.0718 | 1270.836 | | 29.3 | 20 | * |
| Toxaphene (4) | A | 1000 | 1195 | 1115.536 | 1332.709 | | 19.5 | 20 | |
| Toxaphene (5) | A | 1000 | 1086 | 582.2432 | 632.191 | | 8.6 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 1039 | 1311.742 | 1363.045 | | 3.9 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1558 | 357.144 | 556.62 | | 55.9 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1037 | 863.2383 | 895.451 | | 3.7 | 20 | |
| Toxaphene (4) [2C] | A | 1000 | 1387 | 613.1725 | 850.316 | | 38.7 | 20 | * |
| Toxaphene (5) [2C] | A | 1000 | 1167 | 327.2323 | 381.759 | | 16.7 | 20 | |

AVG 19.7%

AVG 23.8%

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06022 Batch Matrix: Solid Preparation: EXT_3546

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06022-BLK1 | 11/10/10 11:40 | 30.00 | 10.00 |
| LCS | 0L06022-BS1 | 11/10/10 11:40 | 30.00 | 10.00 |
| 1011014-01 | 1011258-01 | 11/10/10 11:40 | 30.00 | 10.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L06022-BLK1 File ID: 036F3601.D

Sampled: Prepared: 11/10/10 11:40 Analyzed: 12/10/10 22:24

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg wet | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.170 | 0.340 | 0.670 | U |
| 72-54-8 | 4,4'-DDD | | 0.170 | 0.340 | 0.670 | U |
| 50-29-3 | 4,4'-DDT | | 0.170 | 0.340 | 0.670 | U |
| 309-00-2 | Aldrin | | 0.110 | 0.340 | 0.670 | U |
| 319-84-6 | alpha-BHC | | 0.110 | 0.340 | 0.670 | U |
| 5103-71-9 | alpha-Chlordane | | 0.110 | 0.340 | 0.670 | U |
| 319-85-7 | beta-BHC | | 0.110 | 0.340 | 0.670 | U |
| 319-86-8 | delta-BHC | | 0.110 | 0.340 | 0.670 | U |
| 60-57-1 | Dieldrin | | 0.170 | 0.340 | 0.670 | U |
| 959-98-8 | Endosulfan I | | 0.110 | 0.340 | 0.670 | U |
| 33213-65-9 | Endosulfan II | | 0.170 | 0.340 | 0.670 | U |
| 1031-07-8 | Endosulfan sulfate | | 0.170 | 0.340 | 0.670 | U |
| 72-20-8 | Endrin | | 0.170 | 0.340 | 0.670 | U |
| 7421-93-4 | Endrin aldehyde | | 0.170 | 0.340 | 0.670 | U |
| 53494-70-5 | Endrin ketone | | 0.170 | 0.340 | 0.670 | U |
| 58-89-9 | gamma-BHC (Lindane) | | 0.110 | 0.340 | 0.670 | U |
| 5103-74-2 | gamma-Chlordane | | 0.110 | 0.340 | 0.670 | U |
| 76-44-8 | Heptachlor | | 0.110 | 0.340 | 0.670 | U |
| 1024-57-3 | Heptachlor epoxide | | 0.110 | 0.340 | 0.670 | U |
| 72-43-5 | Methoxychlor | | 0.110 | 0.340 | 0.670 | U |
| 8001-35-2 | Toxaphene | | 11.0 | 22.0 | 33.0 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg wet) | CONC (ug/Kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 6.667 | 6.956 | 104 | 70 - 125 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 8.342 | 125 | 70 - 125 | |
| Decachlorobiphenyl | 6.667 | 6.928 | 104 | 55 - 130 | |
| Decachlorobiphenyl [2C] | 6.667 | 8.284 | 124 | 55 - 130 | |

* Values outside of QC limits

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L06022 | Laboratory ID: | 0L06022-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **4,4'-DDE** | **16.67** | **21.61** | **130** | **70 - 125** |
| **4,4'-DDE [2C]** | **16.67** | **22.38** | **134** | **70 - 125** |
| 4,4'-DDD | 16.67 | 22.11 | 133 | 30 - 135 |
| **4,4'-DDD [2C]** | **16.67** | **22.94** | **138** | **30 - 135** |
| **4,4'-DDT** | **16.67** | **23.93** | **144** | **45 - 140** |
| **4,4'-DDT [2C]** | **16.67** | **24.40** | **146** | **45 - 140** |
| Aldrin | 16.67 | 23.24 | 139 | 45 - 140 |
| **Aldrin [2C]** | **16.67** | **23.90** | **143** | **45 - 140** |
| **alpha-BHC** | **16.67** | **23.99** | **144** | **60 - 125** |
| **alpha-BHC [2C]** | **16.67** | **25.46** | **153** | **60 - 125** |
| **alpha-Chlordane** | **16.67** | **22.09** | **133** | **65 - 120** |
| **alpha-Chlordane [2C]** | **16.67** | **22.13** | **133** | **65 - 120** |
| **beta-BHC** | **16.67** | **21.48** | **129** | **60 - 125** |
| **beta-BHC [2C]** | **16.67** | **23.29** | **140** | **60 - 125** |
| **delta-BHC** | **16.67** | **21.90** | **131** | **55 - 130** |
| **delta-BHC [2C]** | **16.67** | **24.30** | **146** | **55 - 130** |
| **Dieldrin** | **16.67** | **23.38** | **140** | **65 - 125** |
| **Dieldrin [2C]** | **16.67** | **23.32** | **140** | **65 - 125** |
| Endosulfan I | 16.67 | 22.36 | 134 | 15 - 135 |
| Endosulfan I [2C] | 16.67 | 22.42 | 135 | 15 - 135 |
| Endosulfan II | 16.67 | 21.21 | 127 | 35 - 140 |
| Endosulfan II [2C] | 16.67 | 22.51 | 135 | 35 - 140 |
| Endosulfan sulfate | 16.67 | 21.25 | 127 | 60 - 135 |
| **Endosulfan sulfate [2C]** | **16.67** | **23.18** | **139** | **60 - 135** |
| **Endrin** | **16.67** | **25.36** | **152** | **60 - 135** |
| **Endrin [2C]** | **16.67** | **25.79** | **155** | **60 - 135** |
| Endrin aldehyde | 16.67 | 16.94 | 102 | 35 - 145 |
| Endrin aldehyde [2C] | 16.67 | 18.04 | 108 | 35 - 145 |
| Endrin ketone | 16.67 | 20.65 | 124 | 65 - 135 |
| Endrin ketone [2C] | 16.67 | 22.39 | 134 | 65 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L06022 | Laboratory ID: | 0L06022-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **gamma-BHC (Lindane)** | **16.67** | **23.78** | **143** | **60 - 125** |
| **gamma-BHC (Lindane) [2C]** | **16.67** | **24.49** | **147** | **60 - 125** |
| **gamma-Chlordane** | **16.67** | **21.82** | **131** | **65 - 125** |
| **gamma-Chlordane [2C]** | **16.67** | **22.15** | **133** | **65 - 125** |
| **Heptachlor** | **16.67** | **25.42** | **152** | **50 - 140** |
| **Heptachlor [2C]** | **16.67** | **25.37** | **152** | **50 - 140** |
| **Heptachlor epoxide** | **16.67** | **23.23** | **139** | **65 - 130** |
| **Heptachlor epoxide [2C]** | **16.67** | **23.63** | **142** | **65 - 130** |
| Methoxychlor | 16.67 | 22.77 | 137 | 55 - 145 |
| Methoxychlor [2C] | 16.67 | 23.61 | 142 | 55 - 145 |

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011014-01

Lab Name: Empirical Laboratories, LLC

GKHMS-SO-018-10/13

Lab Sample ID: 1011258-01 Date(s) Analyzed: 12/10/2010 12/10/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW | | CONCENTRATION | %D RPD |
|---|---|---|---|---|---|---|
| | | | FROM | TO | | |
| beta-BHC | 1 | 6.05 | 6.34 | 6.40 | 0.498 | |
| | 2 | 5.30 | 5.51 | 5.57 | 1.03 | 70 |
| Endosulfan II | 1 | 8.56 | 8.89 | 8.95 | 0.758 | |
| | 2 | 7.28 | 7.58 | 7.64 | 0.566 | 29 |

JK 1/13/11

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV1 ) ug/L** | | | | Lab File ID: 003F0301.D | | Analyzed: 12/10/10 12:06 | | |
| Tetrachloro-m-xylene | 100.0 | 90.4 | 80 - 120 | 5.122 | 5.122 | 0.0000 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 97.2 | 80 - 120 | 4.319 | 4.319 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 86.5 | 80 - 120 | 11.227 | 11.227 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 91.8 | 80 - 120 | 9.651 | 9.651 | 0.0000 | +/-0.030 | |
| **Calibration Check (0L35009-CCV6 ) ug/L** | | | | Lab File ID: 031F3101.D | | Analyzed: 12/10/10 20:51 | | |
| Tetrachloro-m-xylene | 100.0 | 94.6 | 80 - 120 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 100 | 80 - 120 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 93.8 | 80 - 120 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 101 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Blank (0L06022-BLK1 ) ug/Kg wet** | | | | Lab File ID: 036F3601.D | | Analyzed: 12/10/10 22:24 | | |
| Tetrachloro-m-xylene | 6.667 | 104 | 70 - 125 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 125 | 70 - 125 | 4.314 | 4.319 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl | 6.667 | 104 | 55 - 130 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 6.667 | 124 | 55 - 130 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **LCS (0L06022-BS1 ) ug/Kg wet** | | | | Lab File ID: 037F3701.D | | Analyzed: 12/10/10 22:43 | | |
| Tetrachloro-m-xylene | 6.667 | 125 | 70 - 125 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 135 | 70 - 125 | 4.315 | 4.319 | -0.0040 | +/-0.030 | * |
| Decachlorobiphenyl | 6.667 | 115 | 55 - 130 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 6.667 | 135 | 55 - 130 | 9.647 | 9.651 | -0.0040 | +/-0.030 | * |
| **1011014-01 (1011258-01 ) ug/Kg dry** | | | | Lab File ID: 038F3801.D | | Analyzed: 12/10/10 23:01 | | |
| Tetrachloro-m-xylene | 7.655 | 98.4 | 70 - 125 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 7.655 | 114 | 70 - 125 | 4.314 | 4.319 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl | 7.655 | 104 | 55 - 130 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 7.655 | 110 | 55 - 130 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Calibration Check (0L35009-CCVB ) ug/L** | | | | Lab File ID: 043F4301.D | | Analyzed: 12/11/10 00:34 | | |
| Tetrachloro-m-xylene | 100.0 | 94.4 | 80 - 120 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 102 | 80 - 120 | 4.316 | 4.319 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 90.5 | 80 - 120 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 92.8 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_003

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Solid **Instrument:** GL-ECD3

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| 4,4'-DDD | 0.170 | 0.670 | ug/Kg | SW8081A |
| 4,4'-DDE [2C] | 0.170 | 0.670 | ug/Kg | SW8081A |
| 4,4'-DDT | 0.170 | 0.670 | ug/Kg | SW8081A |
| Aldrin | 0.110 | 0.670 | ug/Kg | SW8081A |
| alpha-BHC | 0.110 | 0.670 | ug/Kg | SW8081A |
| alpha-Chlordane | 0.110 | 0.670 | ug/Kg | SW8081A |
| beta-BHC [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| delta-BHC | 0.110 | 0.670 | ug/Kg | SW8081A |
| Dieldrin | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endosulfan I | 0.110 | 0.670 | ug/Kg | SW8081A |
| Endosulfan II | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endosulfan sulfate | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endrin | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endrin aldehyde | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endrin ketone [2C] | 0.170 | 0.670 | ug/Kg | SW8081A |
| gamma-BHC (Lindane) [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| gamma-Chlordane [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| Heptachlor [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| Heptachlor epoxide | 0.110 | 0.670 | ug/Kg | SW8081A |
| Methoxychlor | 0.110 | 0.670 | ug/Kg | SW8081A |
| Toxaphene | 11.0 | 33.0 | ug/Kg | SW8081A |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: FEBRUARY 14, 2011**

**FROM:** **DANIELLE M. BAUGHMAN** **COPIES: DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – TAL METALS**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_003**

**SAMPLES:**

16/Aqueous/

| | | |
|---|---|---|
| GKHMS-GW-014-1010 | GKHMS-GW-015-1010 | GKHMS-GW-016-1010 |
| GKHMS-GW-020-1010 | GKHMS-GW-021-1010 | GKHMS-GW-024-1010 |
| GKHMS-GW-025-1010 | GKHMS-GW-026-1010 | GKHMS-GW-027-1010 |
| GKHMS-GW-028-1010 | GKHMS-GW-029-1010 | GKHMS-GW-030-1010 |
| GKHMS-GW-031-1010 | GKHMS-GW-032D-1010 | GKHMS-GW-033D-1010 |
| GKHMS-GW-034D-1010 | | |

1/Soil/

GKHMS-SO-018-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_003, consists of sixteen (16) aqueous environmental samples and one (1) soil environmental sample. No field duplicate pairs were included within this SDG.

All samples were analyzed for aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc. The samples were collected by Tetra Tech NUS on October 30 and 31, 2010 and November 1 and 2, 2010 and analyzed by Empirical Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metal analyses were conducted using SW-846 method 6010C. Mercury analyses were conducted using SW-846 methods 7470A and 7471A.

These data were evaluated based on the following parameters:

* • Data Completeness
• Holding Times
• Initial / Continuing Calibration Verification Results
* • Laboratory Method Blank Analyses
* • Laboratory Control Sample Recoveries
* • Matrix Spike Recoveries
* • Serial Dilution Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

All mercury samples were analyzed beyond the 28 day holding time limit. Samples were qualified as estimated "UJ".

The CCV% recoveries on 12/7/10 at 1702 for magnesium, potassium, and sodium were > 110% quality control limit. Samples GKHMS-GW-014-1010, GKHMS-GW-015-1010, GKHMS-GW-016-1010, GKHMS-GW-024-1010, GKHMS-GW-025-1010, GKHMS-GW-026-1010, GKHMS-GW-027-1010, GKHMS-GW-028-1010, GKHMS-GW-032D-1010, and GKHMS-GW-034D-1010 were affected and qualified for magnesium. Samples GKHMS-GW-014-1010, GKHMS-GW-015-1010, GKHMS-GW-016-1010, GKHMS-GW-024-1010, GKHMS-GW-025-1010, GKHMS-GW-026-1010, GKHMS-GW-027-1010, and GKHMS-GW-028-1010 were affected and qualified for potassium. Samples GKHMS-GW-015-1010, GKHMS-GW-016-1010, and GKHMS-GW-026-1010 were affected and qualified for sodium. Results reported for magnesium, potassium, and sodium were qualified as estimated "J".

The CCV % recoveries on 12/7/10 at 1826 for aluminum and magnesium were >110% quality control limit. Samples GKHMS-GW-020-1010, GKHMS-GW-021-1010, GKHMS-GW-029-1010, GKHMS-GW-030-1010, and GKHMS-GW-031-1010 were affected and qualified for aluminum and magnesium. Results reported for aluminum and magnesium were qualified as estimated "J".

The CCV % recovery on 12/7/10 at 1826 for calcium was <90% quality control limit. Samples GKHMS-GW-020-1010, GKHMS-GW-021-1010, GKHMS-GW-029-1010, GKHMS-GW-030-1010, GKHMS-GW-031-1010, and GKHMS-GW-033D-1010 were affected. Results reported for calcium were qualified as estimated "J".

The CCV % recovery on 12/9/10 at 0012 for aluminum was <90% quality control limit. Sample GKHMS-GW-034D-1010 was affected. The result reported for aluminum was qualified as estimated "UJ".

The CRDL % recovery for mercury was >120% quality control limit. Sample GKHMS-SO-018-1010 was affected. The result reported for mercury was qualified as estimated "J".

Notes

Positive results greater than the method detection limit (MDL), but less than the reporting limit (RL) were qualified as estimated "J".

Form I's contained lab IDs. Field sample IDs needed to be determined and were hand written on all Form I's.

Executive Summary

**Laboratory Performance:** All mercury samples were analyzed beyond the 28 day holding time limit. The CCV % recoveries for aluminum, calcium, potassium, magnesium, and sodium were outside of the 90-110% quality control limit. The CRDL % recovery for mercury was outside of the 80-120% quality control limit.

**Other Factors Affecting Data Quality:** Positive results greater than the method detection limit (MDL), but less than the reporting limit (RL) were qualified.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Danielle M. Baughman
Project Engineer

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | | GKHMS-GW-020-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_003 | LAB_ID | 1011257-01 | | | 1011257-02 | | | 1011257-03 | | | 1011257-13 | | |
| FRACTION: M | SAMP_DATE | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 69.3 | J | P | 64.7 | J | P | 274 | | | 75.6 | J | CP |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 4.48 | J | P | 3 | U | | 3.29 | J | P | 3 | U | |
| BARIUM | | 11.8 | J | P | 5 | U | | 11.8 | J | P | 5.19 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 3.63 | J | P | 2.26 | J | P | 2.34 | J | P | 2.9 | J | P |
| CALCIUM | | 268000 | | | 143000 | | | 466000 | | | 93300 | J | C |
| CHROMIUM | | 2 | U | | 2 | U | | 4.17 | J | P | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 448 | | | 268 | | | 471 | | | 169 | | |
| LEAD | | 1.5 | U | | 1.5 | U | | 1.5 | U | | 1.5 | U | |
| MAGNESIUM | | 292000 | J | C | 115000 | J | C | 69400 | J | C | 22400 | J | C |
| MANGANESE | | 12.8 | J | P | 9.48 | J | P | 8.74 | J | P | 4.27 | J | P |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 79100 | J | C | 24000 | J | C | 9910 | J | C | 3030 | J | P |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 2230000 | | | 497000 | J | C | 165000 | J | C | 53600 | | |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 5 | U | | 8.05 | J | P | 7.52 | J | P | 6.39 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | | GKHMS-GW-026-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_003 | LAB_ID | 1011257-14 | | | 1011257-04 | | | 1011257-05 | | | 1011257-07 | | |
| FRACTION: M | SAMP_DATE | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 111 | J | CP | 50 | U | | 50 | U | | 84.6 | J | P |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| BARIUM | | 10 | J | P | 5.62 | J | P | 5 | U | | 5 | U | |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 4.11 | J | P | 2.49 | J | P | 2.08 | J | P | 3.68 | J | P |
| CALCIUM | | 177000 | J | C | 219000 | | | 143000 | | | 98200 | | |
| CHROMIUM | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 36.3 | J | P | 393 | | | 285 | | | 118 | | |
| LEAD | | 1.5 | U | | 2 | U | | 1.5 | U | | 2 | U | |
| MAGNESIUM | | 42700 | J | C | 174000 | J | C | 127000 | J | C | 88100 | J | C |
| MANGANESE | | 3 | U | | 8.76 | J | P | 4.04 | J | P | 4.83 | J | P |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 7090 | | | 42300 | J | C | 30000 | J | C | 16800 | J | C |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 125000 | | | 1080000 | | | 752000 | | | 293000 | J | C |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 5 | U | | 5.35 | J | P | 5 | U | | 6.14 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | | GKHMS-GW-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_003 | LAB_ID | 1011257-08 | | | 1011257-09 | | | 1011257-10 | | | 1011257-11 | | |
| FRACTION: M | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 988 | J | P | 217 | | | 50.4 | J | CP | 154 | J | CP |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| BARIUM | | 22.1 | J | P | 14 | J | P | 14.3 | J | P | 7.16 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 5.64 | | | 4.97 | J | P | 4.52 | J | P | 3.38 | J | P |
| CALCIUM | | 694000 | | | 361000 | | | 195000 | J | C | 193000 | J | C |
| CHROMIUM | | 13.4 | | | 4.24 | J | P | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 1090 | | | 393 | | | 116 | | | 108 | | |
| LEAD | | 7.5 | U | | 19.5 | | | 1.57 | J | P | 1.5 | U | |
| MAGNESIUM | | 111000 | J | C | 118000 | J | C | 190000 | J | C | 93800 | J | C |
| MANGANESE | | 16.8 | | | 6.74 | J | P | 3.69 | J | P | 3.94 | J | P |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 4.62 | J | P | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 26900 | J | C | 40700 | J | C | 60400 | | | 19000 | | |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 449000 | | | 698000 | | | 1390000 | | | 341000 | | |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 6.1 | J | P | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 25 | U | | 7.74 | J | P | 9.29 | J | P | 6.15 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | | GKHMS-GW-034D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_003 | LAB_ID | 1011257-15 | | | 1011257-16 | | | 1011257-12 | | | 1011257-06 | | |
| FRACTION: M | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | | 10/30/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 65.6 | J | CP | 1080 | | | 530 | J | P | 250 | UJ | C |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 5.32 | J | P | 3 | U | | 3.22 | J | P |
| BARIUM | | 10.5 | J | P | 42.9 | | | 17.7 | J | P | 26.9 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 6.64 | | | 13.7 | J | P | 9.78 | J | P | | | |
| CALCIUM | | 157000 | J | C | 1310000 | J | C | 366000 | J | C | 454000 | | |
| CHROMIUM | | 2 | U | | 51.1 | | | 10 | U | | 10 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4.48 | J | P | 7 | U | | 8 | U | |
| IRON | | 40 | J | P | 6100 | | | 40.3 | J | P | 533 | | |
| LEAD | | 3 | U | | 19.6 | | | 7.5 | U | | 7.5 | U | |
| MAGNESIUM | | 196000 | J | C | 884000 | | | 964000 | | | 1020000 | | |
| MANGANESE | | 4.26 | J | P | 55.1 | | | 7.5 | J | P | 18.7 | | |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 3 | U | | 3 | U | | 6 | U | | 3 | U | |
| POTASSIUM | | 44200 | | | 309000 | | | 330000 | | | | | |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 4.38 | J | P |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 1240000 | | | 7820000 | | | 7650000 | | | 7910000 | | |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 6.43 | J | P | 5 | U | | 5 | U | |
| ZINC | | 5 | U | | 27.8 | J | P | 25 | U | | 25 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-034D-1010-RE |
|---|---|---|
| SDG: CTOJM16KW_003 | LAB_ID | 1011257-06RE3 |
| FRACTION: M | SAMP_DATE | 10/30/2010 |
| MEDIA: WATER | QC_TYPE | NM |
| | UNITS | UG/L |
| | PCT_SOLIDS | 0.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| ALUMINUM | | | |
| ANTIMONY | | | |
| ARSENIC | | | |
| BARIUM | | | |
| BERYLLIUM | | | |
| CADMIUM | | | |
| CALCIUM | | | |
| CHROMIUM | | | |
| COBALT | | | |
| COPPER | | | |
| IRON | | | |
| LEAD | | | |
| MAGNESIUM | | | |
| MANGANESE | | | |
| MERCURY | | | |
| NICKEL | | | |
| POTASSIUM | 379000 | | |
| SELENIUM | | | |
| SILVER | | | |
| SODIUM | | | |
| THALLIUM | | | |
| VANADIUM | | | |
| ZINC | | | |

| | | | | |
|---|---|---|---|---|
| **PROJ_NO: 02607** | NSAMPLE | GKHMS-SO-018-1010 | | |
| **SDG: CTOJM16KW_003** | LAB_ID | 1011258-01 | | |
| **FRACTION: M** | SAMP_DATE | 11/2/2010 | | |
| **MEDIA: SOIL** | QC_TYPE | NM | | |
| | UNITS | MG/KG | | |
| | PCT_SOLIDS | 87.1 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| ALUMINUM | | 317 | | |
| ANTIMONY | | 1.13 | U | |
| ARSENIC | | 0.675 | U | |
| BARIUM | | 8.66 | J | P |
| BERYLLIUM | | 0.225 | U | |
| CADMIUM | | 0.831 | J | P |
| CALCIUM | | 381000 | | |
| CHROMIUM | | 3.07 | | |
| COBALT | | 1.13 | U | |
| COPPER | | 1.13 | U | |
| IRON | | 181 | | |
| LEAD | | 1.69 | U | |
| MAGNESIUM | | 1070 | J | P |
| MANGANESE | | 5.77 | | |
| NICKEL | | 1.13 | U | |
| POTASSIUM | | 225 | U | |
| SELENIUM | | 0.675 | U | |
| SILVER | | 0.45 | U | |
| SODIUM | | 1210 | | |
| THALLIUM | | 0.675 | U | |
| VANADIUM | | 2.26 | J | P |
| ZINC | | 5.63 | U | |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

GIKHMS-GW-014-1010

# ANALYSIS DATA SHEET

1011002-01

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/30/10 09:30
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:19 |
| 7429-90-5 | Aluminum | 69.3 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-38-2 | Arsenic | 4.48 | 3.00 | 5.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-39-3 | Barium | 11.8 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-43-9 | Cadmium | 3.63 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-70-2 | Calcium | 268000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7439-89-6 | Iron | 448 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7439-95-4 | Magnesium | 292000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7439-96-5 | Manganese | 12.8 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-09-7 | Potassium | 79100 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-23-5 | Sodium | 2230000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06016 | 12/08/10 23:26 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:14 |

GICHMS-GW-015-1010

# ANALYSIS DATA SHEET

1011002-02

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/30/10 10:00
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-02
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:21 |
| 7429-90-5 | Aluminum | 64.7 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-43-9 | Cadmium | 2.26 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-70-2 | Calcium | 143000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7439-89-6 | Iron | 268 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7439-95-4 | Magnesium | 115000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7439-96-5 | Manganese | 9.48 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-09-7 | Potassium | 24000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-23-5 | Sodium | 497000 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:19 |
| 7440-66-6 | Zinc | 8.05 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:19 |

GKHMS-GW-016-1010

# ANALYSIS DATA SHEET

1011002-03

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/30/10 10:30
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-03
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:22 |
| 7429-90-5 | Aluminum | 274 | 50.0 | 100 | 200 | 1 | | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-38-2 | Arsenic | 3.29 | 3.00 | 5.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-39-3 | Barium | 11.8 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-43-9 | Cadmium | 2.34 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-70-2 | Calcium | 466000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-47-3 | Chromium | 4.17 | 2.00 | 4.00 | 10.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7439-89-6 | Iron | 471 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7439-95-4 | Magnesium | 69400 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7439-96-5 | Manganese | 8.74 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-09-7 | Potassium | 9910 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-23-5 | Sodium | 165000 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:24 |
| 7440-66-6 | Zinc | 7.52 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:24 |

GKHMS-GW-020-1010

1011002-13

# ANALYSIS DATA SHEET

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/01/10 10:00
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-13
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:39 |
| 7429-90-5 | Aluminum | 75.6 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-39-3 | Barium | 5.19 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-43-9 | Cadmium | 2.90 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-70-2 | Calcium | 93300 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7439-89-6 | Iron | 169 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7439-95-4 | Magnesium | 22400 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7439-96-5 | Manganese | 4.27 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-09-7 | Potassium | 3030 | 1000 | 3000 | 5000 | 1 | I | SW6010C | 0L06016 | 12/17/10 12:42 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-23-5 | Sodium | 53600 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06016 | 12/17/10 12:42 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:29 |
| 7440-66-6 | Zinc | 6.39 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:29 |

GKHMS-GW-021-1010

# ANALYSIS DATA SHEET

1011002-14

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/01/10 11:00
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-14
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:40 |
| 7429-90-5 | Aluminum | 111 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-39-3 | Barium | 10.0 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-43-9 | Cadmium | 4.11 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-70-2 | Calcium | 177000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7439-89-6 | Iron | 36.3 | 30.0 | 60.0 | 100 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7439-95-4 | Magnesium | 42700 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-09-7 | Potassium | 7090 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06016 | 12/17/10 12:47 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-23-5 | Sodium | 125000 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06016 | 12/17/10 12:47 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:34 |

GKHMS-GW-024-1010

# ANALYSIS DATA SHEET

1011002-04

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/30/10 13:00
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-04
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:23 |
| 7429-90-5 | Aluminum | | 50.0 | 100 | 200 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-39-3 | Barium | 5.62 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-43-9 | Cadmium | 2.49 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-70-2 | Calcium | 219000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7439-89-6 | Iron | 393 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7439-92-1 | Lead | | 2.00 | 3.00 | 3.00 | 1 | M U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7439-95-4 | Magnesium | 174000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7439-96-5 | Manganese | 8.76 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-09-7 | Potassium | 42300 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-23-5 | Sodium | 1080000 | 1000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/08/10 23:31 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:29 |
| 7440-66-6 | Zinc | 5.35 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:29 |

GKHMS-GW-025-1010

# ANALYSIS DATA SHEET

1011002-05

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/30/10 11:40
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-05
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:25 |
| 7429-90-5 | Aluminum | | 50.0 | 100 | 200 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-43-9 | Cadmium | 2.08 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-70-2 | Calcium | 143000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7439-89-6 | Iron | 285 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7439-95-4 | Magnesium | 127000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7439-96-5 | Manganese | 4.04 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-09-7 | Potassium | 30000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-23-5 | Sodium | 752000 | 400 | 6000 | 10000 | 2 | D | SW6010C | 0L06016 | 12/08/10 23:36 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:35 |

GKHMS-GW-026-1010

# ANALYSIS DATA SHEET

1011002-07

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/31/10 10:40
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-07
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:27 |
| 7429-90-5 | Aluminum | 84.6 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-43-9 | Cadmium | 3.68 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-70-2 | Calcium | 98200 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7439-89-6 | Iron | 118 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7439-92-1 | Lead | | 2.00 | 3.00 | 3.00 | 1 | M U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7439-95-4 | Magnesium | 88100 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7439-96-5 | Manganese | 4.83 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-09-7 | Potassium | 16800 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-23-5 | Sodium | 293000 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:45 |
| 7440-66-6 | Zinc | 6.14 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:45 |

GKHMS-GW-027-1010

# ANALYSIS DATA SHEET

1011002-08

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/31/10 12:20
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-08
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:29 |
| 7429-90-5 | Aluminum | 988 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06016 | 12/09/10 18:39 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-39-3 | Barium | 22.1 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-43-9 | Cadmium | 5.64 | 1.00 | 2.00 | 5.00 | 1 | | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-70-2 | Calcium | 694000 | 5000 | 10000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 18:39 |
| 7440-47-3 | Chromium | 13.4 | 2.00 | 4.00 | 10.0 | 1 | | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7439-89-6 | Iron | 1090 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06016 | 12/09/10 18:39 |
| 7439-95-4 | Magnesium | 111000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7439-96-5 | Manganese | 16.8 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-02-0 | Nickel | 4.62 | 3.00 | 6.00 | 10.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-09-7 | Potassium | 26900 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-23-5 | Sodium | 449000 | 1000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 18:39 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-62-2 | Vanadium | 6.10 | 5.00 | 10.0 | 12.5 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:50 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06016 | 12/09/10 18:39 |

GKHMS-GW-028-1010

# ANALYSIS DATA SHEET

1011002-09

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/31/10 15:00
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-09
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 13:41 |
| 7429-90-5 | Aluminum | 217 | 50.0 | 100 | 200 | 1 | | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-39-3 | Barium | 14.0 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-43-9 | Cadmium | 4.97 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-70-2 | Calcium | 361000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-47-3 | Chromium | 4.24 | 2.00 | 4.00 | 10.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7439-89-6 | Iron | 393 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7439-92-1 | Lead | 19.5 | 1.50 | 3.00 | 3.00 | 1 | | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7439-95-4 | Magnesium | 118000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7439-96-5 | Manganese | 6.74 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-09-7 | Potassium | 40700 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-23-5 | Sodium | 698000 | 1000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 18:44 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:55 |
| 7440-66-6 | Zinc | 7.74 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:55 |

GKHMS-GW-029-1010

# ANALYSIS DATA SHEET

1011002-10

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/31/10 13:00
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-10
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:34 |
| 7429-90-5 | Aluminum | 50.4 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-39-3 | Barium | 14.3 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-43-9 | Cadmium | 4.52 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-70-2 | Calcium | 195000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7439-89-6 | Iron | 116 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7439-92-1 | Lead | 1.57 | 1.50 | 3.00 | 3.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7439-95-4 | Magnesium | 190000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7439-96-5 | Manganese | 3.69 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-09-7 | Potassium | 60400 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06016 | 12/17/10 12:32 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-23-5 | Sodium | 1390000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06016 | 12/09/10 18:49 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:14 |
| 7440-66-6 | Zinc | 9.29 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:14 |

GKHMS-GW-030-1010

# ANALYSIS DATA SHEET

1011002-11

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/31/10 11:40
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-11
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:36 |
| 7429-90-5 | Aluminum | 154 | 50.0 | 100 | 200 | 1 | X 1 | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-39-3 | Barium | 7.16 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-43-9 | Cadmium | 3.38 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-70-2 | Calcium | 193000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7439-89-6 | Iron | 108 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7439-95-4 | Magnesium | 93800 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7439-96-5 | Manganese | 3.94 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-09-7 | Potassium | 19000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06016 | 12/17/10 12:37 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-23-5 | Sodium | 341000 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06016 | 12/17/10 12:37 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:19 |
| 7440-66-6 | Zinc | 6.15 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:19 |

GKHMS-GW-031-1010

# ANALYSIS DATA SHEET

1011002-15

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/01/10 09:20
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-15
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:42 |
| 7429-90-5 | Aluminum | 65.6 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-39-3 | Barium | 10.5 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-43-9 | Cadmium | 6.64 | 1.00 | 2.00 | 5.00 | 1 | | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-70-2 | Calcium | 157000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7439-89-6 | Iron | 40.0 | 30.0 | 60.0 | 100 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7439-92-1 | Lead | | 3.00 | 6.00 | 6.00 | 2 | U | SW6010C | 0L06016 | 12/17/10 13:39 |
| 7439-95-4 | Magnesium | 196000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7439-96-5 | Manganese | 4.26 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-09-7 | Potassium | 44200 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/17/10 12:52 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-23-5 | Sodium | 1240000 | 1000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/17/10 12:52 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:39 |

GKHMS-GW-032D-1010

# ANALYSIS DATA SHEET

1011002-16

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/01/10 08:40
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-16
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:47 |
| 7429-90-5 | Aluminum | 1080 | 250 | 500 | 1000 | 5 | D | SW6010C | 0L06016 | 12/09/10 19:08 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-38-2 | Arsenic | 5.32 | 3.00 | 5.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-39-3 | Barium | 42.9 | 5.00 | 10.0 | 40.0 | 1 | | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-43-9 | Cadmium | 13.7 | 5.00 | 10.0 | 25.0 | 5 | D I | SW6010C | 0L06016 | 12/09/10 19:08 |
| 7440-70-2 | Calcium | 1310000 | 5000 | 10000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 19:08 |
| 7440-47-3 | Chromium | 51.1 | 10.0 | 20.0 | 50.0 | 5 | D | SW6010C | 0L06016 | 12/09/10 19:08 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-50-8 | Copper | 4.48 | 4.00 | 8.00 | 10.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7439-89-6 | Iron | 6100 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7439-92-1 | Lead | 19.6 | 7.50 | 15.0 | 15.0 | 5 | D | SW6010C | 0L06016 | 12/09/10 19:08 |
| 7439-95-4 | Magnesium | 884000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 19:08 |
| 7439-96-5 | Manganese | 55.1 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-09-7 | Potassium | 309000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 19:08 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-23-5 | Sodium | 7820000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06016 | 12/09/10 19:13 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-62-2 | Vanadium | 6.43 | 5.00 | 10.0 | 12.5 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:44 |
| 7440-66-6 | Zinc | 27.8 | 25.0 | 50.0 | 100 | 5 | D I | SW6010C | 0L06016 | 12/09/10 19:08 |

GKHMS-GW-0330-1010

# ANALYSIS DATA SHEET

1011002-12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/31/10 10:00
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-12
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 13:49 |
| 7429-90-5 | Aluminum | 530 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06016 | 12/09/10 18:54 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-39-3 | Barium | 17.7 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-43-9 | Cadmium | 9.78 | 5.00 | 10.0 | 25.0 | 5 | D I | SW6010C | 0L06016 | 12/09/10 18:54 |
| 7440-70-2 | Calcium | 366000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06016 | 12/09/10 18:54 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-50-8 | Copper | | 7.00 | 8.00 | 10.0 | 1 | M U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7439-89-6 | Iron | 40.3 | 30.0 | 60.0 | 100 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06016 | 12/09/10 18:54 |
| 7439-95-4 | Magnesium | 964000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 18:54 |
| 7439-96-5 | Manganese | 7.50 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-02-0 | Nickel | | 6.00 | 6.00 | 10.0 | 1 | M U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-09-7 | Potassium | 330000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/09/10 18:54 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-23-5 | Sodium | 7650000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06016 | 12/09/10 18:58 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:24 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06016 | 12/09/10 18:54 |

GKHNS-GW-0340-1010

# ANALYSIS DATA SHEET

1011002-06

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/30/10 08:40
% Solids: 0.00

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011257-06
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:26 |
| 7429-90-5 | Aluminum | | 250 | 500 | 1000 | 5 | Y U | SW6010C | 0L06016 | 12/08/10 23:41 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-38-2 | Arsenic | 3.22 | 3.00 | 5.00 | 5.00 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-39-3 | Barium | 26.9 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-43-9 | Cadmium | 18.5 | 5.00 | 10.0 | 25.0 | 5 | D1 | SW6010C | 0L06016 | 12/08/10 23:41 |
| 7440-70-2 | Calcium | 454000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06016 | 12/08/10 23:41 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-50-8 | Copper | | 8.00 | 8.00 | 10.0 | 1 | M U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7439-89-6 | Iron | 533 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7439-92-1 | Lead | | 7.50 | 15.0 | 15.0 | 5 | U | SW6010C | 0L06016 | 12/08/10 23:41 |
| 7439-95-4 | Magnesium | 1020000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/08/10 23:41 |
| 7439-96-5 | Manganese | 18.7 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-09-7 | Potassium | 379000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06016 | 12/17/10 18:40 |
| 7782-49-2 | Selenium | 4.38 | 3.00 | 5.00 | 10.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-23-5 | Sodium | 7910000 | 5000 | 75000 | 125000 | 25 | D | SW6010C | 0L06016 | 12/08/10 23:45 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 16:40 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06016 | 12/08/10 23:41 |

GKHMS-SO-018-1010

# ANALYSIS DATA SHEET

1011014-01

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 11:40
% Solids: 87.09

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Laboratory ID: 1011258-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0124 | 0.0316 | 0.0330 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 11:58 |
| 7429-90-5 | Aluminum | 317 | 56.3 | 113 | 225 | 5 | D | SW6010C | 0L15009 | 12/17/10 15:57 |
| 7440-36-0 | Antimony | | 1.13 | 1.80 | 3.38 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-38-2 | Arsenic | | 0.675 | 1.13 | 1.13 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-39-3 | Barium | 8.66 | 1.13 | 2.25 | 9.01 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-41-7 | Beryllium | | 0.225 | 0.450 | 1.13 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-43-9 | Cadmium | 0.831 | 0.225 | 0.450 | 1.13 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-70-2 | Calcium | 381000 | 1130 | 2250 | 5630 | 5 | D | SW6010C | 0L15009 | 12/17/10 15:57 |
| 7440-47-3 | Chromium | 3.07 | 0.450 | 0.901 | 2.25 | 1 | | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-48-4 | Cobalt | | 1.13 | 2.25 | 2.81 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-50-8 | Copper | | 1.13 | 1.80 | 2.25 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7439-89-6 | Iron | 181 | 6.75 | 13.5 | 22.5 | 1 | | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7439-92-1 | Lead | | 1.69 | 3.38 | 3.38 | 5 | U | SW6010C | 0L15009 | 12/17/10 15:57 |
| 7439-95-4 | Magnesium | 1070 | 225 | 675 | 1130 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7439-96-5 | Manganese | 5.77 | 0.675 | 1.35 | 3.38 | 1 | | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-02-0 | Nickel | | 1.13 | 1.35 | 2.25 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-09-7 | Potassium | | 225 | 675 | 1130 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7782-49-2 | Selenium | | 0.675 | 1.13 | 2.25 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-22-4 | Silver | | 0.450 | 0.450 | 2.25 | 1 | M U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-23-5 | Sodium | 1210 | 225 | 675 | 1130 | 1 | | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-28-0 | Thallium | | 0.675 | 0.901 | 1.80 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-62-2 | Vanadium | 2.26 | 1.13 | 2.25 | 2.81 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:48 |
| 7440-66-6 | Zinc | | 5.63 | 11.3 | 22.5 | 5 | U | SW6010C | 0L15009 | 12/17/10 15:57 |

# APPENDIX C
# SUPPORT DOCUMENTATION

## Sample Delivery Group Case Narrative

**Receipt Information**
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

All samples for SW7470A and SW7471A were received in the laboratory out of the EPA recommending holding time.

**Changes to the Revision**
This is an original submittal of the final report package.

**Analytical Information**
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

**Chromatographic Flags for Manual Integration:**
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

**SW6010C/SW7470A/SW7471A:**
Samples 1011257-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15, -16 and 1011258-01 were received after the EPA recommended holding time for SW7470A and SW7471A.

Samples 1011257-04 and -07 are qualified with an M for Lead to indicate that the DL was raised due to interference, samples 1011257-06 and -12 are qualified with an M for

Copper to indicate that the DL was raised due to interference and sample 1011257-12 is qualified with an M for Nickel to indicate that the DL was raised due to interference.

The continuing calibration verifications exceeded criteria in 0L34305-CCV2 with a positive bias for Sodium, in 0L34305-CCV4 with a positive bias for Magnesium, Potassium and Sodium, in 0L34305-CCV5 with a positive bias for Aluminum, Magnesium Potassium and Sodium and with a negative bias for Calcium and in 0L34704-CCV8 with a negative bias for Aluminum.

The continuing calibration blanks 0L34305-CCB3 and –CCB5 and digestion blank 0L06016-BLK1 have positive results for Sodium. The digestion blank 0L15009-BLK1 has a positive result for Zinc.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The batch spike associated to batch 0L06022 exceeded criteria with a positive bias on both columns for 4,4'-DDE, 4,4'-DDT, Alpha-BHC, Alpha-Chlordane, Beta-BHC, Gamma-BHC, Dieldrin, Endrin, Gamma-BHC, Gamma-Chlordane, Heptachlor and Heptachlor Epoxide and on column 2 with a positive bias for 4,4'-DDD, Aldrin and Endosulfan Sulfate.

The surrogates Tetrachloro-m-xylene and Decachlorobiphenyl exceeded criteria with a positive bias in 0L35009-BS1.

The continuing calibration verifications exceeded criteria in 0L35009-CCV6 with a positive bias on column 2 for Delta-BHC, in 0L35009-CCV8 and –CCVD with a positive bias on column 2 for Toxaphene and in 0L35009-CCVB with a positive bias on column 2 for Alpha-BHC and Delta-BHC.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

**Analytical Report Terms and Qualifiers**

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

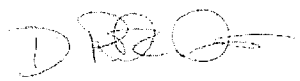
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

CENTAURI LABS™

WORK ORDER

Printed: 11/2/2010 3:12:41PM

**1011002**

**Approved**

*Due Date: 11/16/10 00:00 (14 day TAT)*

*Date Received: 11/02/10 10:00*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

Organic Extractions holding times are 7 days for water AND SOIL!!!

| Analysis | Expires | Comments |
|---|---|---|
| **1011002-01 GKHMS-GW-014-1010 [Water]** | **Sampled 10/30/10 09:30 Eastern** | |
| 8260B LL VOA | 11/13/10 09:30 | |
| 8270D LL SVOC TCL | 11/06/10 09:30 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 09:30 | |
| 6020A QSM TAL | 04/28/11 09:30 | |
| **1011002-02 GKHMS-GW-015-1010 [Water]** | **Sampled 10/30/10 10:00 Eastern** | |
| 6020A QSM TAL | 04/28/11 10:00 | |
| 8260B LL VOA | 11/13/10 10:00 | |
| 8270D LL SVOC TCL | 11/06/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 10:00 | |
| **1011002-03 GKHMS-GW-016-1010 [Water]** | **Sampled 10/30/10 10:30 Eastern** | |
| 6020A QSM TAL | 04/28/11 10:30 | |
| Mercury, Total 7470A | 11/27/10 10:30 | |
| 8260B LL VOA | 11/13/10 10:30 | |
| 8270D LL SVOC TCL | 11/06/10 10:30 | PLUS SIM PAHs |
| **1011002-04 GKHMS-GW-024-1010 [Water]** | **Sampled 10/30/10 13:00 Eastern** | |
| 6020A QSM TAL | 04/28/11 13:00 | |
| 8260B LL VOA | 11/13/10 13:00 | |
| 8270D LL SVOC TCL | 11/06/10 13:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 13:00 | |
| **1011002-05 GKHMS-GW-025-1010 [Water]** | **Sampled 10/30/10 11:40 Eastern** | |
| 6020A QSM TAL | 04/28/11 11:40 | |
| Mercury, Total 7470A | 11/27/10 11:40 | |
| 8270D LL SVOC TCL | 11/06/10 11:40 | PLUS SIM PAHs |
| 8260B LL VOA | 11/13/10 11:40 | |

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WORK ORDER

1011002

Approved

Printed: 11/2/2010 3:12:41PM

*Due Date: 11/16/10 00:00 (14 day TAT)*

*Date Received: 11/02/10 10:00*

| Analysis | Expires | Comments |
|---|---|---|
| 1011002-06 GKHMS-GW-034D-1010 [Water] | | Sampled 10/30/10 08:40 Eastern |
| 6020A QSM TAL | 04/28/11 08:40 | |
| 8260B LL VOA | 11/13/10 08:40 | |
| 8270D LL SVOC TCL | 11/06/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 08:40 | |
| 1011002-07 GKHMS-GW-026-1010 [Water] | | Sampled 10/31/10 10:40 Eastern |
| 8260B LL VOA | 11/14/10 10:40 | |
| 8270D LL SVOC TCL | 11/07/10 10:40 | PLUS SIM PAHs |
| 6020A QSM TAL | 04/29/11 10:40 | |
| Mercury, Total 7470A | 11/28/10 10:40 | |
| 1011002-08 GKHMS-GW-027-1010 [Water] | | Sampled 10/31/10 12:20 Eastern |
| 6020A QSM TAL | 04/29/11 12:20 | |
| 8260B LL VOA | 11/14/10 12:20 | |
| 8270D LL SVOC TCL | 11/07/10 12:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/28/10 12:20 | |
| 1011002-09 GKHMS-GW-028-1010 [Water] | | Sampled 10/31/10 15:00 Eastern |
| Mercury, Total 7470A | 11/28/10 15:00 | |
| 6020A QSM TAL | 04/29/11 15:00 | |
| 8260B LL VOA | 11/14/10 15:00 | |
| 8270D LL SVOC TCL | 11/07/10 15:00 | PLUS SIM PAHs |
| 1011002-10 GKHMS-GW-029-1010 [Water] | | Sampled 10/31/10 13:00 Eastern |
| 8260B LL VOA | 11/14/10 13:00 | |
| 8270D LL SVOC TCL | 11/07/10 13:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/28/10 13:00 | |
| 6020A QSM TAL | 04/29/11 13:00 | |
| 1011002-11 GKHMS-GW-030-1010 [Water] | | Sampled 10/31/10 11:40 Eastern |
| Mercury, Total 7470A | 11/28/10 11:40 | |
| 6020A QSM TAL | 04/29/11 11:40 | |
| 8260B LL VOA | 11/14/10 11:40 | |
| 8270D LL SVOC TCL | 11/07/10 11:40 | PLUS SIM PAHs |
| 1011002-12 GKHMS-GW-033D-1010 [Water] | | Sampled 10/31/10 10:00 Eastern |
| 8260B LL VOA | 11/14/10 10:00 | |
| 8270D LL SVOC TCL | 11/07/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/28/10 10:00 | |
| 6020A QSM TAL | 04/29/11 10:00 | |

CENTAURI LABS™

WORK ORDER

1011002

Approved

Printed: 11/2/2010 3:12:41PM

*Due Date: 11/16/10 00:00 (14 day TAT)*

*Date Received: 11/02/10 10:00*

| Analysis | Expires | Comments |
|---|---|---|
| 1011002-13 GKHMS-GW-020-1010 [Water] | | Sampled 11/01/10 10:00 Eastern |
| Mercury, Total 7470A | 11/29/10 10:00 | |
| 8260B LL VOA | 11/15/10 10:00 | |
| 6020A QSM TAL | 04/30/11 10:00 | |
| 8270D LL SVOC TCL | 11/08/10 10:00 | PLUS SIM PAHs |
| 1011002-14 GKHMS-GW-021-1010 [Water] | | Sampled 11/01/10 11:00 Eastern |
| 6020A QSM TAL | 04/30/11 11:00 | |
| 8260B LL VOA | 11/15/10 11:00 | |
| 8270D LL SVOC TCL | 11/08/10 11:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/29/10 11:00 | |
| 8081B Pesticides | 11/08/10 11:00 | |
| 8082 PCBs | 11/08/10 11:00 | |
| 1011002-15 GKHMS-GW-031-1010 [Water] | | Sampled 11/01/10 09:20 Eastern |
| 6020A QSM TAL | 04/30/11 09:20 | |
| 8270D LL SVOC TCL | 11/08/10 09:20 | PLUS SIM PAHs |
| 8081B Pesticides | 11/08/10 09:20 | |
| Mercury, Total 7470A | 11/29/10 09:20 | |
| 8260B LL VOA | 11/15/10 09:20 | |
| 8082 PCBs | 11/08/10 09:20 | |
| 1011002-16 GKHMS-GW-032D-1010 [Water] | | Sampled 11/01/10 08:40 Eastern |
| Mercury, Total 7470A | 11/29/10 08:40 | |
| 8081B Pesticides | 11/08/10 08:40 | |
| 8082 PCBs | 11/08/10 08:40 | |
| 8260B LL VOA | 11/15/10 08:40 | |
| 8270D LL SVOC TCL | 11/08/10 08:40 | PLUS SIM PAHs |
| 6020A QSM TAL | 04/30/11 08:40 | |
| 1011002-17 GKHMS-TB-02 [Water] | | Sampled 10/30/10 08:00 Eastern |
| 8260B LL VOA | 11/13/10 08:00 | |

Container Locations

| | |
|---|---|
| 32oz Am | WB-1 |
| 32oz HDPE w/ HNO3 | WB-1 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11-2-10
Date

CENTAURI LABS™

WORK ORDER

1011014

Approved

Printed: 11/5/2010 10:45:26AM

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

| | | | |
|---|---|---|---|
| Client: | Tetra Tech NUS, Inc | Lab PM: | Chino Ortiz |
| Contact: | Shauna Stotler-Hardy | Project: | KEY WEST NAS |
| Address | 661 Andersen Dr., Foster Plaza 7<br>Pittsburgh, PA 15220 | Project # | [none] |
| | | Comments: | Copy/Relog from 1011013. LEVEL 3<br>EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!! |
| Phone: | (803) 641-4944 | | |
| Fax: | (803) 642-8454 | | |

| Analysis | Expires | Comments |
|---|---|---|
| ✓1011014-01 GKHMS-SO-018-1010 [Solid] Sampled 11/02/10 11:40 Eastern | | |
| Solids, Dry Weight | 01/31/11 11:40 | |
| Mercury, Total 7471B | 11/30/10 11:40 | |
| 8270D LL SVOC TCL | 11/16/10 11:40 | PLUS SIMs PAHs |
| 8260B VOA | 11/16/10 11:40 | |
| 8082 PCBs | 11/16/10 11:40 | |
| 8081A Pesticides | 11/16/10 11:40 | |
| 6010C Full | 05/01/11 11:40 | |

Container Locations

| | |
|---|---|
| 16oz jar | WG-4 |
| VOA 40mL Vial w/ NaBiSO4 | VW-6 |

Chino

Reviewed By

11/5/10

Date

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011002**

| **SENDING LABORATORY:** | **RECEIVING LABORATORY:** |
|---|---|
| Centauri Labs, LLC | EMPERICAL LABS |
| 7210 Corporate Court | 621 MAINSTREAM DR SUITE 270 |
| Frederick, MD 21703 | NASHVILLE, TN 37228 |
| Phone: 301.694.5310 | Phone :(615) 345-1115 |
| Fax: 301.620.0731 | Fax: (000) 000-0000 |
| Project Manager: Chino Ortiz | |

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011002-01** | **Water** | **Sampled:10/30/10 09:30** | 10 11257-01 |
| Mercury, Total 7470A | | 11/27/10 09:30 | |
| 6020A QSM TAL | | 04/28/11 09:30 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-02** | **Water** | **Sampled:10/30/10 10:00** | -02 |
| 6020A QSM TAL | | 04/28/11 10:00 | |
| Mercury, Total 7470A | | 11/27/10 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-03** | **Water** | **Sampled:10/30/10 10:30** | -03 |
| 6020A QSM TAL | | 04/28/11 10:30 | |
| Mercury, Total 7470A | | 11/27/10 10:30 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-04** | **Water** | **Sampled:10/30/10 13:00** | -04 |
| Mercury, Total 7470A | | 11/27/10 13:00 | |
| 6020A QSM TAL | | 04/28/11 13:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-05** | **Water** | **Sampled:10/30/10 11:40** | -05 |
| 6020A QSM TAL | | 04/28/11 11:40 | |
| Mercury, Total 7470A | | 11/27/10 11:40 | |
| *Containers Supplied:* | | | |

3.0°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 11/29 | [signature] | 11/30/10 08:25 |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011002**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011002-12** | **Water** | **Sampled:10/31/10 10:00** | 1011237-12 |
| Mercury, Total 7470A | | 11/28/10 10:00 | |
| 6020A QSM TAL | | 04/29/11 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-13** | **Water** | **Sampled:11/01/10 10:00** | -13 |
| 6020A QSM TAL | | 04/30/11 10:00 | |
| Mercury, Total 7470A | | 11/29/10 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-14** | **Water** | **Sampled:11/01/10 11:00** | -14 |
| 6020A QSM TAL | | 04/30/11 11:00 | |
| Mercury, Total 7470A | | 11/29/10 11:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-15** | **Water** | **Sampled:11/01/10 09:20** | -15 |
| 6020A QSM TAL | | 04/30/11 09:20 | |
| Mercury, Total 7470A | | 11/29/10 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-16** | **Water** | **Sampled:11/01/10 08:40** | -16 |
| Mercury, Total 7470A | | 11/29/10 08:40 | |
| 6020A QSM TAL | | 04/30/11 08:40 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/16/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

3.0°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011014**

| **SENDING LABORATORY:** | **RECEIVING LABORATORY:** |
|---|---|
| Centauri Labs, LLC | EMPERICAL LABS |
| 7210 Corporate Court | 621 MAINSTREAM DR SUITE 270 |
| Frederick, MD 21703 | NASHVILLE, TN 37228 |
| Phone: 301.694.5310 | Phone :(615) 345-1115 |
| Fax: 301.620.0731 | Fax: (000) 000-0000 |
| Project Manager: Chino Ortiz | |

| Analysis | Expires | Comments |
|---|---|---|
| **Sample ID: 1011014-01 Solid** | **Sampled:11/02/10 11:40** | 1011258 -01 |
| Mercury, Total 7471B | 11/30/10 11:40 | |
| 8081A Pesticides | 11/16/10 11:40 | |
| 6010C Full | 05/01/11 11:40 | |
| *Containers Supplied:* | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/18/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

4.5°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| RW | 11/29 | | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

HOLD TIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | 1011014-01 | 1011258-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | UG/L | 1011002-13 | 1011257-13 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |
| HG | UG/L | 1011002-16 | 1011257-16 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |
| HG | UG/L | 1011002-14 | 1011257-14 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |
| HG | UG/L | 1011002-12 | 1011257-12 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-11 | 1011257-11 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-10 | 1011257-10 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-09 | 1011257-09 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-07 | 1011257-07 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| HG | UG/L | 1011002-06 | 1011257-06 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-05 | 1011257-05 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-04 | 1011257-04 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-01 | 1011257-01 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-03 | 1011257-03 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-15 | 1011257-15 | NM | 11/01/2010 | 12/06/2010 | 12/08/2010 | 35 | 2 | 37 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | 1011002-02 | 1011257-02 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| HG | UG/L | 1011002-08 | 1011257-08 | NM | 10/31/2010 | 12/06/2010 | 12/08/2010 | 36 | 2 | 38 |
| M | MG/KG | 1011014-01 | 1011258-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011014-01 | 1011258-01RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | UG/L | 1011002-06 | 1011257-06 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-01 | 1011257-01RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-02 | 1011257-02 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-03 | 1011257-03 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-04 | 1011257-04 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-04 | 1011257-04RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-05 | 1011257-05 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-06 | 1011257-06RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-01 | 1011257-01 | NM | 10/30/2010 | 12/06/2010 | 12/07/2010 | 37 | 1 | 38 |
| M | UG/L | 1011002-12 | 1011257-12 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-16 | 1011257-16RE2 | NM | 11/01/2010 | 12/06/2010 | 12/09/2010 | 35 | 3 | 38 |
| M | UG/L | 1011002-16 | 1011257-16RE1 | NM | 11/01/2010 | 12/06/2010 | 12/09/2010 | 35 | 3 | 38 |
| M | UG/L | 1011002-16 | 1011257-16 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-15 | 1011257-15RE3 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1011002-15 | 1011257-15RE2 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |
| M | UG/L | 1011002-15 | 1011257-15 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-14 | 1011257-14RE1 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |
| M | UG/L | 1011002-14 | 1011257-14 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-13 | 1011257-13RE1 | NM | 11/01/2010 | 12/06/2010 | 12/17/2010 | 35 | 11 | 46 |
| M | UG/L | 1011002-13 | 1011257-13 | NM | 11/01/2010 | 12/06/2010 | 12/07/2010 | 35 | 1 | 36 |
| M | UG/L | 1011002-05 | 1011257-05RE1 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-12 | 1011257-12RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-11 | 1011257-11RE1 | NM | 10/31/2010 | 12/06/2010 | 12/17/2010 | 36 | 11 | 47 |
| M | UG/L | 1011002-11 | 1011257-11 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-10 | 1011257-10RE2 | NM | 10/31/2010 | 12/06/2010 | 12/17/2010 | 36 | 11 | 47 |
| M | UG/L | 1011002-10 | 1011257-10RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-10 | 1011257-10 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-09 | 1011257-09RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-09 | 1011257-09 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-08 | 1011257-08RE1 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| M | UG/L | 1011002-08 | 1011257-08 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |
| M | UG/L | 1011002-07 | 1011257-07 | NM | 10/31/2010 | 12/06/2010 | 12/07/2010 | 36 | 1 | 37 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1011002-06 | 1011257-06RE3 | NM | 10/30/2010 | 12/06/2010 | 12/17/2010 | 37 | 11 | 48 |
| M | UG/L | 1011002-06 | 1011257-06RE2 | NM | 10/30/2010 | 12/06/2010 | 12/08/2010 | 37 | 2 | 39 |
| M | UG/L | 1011002-12 | 1011257-12RE2 | NM | 10/31/2010 | 12/06/2010 | 12/09/2010 | 36 | 3 | 39 |
| PEST | UG/KG | 1011014-01 | 1011258-01 | SUR | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |
| PEST | UG/KG | 1011014-01 | 1011258-01 | NM | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Instrument: ME-ICP
Calibration: 0350004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34305-CAL1 | 120710A-001 | 12/07/10 10:19 |
| Cal Standard | 0L34305-CAL2 | 120710A-002 | 12/07/10 10:24 |
| Cal Standard | 0L34305-CAL3 | 120710A-003 | 12/07/10 10:28 |
| Cal Standard | 0L34305-CAL4 | 120710A-004 | 12/07/10 10:32 |
| Cal Standard | 0L34305-CAL5 | 120710A-005 | 12/07/10 10:37 |
| Cal Standard | 0L34305-CAL6 | 120710A-006 | 12/07/10 10:41 |
| Cal Standard | 0L34305-CAL7 | 120710A-007 | 12/07/10 10:46 |
| Cal Standard | 0L34305-CAL8 | 120710A-008 | 12/07/10 10:51 |
| Initial Cal Check | 0L34305-ICV1 | 120710B-001 | 12/07/10 11:44 |
| Initial Cal Blank | 0L34305-ICB1 | 120710B-002 | 12/07/10 11:51 |
| Instrument RL Check | 0L34305-CRL1 | 120710B-004 | 12/07/10 12:01 |
| Instrument RL Check | 0L34305-CRL2 | 120710B-006 | 12/07/10 12:13 |
| Interference Check A | 0L34305-IFA1 | 120710B-007 | 12/07/10 12:18 |
| Interference Check B | 0L34305-IFB1 | 120710B-008 | 12/07/10 12:25 |
| Interference Check B | 0L34305-IFB2 | 120710B-009 | 12/07/10 12:32 |
| Calibration Check | 0L34305-CCV1 | 120710B-011 | 12/07/10 12:52 |
| Calibration Blank | 0L34305-CCB1 | 120710B-012 | 12/07/10 13:04 |
| Calibration Check | 0L34305-CCV2 | 120710B-029 | 12/07/10 14:38 |
| Calibration Blank | 0L34305-CCB2 | 120710B-030 | 12/07/10 14:46 |
| Calibration Check | 0L34305-CCV3 | 120710B-041 | 12/07/10 15:46 |
| Calibration Blank | 0L34305-CCB3 | 120710B-042 | 12/07/10 15:54 |
| Blank | 0L06016-BLK1 | 120710B-043 | 12/07/10 15:58 |
| LCS | 0L06016-BS1 | 120710B-044 | 12/07/10 16:03 |
| 1011002-01 GKHMS-GW-014-1010 | 1011257-01 | 120710B-046 | 12/07/10 16:14 |
| 1011002-02 015-1010 | 1011257-02 | 120710B-047 | 12/07/10 16:19 |
| 1011002-03 016-1010 | 1011257-03 | 120710B-048 | 12/07/10 16:24 |
| 1011002-04 024-1010 | 1011257-04 | 120710B-049 | 12/07/10 16:29 |
| 1011002-05 025-1010 | 1011257-05 | 120710B-050 | 12/07/10 16:35 |
| 1011002-06 034D-1010 | 1011257-06 | 120710B-051 | 12/07/10 16:40 |
| 1011002-07 026-1010 | 1011257-07 | 120710B-052 | 12/07/10 16:45 |
| 1011002-08 027-1010 | 1011257-08 | 120710B-053 | 12/07/10 16:50 |
| 1011002-09 028-1010 | 1011257-09 | 120710B-054 | 12/07/10 16:55 |

Na - high

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34305 | Instrument: | ME-ICP |
| Calibration: | 0350004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L34305-CCV4 | 120710B-055 | 12/07/10 17:02 |
| Calibration Blank | 0L34305-CCB4 | 120710B-056 | 12/07/10 17:09 |
| 1011002-10 029-1010 | 1011257-10 | 120710B-057 | 12/07/10 17:14 |
| 1011002-11 030-1010 | 1011257-11 | 120710B-058 | 12/07/10 17:19 |
| 1011002-12 0330-1010 | 1011257-12 | 120710B-059 | 12/07/10 17:24 |
| 1011002-13 020-1010 | 1011257-13 | 120710B-060 | 12/07/10 17:29 |
| 1011002-14 021-1010 | 1011257-14 | 120710B-061 | 12/07/10 17:34 |
| 1011002-15 031-1010 | 1011257-15 | 120710B-062 | 12/07/10 17:39 |
| 1011002-16 0320-1010 | 1011257-16 | 120710B-063 | 12/07/10 17:44 |
| Calibration Check | 0L34305-CCV5 | 120710B-071 | 12/07/10 18:26 |
| Calibration Blank | 0L34305-CCB5 | 120710B-072 | 12/07/10 18:33 |

Mg, K, Na

Mg, K and Na AL Reanalysis

AL - high

Ca - Low

Mg

K

Na

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-ICV1 | Aluminum | 10000 | 9592 | 95.9 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 977.2 | 97.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 982.8 | 98.3 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1090 | 109 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 963.7 | 96.4 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47900 | 95.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 958.0 | 95.8 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 966.4 | 96.6 | ug/L | +/- 10.00% |
| | Copper | 1000 | 958.6 | 95.9 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9772 | 97.7 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.8 | 97.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 52330 | 105 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 957.9 | 95.8 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 960.6 | 96.1 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9476 | 94.8 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 986.2 | 98.6 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 468.8 | 93.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50550 | 101 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 939.5 | 93.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 953.1 | 95.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 972.5 | 97.2 | ug/L | +/- 10.00% |
| 0L34305-CCV1 | Aluminum | 10000 | 9799 | 98.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 987.0 | 98.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1012 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1046 | 105 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1037 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50720 | 101 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 999.4 | 99.9 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 960.8 | 96.1 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1018 | 102 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10380 | 104 | ug/L | +/- 10.00% |
| | Lead | 1000 | 957.7 | 95.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54130 | 108 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.0 | 98.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10060 | 101 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV1 | Selenium | 1000 | 972.7 | 97.3 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 501.7 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 54310 | 109 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.7 | 99.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 968.6 | 96.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| 0L34305-CCV2 | Aluminum | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 999.2 | 99.9 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1013 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1032 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 46890 | 93.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 982.5 | 98.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 956.9 | 95.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 962.2 | 96.2 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54390 | 109 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 995.2 | 99.5 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 976.0 | 97.6 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10810 | 108 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 980.7 | 98.1 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 483.4 | 96.7 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **56400** | **113** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 931.0 | 93.1 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 995.1 | 99.5 | ug/L | +/- 10.00% |
| 0L34305-CCV3 | Aluminum | 10000 | 10070 | 101 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 988.6 | 98.9 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1015 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1005 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1028 | 103 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1026 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 49280 | 98.6 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 973.8 | 97.4 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 950.1 | 95.0 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1026 | 103 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV3 | Iron | 10000 | 10150 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 949.9 | 95.0 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54440 | 109 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1025 | 103 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 980.5 | 98.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10860 | 109 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 964.1 | 96.4 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 497.1 | 99.4 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 55080 | 110 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.2 | 99.2 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 937.2 | 93.7 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1008 | 101 | ug/L | +/- 10.00% |
| 0L34305-CCV4 | Aluminum | 10000 | 10530 | 105 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1027 | 103 | ug/L | +/- 10.00% |
| | Barium | 1000 | 998.2 | 99.8 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1043 | 104 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1035 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 48280 | 96.6 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 971.0 | 97.1 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 957.3 | 95.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1074 | 107 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10050 | 100 | ug/L | +/- 10.00% |
| | Lead | 1000 | 962.9 | 96.3 | ug/L | +/- 10.00% |
| | **Magnesium** | **50000** | **56360** | **113** | **ug/L** | +/- 10.00% |
| | Manganese | 1000 | 1039 | 104 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.5 | 98.9 | ug/L | +/- 10.00% |
| | **Potassium** | **10000** | **11760** | **118** | **ug/L** | +/- 10.00% |
| | Selenium | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 503.6 | 101 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **60530** | **121** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 961.9 | 96.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 994.1 | 99.4 | ug/L | +/- 10.00% |
| **0L34305-CCV5** | **Aluminum** | **10000** | **11160** | **112** | **ug/L** | +/- 10.00% |
| | Antimony | 1000 | 1047 | 105 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1045 | 104 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1002 | 100 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV5 | Beryllium | 1000 | 989.9 | 99.0 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1034 | 103 | ug/L | +/- 10.00% |
| | **Calcium** | **50000** | **42920** | **85.8** | **ug/L** | +/- 10.00% |
| | Chromium | 1000 | 935.7 | 93.6 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 957.6 | 95.8 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1066 | 107 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9704 | 97.0 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.9 | 97.8 | ug/L | +/- 10.00% |
| | **Magnesium** | **50000** | **57790** | **116** | **ug/L** | +/- 10.00% |
| | Manganese | 1000 | 959.1 | 95.9 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 979.6 | 98.0 | ug/L | +/- 10.00% |
| | **Potassium** | **10000** | **13380** | **134** | **ug/L** | +/- 10.00% |
| | Selenium | 1000 | 1022 | 102 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 477.9 | 95.6 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **67120** | **134** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 1021 | 102 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 909.7 | 91.0 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 943.6 | 94.4 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0344004
Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34403-ICV1 | Mercury | 4.000 | 4.047 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV1 | Mercury | 4.000 | 4.030 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV2 | Mercury | 4.000 | 4.123 | 103 | ug/L | +/- 15.00% |
| 0L34403-CCV3 | Mercury | 2.000 | 1.845 | 92.2 | ug/L | +/- 15.00% |
| 0L34403-CCV4 | Mercury | 2.000 | 1.835 | 91.7 | ug/L | +/- 15.00% |
| 0L34403-CCV5 | Mercury | 4.000 | 4.052 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV6 | Mercury | 4.000 | 3.647 | 91.2 | ug/L | +/- 15.00% |
| 0L34403-CCV7 | Mercury | 2.000 | 1.860 | 93.0 | ug/L | +/- 15.00% |
| 0L34403-CCV8 | Mercury | 2.000 | 1.903 | 95.2 | ug/L | +/- 15.00% |
| 0L34403-CCV9 | Mercury | 2.000 | 1.899 | 94.9 | ug/L | +/- 15.00% |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34403
Instrument: ME-FIMS
Calibration: 0344004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34403-CAL1 | COPY120810W-002 | 12/08/10 10:42 |
| Cal Standard | 0L34403-CAL2 | COPY120810W-003 | 12/08/10 10:43 |
| Cal Standard | 0L34403-CAL3 | COPY120810W-004 | 12/08/10 10:45 |
| Cal Standard | 0L34403-CAL4 | COPY120810W-005 | 12/08/10 10:47 |
| Cal Standard | 0L34403-CAL5 | COPY120810W-006 | 12/08/10 10:49 |
| Cal Standard | 0L34403-CAL6 | COPY120810W-007 | 12/08/10 10:51 |
| Cal Standard | 0L34403-CAL7 | COPY120810W-008 | 12/08/10 10:53 |
| Initial Cal Check | 0L34403-ICV1 | COPY120810W-009 | 12/08/10 10:59 |
| Initial Cal Blank | 0L34403-ICB1 | COPY120810W-010 | 12/08/10 11:00 |
| Instrument RL Check | 0L34403-CRL1 | COPY120810W-011 | 12/08/10 11:02 |
| Calibration Check | 0L34403-CCV1 | COPY120810W-021 | 12/08/10 11:28 |
| Calibration Blank | 0L34403-CCB1 | COPY120810W-022 | 12/08/10 11:29 |
| Calibration Check | 0L34403-CCV2 | COPY120810W-033 | 12/08/10 11:49 |
| Calibration Blank | 0L34403-CCB2 | COPY120810W-034 | 12/08/10 11:50 |
| LCS | 0L06007-BS1 | COPY120810W-042 | 12/08/10 12:02 |
| Blank | 0L06007-BLK1 | COPY120810W-043 | 12/08/10 12:04 |
| Calibration Check | 0L34403-CCV3 | COPY120810W-045 | 12/08/10 12:12 |
| Calibration Blank | 0L34403-CCB3 | COPY120810W-046 | 12/08/10 12:13 |
| 1011002-01 014-1010 | 1011257-01 | COPY120810W-049 | 12/08/10 12:19 |
| 1011002-02 015-1010 | 1011257-02 | COPY120810W-050 | 12/08/10 12:21 |
| 1011002-03 016-1010 | 1011257-03 | COPY120810W-051 | 12/08/10 12:22 |
| 1011002-04 024-1010 | 1011257-04 | COPY120810W-052 | 12/08/10 12:23 |
| 1011002-05 025-1010 | 1011257-05 | COPY120810W-053 | 12/08/10 12:25 |
| 1011002-06 034D-1010 | 1011257-06 | COPY120810W-054 | 12/08/10 12:26 |
| 1011002-07 026-1010 | 1011257-07 | COPY120810W-055 | 12/08/10 12:27 |
| 1011002-08 027-1010 | 1011257-08 | COPY120810W-056 | 12/08/10 12:29 |
| Calibration Check | 0L34403-CCV4 | COPY120810W-057 | 12/08/10 12:30 |
| Calibration Blank | 0L34403-CCB4 | COPY120810W-058 | 12/08/10 12:32 |
| 1011002-10 029-1010 | 1011257-10 | COPY120810W-059 | 12/08/10 12:34 |
| 1011002-11 030-1010 | 1011257-11 | COPY120810W-060 | 12/08/10 12:36 |
| 1011002-13 020-1010 | 1011257-13 | COPY120810W-061 | 12/08/10 12:39 |
| 1011002-14 021-1010 | 1011257-14 | COPY120810W-062 | 12/08/10 12:40 |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34403 | Instrument: | ME-FIMS |
| Calibration: | 0344004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| 1011002-15 0031-1010 | 1011257-15 | COPY120810W-063 | 12/08/10 12:42 |
| 1011002-15 | 0L06007-MS1 | COPY120810W-064 | 12/08/10 12:43 |
| 1011002-15 | 0L06007-MSD1 | COPY120810W-065 | 12/08/10 12:45 |
| 1011002-16 0320-1010 | 1011257-16 | COPY120810W-066 | 12/08/10 12:47 |
| Calibration Check | 0L34403-CCV5 | COPY120810W-068 | 12/08/10 12:49 |
| Calibration Blank | 0L34403-CCB5 | COPY120810W-069 | 12/08/10 12:51 |
| Calibration Check | 0L34403-CCV6 | COPY120810W-080 | 12/08/10 13:16 |
| Calibration Blank | 0L34403-CCB6 | COPY120810W-081 | 12/08/10 13:17 |
| Calibration Check | 0L34403-CCV7 | COPY120810W-092 | 12/08/10 13:35 |
| Calibration Blank | 0L34403-CCB7 | COPY120810W-093 | 12/08/10 13:37 |
| 1011002-09 0028-1010 | 1011257-09 | COPY120810W-096 | 12/08/10 13:41 |
| Instrument RL Check | 0L34403-CRL2 | COPY120810W-097 | 12/08/10 13:42 |
| Calibration Check | 0L34403-CCV8 | COPY120810W-098 | 12/08/10 13:44 |
| Calibration Blank | 0L34403-CCB8 | COPY120810W-099 | 12/08/10 13:46 |
| 1011002-12 0330-1010 | 1011257-12 | COPY120810W-100 | 12/08/10 13:49 |
| Instrument RL Check | 0L34403-CRL3 | COPY120810W-101 | 12/08/10 13:50 |
| Calibration Check | 0L34403-CCV9 | COPY120810W-102 | 12/08/10 13:52 |
| Calibration Blank | 0L34403-CCB9 | COPY120810W-103 | 12/08/10 13:54 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34704 | Instrument: | ME-ICP |
| Calibration: | 0347001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34704-CAL1 | 120810A-001 | 12/08/10 13:09 |
| Cal Standard | 0L34704-CAL2 | 120810A-002 | 12/08/10 13:13 |
| Cal Standard | 0L34704-CAL3 | 120810A-003 | 12/08/10 13:18 |
| Cal Standard | 0L34704-CAL5 | 120810A-005 | 12/08/10 13:28 |
| Cal Standard | 0L34704-CAL6 | 120810A-006 | 12/08/10 13:33 |
| Cal Standard | 0L34704-CAL7 | 120810A-007 | 12/08/10 13:38 |
| Cal Standard | 0L34704-CAL8 | 120810A-008 | 12/08/10 13:43 |
| Initial Cal Check | 0L34704-ICV1 | 120810B-001 | 12/08/10 14:34 |
| Initial Cal Blank | 0L34704-ICB1 | 120810B-002 | 12/08/10 14:41 |
| Instrument RL Check | 0L34704-CRL1 | 120810B-003 | 12/08/10 14:46 |
| Interference Check A | 0L34704-IFA1 | 120810B-008 | 12/08/10 15:12 |
| Interference Check B | 0L34704-IFB1 | 120810B-009 | 12/08/10 15:17 |
| Calibration Check | 0L34704-CCV1 | 120810B-011 | 12/08/10 15:29 |
| Calibration Blank | 0L34704-CCB1 | 120810B-012 | 12/08/10 15:37 |
| Calibration Check | 0L34704-CCV7 | 120810B-103 | 12/08/10 23:05 |
| Calibration Blank | 0L34704-CCB7 | 120810B-104 | 12/08/10 23:12 |
| 1011002-01 014-1010 | 1011257-01RE1 | 120810B-107 | 12/08/10 23:26 |
| 1011002-04 024-1010 | 1011257-04RE1 | 120810B-108 | 12/08/10 23:31 |
| 1011002-05 025-1010 | 1011257-05RE1 | 120810B-109 | 12/08/10 23:36 |
| 1011002-06 0340-1010 | 1011257-06RE1 | 120810B-110 | 12/08/10 23:41 |
| 1011002-06 | 1011257-06RE2 | 120810B-111 | 12/08/10 23:45 |
| Calibration Check | 0L34704-CCV8 | 120810B-116 | 12/09/10 00:12 |
| Calibration Blank | 0L34704-CCB8 | 120810B-117 | 12/09/10 00:19 |

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# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0347001
Sequence: 0L34704

12/8/10

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34704-ICV1 | Aluminum | 10000 | 9638 | 96.4 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1064 | 106 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 1007 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 990.4 | 99.0 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54370 | 109 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 51210 | 102 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1013 | 101 | ug/L | +/- 10.00% |
| 0L34704-CCV1 | Aluminum | 10000 | 9730 | 97.3 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1056 | 106 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 991.6 | 99.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 984.0 | 98.4 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54840 | 110 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 52800 | 106 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1006 | 101 | ug/L | +/- 10.00% |
| 0L34704-CCV7 | Aluminum | 10000 | 9297 | 93.0 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 963.3 | 96.3 | ug/L | +/- 10.00% |
| | Lead | 1000 | 969.3 | 96.9 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 51000 | 102 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50250 | 100 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 986.6 | 98.7 | ug/L | +/- 10.00% |
| **0L34704-CCV8** | **Aluminum** | **10000** | **8782** | **87.8** | **ug/L** | +/- 10.00% |
| | Cadmium | 1000 | 1040 | 104 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 957.1 | 95.7 | ug/L | +/- 10.00% |
| | Lead | 1000 | 968.5 | 96.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48600 | 97.2 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 48320 | 96.6 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 982.3 | 98.2 | ug/L | +/- 10.00% |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34705
Instrument: ME-ICP
Calibration: 0352001

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34705-CAL1 | 120910A-001 | 12/09/10 11:18 |
| Cal Standard | 0L34705-CAL2 | 120910A-002 | 12/09/10 11:22 |
| Cal Standard | 0L34705-CAL3 | 120910A-003 | 12/09/10 11:27 |
| Cal Standard | 0L34705-CAL5 | 120910A-005 | 12/09/10 11:36 |
| Cal Standard | 0L34705-CAL6 | 120910A-006 | 12/09/10 11:41 |
| Cal Standard | 0L34705-CAL7 | 120910A-007 | 12/09/10 11:46 |
| Cal Standard | 0L34705-CAL8 | 120910A-008 | 12/09/10 11:51 |
| Initial Cal Check | 0L34705-ICV1 | 120910B-001 | 12/09/10 12:22 |
| Initial Cal Blank | 0L34705-ICB1 | 120910B-002 | 12/09/10 12:30 |
| Instrument RL Check | 0L34705-CRL1 | 120910B-003 | 12/09/10 12:34 |
| Interference Check A | 0L34705-IFA1 | 120910B-005 | 12/09/10 12:43 |
| Interference Check B | 0L34705-IFB1 | 120910B-006 | 12/09/10 12:57 |
| Calibration Check | 0L34705-CCV1 | 120910C-002 | 12/09/10 13:11 |
| Calibration Blank | 0L34705-CCB1 | 120910C-003 | 12/09/10 13:18 |
| Calibration Check | 0L34705-CCV5 | 120910C-056 | 12/09/10 17:53 |
| Calibration Blank | 0L34705-CCB5 | 120910C-057 | 12/09/10 18:00 |
| 1011002-08 027-1010 | 1011257-08RE1 | 120910C-065 | 12/09/10 18:39 |
| 1011002-09 028-1010 | 1011257-09RE1 | 120910C-066 | 12/09/10 18:44 |
| 1011002-10 029-1010 | 1011257-10RE1 | 120910C-067 | 12/09/10 18:49 |
| 1011002-12 0330-1010 | 1011257-12RE1 | 120910C-068 | 12/09/10 18:54 |
| 1011002-12 | 1011257-12RE2 | 120910C-069 | 12/09/10 18:58 |
| 1011002-16 0320-1010 | 1011257-16RE1 | 120910C-071 | 12/09/10 19:08 |
| 1011002-16 | 1011257-16RE2 | 120910C-072 | 12/09/10 19:13 |
| Calibration Check | 0L34705-CCV6 | 120910C-073 | 12/09/10 19:18 |
| Calibration Blank | 0L34705-CCB6 | 120910C-074 | 12/09/10 19:26 |

# ANALYSIS SEQUENCE SUMMARY

## SW7471A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35013 | Instrument: | ME-FIMS |
| Calibration: | 0350003 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35013-CAL1 | 121610S-002 | 12/16/10 11:21 |
| Cal Standard | 0L35013-CAL2 | 121610S-003 | 12/16/10 11:22 |
| Cal Standard | 0L35013-CAL3 | 121610S-004 | 12/16/10 11:24 |
| Cal Standard | 0L35013-CAL4 | 121610S-005 | 12/16/10 11:26 |
| Cal Standard | 0L35013-CAL5 | 121610S-006 | 12/16/10 11:28 |
| Cal Standard | 0L35013-CAL6 | 121610S-007 | 12/16/10 11:30 |
| Cal Standard | 0L35013-CAL7 | 121610S-008 | 12/16/10 11:32 |
| Cal Standard | 0L35013-CAL8 | 121610S-009 | 12/16/10 11:34 |
| Initial Cal Check | 0L35013-ICV1 | 121610S-010 | 12/16/10 11:48 |
| Initial Cal Blank | 0L35013-ICB1 | 121610S-011 | 12/16/10 11:50 |
| Instrument RL Check | 0L35013-CRL1 | 121610S-012 | 12/16/10 11:53 |
| LCS | 0L10002-BS1 | 121610S-013 | 12/16/10 11:54 |
| Blank | 0L10002-BLK1 | 121610S-014 | 12/16/10 11:56 |
| 1011014-01 GKHMS-SW-018-1016 | 1011258-01 | 121610S-015 | 12/16/10 11:58 |
| Calibration Check | 0L35013-CCV1 | 121610S-022 | 12/16/10 12:10 |
| Calibration Blank | 0L35013-CCB1 | 121610S-023 | 12/16/10 12:12 |
| Calibration Check | 0L35013-CCV6 | 121610S-082 | 12/16/10 14:08 |
| Calibration Blank | 0L35013-CCB6 | 121610S-083 | 12/16/10 14:10 |
| Instrument RL Check | 0L35013-CRL2 | 121610S-091 | 12/16/10 14:25 |
| Calibration Check | 0L35013-CCV7 | 121610S-092 | 12/16/10 14:27 |
| Calibration Blank | 0L35013-CCB7 | 121610S-093 | 12/16/10 14:28 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Instrument: ME-ICP
Calibration: 0350004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35203-CAL1 | 121610A-001 | 12/16/10 08:52 |
| Cal Standard | 0L35203-CAL2 | 121610A-002 | 12/16/10 08:57 |
| Cal Standard | 0L35203-CAL3 | 121610A-003 | 12/16/10 09:01 |
| Cal Standard | 0L35203-CAL4 | 121610A-004 | 12/16/10 09:06 |
| Cal Standard | 0L35203-CAL5 | 121610A-005 | 12/16/10 09:11 |
| Cal Standard | 0L35203-CAL6 | 121610A-006 | 12/16/10 09:16 |
| Cal Standard | 0L35203-CAL7 | 121610A-007 | 12/16/10 09:21 |
| Cal Standard | 0L35203-CAL8 | 121610A-008 | 12/16/10 09:26 |
| Initial Cal Check | 0L35203-ICV1 | 121610B-001 | 12/16/10 10:06 |
| Initial Cal Blank | 0L35203-ICB1 | 121610B-002 | 12/16/10 10:14 |
| Instrument RL Check | 0L35203-CRL1 | 121610B-005 | 12/16/10 10:29 |
| Instrument RL Check | 0L35203-CRL2 | 121610B-006 | 12/16/10 10:34 |
| Interference Check A | 0L35203-IFA1 | 121610B-007 | 12/16/10 10:39 |
| Interference Check B | 0L35203-IFB1 | 121610B-008 | 12/16/10 10:45 |
| Calibration Check | 0L35203-CCV1 | 121610B-010 | 12/16/10 10:57 |
| Calibration Blank | 0L35203-CCB1 | 121610B-011 | 12/16/10 11:04 |
| Calibration Check | 0L35203-CCV2 | 121610B-015 | 12/16/10 11:25 |
| Calibration Blank | 0L35203-CCB2 | 121610B-016 | 12/16/10 11:33 |
| Blank | 0L15009-BLK1 | 121610B-017 | 12/16/10 11:37 |
| LCS | 0L15009-BS1 | 121610B-018 | 12/16/10 11:42 |
| 1011014-01 SO-018-1010 | 1011258-01 | 121610B-019 | 12/16/10 11:48 |
| Calibration Check | 0L35203-CCV3 | 121610B-029 | 12/16/10 12:40 |
| Calibration Blank | 0L35203-CCB3 | 121610B-030 | 12/16/10 12:47 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35301
Instrument: ME-ICP
Calibration: 0354001

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35301-CAL1 | 121710A-001 | 12/17/10 09:50 |
| Cal Standard | 0L35301-CAL2 | 121710A-002 | 12/17/10 09:54 |
| Cal Standard | 0L35301-CAL3 | 121710A-003 | 12/17/10 09:59 |
| Cal Standard | 0L35301-CAL5 | 121710A-005 | 12/17/10 10:11 |
| Cal Standard | 0L35301-CAL6 | 121710A-006 | 12/17/10 10:16 |
| Cal Standard | 0L35301-CAL7 | 121710A-007 | 12/17/10 10:23 |
| Cal Standard | 0L35301-CAL8 | 121710A-008 | 12/17/10 10:28 |
| Initial Cal Check | 0L35301-ICV1 | 121710C-001 | 12/17/10 11:19 |
| Initial Cal Blank | 0L35301-ICB1 | 121710C-002 | 12/17/10 11:27 |
| Instrument RL Check | 0L35301-CRL1 | 121710C-003 | 12/17/10 11:31 |
| Interference Check A | 0L35301-IFA1 | 121710C-006 | 12/17/10 11:47 |
| Interference Check B | 0L35301-IFB1 | 121710C-007 | 12/17/10 11:55 |
| Calibration Check | 0L35301-CCV1 | 121710C-009 | 12/17/10 12:15 |
| Calibration Blank | 0L35301-CCB1 | 121710C-010 | 12/17/10 12:23 |
| 1011002-10 029-1010 | 1011257-10RE2 | 121710C-012 | 12/17/10 12:32 |
| 1011002-11 030-1010 | 1011257-11RE1 | 121710C-013 | 12/17/10 12:37 |
| 1011002-13 020-1010 | 1011257-13RE1 | 121710C-014 | 12/17/10 12:42 |
| 1011002-14 021-1010 | 1011257-14RE1 | 121710C-015 | 12/17/10 12:47 |
| 1011002-15 031-1010 | 1011257-15RE2 | 121710C-016 | 12/17/10 12:52 |
| 1011002-15 | 1011257-15RE3 | 121710C-025 | 12/17/10 13:39 |
| Calibration Check | 0L35301-CCV2 | 121710C-026 | 12/17/10 13:47 |
| Calibration Blank | 0L35301-CCB2 | 121710C-027 | 12/17/10 13:54 |
| Calibration Check | 0L35301-CCV3 | 121710C-047 | 12/17/10 15:38 |
| Calibration Blank | 0L35301-CCB3 | 121710C-048 | 12/17/10 15:46 |
| 1011014-01 SO-018-1010 | 1011258-01RE1 | 121710D-002 | 12/17/10 15:57 |
| Calibration Check | 0L35301-CCV4 | 121710D-012 | 12/17/10 16:47 |
| Calibration Blank | 0L35301-CCB4 | 121710D-013 | 12/17/10 16:55 |
| Calibration Check | 0L35301-CCV5 | 121710D-025 | 12/17/10 17:54 |
| Calibration Blank | 0L35301-CCB5 | 121710D-026 | 12/17/10 18:02 |
| 1011002-06 034D-1010 | 1011257-06RE3 | 121710D-034 | 12/17/10 18:40 |
| Calibration Check | 0L35301-CCV6 | 121710D-035 | 12/17/10 18:45 |
| Calibration Blank | 0L35301-CCB6 | 121710D-036 | 12/17/10 18:53 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35301 | Instrument: | ME-ICP |
| Calibration: | 0354001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L35301-CCV7 | 121710D-051 | 12/17/10 20:03 |
| Calibration Blank | 0L35301-CCB7 | 121710D-052 | 12/17/10 20:10 |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0352001
Sequence: 0L34705

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34705-ICV1 | Aluminum | 10000 | 10170 | 102 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1090 | 109 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 51010 | 102 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 996.3 | 99.6 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1026 | 103 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48700 | 97.4 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9435 | 94.3 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49660 | 99.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1048 | 105 | ug/L | +/- 10.00% |
| 0L34705-CCV1 | Aluminum | 10000 | 9892 | 98.9 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1068 | 107 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50900 | 102 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 1005 | 100 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1022 | 102 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48840 | 97.7 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9686 | 96.9 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49940 | 99.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1051 | 105 | ug/L | +/- 10.00% |
| 0L34705-CCV5 | Aluminum | 10000 | 10050 | 101 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1069 | 107 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 48880 | 97.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 942.2 | 94.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 46960 | 93.9 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10190 | 102 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 51110 | 102 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 993.7 | 99.4 | ug/L | +/- 10.00% |
| 0L34705-CCV6 | Aluminum | 10000 | 9962 | 99.6 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1076 | 108 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50380 | 101 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 941.5 | 94.1 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 47520 | 95.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10000 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49370 | 98.7 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 978.7 | 97.9 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW7471A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0350003
Sequence: 0L35013

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35013-ICV1 | Mercury | 4.000 | 4.254 | 106 | ug/L | +/- 15.00% |
| 0L35013-CCV1 | Mercury | 4.000 | 4.029 | 101 | ug/L | +/- 15.00% |
| 0L35013-CCV6 | Mercury | 4.000 | 4.073 | 102 | ug/L | +/- 15.00% |
| 0L35013-CCV7 | Mercury | 2.000 | 2.054 | 103 | ug/L | +/- 15.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35203-ICV1 | Aluminum | 10000 | 9763 | 97.6 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 986.7 | 98.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1005 | 100 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1048 | 105 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1029 | 103 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1060 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 53260 | 107 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 984.2 | 98.4 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 989.2 | 98.9 | ug/L | +/- 10.00% |
| | Copper | 1000 | 971.8 | 97.2 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10480 | 105 | ug/L | +/- 10.00% |
| | Lead | 1000 | 995.3 | 99.5 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 49890 | 99.8 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1020 | 102 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 989.0 | 98.9 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9093 | 90.9 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 979.7 | 98.0 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 499.6 | 99.9 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 48030 | 96.1 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 953.4 | 95.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 981.8 | 98.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1030 | 103 | ug/L | +/- 10.00% |
| 0L35203-CCV1 | Aluminum | 10000 | 9865 | 98.6 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1004 | 100 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1007 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1036 | 104 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1039 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50750 | 102 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 963.0 | 96.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 979.8 | 98.0 | ug/L | +/- 10.00% |
| | Copper | 1000 | 967.4 | 96.7 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10220 | 102 | ug/L | +/- 10.00% |
| | Lead | 1000 | 985.9 | 98.6 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 49230 | 98.5 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 972.6 | 97.3 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 984.3 | 98.4 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9849 | 98.5 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35203-CCV1 | Selenium | 1000 | 997.7 | 99.8 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 470.9 | 94.2 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49940 | 99.9 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 979.2 | 97.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 949.6 | 95.0 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 999.4 | 99.9 | ug/L | +/- 10.00% |
| 0L35203-CCV2 | Aluminum | 10000 | 9796 | 98.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1006 | 101 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1008 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1003 | 100 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1020 | 102 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1034 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 49190 | 98.4 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 962.7 | 96.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 983.2 | 98.3 | ug/L | +/- 10.00% |
| | Copper | 1000 | 980.8 | 98.1 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9896 | 99.0 | ug/L | +/- 10.00% |
| | Lead | 1000 | 998.0 | 99.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48520 | 97.0 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 965.5 | 96.5 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 980.1 | 98.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9554 | 95.5 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 995.2 | 99.5 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 463.8 | 92.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49390 | 98.8 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 979.3 | 97.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 948.7 | 94.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 983.7 | 98.4 | ug/L | +/- 10.00% |
| 0L35203-CCV3 | Aluminum | 10000 | 9756 | 97.6 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1044 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50210 | 100 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 953.0 | 95.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 981.0 | 98.1 | ug/L | +/- 10.00% |
| | Copper | 1000 | 987.1 | 98.7 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Instrument ID: ME-ICP
Calibration: 0350004
Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35203-CCV3 | Iron | 10000 | 9943 | 99.4 | ug/L | +/- 10.00% |
| | Lead | 1000 | 986.8 | 98.7 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48720 | 97.4 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 991.6 | 99.2 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 987.3 | 98.7 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9788 | 97.9 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 473.5 | 94.7 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49980 | 100 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 986.2 | 98.6 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 978.2 | 97.8 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1001 | 100 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0354001
Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35301-ICV1 | Aluminum | 10000 | 10030 | 100 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 53020 | 106 | ug/L | +/- 10.00% |
| | Lead | 1000 | 994.6 | 99.5 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10080 | 101 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49880 | 99.8 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| 0L35301-CCV1 | Aluminum | 10000 | 9839 | 98.4 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50970 | 102 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1009 | 101 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9854 | 98.5 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49580 | 99.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1029 | 103 | ug/L | +/- 10.00% |
| 0L35301-CCV2 | Aluminum | 10000 | 10110 | 101 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 49290 | 98.6 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1024 | 102 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10360 | 104 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 52400 | 105 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1007 | 101 | ug/L | +/- 10.00% |
| 0L35301-CCV3 | Aluminum | 10000 | 10260 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47600 | 95.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10930 | 109 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 54340 | 109 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 953.2 | 95.3 | ug/L | +/- 10.00% |
| 0L35301-CCV4 | Aluminum | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47600 | 95.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 993.5 | 99.3 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10650 | 106 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 53630 | 107 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 961.9 | 96.2 | ug/L | +/- 10.00% |
| 0L35301-CCV5 | Aluminum | 10000 | 10110 | 101 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47600 | 95.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 991.8 | 99.2 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10640 | 106 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 53660 | 107 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 965.0 | 96.5 | ug/L | +/- 10.00% |
| 0L35301-CCV6 | Aluminum | 10000 | 10250 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47880 | 95.8 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0354001
Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35301-CCV6 | Lead | 1000 | 1012 | 101 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10780 | 108 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 53490 | 107 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 981.2 | 98.1 | ug/L | +/- 10.00% |
| 0L35301-CCV7 | Aluminum | 10000 | 10060 | 101 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 48400 | 96.8 | ug/L | +/- 10.00% |
| | Lead | 1000 | 989.9 | 99.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10440 | 104 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 51860 | 104 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 979.9 | 98.0 | ug/L | +/- 10.00% |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34305-CRL1 | Aluminum | 100.0 | 99.73 | 99.7 | ug/L | 80 - 120 |
| | Antimony | 8.000 | 6.500 | 81.2 | ug/L | 80 - 120 |
| | Barium | 10.00 | 10.07 | 101 | ug/L | 80 - 120 |
| | Beryllium | 2.000 | 2.054 | 103 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 1.846 | 92.3 | ug/L | 80 - 120 |
| | Calcium | 2000 | 1966 | 98.3 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.982 | 99.6 | ug/L | 80 - 120 |
| | Cobalt | 10.00 | 9.079 | 90.8 | ug/L | 80 - 120 |
| | Copper | 8.000 | 7.542 | 94.3 | ug/L | 80 - 120 |
| | Iron | 60.00 | 64.06 | 107 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.566 | 85.5 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 3113 | 104 | ug/L | 80 - 120 |
| | Manganese | 6.000 | 6.735 | 112 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.898 | 98.3 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3020 | 101 | ug/L | 80 - 120 |
| | Silver | 2.000 | 1.893 | 94.7 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3298 | 110 | ug/L | 80 - 120 |
| | Thallium | 4.000 | 4.272 | 107 | ug/L | 80 - 120 |
| | Vanadium | 10.00 | 9.529 | 95.3 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.414 | 94.1 | ug/L | 80 - 120 |
| 0L34305-CRL2 | Arsenic | 5.000 | 4.042 | 80.8 | ug/L | 80 - 120 |
| | Selenium | 5.000 | 4.812 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW7470A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-FIMS

Calibration: 0344004

Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34403-CRL1 | Mercury | 0.2000 | 0.1985 | 99.3 | ug/L | 70 - 130 |
| 0L34403-CRL2 | Mercury | 0.2000 | 0.2066 | 103 | ug/L | 70 - 130 |
| 0L34403-CRL3 | Mercury | 0.2000 | 0.2106 | 105 | ug/L | 70 - 130 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0347001

Sequence: 0L34704

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34704-CRL1 | Aluminum | 100.0 | 104.3 | 104 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 2.320 | 116 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 4.165 | 104 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.514 | 83.8 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 3306 | 110 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3455 | 115 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.617 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0352001

Sequence: 0L34705

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34705-CRL1 | Aluminum | 100.0 | 105.5 | 105 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 2.243 | 112 | ug/L | 80 - 120 |
| | Calcium | 2000 | 2057 | 103 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.975 | 99.4 | ug/L | 80 - 120 |
| | Lead | 3.000 | 3.371 | 112 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 2852 | 95.1 | ug/L | 80 - 120 |
| | Potassium | 3000 | 2868 | 95.6 | ug/L | 80 - 120 |
| | Sodium | 3000 | 2916 | 97.2 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.618 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW7471A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-FIMS

Calibration: 0350003

Sequence: 0L35013

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35013-CRL1 | Mercury | 0.2000 | 0.2489 | 124 | ug/L | 70 - 130 |
| 0L35013-CRL2 | Mercury | 0.2000 | 0.2571 | 129 | ug/L | 70 - 130 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35203-CRL1 | Aluminum | 100.0 | 102.9 | 103 | ug/L | 80 - 120 |
| | Antimony | 8.000 | 7.843 | 98.0 | ug/L | 80 - 120 |
| | Barium | 10.00 | 10.74 | 107 | ug/L | 80 - 120 |
| | Beryllium | 2.000 | 2.118 | 106 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 2.254 | 113 | ug/L | 80 - 120 |
| | Calcium | 2000 | 2036 | 102 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.946 | 98.6 | ug/L | 80 - 120 |
| | Cobalt | 10.00 | 9.614 | 96.1 | ug/L | 80 - 120 |
| | Copper | 8.000 | 8.067 | 101 | ug/L | 80 - 120 |
| | Iron | 60.00 | 64.54 | 108 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.460 | 82.0 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 2999 | 100 | ug/L | 80 - 120 |
| | Manganese | 6.000 | 6.503 | 108 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.570 | 92.8 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3026 | 101 | ug/L | 80 - 120 |
| | Silver | 2.000 | 2.012 | 101 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3125 | 104 | ug/L | 80 - 120 |
| | Thallium | 4.000 | 4.358 | 109 | ug/L | 80 - 120 |
| | Vanadium | 10.00 | 9.830 | 98.3 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 10.71 | 107 | ug/L | 80 - 120 |
| 0L35203-CRL2 | Arsenic | 5.000 | 4.855 | 97.1 | ug/L | 80 - 120 |
| | Selenium | 5.000 | 5.363 | 107 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0354001

Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35301-CRL1 | Aluminum | 100.0 | 110.4 | 110 | ug/L | 80 - 120 |
| | Calcium | 2000 | 2075 | 104 | ug/L | 80 - 120 |
| | Lead | 3.000 | 3.090 | 103 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3002 | 100 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3076 | 103 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.767 | 97.7 | ug/L | 80 - 120 |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-ICB1 | Aluminum | 1.815 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.0008800 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.4936 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.04896 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.1662 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.09110 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 10.71 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.06206 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.2396 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.006120 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.525 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.2232 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -0.1900 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.1529 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.3307 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 4.330 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.4155 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.1294 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 11.82 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.3133 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.09286 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.06542 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB1 | Aluminum | 4.29 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.141 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.226 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00225 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | -0.000740 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.0220 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.134 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.110 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.235 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.54 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB1 | Lead | -0.0467 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -1.90 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.120 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.488 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.671 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0628 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 8.23 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.0416 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.176 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 2.27 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB2 | Aluminum | 2.36 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.137 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.797 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | -0.0616 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0689 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.416 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 2.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.214 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | -0.00589 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0684 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.276 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.391 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.05 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0433 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.125 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 5.44 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.259 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.203 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 21.8 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 1.07 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.0689 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0667 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB3 | Aluminum | 2.22 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.392 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -1.01 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0236 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.200 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.256 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 36.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.122 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0870 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0977 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.68 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.0672 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 43.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.143 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.253 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 47.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.195 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.111 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 657 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.404 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.00779 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0353 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L06016-BLK1 | Aluminum | 2.27 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.693 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.0877 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0382 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0306 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.0747 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 17.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.116 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0301 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0758 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 1.18 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L06016-BLK1 | Lead | -0.507 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 4.83 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.114 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.326 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 34.0 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.971 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0703 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 389 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.355 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.213 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.263 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB4 | Aluminum | 0.0923 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.208 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -1.05 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00574 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0383 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.463 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 6.92 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.161 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0575 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.134 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | -0.499 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.0754 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -7.85 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0545 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.0630 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 26.9 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.167 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.106 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 184 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.836 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.248 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0227 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB5 | Aluminum | 2.71 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.106 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.221 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.116 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0964 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.901 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 7.16 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.129 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.287 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.350 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.0675 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -1.41 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.66 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.139 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.0344 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 30.7 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.211 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.203 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 216 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.752 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.0128 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0866 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: CTOJM16 Key West 2010
Sequence: 0L34403
Calibration: 0344004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34403-ICB1 | Mercury | 0.02156 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB1 | Mercury | 0.0158 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB2 | Mercury | 0.0309 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L06007-BLK1 | Mercury | 0.00684 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB3 | Mercury | 0.0237 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB4 | Mercury | 0.0237 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB5 | Mercury | 0.0368 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB6 | Mercury | 0.0205 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB7 | Mercury | 0.0330 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB8 | Mercury | 0.0301 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB9 | Mercury | 0.0245 | 0.0800 | 0.200 | ug/L | U | SW7470A |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34704
Calibration: 0347001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34704-ICB1 | Aluminum | 3.396 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.4338 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | 0.2560 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -1.150 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 3.870 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 8.560 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | 0.2063 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34704-CCB1 | Aluminum | 1.60 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.166 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | 0.000650 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.481 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -0.820 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 9.13 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0900 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34704-CCB7 | Aluminum | 1.88 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | -0.0429 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | -0.0535 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | 0.605 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 1.54 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 89.8 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0709 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34704-CCB8 | Aluminum | 2.02 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | -0.158 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | -0.0939 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.239 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.68 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 27.0 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0698 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34705
Calibration: 0352001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34705-ICB1 | Aluminum | -0.2253 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.1480 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | -0.2600 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.07347 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.4911 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 7.110 | 1000 | 5000 | ug/L | U | SW6010C |
| | Potassium | 3.670 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | -14.41 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.09001 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34705-CCB1 | Aluminum | 0.224 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.215 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 9.98 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.180 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | 0.378 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 11.4 | 1000 | 5000 | ug/L | U | SW6010C |
| | Potassium | 7.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 5.94 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0157 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34705-CCB5 | Aluminum | 1.81 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.457 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 1.53 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.00900 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.750 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 1.84 | 1000 | 5000 | ug/L | U | SW6010C |
| | Potassium | 6.88 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | -13.7 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0659 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34705-CCB6 | Aluminum | 0.479 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.729 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 4.76 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.0854 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.746 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 6.46 | 1000 | 5000 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34705
Calibration: 0352001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34705-CCB6 | Potassium | 17.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 52.6 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0407 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW7471A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: CTOJM16 Key West 2010
Sequence: 0L35013
Calibration: 0350003

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35013-ICB1 | Mercury | 0.04747 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L10002-BLK1 | Mercury | 0.00774 | 0.0130 | 0.0330 | mg/Kg wet | U | SW7471A |
| 0L35013-CCB1 | Mercury | 0.0453 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L35013-CCB6 | Mercury | 0.0461 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L35013-CCB7 | Mercury | 0.0483 | 0.0780 | 0.198 | ug/L | U | SW7471A |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35203-ICB1 | Aluminum | -0.3931 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.3437 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | -0.2714 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.2165 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.04395 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.09989 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 5.350 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.01421 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | 0.07734 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.1403 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.9273 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.4778 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 10.56 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.1786 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.07111 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | -6.210 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.4396 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | 0.1450 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 12.81 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.05764 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.01923 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.1244 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35203-CCB1 | Aluminum | 0.709 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.608 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | -0.200 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.174 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.313 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.216 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 16.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.0896 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | 0.000690 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.211 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 3.14 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35203-CCB1 | Lead | -0.0926 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 20.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.119 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.181 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 2.77 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.231 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | -0.0807 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 28.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.176 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.191 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0183 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35203-CCB2 | Aluminum | 1.22 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.210 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | -0.120 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.181 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.115 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.337 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 9.40 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.0977 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | 0.0375 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.244 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 1.08 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.0774 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 9.42 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0941 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.172 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | -6.54 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 1.02 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | -0.0379 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 15.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.00116 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.113 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0607 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L15009-BLK1 | Aluminum | 0.280 | 2.50 | 10.0 | mg/Kg wet | U | SW6010C |
| | Antimony | 0.0237 | 0.250 | 0.750 | mg/Kg wet | U | SW6010C |
| | Arsenic | -0.0307 | 0.150 | 0.250 | mg/Kg wet | U | SW6010C |
| | Barium | 0.0185 | 0.250 | 2.00 | mg/Kg wet | U | SW6010C |
| | Beryllium | -0.000767 | 0.0500 | 0.250 | mg/Kg wet | U | SW6010C |
| | Cadmium | 0.0417 | 0.0500 | 0.250 | mg/Kg wet | U | SW6010C |
| | Calcium | 21.3 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Chromium | 0.0789 | 0.100 | 0.500 | mg/Kg wet | U | SW6010C |
| | Cobalt | -0.00110 | 0.250 | 0.625 | mg/Kg wet | U | SW6010C |
| | Copper | 0.00705 | 0.250 | 0.500 | mg/Kg wet | U | SW6010C |
| | Iron | 0.190 | 1.50 | 5.00 | mg/Kg wet | U | SW6010C |
| | Lead | -0.0196 | 0.0750 | 0.150 | mg/Kg wet | U | SW6010C |
| | Magnesium | 0.240 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Manganese | 0.0131 | 0.150 | 0.750 | mg/Kg wet | U | SW6010C |
| | Nickel | -0.0181 | 0.250 | 0.500 | mg/Kg wet | U | SW6010C |
| | Potassium | 0.494 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Selenium | 0.113 | 0.150 | 0.500 | mg/Kg wet | U | SW6010C |
| | Silver | -0.0114 | 0.0500 | 0.500 | mg/Kg wet | U | SW6010C |
| | Sodium | 0.734 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Thallium | -0.0804 | 0.150 | 0.400 | mg/Kg wet | U | SW6010C |
| | Vanadium | -0.0112 | 0.250 | 0.625 | mg/Kg wet | U | SW6010C |
| | Zinc | 0.481 | 0.250 | 1.00 | mg/Kg wet | I | SW6010C |
| 0L35203-CCB3 | Aluminum | 0.361 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.153 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | 0.706 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.114 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0456 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.245 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 99.9 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.205 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | -0.0724 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.182 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.338 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35203-CCB3 | Lead | -0.117 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 5.31 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0382 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.183 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 4.94 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.745 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | -0.0310 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 8.06 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.142 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.116 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0941 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35301
Calibration: 0354001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35301-ICB1 | Aluminum | 2.164 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -2.810 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.03316 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Potassium | -3.010 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 16.59 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.6995 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB1 | Aluminum | 1.79 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -1.44 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | 0.289 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Potassium | 8.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 17.2 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.707 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB2 | Aluminum | 1.26 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -8.80 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.458 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Potassium | 15.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 60.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.883 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB3 | Aluminum | 0.928 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -15.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | 0.296 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Potassium | 7.37 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 56.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.830 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB4 | Aluminum | 0.398 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | 0.270 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.419 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Potassium | 5.33 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 32.2 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.846 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB5 | Aluminum | 2.97 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | 2.35 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.414 | 1.50 | 3.00 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Sequence: 0L35301

SDG: CTOJM16KW_003
Project: CTOJM16 Key West 2010
Calibration: 0354001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35301-CCB5 | Potassium | -3.96 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 31.0 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.769 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB6 | Aluminum | 2.39 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | 0.310 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | 0.183 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Potassium | 30.9 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 279 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.898 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB7 | Aluminum | 3.08 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -9.62 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.506 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Potassium | 0.110 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 40.9 | 1000 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.835 | 5.00 | 20.0 | ug/L | U | SW6010C |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW7470A**

**1011002-15**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06007

% Solids:

Source Sample Name: **1011257-15**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Mercury | 2.000 | ND | 1.948 | 97.4 | | 80 - 120 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Mercury | 2.000 | 2.052 | 103 | 5.22 | | 20 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06007 | Laboratory ID: | 0L06007-BS1 |
| Preparation: | pMercury-W SW 7470A | Initial/Final: | 30 mL / 30 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 2.000 | 2.024 | 101 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L06016
Laboratory ID: 0L06016-BS1
Preparation: MET_3005A
Initial/Final: 50 mL / 50 mL

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 2000 | 1956 | 97.8 | 80 - 120 |
| Antimony | 250.0 | 231.2 | 92.5 | 80 - 120 |
| Arsenic | 250.0 | 235.9 | 94.3 | 80 - 120 |
| Barium | 2000 | 2016 | 101 | 80 - 120 |
| Beryllium | 50.00 | 54.42 | 109 | 80 - 120 |
| Cadmium | 125.0 | 121.3 | 97.0 | 80 - 120 |
| Calcium | 5000 | 4635 | 92.7 | 80 - 120 |
| Chromium | 200.0 | 198.6 | 99.3 | 80 - 120 |
| Cobalt | 500.0 | 472.7 | 94.5 | 80 - 120 |
| Copper | 250.0 | 247.8 | 99.1 | 80 - 120 |
| Iron | 1000 | 1042 | 104 | 80 - 120 |
| Lead | 250.0 | 241.0 | 96.4 | 80 - 120 |
| Magnesium | 5000 | 5197 | 104 | 80 - 120 |
| Manganese | 500.0 | 533.0 | 107 | 80 - 120 |
| Nickel | 500.0 | 489.9 | 98.0 | 80 - 120 |
| Potassium | 5000 | 5193 | 104 | 80 - 120 |
| Selenium | 250.0 | 222.9 | 89.2 | 80 - 120 |
| Silver | 250.0 | 234.8 | 93.9 | 80 - 120 |
| Sodium | 5000 | 5776 | 116 | 80 - 120 |
| Thallium | 250.0 | 241.0 | 96.4 | 80 - 120 |
| Vanadium | 500.0 | 481.8 | 96.4 | 80 - 120 |
| Zinc | 500.0 | 494.9 | 99.0 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW7471A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_003 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L10002 | Laboratory ID: | 0L10002-BS1 |
| Preparation: | MET_HG_S | Initial/Final: | 0.3 g / 50 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 0.3333 | 0.3678 | 110 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_003
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Solid
Batch: 0L15009
Laboratory ID: 0L15009-BS1
Preparation: MET_3050B
Initial/Final: 2 g / 100 mL

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 100.0 | 101.4 | 101 | 80 - 120 |
| Antimony | 12.50 | 12.71 | 102 | 80 - 120 |
| Arsenic | 12.50 | 12.34 | 98.7 | 80 - 120 |
| Barium | 100.0 | 111.6 | 112 | 80 - 120 |
| Beryllium | 2.500 | 2.556 | 102 | 80 - 120 |
| Cadmium | 6.250 | 6.445 | 103 | 80 - 120 |
| Calcium | 250.0 | 280.3 | 112 | 80 - 120 |
| Chromium | 10.00 | 10.45 | 104 | 80 - 120 |
| Cobalt | 25.00 | 26.93 | 108 | 80 - 120 |
| Copper | 12.50 | 12.29 | 98.3 | 80 - 120 |
| Iron | 50.00 | 55.64 | 111 | 80 - 120 |
| Lead | 12.50 | 12.95 | 104 | 80 - 120 |
| Magnesium | 250.0 | 240.0 | 96.0 | 80 - 120 |
| Manganese | 25.00 | 25.53 | 102 | 80 - 120 |
| Nickel | 25.00 | 26.92 | 108 | 80 - 120 |
| Potassium | 250.0 | 246.2 | 98.5 | 80 - 120 |
| Selenium | 12.50 | 11.70 | 93.6 | 80 - 120 |
| Silver | 12.50 | 11.66 | 93.2 | 80 - 120 |
| Sodium | 250.0 | 254.4 | 102 | 80 - 120 |
| Thallium | 12.50 | 12.06 | 96.5 | 80 - 120 |
| Vanadium | 25.00 | 24.36 | 97.5 | 80 - 120 |
| Zinc | 25.00 | 26.34 | 105 | 80 - 120 |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_003

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-FIMS

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Mercury | 0.0800 | 0.200 | ug/L | SW7470A |
| | 0.0130 | 0.0330 | mg/Kg | SW7471A |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_003

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Solid **Instrument:** ME-ICP

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aluminum | 2.50 | 10.0 | mg/Kg | SW6010C |
| | 12.5 | 50.0 | ug/L | SW6010C |
| | 50.0 | 200 | ug/L | SW6010C |
| Antimony | 0.250 | 0.750 | mg/Kg | SW6010C |
| | 5.00 | 10.0 | ug/L | SW6010C |
| | 1.25 | 3.75 | ug/L | SW6010C |
| Arsenic | 0.150 | 0.250 | mg/Kg | SW6010C |
| | 0.750 | 1.50 | ug/L | SW6010C |
| | 3.00 | 5.00 | ug/L | SW6010C |
| Barium | 0.250 | 2.00 | mg/Kg | SW6010C |
| | 1.25 | 10.0 | ug/L | SW6010C |
| | 5.00 | 40.0 | ug/L | SW6010C |
| Beryllium | 0.0500 | 0.250 | mg/Kg | SW6010C |
| | 1.00 | 5.00 | ug/L | SW6010C |
| | 0.250 | 1.25 | ug/L | SW6010C |
| Cadmium | 0.0500 | 0.250 | mg/Kg | SW6010C |
| | 0.250 | 1.25 | ug/L | SW6010C |
| | 1.00 | 5.00 | ug/L | SW6010C |
| Calcium | 50.0 | 250 | mg/Kg | SW6010C |
| | 1000 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Chromium | 0.100 | 0.500 | mg/Kg | SW6010C |
| | 0.500 | 1.25 | ug/L | SW6010C |
| | 2.00 | 10.0 | ug/L | SW6010C |
| Cobalt | 0.250 | 0.625 | mg/Kg | SW6010C |
| | 1.25 | 3.12 | ug/L | SW6010C |
| | 5.00 | 12.5 | ug/L | SW6010C |
| Copper | 0.250 | 0.500 | mg/Kg | SW6010C |
| | 4.00 | 10.0 | ug/L | SW6010C |
| | 1.25 | 2.50 | ug/L | SW6010C |
| Iron | 1.50 | 5.00 | mg/Kg | SW6010C |
| | 30.0 | 100 | ug/L | SW6010C |
| | 7.50 | 25.0 | ug/L | SW6010C |
| Lead | 0.0750 | 0.150 | mg/Kg | SW6010C |
| | 0.375 | 0.750 | ug/L | SW6010C |
| | 1.50 | 3.00 | ug/L | SW6010C |
| Magnesium | 50.0 | 250 | mg/Kg | SW6010C |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_003

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-ICP

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Magnesium | 1000 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Manganese | 0.150 | 0.750 | mg/Kg | SW6010C |
| | 3.00 | 15.0 | ug/L | SW6010C |
| | 0.750 | 3.75 | ug/L | SW6010C |
| Nickel | 0.250 | 0.500 | mg/Kg | SW6010C |
| | 3.00 | 10.0 | ug/L | SW6010C |
| | 0.750 | 2.50 | ug/L | SW6010C |
| Potassium | 50.0 | 250 | mg/Kg | SW6010C |
| | 1000 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Selenium | 0.150 | 0.500 | mg/Kg | SW6010C |
| | 0.750 | 1.50 | ug/L | SW6010C |
| | 3.00 | 10.0 | ug/L | SW6010C |
| Silver | 0.0500 | 0.500 | mg/Kg | SW6010C |
| | 1.00 | 10.0 | ug/L | SW6010C |
| | 0.250 | 1.25 | ug/L | SW6010C |
| Sodium | 50.0 | 250 | mg/Kg | SW6010C |
| | 200 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Thallium | 0.150 | 0.400 | mg/Kg | SW6010C |
| | 0.750 | 2.00 | ug/L | SW6010C |
| | 3.00 | 8.00 | ug/L | SW6010C |
| Vanadium | 0.250 | 0.625 | mg/Kg | SW6010C |
| | 1.25 | 3.12 | ug/L | SW6010C |
| | 5.00 | 12.5 | ug/L | SW6010C |
| Zinc | 0.250 | 1.00 | mg/Kg | SW6010C |
| | 1.25 | 5.00 | ug/L | SW6010C |
| | 5.00 | 20.0 | ug/L | SW6010C |

# PREPARATION BATCH SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06007 Batch Matrix: Water Preparation: pMercury-W SW 7470A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06007-BLK1 | 12/06/10 07:47 | 30.00 | 30.00 |
| LCS | 0L06007-BS1 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-15 | 0L06007-MS1 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-15 | 0L06007-MSD1 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-01 | 1011257-01 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-02 | 1011257-02 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-03 | 1011257-03 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-04 | 1011257-04 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-05 | 1011257-05 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-06 | 1011257-06 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-07 | 1011257-07 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-08 | 1011257-08 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-09 | 1011257-09 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-10 | 1011257-10 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-11 | 1011257-11 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-12 | 1011257-12 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-13 | 1011257-13 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-14 | 1011257-14 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-15 | 1011257-15 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011002-16 | 1011257-16 | 12/06/10 07:47 | 30.00 | 30.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06016 Batch Matrix: Water Preparation: MET_3005A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06016-BLK1 | 12/06/10 11:05 | 50.00 | 50.00 |
| LCS | 0L06016-BS1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-01 | 1011257-01 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-01 | 1011257-01RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-02 | 1011257-02 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-03 | 1011257-03 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-04 | 1011257-04 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-04 | 1011257-04RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-05 | 1011257-05 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-05 | 1011257-05RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-06 | 1011257-06 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-06 | 1011257-06RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-06 | 1011257-06RE2 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-06 | 1011257-06RE3 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-07 | 1011257-07 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-08 | 1011257-08 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-08 | 1011257-08RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-09 | 1011257-09 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-09 | 1011257-09RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-10 | 1011257-10 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-10 | 1011257-10RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-10 | 1011257-10RE2 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-11 | 1011257-11 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-11 | 1011257-11RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-12 | 1011257-12 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-12 | 1011257-12RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-12 | 1011257-12RE2 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-13 | 1011257-13 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-13 | 1011257-13RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-14 | 1011257-14 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-14 | 1011257-14RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-15 | 1011257-15 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-15 | 1011257-15RE2 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-15 | 1011257-15RE3 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-16 | 1011257-16 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-16 | 1011257-16RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011002-16 | 1011257-16RE2 | 12/06/10 11:05 | 50.00 | 50.00 |

# PREPARATION BATCH SUMMARY

## SW7471A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L10002 Batch Matrix: Solid Preparation: MET_HG_S

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L10002-BLK1 | 12/15/10 07:30 | 0.30 | 50.00 |
| LCS | 0L10002-BS1 | 12/15/10 07:30 | 0.30 | 50.00 |
| 1011014-01 | 1011258-01 | 12/15/10 07:30 | 0.36 | 50.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_003

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L15009 Batch Matrix: Solid Preparation: MET_3050B

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L15009-BLK1 | 12/15/10 11:00 | 2.00 | 100.00 |
| LCS | 0L15009-BS1 | 12/15/10 11:00 | 2.00 | 100.00 |
| 1011014-01 | 1011258-01 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011014-01 | 1011258-01RE1 | 12/15/10 11:00 | 0.51 | 100.00 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **JANUARY 13, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – PEST/PCB**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_004**

**SAMPLES:** 3 / Aqueous / PEST / PCB

G01-MW-01-1010 G01-MW-02-1010 G01-MW-04-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_004 consisted of three (3) aqueous environmental samples. All samples were analyzed for the organochloride pesticides (PEST) and polychlorinated biphenyls (PCB) as indicated above. No field duplicate pair samples were included in the Sample Delivery Group (SDG).

The samples were collected by Tetra Tech NUS on November 5, 2010 and analyzed by Empirical Laboratories LLC upon transfer from Centauri Labs who performed the initial sample method extractions. All analyses were conducted in accordance with SW-846 Method 8081A and 8082A analytical and reporting protocols. The data contained in this SDG were fully validated with regard to the following parameters:

- Data Completeness
- * Holding Times
- Initial and Continuing Calibration
- * Laboratory Blank Analyses
- Blank Spike Results
- * System Monitoring Compound/Surrogate Recovery
- * Compound Identification
- Compound Quantitation
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

PEST

The closing CCV %D was greater than 15% quality control limit for instrument GL-ECD3 on 12/10/10 @ 20:51 for the column ZB-MR-2 for 4,4'-DDT affecting all the SDG samples. The positive 4,4'-DDT result for sample G01-MW-04-1010 was qualified estimated, (J), as it was reported from the ZB-MR-2 column. The non-detected 4,4'-DDT results were not qualified as the alternate column CCV %Ds for 4,4'-DDT was within the quality control limit.

The higher of the two column PEST results was reported except in cases where the laboratory determined that there was a sample matrix interference in which case the alternate column result was reported. Due

to a matrix interference the positive result for alpha-chlordane for sample G01-MW-04-1010 was reported from the alternate column and was qualified estimated, (J).

The relative percent difference (RPD) between the two analytical column results was greater than the 40% quality control limit for alpha-chlordane for sample G01-MW-04-1010. The alpha-chlordane result was qualified estimated, (J), for sample G01-MW-04-1010.

The PEST laboratory control sample (LSC) %Rs exceeded the quality control limits for all PEST analytes. All non-detected PEST analytes were not qualified due to this issue. The positive 4,4'-DDT, alpha-chlordane, and methoxychlor results for sample G01-MW-04-1010 were qualified estimated, (J),

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PCB

No issues were identified.

Additional Comments

The samples were initially sent to Centauri Labs for analysis but the laboratory closed prior to sample analysis completion. The laboratory extracted the samples for PESTs and PCBs prior to closure. The extracts were sent to Empirical for the completion of the analyses. Samples were logged in to Empirical using the Centauri Labs identification instead of the sample identification. The Form I results for this SDG have been manually edited to indicate the actually sample name.

The opening CCV %D was greater than 15% quality control limit for instrument GL-ECD3 on 12/10/10 @ 12:06 for the column ZB-MR-1 for endrin and on 12/10/10 @ 12:44 for the column ZB-MR-2 for toxaphene affecting all the SDG samples. The closing CCV %D was greater than 15% quality control limit for instrument GL-ECD3 on 12/10/10 @ 20:51 for the column ZB-MR-2 for alpha-BHC, delta-BHC, and gamma-BHC, for the ZB-MR-1 column for heptachlor, and on 12/10/10 @ 21:28 for the column ZB-MR-2 for toxaphene affecting all the SDG samples. The endrin, alpha-BHC, delta-BHC, gamma-BHC, and toxaphene results for all the samples were non-detected and the %R was within the quality control limits for both the opening and closing CCVs for the alternate columns. No validation action was taken for the non-detected sample results for endrin, alpha-BHC, delta-BHC, gamma-BHC, and toxaphene.

## Executive Summary

**Laboratory Performance:** PEST continuing calibration verification %Ds which exceeded the quality control limits resulted in the qualification of pesticide positive results. The PEST alpha-chlordane positive result for sample G01-MW-04-1010 was qualified due to a matrix interference. The positive PEST results for sample G01-MW-04-1010 were qualified due to LCS quality control limit non-compliances.

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J). The RPD quality control limit exceedance between analytical column results resulted in a data qualification for alpha-chlordane for sample G01-MW-04-1010.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site Sample Analysis Plan (SAP), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

**Appendix A**

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | | | G01-MW-02-1010 | | | G01-MW-04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_004 | LAB_ID | 1011260-01 | | | 1011260-02 | | | 1011260-03 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| 4,4'-DDE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| 4,4'-DDT | | 0.005 | U | | 0.005 | U | | 0.00855 | J | EP |
| ALDRIN | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| ALPHA-BHC | | 0.0033 | U | | 0.005 | U | | 0.0033 | U | |
| ALPHA-CHLORDANE | | 0.0033 | U | | 0.0033 | U | | 0.00587 | J | EPQU |
| AROCLOR-1016 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1221 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1232 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1242 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1248 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1254 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1260 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| BETA-BHC | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| DELTA-BHC | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| DIELDRIN | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN I | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| ENDOSULFAN II | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN SULFATE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN ALDEHYDE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN KETONE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| GAMMA-BHC (LINDANE) | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| GAMMA-CHLORDANE | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| HEPTACHLOR | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| HEPTACHLOR EPOXIDE | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| METHOXYCHLOR | | 0.0033 | U | | 0.0033 | U | | 0.0123 | J | EP |
| TOXAPHENE | | 0.33 | U | | 0.33 | U | | 0.33 | U | |

## Appendix B

Results as Reported by the Laboratory

# ANALYSIS DATA SHEET

1011022-01

GD1-MW-01-1010 JK 1/11/11

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011260-01 File ID: 014F1401.D

Sampled: 11/05/10 11:40 Prepared: 11/12/10 10:15 Analyzed: 12/10/10 15:33

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 309-00-2 | Aldrin | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-84-6 | alpha-BHC | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-71-9 | alpha-Chlordane | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-85-7 | beta-BHC | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-86-8 | delta-BHC | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 60-57-1 | Dieldrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 959-98-8 | Endosulfan I | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 1031-07-8 | Endosulfan sulfate | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-74-2 | gamma-Chlordane | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 76-44-8 | Heptachlor [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 1024-57-3 | Heptachlor epoxide | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1822 | 91.1 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2054 | 103 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1848 | 92.4 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1889 | 94.5 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011022-02

GW1-MW-02-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011260-02 File ID: 015F1501.D

Sampled: 11/05/10 10:35 Prepared: 11/12/10 10:15 Analyzed: 12/10/10 15:52

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 309-00-2 | Aldrin | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-84-6 | alpha-BHC [2C] | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 5103-71-9 | alpha-Chlordane | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-85-7 | beta-BHC | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-86-8 | delta-BHC | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 60-57-1 | Dieldrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 959-98-8 | Endosulfan I | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 1031-07-8 | Endosulfan sulfate | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-74-2 | gamma-Chlordane | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 76-44-8 | Heptachlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 1024-57-3 | Heptachlor epoxide | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1506 | 75.3 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1742 | 87.1 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1471 | 73.5 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1536 | 76.8 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011022-03

GB1-MW-04-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011260-03 File ID: 016R1601.D

Sampled: 11/05/10 09:28 Prepared: 11/12/10 10:15 Analyzed: 12/10/10 16:11

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE [2C] | | 0.00500 | 0.0100 | 0.0200 | UO |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UO |
| 50-29-3 | 4,4'-DDT [2C] | 0.00855 | 0.00500 | 0.0100 | 0.0200 | IO |
| 309-00-2 | Aldrin | | 0.00330 | 0.0100 | 0.0200 | UO |
| 319-84-6 | alpha-BHC | | 0.00330 | 0.0100 | 0.0200 | UO |
| 5103-71-9 | alpha-Chlordane | 0.00587 | 0.00330 | 0.0100 | 0.0200 | IPQ, M |
| 319-85-7 | beta-BHC | | 0.00330 | 0.0100 | 0.0200 | UO |
| 319-86-8 | delta-BHC | | 0.00330 | 0.0100 | 0.0200 | UO |
| 60-57-1 | Dieldrin | | 0.00500 | 0.0100 | 0.0200 | UO |
| 959-98-8 | Endosulfan I [2C] | | 0.00330 | 0.0100 | 0.0200 | UO |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UO |
| 1031-07-8 | Endosulfan sulfate | | 0.00500 | 0.0100 | 0.0200 | UO |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UO |
| 7421-93-4 | Endrin aldehyde [2C] | | 0.00500 | 0.0100 | 0.0200 | UO |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UO |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | UO |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.00330 | 0.0100 | 0.0200 | UO |
| 76-44-8 | Heptachlor | | 0.00330 | 0.0100 | 0.0200 | UO |
| 1024-57-3 | Heptachlor epoxide | | 0.00330 | 0.0100 | 0.0200 | UO |
| 72-43-5 | Methoxychlor [2C] | 0.0123 | 0.00330 | 0.0100 | 0.0200 | IPQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.2374 | 119 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2492 | 125 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.2142 | 107 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1916 | 95.8 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011022-01

GØ1-MW-Ø1-1Ø1Ø

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010 * 1/11/11

Matrix: Water Laboratory ID: 1011260-01 File ID: 014F1401.D

Sampled: 11/05/10 11:40 Prepared: 11/12/10 10:15 Analyzed: 12/10/10 15:33

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1822 | 91.1 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2054 | 103 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1848 | 92.4 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1889 | 94.5 | 40 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011022-02

GD1-MW-02-1010

* 1/11/11

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011260-02 File ID: 015F1501.D

Sampled: 11/05/10 10:35 Prepared: 11/12/10 10:15 Analyzed: 12/10/10 15:52

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1506 | 75.3 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1742 | 87.1 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1471 | 73.5 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1536 | 76.8 | 40 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011022-03

~~GDC~~ GDI-MW-04-1010

JK 1/11/11

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011260-03 File ID: 016F1601.D

Sampled: 11/05/10 09:28 Prepared: 11/12/10 10:15 Analyzed: 12/10/10 16:11

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.2374 | 119 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2492 | 125 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.2142 | 107 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1916 | 95.8 | 40 - 135 | |

* Values outside of QC limits

**Appendix C**

Support Documentation

HOLDTIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | 1011013-11 | 1011259-11 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-01 | 1011259-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-19 | 1011259-19 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-18 | 1011259-18 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-17 | 1011259-17 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-16 | 1011259-16 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-15 | 1011259-15 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-14 | 1011259-14 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-12 | 1011259-12 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-20 | 1011259-20 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-10 | 1011259-10 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-09 | 1011259-09 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-08 | 1011259-08 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-07 | 1011259-07 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-06 | 1011259-06 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | 1011013-04 | 1011259-04 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-03 | 1011259-03 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-02 | 1011259-02 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-13 | 1011259-13 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | UG/L | 1011022-03 | 1011260-03 | NM | 11/05/2010 | 12/06/2010 | 12/08/2010 | 31 | 2 | 33 |
| HG | UG/L | 1011022-01 | 1011260-01 | NM | 11/05/2010 | 12/06/2010 | 12/08/2010 | 31 | 2 | 33 |
| HG | UG/L | 1011022-02 | 1011260-02 | NM | 11/05/2010 | 12/06/2010 | 12/08/2010 | 31 | 2 | 33 |
| M | MG/KG | 1011013-04 | 1011259-04 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-10 | 1011259-10RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-09 | 1011259-09 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-08 | 1011259-08RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-08 | 1011259-08 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-07 | 1011259-07RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-07 | 1011259-07 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-06 | 1011259-06RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-04 | 1011259-04RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-10 | 1011259-10 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-03 | 1011259-03RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | MG/KG | 1011013-03 | 1011259-03 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-02 | 1011259-02RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-02 | 1011259-02 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-01 | 1011259-01RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-01 | 1011259-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-06 | 1011259-06 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-19 | 1011259-19RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-09 | 1011259-09RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-20 | 1011259-20 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-19 | 1011259-19 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-18 | 1011259-18RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-18 | 1011259-18 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-17 | 1011259-17RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-17 | 1011259-17 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-16 | 1011259-16RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-16 | 1011259-16 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-15 | 1011259-15 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-14 | 1011259-14RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | MG/KG | 1011013-14 | 1011259-14 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-13 | 1011259-13RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-13 | 1011259-13 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-12 | 1011259-12RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-12 | 1011259-12 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-11 | 1011259-11RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-11 | 1011259-11 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-20 | 1011259-20RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-15 | 1011259-15RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | UG/L | 1011022-02 | 1011260-02 | NM | 11/05/2010 | 12/06/2010 | 12/07/2010 | 31 | 1 | 32 |
| M | UG/L | 1011022-03 | 1011260-03RE1 | NM | 11/05/2010 | 12/06/2010 | 12/09/2010 | 31 | 3 | 34 |
| M | UG/L | 1011022-02 | 1011260-02RE1 | NM | 11/05/2010 | 12/06/2010 | 12/09/2010 | 31 | 3 | 34 |
| M | UG/L | 1011022-01 | 1011260-01RE1 | NM | 11/05/2010 | 12/06/2010 | 12/09/2010 | 31 | 3 | 34 |
| M | UG/L | 1011022-01 | 1011260-01 | NM | 11/05/2010 | 12/06/2010 | 12/07/2010 | 31 | 1 | 32 |
| M | UG/L | 1011022-03 | 1011260-03 | NM | 11/05/2010 | 12/06/2010 | 12/07/2010 | 31 | 1 | 32 |
| PCB | UG/L | 1011022-01 | 1011260-01 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PCB | UG/L | 1011022-01 | 1011260-01 | SUR | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PCB | UG/L | 1011022-02 | 1011260-02 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB | UG/L | 1011022-02 | 1011260-02 | SUR | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PCB | UG/L | 1011022-03 | 1011260-03 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PCB | UG/L | 1011022-03 | 1011260-03 | SUR | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PEST | UG/L | 1011022-03 | 1011260-03 | SUR | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PEST | UG/L | 1011022-01 | 1011260-01 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PEST | UG/L | 1011022-01 | 1011260-01 | SUR | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PEST | UG/L | 1011022-02 | 1011260-02 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PEST | UG/L | 1011022-02 | 1011260-02 | SUR | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PEST | UG/L | 1011022-03 | 1011260-03 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-12

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Centauri Labs**<br>**7210 Corporate Court**<br>**Fredrick, MD 21703** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Chino Ortiz**<br>**301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8260B** | G01-MW-01 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8720D/8270DSIM** | G01-MW-01 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8082A** | G01-MW-01 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 8081B** | G01-MW-01 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-01-1010 | 11:40 | **SW846 6020A** | G01-MW-01 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8260B** | G01-MW-02 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8720D/8270DSIM** | G01-MW-02 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8082A** | G01-MW-02 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 8081B** | G01-MW-02 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-02-1010 | 10:35 | **SW846 6020A** | G01-MW-02 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8260B** | G01-MW-04 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8720D/8270DSIM** | G01-MW-04 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8082A** | G01-MW-04 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 8081B** | G01-MW-04 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/05/2010 | G01-MW-04-1010 | 09:28 | **SW846 6020A** | G01-MW-04 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/05/2010 | GKHMS-TB-05 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

101022

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/05/2010 | 13:26 | **Federal Express** | 11/05/2010 | 15:26 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| | | | | 11/6/10 | 10:30 |

CENTAURI LABS™

WORK ORDER

Printed: 11/8/2010 10:20:16AM

1011022

Approved

*Due Date: 11/20/10 00:00 (14 day TAT)*

*Date Received: 11/06/10 15:26*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: Copy/Relog from 1011014. LEVEL 3

EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!!

| Analysis | Expires | Comments |
|---|---|---|
| 1011022-01 G01-MW-01-1010 | [Water] Sampled 11/05/10 11:40 Eastern | |
| 6020A Full | 05/04/11 11:40 | |
| 8081A Pesticides | 11/12/10 11:40 | |
| 8082 PCBs | 11/12/10 11:40 | |
| 8260B LL VOA | 11/19/10 11:40 | |
| 8270D LL SVOC TCL | 11/12/10 11:40 | PLUS SIMs PAHs |
| Mercury, Total 7470A | 12/03/10 11:40 | |
| 6010C Full | 05/04/11 11:40 | |
| 1011022-02 G01-MW-02-1010 | [Water] Sampled 11/05/10 10:35 Eastern | |
| 8260B LL VOA | 11/19/10 10:35 | |
| 6010C Full | 05/04/11 10:35 | |
| 6020A Full | 05/04/11 10:35 | |
| 8082 PCBs | 11/12/10 10:35 | |
| 8270D LL SVOC TCL | 11/12/10 10:35 | PLUS SIMs PAHs |
| Mercury, Total 7470A | 12/03/10 10:35 | |
| 8081A Pesticides | 11/12/10 10:35 | |
| 1011022-03 G01-MW-04-1010 | [Water] Sampled 11/05/10 09:28 Eastern | |
| 6010C Full | 05/04/11 09:28 | |
| 6020A Full | 05/04/11 09:28 | |
| 8081A Pesticides | 11/12/10 09:28 | |
| 8082 PCBs | 11/12/10 09:28 | |
| 8260B LL VOA | 11/19/10 09:28 | |
| 8270D LL SVOC TCL | 11/12/10 09:28 | PLUS SIMs PAHs |
| Mercury, Total 7470A | 12/03/10 09:28 | |
| 1011022-04 GKHMS-TB-05 | [Water] Sampled 11/05/10 09:28 Eastern | |
| 8260B LL VOA | 11/19/10 09:28 | |

Container Locations

Chino
Reviewed By

11/8/
Date

CENTAURI LABS™

WORK ORDER

Printed: 11/8/2010 10:20:16AM

1011022

Approved

*Due Date: 11/20/10 00:00 (14 day TAT)*

*Date Received: 11/06/10 15:26*

| | |
|---|---|
| 32oz Am | |
| 32oz Am | WS-5 |
| 32oz HDPE w/ HNO3 | WS-5 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

Date

## Sample Delivery Group Case Narrative

**Receipt Information**
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

All samples for SW7470A and SW7471A were received in the laboratory out of the EPA recommending holding time. Analyses for SW6010C and SW7471A were not able to be performed for samples 1011013-05 and 1011013-21 due to the samples being received in the laboratory with cracked lids.

**Changes to the Revision**
This is an original submittal of the final report package.

**Analytical Information**
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

**Chromatographic Flags for Manual Integration:**
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

**SW6010C/SW7470A/SW7471A:**
Samples 1011259-01, -02, -03, -04, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, 1011260-01, -02 and -03 were received after the EPA recommended holding time for SW7470A and SW7471A.

Samples 1011259-01, -02, -04, -06, -07, -09, -12, -13, -14, -17 and -18 are qualified with an M for Silver to indicate that the DL was raised due to interference and samples 1011259—01, -07 and -15 are qualified with an M for Thallium to indicate that the DL was raised due to interference.

The continuing calibration verifications exceeded criteria in 0L34305--CCV4 with a positive bias for Magnesium, Potassium and Sodium, in 0L34305-CCV5 with a positive bias for Aluminum, Magnesium Potassium and Sodium and with a negative bias for Calcium, in 0L34705-CCV8 with a positive bias for Potassium and Sodium and in 0L35203-CV4 with a negative bias for Silver.

The continuing calibration blanks 0L34305-CCB3 and –CCB5 and digestion blank 0L06016-BLK1 have positive results for Sodium. The digestion blank 0L15009-BLK1 has a positive result for Zinc.

The matrix spikes associated to sample 1011259-03 exceeded criteria with a positive bias for Antimony, Arsenic and Cadmium and with a negative bias for Iron and Manganese. The post digestion spike associated to sample 1011259-20 exceeded criteria for Antimony, Arsenic and Cadmium. The matrix spikes associated to sample 1011260-02 exceeded criteria with a positive bias for Aluminum, Antimony, Arsenic, Cadmium, Copper and Silver. Calcium and Magnesium also exceeded criteria but the parent sample concentration was greater then 4 times the amount spiked. The post digestion spike associated to sample 1011260-03 exceeded criteria for Aluminum, Antimony, Arsenic, Barium, Cadmium, Calcium, Copper, Magnesium, Selenium, Silver and Thallium.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The batch spikes associated to batch 0L06020 exceeded criteria with a positive bias for all compounds. No positive results above the LOQ were detected in the associated samples.

The continuing calibration verifications exceeded criteria in 0L35009-CCV6 with a positive bias on column 2 for Delta-BHC and in 0L35009-CCV8 with a positive bias on column 2 for Toxaphene.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
No anomalies or deviations are noted.

**Data Qualifiers**

As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

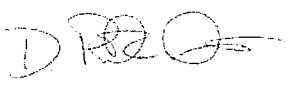
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| SENDING LABORATORY: | RECEIVING LABORATORY: |
|---|---|
| Centauri Labs, LLC<br>7210 Corporate Court<br>Frederick, MD 21703<br>Phone: 301.694.5310<br>Fax: 301.620.0731<br>Project Manager: Chino Ortiz | EMPERICAL LABS<br>621 MAINSTREAM DR SUITE 270<br>NASHVILLE, TN 37228<br>Phone :(615) 345-1115<br>Fax: (000) 000-0000 |

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-01** | **Solid** | **Sampled:11/02/10 08:00** | 10|259-01 |
| Mercury, Total 7471B | | 11/30/10 08:00 | |
| 6010C Full | | 05/01/11 08:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-02** | **Solid** | **Sampled:11/02/10 08:20** | -02 |
| 6010C Full | | 05/01/11 08:20 | |
| Mercury, Total 7471B | | 11/30/10 08:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-03** | **Solid** | **Sampled:11/02/10 08:40** | -03 |
| 6010C Full | | 05/01/11 08:40 | |
| Mercury, Total 7471B | | 11/30/10 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-04** | **Solid** | **Sampled:11/02/10 09:00** | -04 |
| 6010C Full | | 05/01/11 09:00 | |
| Mercury, Total 7471B | | 11/30/10 09:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-05** | **Solid** | **Sampled:11/02/10 09:20** | -05 |
| Mercury, Total 7471B | | 11/30/10 09:20 | |
| 6010C Full | | 05/01/11 09:20 | |
| *Containers Supplied:* | | | |

1.20C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

SUBCONTRACT ORDER

Centauri Labs, LLC

1011013

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-06** | **Solid** | **Sampled:11/02/10 09:40** | 1011259-06 |
| 6010C Full | | 05/01/11 09:40 | |
| Mercury, Total 7471B | | 11/30/10 09:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-07** | **Solid** | **Sampled:11/02/10 12:00** | -07 |
| 6010C Full | | 05/01/11 12:00 | |
| Mercury, Total 7471B | | 11/30/10 12:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-08** | **Solid** | **Sampled:11/02/10 14:00** | -08 |
| 6010C Full | | 05/01/11 14:00 | |
| Mercury, Total 7471B | | 11/30/10 14:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-09** | **Solid** | **Sampled:11/02/10 10:00** | -09 |
| 6010C Full | | 05/01/11 10:00 | |
| Mercury, Total 7471B | | 11/30/10 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-10** | **Solid** | **Sampled:11/02/10 10:20** | -10 |
| 6010C Full | | 05/01/11 10:20 | |
| Mercury, Total 7471B | | 11/30/10 10:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-11** | **Solid** | **Sampled:11/02/10 10:40** | -11 |
| Mercury, Total 7471B | | 11/30/10 10:40 | |
| 6010C Full | | 05/01/11 10:40 | |
| *Containers Supplied:* | | | |

1.2°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-12** | **Solid** | **Sampled:11/02/10 11:00** | 1011259-12 |
| 6010C Full | | 05/01/11 11:00 | |
| Mercury, Total 7471B | | 11/30/10 11:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-13** | **Solid** | **Sampled:11/02/10 13:40** | -13 |
| 6010C Full | | 05/01/11 13:40 | |
| Mercury, Total 7471B | | 11/30/10 13:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-14** | **Solid** | **Sampled:11/02/10 11:20** | -14 |
| 6010C Full | | 05/01/11 11:20 | |
| Mercury, Total 7471B | | 11/30/10 11:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-15** | **Solid** | **Sampled:11/02/10 13:20** | -15 |
| 6010C Full | | 05/01/11 13:20 | |
| Mercury, Total 7471B | | 11/30/10 13:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-16** | **Solid** | **Sampled:11/02/10 12:40** | -16 |
| 6010C Full | | 05/01/11 12:40 | |
| Mercury, Total 7471B | | 11/30/10 12:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-17** | **Solid** | **Sampled:11/02/10 11:40** | -17 |
| Mercury, Total 7471B | | 11/30/10 11:40 | |
| 6010C Full | | 05/01/11 11:40 | |
| *Containers Supplied:* | | | |

1.2°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-18** | **Solid** | **Sampled:11/02/10 12:20** | 1011259-18 |
| 6010C Full | | 05/01/11 12:20 | |
| Mercury, Total 7471B | | 11/30/10 12:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-19** | **Solid** | **Sampled:11/02/10 13:00** | -19 |
| 6010C Full | | 05/01/11 13:00 | |
| Mercury, Total 7471B | | 11/30/10 13:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-20** | **Solid** | **Sampled:11/02/10 00:00** | -20 |
| 6010C Full | | 05/01/11 00:00 | |
| Mercury, Total 7471B | | 11/30/10 00:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-21** | **Solid** | **Sampled:11/02/10 00:00** | -21 |
| Mercury, Total 7471B | | 11/30/10 00:00 | |
| 6010C Full | | 05/01/11 00:00 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/18/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

1.20C

KW 11/29 _____ 11/30/10 08:25

Released By Date Received By Date

Released By Date Received By Date

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011259 Number of Coolers: 1 of 2

Client: Centauri 2685 Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Dow (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered

EL Courier Other: _____

If applicable, enter airbill number here: 0609

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 1.5 °C Correction Factor: -0.3 °C Final Value: 1.2 °C

Dates samples were logged-in: 11/30/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | Yes | (No) | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | No | (N/A) |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | (Yes) | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

1011013-05 1011013-21 lid cracked! May be contaminated

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 101259 Number of Coolers: 2 of 2

Client: Centaur Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature):

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered

EL Courier Other: _____

If applicable, enter airbill number here: 0655

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: WET DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 4.8 °C Correction Factor: -0.3 °C Final Value: 4.5 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | Yes | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | Yes | No | N/A |
| 12. Was all required bottle label information complete? ..... | Yes | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | Yes | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | Yes | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | No | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | N/A |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | Yes | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | N/A |

See 1 of 2

If Non-Conformance issues were present, list by sample ID: _____

# SUBCONTRACT ORDER

**Centauri Labs, LLC**

**1011022**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011022-01** | **Water** | **Sampled:11/05/10 11:40** | 1011260-01 |
| Mercury, Total 7470A | | 12/03/10 11:40 | |
| 8082 PCBs | | 11/12/10 11:40 | |
| 8081A Pesticides | | 11/12/10 11:40 | |
| 6020A Full | | 05/04/11 11:40 | |
| 6010C Full | | 05/04/11 11:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011022-02** | **Water** | **Sampled:11/05/10 10:35** | -02 |
| Mercury, Total 7470A | | 12/03/10 10:35 | |
| 8082 PCBs | | 11/12/10 10:35 | |
| 8081A Pesticides | | 11/12/10 10:35 | |
| 6020A Full | | 05/04/11 10:35 | |
| 6010C Full | | 05/04/11 10:35 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011022-03** | **Water** | **Sampled:11/05/10 09:28** | -03 |
| Mercury, Total 7470A | | 12/03/10 09:28 | |
| 8082 PCBs | | 11/12/10 09:28 | |
| 8081A Pesticides | | 11/12/10 09:28 | |
| 6020A Full | | 05/04/11 09:28 | |
| 6010C Full | | 05/04/11 09:28 | |
| *Containers Supplied:* | | | |

4.5°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

SUBCONTRACT ORDER

Centauri Labs, LLC

1011022

*Carrier:* _____ *Airbill No.:* _____

*Report Due:* 11/20/10 00:00 *Send Report Attn:* _____

*Condition upon receipt:* _____

*Comments:* _____

4.5°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | | 11/30/10 08:25 |
| | | | |

| Released By | Date | Received By | Date |
|---|---|---|---|
| | | | |

WS 11/30/10

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 101260 Number of Coolers: 1 of ~~2~~ 2

Client: Centuri Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature):

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: —

If applicable, enter airbill number here: 0594

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.7 °C Correction Factor: -0.3 °C Final Value: 2.4 °C

Dates samples were logged-in: 11/30/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | (Yes) | No | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | (Yes) | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: —

Rec'd extracts for 1011022 BLK, BLK2, BKS1 BKS2, BKSD2 Tagged as -04 - 08 for Pest/PCB per contacts

pHL 2 for all metals

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 101260 Number of Coolers: 2 of 2

Client: Centrue Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Dong (signature):

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other:

If applicable, enter airbill number here:

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: WET DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 4.6 °C Correction Factor: -0.3 °C Final Value: 4.5 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): (Initial):

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | Yes | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | Yes | No | N/A |
| 12. Was all required bottle label information complete? ..... | Yes | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | Yes | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | Yes | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | No | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | N/A |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | Yes | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | N/A |

If Non-Conformance issues were present, list by sample ID:

See 1 of 2

WORK ORDER

**1011259**

Printed: 12/21/2010 2:41:01PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/21/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 11/30/2010 08:25
Date Logged In 11/30/2010 15:38

Samples Received at: 4.5°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011259-01 1011013-01 [Solid] Sampled 11/02/2010 08:00 Eastern** | | | | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 07:00 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 07:00 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 07:00 | | |
| **1011259-02 1011013-02 [Solid] Sampled 11/02/2010 08:20 Eastern** | | | | | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 07:20 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 07:20 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 07:20 | client list | |



CTOJM16KW_004 Summ Package

WORK ORDER

**1011259**

Printed: 12/21/2010 2:41:01PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011259-03 1011013-03 [Solid] Sampled 11/02/2010 08:40 Eastern** | | | | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 07:40 | client list | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 07:40 | | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 07:40 | | |
| **1011259-04 1011013-04 [Solid] Sampled 11/02/2010 09:00 Eastern** | | | | | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 08:00 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 08:00 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 08:00 | client list | |
| **1011259-05 1011013-05 [Solid] Sampled 11/02/2010 09:20 Eastern** | | | | | **ON HOLD PER CONTAINER LID CRACKED UPON RECEIPT!!** |
| SM2540B (Cancelled) | 12/16/2010 14:00 | 15 | 11/09/2010 08:20 | | Client does not want to run!! |
| SW6010C (Cancelled) | 12/16/2010 14:00 | 15 | 05/01/2011 08:20 | client list | Client does not want to run!! |
| SW7471A (Cancelled) | 12/16/2010 14:00 | 15 | 11/30/2010 08:20 | | Client does not want to run!! |
| **1011259-06 1011013-06 [Solid] Sampled 11/02/2010 09:40 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 08:40 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 08:40 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 08:40 | | |
| **1011259-07 1011013-07 [Solid] Sampled 11/02/2010 12:00 Eastern** | | | | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 11:00 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 11:00 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 11:00 | | |

WORK ORDER

**1011259**

Printed: 12/21/2010 2:41:01PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011259-08 1011013-08 [Solid] Sampled 11/02/2010 14:00 Eastern** | | | | | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 13:00 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 13:00 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 13:00 | client list | |
| **1011259-09 1011013-09 [Solid] Sampled 11/02/2010 10:00 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 09:00 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 09:00 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 09:00 | | |
| **1011259-10 1011013-10 [Solid] Sampled 11/02/2010 10:20 Eastern** | | | | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 09:20 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 09:20 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 09:20 | | |
| **1011259-11 1011013-11 [Solid] Sampled 11/02/2010 10:40 Eastern** | | | | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 09:40 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 09:40 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 09:40 | | |
| **1011259-12 1011013-12 [Solid] Sampled 11/02/2010 11:00 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 10:00 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 10:00 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 10:00 | | |

WORK ORDER

**1011259**

Printed: 12/21/2010 2:41:01PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011259-13 1011013-13 [Solid] Sampled 11/02/2010 13:40 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 12:40 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 12:40 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 12:40 | | |
| **1011259-14 1011013-14 [Solid] Sampled 11/02/2010 11:20 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 10:20 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 10:20 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 10:20 | | |
| **1011259-15 1011013-15 [Solid] Sampled 11/02/2010 13:20 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 12:20 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 12:20 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 12:20 | | |
| **1011259-16 1011013-16 [Solid] Sampled 11/02/2010 12:40 Eastern** | | | | | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 11:40 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 11:40 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 11:40 | client list | |
| **1011259-17 1011013-17 [Solid] Sampled 11/02/2010 11:40 Eastern** | | | | | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 10:40 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 10:40 | client list | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 10:40 | | |

WORK ORDER

**1011259**

Printed: 12/21/2010 2:41:01PM

## Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010

Project Manager: Kim Kostzer
Project Number: CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011259-18 1011013-18 [Solid] Sampled 11/02/2010 12:20 Eastern** | | | | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 11:20 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 11:20 | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 11:20 | | |
| **1011259-19 1011013-19 [Solid] Sampled 11/02/2010 13:00 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/30/2010 12:00 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/01/2011 12:00 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/09/2010 12:00 | | |
| **1011259-20 1011013-20 [Solid] Sampled 11/02/2010 00:00 Eastern** | | | | | |
| SW7471A | 12/16/2010 14:00 | 15 | 11/29/2010 23:00 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 04/30/2011 23:00 | client list | |
| SM2540B | 12/16/2010 14:00 | 15 | 11/08/2010 23:00 | | |
| **1011259-21 1011013-21 [Solid] Sampled 11/02/2010 00:00 Eastern** | | | | | **ON HOLD PER CONTAINER LID CRACKED UPON RECEIPT!!** |
| SM2540B (Cancelled) | 12/16/2010 14:00 | 15 | 11/08/2010 23:00 | | Client does not want to run!! |
| SW7471A (Cancelled) | 12/16/2010 14:00 | 15 | 11/29/2010 23:00 | | Client does not want to run!! |
| SW6010C (Cancelled) | 12/16/2010 14:00 | 15 | 04/30/2011 23:00 | client list | Client does not want to run!! |

WORK ORDER

**1011260**

Printed: 12/21/2010 2:41:27PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/21/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 11/30/2010 08:25
Date Logged In 11/30/2010 16:00

Samples Received at: 4.5°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confi Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011260-01 1011022-01 [Water] Sampled 11/05/2010 11:40 Eastern** | | | | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/04/2011 10:40 | client list | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/12/2010 10:40 | | Sample is an extract!! |
| SW8081A | 12/16/2010 14:00 | 15 | 11/12/2010 10:40 | | Sample is an extract!! |
| SW7470A | 12/16/2010 14:00 | 15 | 12/03/2010 10:40 | | |
| **1011260-02 1011022-02 [Water] Sampled 11/05/2010 10:35 Eastern** | | | | | |
| SW7470A | 12/16/2010 14:00 | 15 | 12/03/2010 09:35 | | |
| SW6010C | 12/16/2010 14:00 | 15 | 05/04/2011 09:35 | client list | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/12/2010 09:35 | | Sample is an extract!! |
| SW8081A | 12/16/2010 14:00 | 15 | 11/12/2010 09:35 | | Sample is an extract!! |



CTOJM16KW_004 Summ Package

WORK ORDER

**1011260**

Printed: 12/21/2010 2:41:27PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011260-03 1011022-03 [Water] Sampled 11/05/2010 09:28 Eastern** | | | | | |
| SW8081A | 12/16/2010 14:00 | 15 | 11/12/2010 08:28 | | Sample is an extract!! |
| SW7470A | 12/16/2010 14:00 | 15 | 12/03/2010 08:28 | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/12/2010 08:28 | | Sample is an extract!! |
| SW6010C | 12/16/2010 14:00 | 15 | 05/04/2011 08:28 | client list | |
| **1011260-04 1011022 BLK [Water] Sampled 11/05/2010 00:00 Eastern** | | | | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! |
| SW8081A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! |
| **1011260-05 1011022 BLK2 [Water] Sampled 11/05/2010 00:00 Eastern** | | | | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! LOW VOLUME |
| SW8081A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! LOW VOLUME |
| **1011260-06 1011022 BKS1 [Water] Sampled 11/05/2010 00:00 Eastern** | | | | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! LOW VOLUME |
| SW8081A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! LOW VOLUME |
| **1011260-07 1011022 BKS2 [Water] Sampled 11/05/2010 00:00 Eastern** | | | | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! |
| SW8081A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! |
| **1011260-08 1011022 BKSD2 [Water] Sampled 11/05/2010 00:00 Eastern** | | | | | |
| SW8081A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! LOW VOLUME |
| SW8082A | 12/16/2010 14:00 | 15 | 11/11/2010 23:00 | | Sample is an extract!! LOW VOLUME |

# Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: CTOJM16 Key West 2010
SDG #: CTOJM16KW_004
MATRIX: Water

QC LEVEL: EDD/IVQSM
Lab Due Date: 12/21/2010
Client Sample Count: 29

| Sample Type | Sampled | Received | Lab ID | Client ID | SM2540B | SW6010C | SW7470A | SW7471A | SW8081A | SW8082A |
|---|---|---|---|---|---|---|---|---|---|---|
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-01 | 1011013-01 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-02 | 1011013-02 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-03 | 1011013-03 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-04 | 1011013-04 | X | X | | X | | |
| | | | | | ON HOLD PER CONTAINER LID CRACKED UPON | ON HOLD PER CONTAINER LID CRACKED UPON | | ON HOLD PER CONTAINER LID CRACKED UPON | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-05 | 1011013-05 | RECEIPT!! | RECEIPT!! | | RECEIPT!! | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-06 | 1011013-06 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-07 | 1011013-07 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-08 | 1011013-08 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-09 | 1011013-09 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-10 | 1011013-10 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-11 | 1011013-11 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-12 | 1011013-12 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-13 | 1011013-13 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-14 | 1011013-14 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-15 | 1011013-15 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-16 | 1011013-16 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-17 | 1011013-17 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-18 | 1011013-18 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-19 | 1011013-19 | X | X | | X | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-20 | 1011013-20 | X | X | | X | | |
| | | | | | ON HOLD PER CONTAINER LID CRACKED UPON | ON HOLD PER CONTAINER LID CRACKED UPON | | ON HOLD PER CONTAINER LID CRACKED UPON | | |
| Client Sample | 11/2/2010 | 11/30/2010 | 1011259-21 | 1011013-21 | RECEIPT!! | RECEIPT!! | | RECEIPT!! | | |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-01 | 1011022-01 | | X | X | | X | X |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-02 | 1011022-02 | | X | X | | X | X |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-03 | 1011022-03 | | X | X | | X | X |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-04 | 1011022 BLK | | | | | X | X |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-05 | 1011022 BLK2 | | | | | X | X |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-06 | 1011022 BKS1 | | | | | X | X |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-07 | 1011022 BKS2 | | | | | X | X |
| Client Sample | 11/5/2010 | 11/30/2010 | 1011260-08 | 1011022 BKSD2 | | | | | X | X |

# Data for SW8081A Forms

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_004

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** GL-ECD3

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| 4,4'-DDD | 0.00500 | 0.0200 | ug/L | SW8081A |
| 4,4'-DDE | 0.00500 | 0.0200 | ug/L | SW8081A |
| 4,4'-DDE [2C] | 0.00500 | 0.0200 | ug/L | SW8081A |
| 4,4'-DDT | 0.00500 | 0.0200 | ug/L | SW8081A |
| 4,4'-DDT [2C] | 0.00500 | 0.0200 | ug/L | SW8081A |
| Aldrin | 0.00330 | 0.0200 | ug/L | SW8081A |
| alpha-BHC | 0.00330 | 0.0200 | ug/L | SW8081A |
| alpha-BHC [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| alpha-Chlordane | 0.00330 | 0.0200 | ug/L | SW8081A |
| beta-BHC | 0.00330 | 0.0200 | ug/L | SW8081A |
| delta-BHC | 0.00330 | 0.0200 | ug/L | SW8081A |
| Dieldrin | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endosulfan I | 0.00330 | 0.0200 | ug/L | SW8081A |
| Endosulfan I [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Endosulfan II | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endosulfan sulfate | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin aldehyde | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin aldehyde [2C] | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin ketone | 0.00500 | 0.0200 | ug/L | SW8081A |
| gamma-BHC (Lindane) | 0.00330 | 0.0200 | ug/L | SW8081A |
| gamma-Chlordane | 0.00330 | 0.0200 | ug/L | SW8081A |
| gamma-Chlordane [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Heptachlor | 0.00330 | 0.0200 | ug/L | SW8081A |
| Heptachlor [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Heptachlor epoxide | 0.00330 | 0.0200 | ug/L | SW8081A |
| Methoxychlor | 0.00330 | 0.0200 | ug/L | SW8081A |
| Methoxychlor [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Toxaphene | 0.330 | 1.00 | ug/L | SW8081A |

# HOLDING TIME SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011022-01 | 11/05/10 11:40 | 11/30/10 08:25 | 11/12/10 10:15 | 6.98 | 7.00 | 12/10/10 15:33 | 28.22 | 40.00 | |
| 1011022-02 | 11/05/10 10:35 | 11/30/10 08:25 | 11/12/10 10:15 | 7.03 | 7.00 | 12/10/10 15:52 | 28.23 | 40.00 | |
| 1011022-03 | 11/05/10 09:28 | 11/30/10 08:25 | 11/12/10 10:15 | 7.07 | 7.00 | 12/10/10 16:11 | 28.25 | 40.00 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0K32715
Instrument: GL-ECD3
Calibration: 0344005

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | 0K32715-PEM1 | 002F0201.D | 11/19/10 13:08 |
| Performance Mix | 0K32715-PEM1 | 002R0201.D | 11/19/10 13:08 |
| Cal Standard | 0K32715-CAL7 | 011R1101.D | 11/19/10 15:56 |
| Cal Standard | 0K32715-CAL7 | 011F1101.D | 11/19/10 15:56 |
| Cal Standard | 0K32715-CAL8 | 012F1201.D | 11/19/10 16:14 |
| Cal Standard | 0K32715-CAL8 | 012R1201.D | 11/19/10 16:14 |
| Cal Standard | 0K32715-CAL9 | 013R1301.D | 11/19/10 16:33 |
| Cal Standard | 0K32715-CAL9 | 013F1301.D | 11/19/10 16:33 |
| Cal Standard | 0K32715-CALA | 014F1401.D | 11/19/10 16:52 |
| Cal Standard | 0K32715-CALA | 014R1401.D | 11/19/10 16:52 |
| Cal Standard | 0K32715-CALB | 015F1501.D | 11/19/10 17:10 |
| Cal Standard | 0K32715-CALB | 015R1501.D | 11/19/10 17:10 |
| Cal Standard | 0K32715-CALC | 016F1601.D | 11/19/10 17:29 |
| Cal Standard | 0K32715-CALC | 016R1601.D | 11/19/10 17:29 |
| Initial Cal Check | 0K32715-ICV2 | 017F1701.D | 11/19/10 17:47 |
| Initial Cal Check | 0K32715-ICV2 | 017R1701.D | 11/19/10 17:47 |
| Cal Standard | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |
| Cal Standard | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| Initial Cal Check | 0K32715-ICV3 | 025F2501.D | 11/19/10 20:16 |
| Initial Cal Check | 0K32715-ICV3 | 025R2501.D | 11/19/10 20:16 |

# INITIAL CALIBRATION STANDARDS

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011R1101.D | 11/19/10 15:56 |
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011F1101.D | 11/19/10 15:56 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012F1201.D | 11/19/10 16:14 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012R1201.D | 11/19/10 16:14 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013F1301.D | 11/19/10 16:33 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013R1301.D | 11/19/10 16:33 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014F1401.D | 11/19/10 16:52 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014R1401.D | 11/19/10 16:52 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015F1501.D | 11/19/10 17:10 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015R1501.D | 11/19/10 17:10 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016R1601.D | 11/19/10 17:29 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016F1601.D | 11/19/10 17:29 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 33546.52 | 6.000484 | 8.184572 | 2.267959E-02 | | | 20 | |
| 4,4'-DDE [2C] | 21057.32 | 11.07954 | 6.824143 | 2.103318E-02 | | | 20 | |
| 4,4'-DDD | 27664.89 | 7.540731 | 8.810143 | 5.248612E-03 | | | 20 | |
| 4,4'-DDD [2C] | 18693.78 | 11.44265 | 7.438286 | 2.802734E-02 | | | 20 | |
| 4,4'-DDT | 24740.67 | 14.5165 | 9.189857 | 7.068491E-03 | | | 20 | |
| 4,4'-DDT [2C] | 15729.51 | 4.871312 | 7.721286 | 1.954911E-02 | | | 20 | |
| Aldrin | 36147.13 | 7.456226 | 7.128143 | 1.296638E-02 | | | 20 | |
| Aldrin [2C] | 22656.45 | 9.98282 | 5.819 | 1.806906E-02 | | | 20 | |
| alpha-BHC | 40409.75 | 10.16852 | 5.832857 | 2.119288E-02 | | | 20 | |
| alpha-BHC [2C] | 26238.33 | 5.215596 | 4.972572 | 0.0158976 | | | 20 | |
| alpha-Chlordane | 32821.21 | 4.761104 | 7.986286 | 3.589714E-03 | | | 20 | |
| alpha-Chlordane [2C] | 21675.65 | 14.21858 | 6.625714 | 1.577067E-02 | | | 20 | |
| beta-BHC | 15846.9 | 4.976926 | 6.370286 | 1.550503E-02 | | | 20 | |
| beta-BHC [2C] | 9658.734 | 12.56008 | 5.537714 | 3.655615E-02 | | | 20 | |
| delta-BHC | 33539.38 | 10.83928 | 6.629143 | 1.181652E-02 | | | 20 | |
| delta-BHC [2C] | 20704.78 | 4.437113 | 5.747714 | 3.745169E-02 | | | 20 | |
| Dieldrin | 33895.65 | 7.310364 | 8.373143 | 1.230849E-02 | | | 20 | |
| Dieldrin [2C] | 22375.56 | 11.72956 | 6.969286 | 1.351574E-02 | | | 20 | |
| Endosulfan I | 31729.01 | 5.810311 | 8.049428 | 2.163559E-02 | | | 20 | |
| Endosulfan I [2C] | 20934.91 | 11.92243 | 6.689286 | 0.0156653 | | | 20 | |
| Endosulfan II | 29666.08 | 4.320259 | 8.922857 | 9.499018E-03 | | | 20 | |
| Endosulfan II [2C] | 19402.61 | 13.50319 | 7.609286 | 1.172058E-02 | | | 20 | |
| Endosulfan sulfate | 25616.99 | 5.703931 | 9.372 | 2.124432E-02 | | | 20 | |
| Endosulfan sulfate [2C] | 16791.83 | 11.98722 | 8.077286 | 1.600537E-02 | | | 20 | |
| Endrin | 24735.1 | 8.585635 | 8.649143 | 0.0197868 | | | 20 | |
| Endrin [2C] | 16756.72 | 11.09602 | 7.271286 | 0.0204429 | | | 20 | |
| Endrin aldehyde | 24109.03 | 3.96554 | 9.082714 | 8.921441E-03 | | | 20 | |
| Endrin aldehyde [2C] | 17038.67 | 16.23379 | 7.816857 | 2.146648E-02 | | | 20 | |
| Endrin ketone | 34636.65 | 4.514572 | 9.976571 | 1.195761E-02 | | | 20 | |
| Endrin ketone [2C] | 23263.99 | 13.77737 | 8.678857 | 2.201704E-02 | | | 20 | |
| gamma-BHC (Lindane) | 36031.77 | 8.801481 | 6.163429 | 8.315358E-03 | | | 20 | |
| gamma-BHC (Lindane) [2C] | 24013.09 | 7.287553 | 5.262857 | 1.952569E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | 33961.2 | 5.579594 | 7.897286 | 4.623527E-03 | | | 20 | |
| gamma-Chlordane [2C] | 21621.04 | 13.53738 | 6.561 | 1.259477E-02 | | | 20 | |
| Heptachlor | 29722.9 | 11.59268 | 6.759857 | 1.171619E-02 | | | 20 | |
| Heptachlor [2C] | 21682.7 | 10.66915 | 5.559143 | 1.004687E-02 | | | 20 | |
| Heptachlor epoxide | 33684.73 | 4.993924 | 7.605 | 3.240937E-03 | | | 20 | |
| Heptachlor epoxide [2C] | 21633.25 | 13.96005 | 6.309286 | 1.977155E-02 | | | 20 | |
| Methoxychlor | 12781.08 | 8.3161 | 9.791 | 1.095047E-02 | | | 20 | |
| Methoxychlor [2C] | 8700.811 | 14.35167 | 8.413714 | 0.0173794 | | | 20 | |
| Chlordane (tech) | 2265.814 | 2.036435 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (1) | 4560.136 | 2.206321 | 7.989 | 1.416297E-02 | | | 20 | |
| Chlordane (2) | 1011.213 | 4.748592 | 6.536 | 1.188001E-02 | | | 20 | |
| Chlordane (3) | 1003.996 | 8.624511 | 6.760834 | 8.797502E-03 | | | 20 | |
| Chlordane (4) | 3753.811 | 2.957383 | 7.897833 | 8.880134E-03 | | | 20 | |
| Chlordane (5) | 999.9125 | 4.559042 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (tech) [2C] | 1234.277 | 10.59888 | 7.605 | 3.28691E-03 | | | 20 | |
| Chlordane (1) [2C] | 2188.726 | 14.89601 | 6.6265 | 1.838167E-02 | | | 20 | |
| Chlordane (2) [2C] | 750.7542 | 8.135717 | 5.401333 | 1.394675E-02 | | | 20 | |
| Chlordane (3) [2C] | 797.21 | 5.579656 | 5.56 | 3.498735E-03 | | | 20 | |
| Chlordane (4) [2C] | 1630.041 | 13.84368 | 6.581167 | 8.453161E-03 | | | 20 | |
| Chlordane (5) [2C] | 804.6533 | 7.142321 | 7.605 | 3.28691E-03 | | | 20 | |
| Toxaphene (1) | 1251.284 | 13.26694 | 9.874667 | 1.008505E-02 | | | 20 | |
| Toxaphene (2) | 499.794 | 18.79183 | 8.578 | 1.896147E-02 | | | 20 | |
| Toxaphene (3) | 983.0718 | 13.15648 | 9.2395 | 1.502643E-02 | | | 20 | |
| Toxaphene (4) | 1115.536 | 19.14758 | 9.35 | 0.0145175 | | | 20 | |
| Toxaphene (5) | 582.2432 | 13.0691 | 10.32517 | 1.365035E-02 | | | 20 | |
| Toxaphene (1) [2C] | 1311.742 | 9.570442 | 8.5295 | 5.472725E-03 | | | 20 | |
| Toxaphene (2) [2C] | 357.144 | 23.44747 | 7.601 | 1.768119E-02 | | | 20 | * |
| Toxaphene (3) [2C] | 863.2383 | 11.36044 | 7.942333 | 2.059764E-02 | | | 20 | |
| Toxaphene (4) [2C] | 613.1725 | 12.22375 | 8.908834 | 1.237003E-02 | | | 20 | |
| Toxaphene (5) [2C] | 327.2323 | 16.07536 | 9.074667 | 1.398232E-02 | | | 20 | |
| Tetrachloro-m-xylene | 28765.14 | 2.541019 | 5.388857 | 1.804526E-02 | | | 20 | |
| Tetrachloro-m-xylene [2C] | 21379.77 | 11.06958 | 4.526 | 6.298631E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Decachlorobiphenyl | 29956.87 | 5.97861 | 11.62329 | 1.578512E-02 | | | 20 | |
| Decachlorobiphenyl [2C] | 17512.73 | 17.45123 | 10.00071 | 1.794087E-02 | | | 20 | |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 200 | 37513.33 | 100 | 33730.93 | 50 | 34388.64 | 25 | 33301.96 | 10 | 32327.8 | 5 | 31612 |
| 4,4'-DDE [2C] | 200 | 18257.3 | 100 | 18338.82 | 50 | 20151.58 | 25 | 21368.44 | 10 | 22221.1 | 5 | 22326 |
| 4,4'-DDD | 200 | 31518.02 | 100 | 28321.8 | 50 | 28748.18 | 25 | 27328.36 | 10 | 26325.1 | 5 | 25505.8 |
| 4,4'-DDD [2C] | 200 | 16513.82 | 100 | 16419.14 | 50 | 17910.14 | 25 | 18290.88 | 10 | 19251.5 | 5 | 19909 |
| 4,4'-DDT | 200 | 31197.69 | 100 | 26071.43 | 50 | 25942.18 | 25 | 24957.56 | 10 | 22888.2 | 5 | 22055.6 |
| 4,4'-DDT [2C] | 200 | 15542.91 | 100 | 14446.41 | 50 | 15476.54 | 25 | 15916.8 | 10 | 16093.1 | 5 | 15635.8 |
| Aldrin | 200 | 40767.94 | 100 | 37299.45 | 50 | 37537.34 | 25 | 36051.2 | 10 | 34777 | 5 | 33953 |
| Aldrin [2C] | 200 | 19617.71 | 100 | 20294.77 | 50 | 21953.9 | 25 | 22503.8 | 10 | 23712.4 | 5 | 24651.6 |
| alpha-BHC | 200 | 47167.84 | 100 | 42289.44 | 50 | 42861.2 | 25 | 40287.04 | 10 | 38376.7 | 5 | 36953 |
| alpha-BHC [2C] | 200 | 25165.1 | 100 | 24453.88 | 50 | 26202.34 | 25 | 25862.96 | 10 | 26405.8 | 5 | 26809.2 |
| alpha-Chlordane | 200 | 36000.86 | 100 | 32733.34 | 50 | 33417.76 | 25 | 32553 | 10 | 32043.1 | 5 | 31429.4 |
| alpha-Chlordane [2C] | 200 | 18546.3 | 100 | 18517.16 | 50 | 20113.24 | 25 | 21125.88 | 10 | 22565.8 | 5 | 23774.2 |
| beta-BHC | 200 | 16661.48 | 100 | 15277.28 | 50 | 15642.24 | 25 | 15286.52 | 10 | 15203.2 | 5 | 15623.6 |
| beta-BHC [2C] | 200 | 9426.75 | 100 | 8924.51 | 50 | 9284.36 | 25 | 9176.12 | 10 | 9017.8 | 5 | 9404.6 |
| delta-BHC | 200 | 39647.29 | 100 | 35123.66 | 50 | 36041.72 | 25 | 33068.12 | 10 | 31230.7 | 5 | 29532.2 |
| delta-BHC [2C] | 200 | 21031.8 | 100 | 19998.31 | 50 | 21501.58 | 25 | 20358.56 | 10 | 19943.4 | 5 | 19848.8 |
| Dieldrin | 200 | 38496.14 | 100 | 34608.85 | 50 | 35074.08 | 25 | 33560.2 | 10 | 32585.1 | 5 | 31793.2 |
| Dieldrin [2C] | 200 | 19662.69 | 100 | 19504.01 | 50 | 21226.14 | 25 | 22038.96 | 10 | 23246.3 | 5 | 24006.8 |
| Endosulfan I | 200 | 35075.56 | 100 | 31932.15 | 50 | 32708.06 | 25 | 31682.4 | 10 | 31095.7 | 5 | 30242.2 |
| Endosulfan I [2C] | 200 | 17977.4 | 100 | 18059.23 | 50 | 20018.4 | 25 | 21082.56 | 10 | 21729.4 | 5 | 22837.4 |
| Endosulfan II | 200 | 32415.48 | 100 | 29233.23 | 50 | 29896.28 | 25 | 29325.6 | 10 | 28538 | 5 | 28919 |
| Endosulfan II [2C] | 200 | 16730.24 | 100 | 16636.04 | 50 | 17930.88 | 25 | 19021.6 | 10 | 20551.5 | 5 | 21079 |
| Endosulfan sulfate | 200 | 28655.84 | 100 | 25484.04 | 50 | 26055.9 | 25 | 24786.24 | 10 | 24957.3 | 5 | 24179.6 |
| Endosulfan sulfate [2C] | 200 | 15083.04 | 100 | 14820.32 | 50 | 15997.64 | 25 | 16290.4 | 10 | 17059 | 5 | 17493.4 |
| Endrin | 200 | 28873.78 | 100 | 24723.13 | 50 | 25349.54 | 25 | 25170.56 | 10 | 23415.3 | 5 | 23110.4 |
| Endrin [2C] | 200 | 15221.71 | 100 | 14379.04 | 50 | 15716.62 | 25 | 16628 | 10 | 17495.9 | 5 | 18016.8 |
| Endrin aldehyde | 200 | 26063.46 | 100 | 23971.36 | 50 | 23857.48 | 25 | 23122.04 | 10 | 23556.1 | 5 | 23707.8 |
| Endrin aldehyde [2C] | 200 | 14492.01 | 100 | 14601.62 | 50 | 15568 | 25 | 16051.84 | 10 | 17817.6 | 5 | 18427.6 |
| Endrin ketone | 200 | 37851.39 | 100 | 34261.26 | 50 | 34676.24 | 25 | 33902.16 | 10 | 33884.3 | 5 | 32911.2 |
| Endrin ketone [2C] | 200 | 19946.04 | 100 | 19965.76 | 50 | 21730.44 | 25 | 22773.36 | 10 | 24427.3 | 5 | 25021 |
| gamma-BHC (Lindane) | 200 | 41557.52 | 100 | 37289.21 | 50 | 37763.9 | 25 | 35892.32 | 10 | 34220.6 | 5 | 33185.8 |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_004

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 200 | 22560.79 | 100 | 22019.83 | 50 | 23457.66 | 25 | 23621.84 | 10 | 24180.3 | 5 | 24926.2 |
| gamma-Chlordane | 200 | 37678.01 | 100 | 34110.69 | 50 | 34834.82 | 25 | 33600.4 | 10 | 32976.7 | 5 | 32060.8 |
| gamma-Chlordane [2C] | 200 | 18741.21 | 100 | 18638.62 | 50 | 20193.42 | 25 | 21045.52 | 10 | 22343.3 | 5 | 23488.2 |
| Heptachlor | 200 | 35954.45 | 100 | 31207.27 | 50 | 31243.86 | 25 | 29497.2 | 10 | 27414.9 | 5 | 26224.6 |
| Heptachlor [2C] | 200 | 19133.32 | 100 | 18879.69 | 50 | 20417.26 | 25 | 21733.52 | 10 | 22929.1 | 5 | 23873 |
| Heptachlor epoxide | 200 | 37029.96 | 100 | 33434.91 | 50 | 34511.94 | 25 | 33438.32 | 10 | 33013.2 | 5 | 32270.8 |
| Heptachlor epoxide [2C] | 200 | 18183.73 | 100 | 18799.95 | 50 | 20518.56 | 25 | 20888.88 | 10 | 22351.8 | 5 | 23774.8 |
| Methoxychlor | 200 | 14869.25 | 100 | 12633.48 | 50 | 12981.86 | 25 | 12793.56 | 10 | 12299.8 | 5 | 11342.6 |
| Methoxychlor [2C] | 200 | 7716.485 | 100 | 7239.67 | 50 | 8103.94 | 25 | 8548.48 | 10 | 9115.5 | 5 | 9132.6 |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 200 | 30396.38 | 100 | 28270.71 | 50 | 28442.38 | 25 | 28656.12 | 10 | 28496 | 5 | 28638.4 |
| Tetrachloro-m-xylene [2C] | 200 | 19072.68 | 100 | 19248.97 | 50 | 20109.36 | 25 | 20564.48 | 10 | 22076.7 | 5 | 22878.2 |
| Decachlorobiphenyl | 200 | 29960.3 | 100 | 27340.04 | 50 | 28005.84 | 25 | 29560.24 | 10 | 31558.5 | 5 | 31300.2 |
| Decachlorobiphenyl [2C] | 200 | 14811.62 | 100 | 14456.54 | 50 | 15435.18 | 25 | 16877.6 | 10 | 18462 | 5 | 19614.2 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 1 | 31951 | | | | | | | | | | |
| 4,4'-DDE [2C] | 1 | 24738 | | | | | | | | | | |
| 4,4'-DDD | 1 | 25907 | | | | | | | | | | |
| 4,4'-DDD [2C] | 1 | 22562 | | | | | | | | | | |
| 4,4'-DDT | 1 | 20072 | | | | | | | | | | |
| 4,4'-DDT [2C] | 1 | 16995 | | | | | | | | | | |
| Aldrin | 1 | 32644 | | | | | | | | | | |
| Aldrin [2C] | 1 | 25861 | | | | | | | | | | |
| alpha-BHC | 1 | 34933 | | | | | | | | | | |
| alpha-BHC [2C] | 1 | 28769 | | | | | | | | | | |
| alpha-Chlordane | 1 | 31571 | | | | | | | | | | |
| alpha-Chlordane [2C] | 1 | 27087 | | | | | | | | | | |
| beta-BHC | 1 | 17234 | | | | | | | | | | |
| beta-BHC [2C] | 1 | 12377 | | | | | | | | | | |
| delta-BHC | 1 | 30132 | | | | | | | | | | |
| delta-BHC [2C] | 1 | 22251 | | | | | | | | | | |
| Dieldrin | 1 | 31152 | | | | | | | | | | |
| Dieldrin [2C] | 1 | 26944 | | | | | | | | | | |
| Endosulfan I | 1 | 29367 | | | | | | | | | | |
| Endosulfan I [2C] | 1 | 24840 | | | | | | | | | | |
| Endosulfan II | 1 | 29335 | | | | | | | | | | |
| Endosulfan II [2C] | 1 | 23869 | | | | | | | | | | |
| Endosulfan sulfate | 1 | 25200 | | | | | | | | | | |
| Endosulfan sulfate [2C] | 1 | 20799 | | | | | | | | | | |
| Endrin | 1 | 22503 | | | | | | | | | | |
| Endrin [2C] | 1 | 19839 | | | | | | | | | | |
| Endrin aldehyde | 1 | 24485 | | | | | | | | | | |
| Endrin aldehyde [2C] | 1 | 22312 | | | | | | | | | | |
| Endrin ketone | 1 | 34970 | | | | | | | | | | |
| Endrin ketone [2C] | 1 | 28984 | | | | | | | | | | |
| gamma-BHC (Lindane) | 1 | 32313 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 1 | 27325 | | | | | | | | | | |
| gamma-Chlordane | 1 | 32467 | | | | | | | | | | |
| gamma-Chlordane [2C] | 1 | 26897 | | | | | | | | | | |
| Heptachlor | 1 | 26518 | | | | | | | | | | |
| Heptachlor [2C] | 1 | 24813 | | | | | | | | | | |
| Heptachlor epoxide | 1 | 32094 | | | | | | | | | | |
| Heptachlor epoxide [2C] | 1 | 26915 | | | | | | | | | | |
| Methoxychlor | 1 | 12547 | | | | | | | | | | |
| Methoxychlor [2C] | 1 | 11049 | | | | | | | | | | |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | 100 | 1011.74 | 250 | 1138.296 | 500 | 1329.082 | 750 | 1350.244 | 1000 | 1473.986 |
| Toxaphene (2) | | | 100 | 355.43 | 250 | 435.488 | 500 | 522.674 | 750 | 553.6027 | 1000 | 624.948 |
| Toxaphene (3) | | | 100 | 802.53 | 250 | 873.748 | 500 | 1043.166 | 750 | 1063.331 | 1000 | 1152.338 |
| Toxaphene (4) | | | 100 | 764.03 | 250 | 1017.328 | 500 | 1190.532 | 750 | 1224.499 | 1000 | 1393.516 |
| Toxaphene (5) | | | 100 | 505.48 | 250 | 515.472 | 500 | 613.14 | 750 | 609.9133 | 1000 | 706.184 |
| Toxaphene (1) [2C] | | | 100 | 1099.76 | 250 | 1365.06 | 500 | 1316.87 | 750 | 1459.457 | 1000 | 1382.324 |
| Toxaphene (2) [2C] | | | 100 | 281.3 | 250 | 293.268 | 500 | 391.276 | 750 | 486.7773 | 1000 | 404.162 |
| Toxaphene (3) [2C] | | | 100 | 795.76 | 250 | 866.04 | 500 | 961.43 | 750 | 762.968 | 1000 | 1000.542 |
| Toxaphene (4) [2C] | | | 100 | 538.2 | 250 | 581.584 | 500 | 642.586 | 750 | 715.0347 | 1000 | 671.258 |
| Toxaphene (5) [2C] | | | 100 | 267.14 | 250 | 287.752 | 500 | 344.098 | 750 | 400.944 | 1000 | 369.859 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 1 | 28456 | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | 1 | 25708 | | | | | | | | | | |
| Decachlorobiphenyl | 1 | 31973 | | | | | | | | | | |
| Decachlorobiphenyl [2C] | 1 | 22932 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | | | 5 | 2280.04 | 10 | 2255.94 | 20 | 2254.73 | 50 | 2214.676 | 100 | 2349.214 |
| Chlordane (1) | | | 5 | 4651.4 | 10 | 4498 | 20 | 4586.1 | 50 | 4440.14 | 100 | 4695.65 |
| Chlordane (2) | | | 5 | 961 | 10 | 953.3 | 20 | 1010.75 | 50 | 1015.74 | 100 | 1073.7 |
| Chlordane (3) | | | 5 | 924.8 | 10 | 1165.8 | 20 | 984 | 50 | 956.96 | 100 | 1030.14 |
| Chlordane (4) | | | 5 | 3814.6 | 10 | 3608.6 | 20 | 3721.45 | 50 | 3693.02 | 100 | 3932.96 |
| Chlordane (5) | | | 5 | 1048.4 | 10 | 1054 | 20 | 971.35 | 50 | 967.52 | 100 | 1013.62 |
| Chlordane (tech) [2C] | | | 5 | 1214.8 | 10 | 1413.52 | 20 | 1337.26 | 50 | 1235.78 | 100 | 1163.546 |
| Chlordane (1) [2C] | | | 5 | 2063.8 | 10 | 2727.2 | 20 | 2329.95 | 50 | 2229.98 | 100 | 2006.16 |
| Chlordane (2) [2C] | | | 5 | 804.6 | 10 | 805.6 | 20 | 793.6 | 50 | 731.02 | 100 | 715.14 |
| Chlordane (3) [2C] | | | 5 | 810.6 | 10 | 832.3 | 20 | 797.25 | 50 | 816.9 | 100 | 816.81 |
| Chlordane (4) [2C] | | | 5 | 1539.2 | 10 | 1853.8 | 20 | 1945.95 | 50 | 1608.14 | 100 | 1465.95 |
| Chlordane (5) [2C] | | | 5 | 855.8 | 10 | 848.7 | 20 | 819.55 | 50 | 792.86 | 100 | 813.67 |
| Toxaphene (1) | 2000 | 1204.354 | | | | | | | | | | |
| Toxaphene (2) | 2000 | 506.6215 | | | | | | | | | | |
| Toxaphene (3) | 2000 | 963.318 | | | | | | | | | | |
| Toxaphene (4) | 2000 | 1103.312 | | | | | | | | | | |
| Toxaphene (5) | 2000 | 543.27 | | | | | | | | | | |
| Toxaphene (1) [2C] | 2000 | 1246.983 | | | | | | | | | | |
| Toxaphene (2) [2C] | 2000 | 286.0805 | | | | | | | | | | |
| Toxaphene (3) [2C] | 2000 | 792.6895 | | | | | | | | | | |
| Toxaphene (4) [2C] | 2000 | 530.3725 | | | | | | | | | | |
| Toxaphene (5) [2C] | 2000 | 293.6005 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | 200 | 2240.281 | | | | | | | | | | |
| Chlordane (1) | 200 | 4489.525 | | | | | | | | | | |
| Chlordane (2) | 200 | 1052.785 | | | | | | | | | | |
| Chlordane (3) | 200 | 962.275 | | | | | | | | | | |
| Chlordane (4) | 200 | 3752.235 | | | | | | | | | | |
| Chlordane (5) | 200 | 944.585 | | | | | | | | | | |
| Chlordane (tech) [2C] | 200 | 1040.755 | | | | | | | | | | |
| Chlordane (1) [2C] | 200 | 1775.265 | | | | | | | | | | |
| Chlordane (2) [2C] | 200 | 654.565 | | | | | | | | | | |
| Chlordane (3) [2C] | 200 | 709.4 | | | | | | | | | | |
| Chlordane (4) [2C] | 200 | 1367.205 | | | | | | | | | | |
| Chlordane (5) [2C] | 200 | 697.34 | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Tetrachloro-m-xylene [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |

## BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM1 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 0.00 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.83 |
| Endrin | 6.09 |

## BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM2 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.24 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.32 |

## BREAKDOWN REPORT

**Lab Sample ID:** 0K32715-PEM1 **Analyzed:** 11/19/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.85 |
| Endrin | 9.88 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 5.52 |
| Endrin | 10.41 |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 017F1701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV2 | Injection Time: | 17:47 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1110 | 1251.284 | 1389.576 | | 11.1 | 20 | |
| Toxaphene (2) | A | 1000 | 1136 | 499.794 | 567.613 | | 13.6 | 20 | |
| Toxaphene (3) | A | 1000 | 1110 | 983.0718 | 1091.295 | | 11.0 | 20 | |
| Toxaphene (4) | A | 1000 | 1150 | 1115.536 | 1283.494 | | 15.1 | 20 | |
| Toxaphene (5) | A | 1000 | 1129 | 582.2432 | 657.346 | | 12.9 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 1006 | 1311.742 | 1318.988 | | 0.6 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1214 | 357.144 | 433.465 | | 21.4 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1153 | 863.2383 | 995.34 | | 15.3 | 20 | |
| Toxaphene (4) [2C] | A | 1000 | 1033 | 613.1725 | 633.434 | | 3.3 | 20 | |
| Toxaphene (5) [2C] | A | 1000 | 1003 | 327.2323 | 328.351 | | 0.3 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025F2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 104.8 | 33546.52 | 35173.04 | | 4.8 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 91.21 | 21057.32 | 19206.02 | | -8.8 | 20 |
| 4,4'-DDD | A | 100.0 | 104.0 | 27664.89 | 28779.14 | | 4.0 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 89.33 | 18693.78 | 16698.8 | | -10.7 | 20 |
| 4,4'-DDT | A | 100.0 | 106.8 | 24740.67 | 26437.44 | | 6.9 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 92.11 | 15729.51 | 14489.01 | | -7.9 | 20 |
| Aldrin | A | 100.0 | 105.8 | 36147.13 | 38246.73 | | 5.8 | 20 |
| Aldrin [2C] | A | 100.0 | 92.49 | 22656.45 | 20955.53 | | -7.5 | 20 |
| alpha-BHC | A | 100.0 | 109.5 | 40409.75 | 44244.95 | | 9.5 | 20 |
| alpha-BHC [2C] | A | 100.0 | 97.38 | 26238.33 | 25550.97 | | -2.6 | 20 |
| alpha-Chlordane | A | 100.0 | 104.0 | 32821.21 | 34128.09 | | 4.0 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 88.98 | 21675.65 | 19286.5 | | -11.0 | 20 |
| beta-BHC | A | 100.0 | 104.2 | 15846.9 | 16511.38 | | 4.2 | 20 |
| beta-BHC [2C] | A | 100.0 | 102.0 | 9658.734 | 9850.8 | | 2.0 | 20 |
| delta-BHC | A | 100.0 | 109.9 | 33539.38 | 36866.04 | | 9.9 | 20 |
| delta-BHC [2C] | A | 100.0 | 101.0 | 20704.78 | 20920.6 | | 1.0 | 20 |
| Dieldrin | A | 100.0 | 103.6 | 33895.65 | 35122.84 | | 3.6 | 20 |
| Dieldrin [2C] | A | 100.0 | 88.17 | 22375.56 | 19728.31 | | -11.8 | 20 |
| Endosulfan I | A | 100.0 | 105.5 | 31729.01 | 33463.25 | | 5.5 | 20 |
| Endosulfan I [2C] | A | 100.0 | 90.93 | 20934.91 | 19035.91 | | -9.1 | 20 |
| Endosulfan II | A | 100.0 | 99.65 | 29666.08 | 29561.55 | | -0.4 | 20 |
| Endosulfan II [2C] | A | 100.0 | 86.57 | 19402.61 | 16796.12 | | -13.4 | 20 |
| Endosulfan sulfate | A | 100.0 | 102.5 | 25616.99 | 26259 | | 2.5 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 90.41 | 16791.83 | 15181.22 | | -9.6 | 20 |
| Endrin | A | 100.0 | 96.91 | 24735.1 | 23971.57 | | -3.1 | 20 |
| Endrin [2C] | A | 100.0 | 84.35 | 16756.72 | 14134.37 | | -15.6 | 20 |
| Endrin aldehyde | A | 100.0 | 99.85 | 24109.03 | 24072.34 | | -0.2 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 85.73 | 17038.67 | 14606.93 | | -14.3 | 20 |
| Endrin ketone | A | 100.0 | 100.7 | 34636.65 | 34880.58 | | 0.7 | 20 |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025R2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 87.14 | 23263.99 | 20271.19 | | -12.9 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 109.0 | 36031.77 | 39277 | | 9.0 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 95.47 | 24013.09 | 22925.86 | | -4.5 | 20 |
| gamma-Chlordane | A | 100.0 | 105.1 | 33961.2 | 35701.47 | | 5.1 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 89.96 | 21621.04 | 19451 | | -10.0 | 20 |
| Heptachlor | A | 100.0 | 110.8 | 29722.9 | 32936.84 | | 10.8 | 20 |
| Heptachlor [2C] | A | 100.0 | 89.51 | 21682.7 | 19408.4 | | -10.5 | 20 |
| Heptachlor epoxide | A | 100.0 | 104.2 | 33684.73 | 35102.63 | | 4.2 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 89.32 | 21633.25 | 19321.83 | | -10.7 | 20 |
| Methoxychlor | A | 100.0 | 104.1 | 12781.08 | 13303.99 | | 4.1 | 20 |
| Methoxychlor [2C] | A | 100.0 | 87.23 | 8700.811 | 7589.37 | | -12.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35009 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | 0L35009-PEM1 | 002R0201.D | 12/10/10 11:47 |
| Performance Mix | 0L35009-PEM1 | 002F0201.D | 12/10/10 11:47 |
| Calibration Check | 0L35009-CCV1 | 003F0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV1 | 003R0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV3 | 005R0501.D | 12/10/10 12:44 |
| Calibration Check | 0L35009-CCV3 | 005F0501.D | 12/10/10 12:44 |
| Performance Mix | 0L35009-PEM2 | 008F0801.D | 12/10/10 13:40 |
| Performance Mix | 0L35009-PEM2 | 008R0801.D | 12/10/10 13:40 |
| Blank | 0L06020-BLK1 | 009F0901.D | 12/10/10 13:59 |
| Blank | 0L06020-BLK1 | 009R0901.D | 12/10/10 13:59 |
| LCS | 0L06020-BS1 | 010F1001.D | 12/10/10 14:18 |
| LCS | 0L06020-BS1 | 010R1001.D | 12/10/10 14:18 |
| LCS Dup | 0L06020-BSD1 | 011R1101.D | 12/10/10 14:37 |
| LCS Dup | 0L06020-BSD1 | 011F1101.D | 12/10/10 14:37 |
| 1011022-01 | 1011260-01 | 014F1401.D | 12/10/10 15:33 |
| 1011022-01 | 1011260-01 | 014R1401.D | 12/10/10 15:33 |
| 1011022-02 | 1011260-02 | 015R1501.D | 12/10/10 15:52 |
| 1011022-02 | 1011260-02 | 015F1501.D | 12/10/10 15:52 |
| 1011022-03 | 1011260-03 | 016R1601.D | 12/10/10 16:11 |
| 1011022-03 | 1011260-03 | 016F1601.D | 12/10/10 16:11 |
| Calibration Check | 0L35009-CCV6 | 031F3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV6 | 031R3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV8 | 033F3301.D | 12/10/10 21:28 |
| Calibration Check | 0L35009-CCV8 | 033R3301.D | 12/10/10 21:28 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003F0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 95.06 | 33546.52 | 31888.7 | | -4.9 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 100.0 | 21057.32 | 21064.45 | | 0.03 | 20 |
| 4,4'-DDD | A | 100.0 | 95.57 | 27664.89 | 26440.41 | | -4.4 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 98.26 | 18693.78 | 18368.22 | | -1.7 | 20 |
| 4,4'-DDT | A | 100.0 | 106.1 | 24740.67 | 26244.44 | | 6.1 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 109.8 | 15729.51 | 17280.22 | | 9.9 | 20 |
| Aldrin | A | 100.0 | 101.0 | 36147.13 | 36522.16 | | 1.0 | 20 |
| Aldrin [2C] | A | 100.0 | 105.8 | 22656.45 | 23975.62 | | 5.8 | 20 |
| alpha-BHC | A | 100.0 | 103.6 | 40409.75 | 41864.64 | | 3.6 | 20 |
| alpha-BHC [2C] | A | 100.0 | 110.9 | 26238.33 | 29096.28 | | 10.9 | 20 |
| alpha-Chlordane | A | 100.0 | 96.05 | 32821.21 | 31524.94 | | -3.9 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 97.22 | 21675.65 | 21073.43 | | -2.8 | 20 |
| beta-BHC | A | 100.0 | 92.91 | 15846.9 | 14723.35 | | -7.1 | 20 |
| beta-BHC [2C] | A | 100.0 | 105.7 | 9658.734 | 10213.81 | | 5.7 | 20 |
| delta-BHC | A | 100.0 | 102.9 | 33539.38 | 34521.92 | | 2.9 | 20 |
| delta-BHC [2C] | A | 100.0 | 113.0 | 20704.78 | 23401.31 | | 13.0 | 20 |
| Dieldrin | A | 100.0 | 99.30 | 33895.65 | 33657.62 | | -0.7 | 20 |
| Dieldrin [2C] | A | 100.0 | 99.90 | 22375.56 | 22352.35 | | -0.1 | 20 |
| Endosulfan I | A | 100.0 | 98.79 | 31729.01 | 31346.03 | | -1.2 | 20 |
| Endosulfan I [2C] | A | 100.0 | 100.6 | 20934.91 | 21052.3 | | 0.6 | 20 |
| Endosulfan II | A | 100.0 | 94.01 | 29666.08 | 27888.18 | | -6.0 | 20 |
| Endosulfan II [2C] | A | 100.0 | 95.93 | 19402.61 | 18613 | | -4.1 | 20 |
| Endosulfan sulfate | A | 100.0 | 94.30 | 25616.99 | 24156.69 | | -5.7 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 99.04 | 16791.83 | 16630.45 | | -1.0 | 20 |
| Endrin | A | 100.0 | 115.7 | 24735.1 | 28622.15 | | 15.7 | 20 |
| Endrin [2C] | A | 100.0 | 114.5 | 16756.72 | 19189.85 | | 14.5 | 20 |
| Endrin aldehyde | A | 100.0 | 92.06 | 24109.03 | 22194.94 | | -7.9 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 94.16 | 17038.67 | 16044.42 | | -5.8 | 20 |
| Endrin ketone | A | 100.0 | 91.67 | 34636.65 | 31751.26 | | -8.3 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003R0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 94.14 | 23263.99 | 21901.02 | | -5.9 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 101.7 | 36031.77 | 36639.85 | | 1.7 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 107.5 | 24013.09 | 25804.91 | | 7.5 | 20 |
| gamma-Chlordane | A | 100.0 | 96.86 | 33961.2 | 32896.08 | | -3.1 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 98.55 | 21621.04 | 21307.95 | | -1.4 | 20 |
| Heptachlor | A | 100.0 | 105.6 | 29722.9 | 31389.52 | | 5.6 | 20 |
| Heptachlor [2C] | A | 100.0 | 109.9 | 21682.7 | 23835.42 | | 9.9 | 20 |
| Heptachlor epoxide | A | 100.0 | 98.15 | 33684.73 | 33060.71 | | -1.9 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 99.81 | 21633.25 | 21592.45 | | -0.2 | 20 |
| Methoxychlor | A | 100.0 | 102.8 | 12781.08 | 13145.66 | | 2.9 | 20 |
| Methoxychlor [2C] | A | 100.0 | 101.7 | 8700.811 | 8846.79 | | 1.7 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 90.38 | 28765.14 | 25999.25 | | -9.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 97.24 | 21379.77 | 20790.76 | | -2.8 | 20 |
| Decachlorobiphenyl | A | 100.0 | 86.52 | 29956.87 | 25919.92 | | -13.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 91.76 | 17512.73 | 16070.47 | | -8.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 005F0501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV3 | Injection Time: | 12:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 959.4 | 1251.284 | 1200.434 | | -4.1 | 20 | |
| Toxaphene (2) | A | 1000 | 976.8 | 499.794 | 488.208 | | -2.3 | 20 | |
| Toxaphene (3) | A | 1000 | 980.5 | 983.0718 | 963.89 | | -2.0 | 20 | |
| Toxaphene (4) | A | 1000 | 989.6 | 1115.536 | 1103.948 | | -1.0 | 20 | |
| Toxaphene (5) | A | 1000 | 884.8 | 582.2432 | 515.191 | | -11.5 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 826.6 | 1311.742 | 1084.238 | | -17.3 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1311 | 357.144 | 468.215 | | 31.1 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1230 | 863.2383 | 1061.713 | | 23.0 | 20 | * |
| Toxaphene (4) [2C] | A | 1000 | 1072 | 613.1725 | 657.243 | | 7.2 | 20 | |
| Toxaphene (5) [2C] | A | 1000 | 1043 | 327.2323 | 341.423 | | 4.3 | 20 | |

AVG 16.62

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: GL-ECD3
Lab File ID: 031F3101.D
Sequence: 0L35009
Lab Sample ID: 0L35009-CCV6

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0344005
Calibration Date: 11/19/10 00:00
Injection Date: 12/10/10
Injection Time: 20:51

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 100.3 | 33546.52 | 33639.75 | | 0.3 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 101.4 | 21057.32 | 21355.1 | | 1.4 | 20 |
| 4,4'-DDD | A | 100.0 | 103.3 | 27664.89 | 28570.6 | | 3.3 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 104.6 | 18693.78 | 19546.39 | | 4.6 | 20 |
| 4,4'-DDT | A | 100.0 | 110.4 | 24740.67 | 27324.32 | | 10.4 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 115.8 | 15729.51 | 18223.18 | | 15.9 | 20 |
| Aldrin | A | 100.0 | 106.0 | 36147.13 | 38328 | | 6.0 | 20 |
| Aldrin [2C] | A | 100.0 | 106.8 | 22656.45 | 24201.48 | | 6.8 | 20 |
| alpha-BHC | A | 100.0 | 114.1 | 40409.75 | 46112.18 | | 14.1 | 20 |
| alpha-BHC [2C] | A | 100.0 | 119.7 | 26238.33 | 31413.67 | | 19.7 | 20 |
| alpha-Chlordane | A | 100.0 | 99.88 | 32821.21 | 32782.2 | | -0.1 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 102.2 | 21675.65 | 22144.07 | | 2.2 | 20 |
| beta-BHC | A | 100.0 | 100.7 | 15846.9 | 15956.51 | | 0.7 | 20 |
| beta-BHC [2C] | A | 100.0 | 110.0 | 9658.734 | 10622 | | 10.0 | 20 |
| delta-BHC | A | 100.0 | 115.0 | 33539.38 | 38572.21 | | 15.0 | 20 |
| delta-BHC [2C] | A | 100.0 | 128.2 | 20704.78 | 26539.96 | | 28.2 | 20 * |
| Dieldrin | A | 100.0 | 104.1 | 33895.65 | 35280.86 | | 4.1 | 20 |
| Dieldrin [2C] | A | 100.0 | 102.4 | 22375.56 | 22908.72 | | 2.4 | 20 |
| Endosulfan I | A | 100.0 | 101.0 | 31729.01 | 32059.15 | | 1.0 | 20 |
| Endosulfan I [2C] | A | 100.0 | 101.2 | 20934.91 | 21180.75 | | 1.2 | 20 |
| Endosulfan II | A | 100.0 | 98.86 | 29666.08 | 29327.82 | | -1.1 | 20 |
| Endosulfan II [2C] | A | 100.0 | 102.3 | 19402.61 | 19847.8 | | 2.3 | 20 |
| Endosulfan sulfate | A | 100.0 | 101.5 | 25616.99 | 26009.05 | | 1.5 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 107.4 | 16791.83 | 18029.59 | | 7.4 | 20 |
| Endrin | A | 100.0 | 107.6 | 24735.1 | 26624.33 | | 7.6 | 20 |
| Endrin [2C] | A | 100.0 | 110.5 | 16756.72 | 18517.45 | | 10.5 | 20 |
| Endrin aldehyde | A | 100.0 | 101.5 | 24109.03 | 24470.41 | | 1.5 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 103.7 | 17038.67 | 17671.18 | | 3.7 | 20 |
| Endrin ketone | A | 100.0 | 101.0 | 34636.65 | 34989.36 | | 1.0 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031R3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 102.5 | 23263.99 | 23853.72 | | 2.5 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 111.4 | 36031.77 | 40125.7 | | 11.4 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 116.3 | 24013.09 | 27934.94 | | 16.3 | 20 |
| gamma-Chlordane | A | 100.0 | 100.2 | 33961.2 | 34043.75 | | 0.2 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 103.8 | 21621.04 | 22450.69 | | 3.8 | 20 |
| Heptachlor | A | 100.0 | 118.7 | 29722.9 | 35283.51 | | 18.7 | 20 |
| Heptachlor [2C] | A | 100.0 | 112.9 | 21682.7 | 24487.38 | | 12.9 | 20 |
| Heptachlor epoxide | A | 100.0 | 103.6 | 33684.73 | 34912.7 | | 3.6 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 103.0 | 21633.25 | 22288.54 | | 3.0 | 20 |
| Methoxychlor | A | 100.0 | 106.7 | 12781.08 | 13635.6 | | 6.7 | 20 |
| Methoxychlor [2C] | A | 100.0 | 105.5 | 8700.811 | 9183.64 | | 5.5 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 94.61 | 28765.14 | 27215.45 | | -5.4 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 100.5 | 21379.77 | 21496.84 | | 0.5 | 20 |
| Decachlorobiphenyl | A | 100.0 | 93.78 | 29956.87 | 28094.31 | | -6.2 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 101.0 | 17512.73 | 17696.02 | | 1.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 033F3301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV8 | Injection Time: | 21:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1034 | 1251.284 | 1293.902 | | 3.4 | 20 | |
| Toxaphene (2) | A | 1000 | 1084 | 499.794 | 541.667 | | 8.4 | 20 | |
| Toxaphene (3) | A | 1000 | 1049 | 983.0718 | 1031.635 | | 4.9 | 20 | |
| Toxaphene (4) | A | 1000 | 1028 | 1115.536 | 1147.046 | | 2.8 | 20 | |
| Toxaphene (5) | A | 1000 | 906.7 | 582.2432 | 527.931 | | -9.3 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 964.9 | 1311.742 | 1265.7 | | -3.5 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1301 | 357.144 | 464.811 | | 30.1 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1335 | 863.2383 | 1152.173 | | 33.5 | 20 | * |
| Toxaphene (4) [2C] | A | 1000 | 1280 | 613.1725 | 785.22 | | 28.1 | 20 | * |
| Toxaphene (5) [2C] | A | 1000 | 1278 | 327.2323 | 418.067 | | 27.8 | 20 | * |

AVG 24.6

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Batch: 0L06020 Batch Matrix: Water

Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06020-BLK1 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| LCS | 0L06020-BS1 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| LCS Dup | 0L06020-BSD1 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| 1011022-01 | 1011260-01 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| 1011022-02 | 1011260-02 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| 1011022-03 | 1011260-03 | 11/12/10 10:15 | 1,000.00 | 10.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L06020-BLK1 File ID: 009F0901.D

Sampled: Prepared: 11/12/10 10:15 Analyzed: 12/10/10 13:59

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.00500 | 0.0100 | 0.0200 | U |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | U |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | U |
| 309-00-2 | Aldrin | | 0.00330 | 0.0100 | 0.0200 | U |
| 319-84-6 | alpha-BHC | | 0.00330 | 0.0100 | 0.0200 | U |
| 5103-71-9 | alpha-Chlordane | | 0.00330 | 0.0100 | 0.0200 | U |
| 319-85-7 | beta-BHC | | 0.00330 | 0.0100 | 0.0200 | U |
| 319-86-8 | delta-BHC | | 0.00330 | 0.0100 | 0.0200 | U |
| 60-57-1 | Dieldrin | | 0.00500 | 0.0100 | 0.0200 | U |
| 959-98-8 | Endosulfan I | | 0.00330 | 0.0100 | 0.0200 | U |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | U |
| 1031-07-8 | Endosulfan sulfate | | 0.00500 | 0.0100 | 0.0200 | U |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | U |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | U |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | U |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | U |
| 5103-74-2 | gamma-Chlordane | | 0.00330 | 0.0100 | 0.0200 | U |
| 76-44-8 | Heptachlor | | 0.00330 | 0.0100 | 0.0200 | U |
| 1024-57-3 | Heptachlor epoxide | | 0.00330 | 0.0100 | 0.0200 | U |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | U |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1927 | 96.3 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2242 | 112 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1886 | 94.3 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.2212 | 111 | 30 - 135 | |

* Values outside of QC limits

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L06020
Laboratory ID: 0L06020-BS1
Preparation: EXT_3510
Initial/Final: 1000 mL / 10 mL

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDE | 0.5000 | 0.8796 | 176 | 35 - 140 |
| 4,4'-DDE [2C] | 0.5000 | 0.8356 | 167 | 35 - 140 |
| 4,4'-DDD | 0.5000 | 0.9137 | 183 | 25 - 150 |
| 4,4'-DDD [2C] | 0.5000 | 0.8414 | 168 | 25 - 150 |
| 4,4'-DDT | 0.5000 | 1.037 | 207 | 45 - 140 |
| 4,4'-DDT [2C] | 0.5000 | 0.9389 | 188 | 45 - 140 |
| Aldrin | 0.5000 | 0.9397 | 188 | 25 - 140 |
| Aldrin [2C] | 0.5000 | 0.8352 | 167 | 25 - 140 |
| alpha-BHC | 0.5000 | 0.9659 | 193 | 60 - 130 |
| alpha-BHC [2C] | 0.5000 | 0.9332 | 187 | 60 - 130 |
| alpha-Chlordane | 0.5000 | 0.8701 | 174 | 65 - 125 |
| alpha-Chlordane [2C] | 0.5000 | 0.8086 | 162 | 65 - 125 |
| beta-BHC | 0.5000 | 0.8512 | 170 | 65 - 125 |
| beta-BHC [2C] | 0.5000 | 0.8894 | 178 | 65 - 125 |
| delta-BHC | 0.5000 | 0.9480 | 190 | 45 - 135 |
| delta-BHC [2C] | 0.5000 | 0.9555 | 191 | 45 - 135 |
| Dieldrin | 0.5000 | 0.9790 | 196 | 60 - 130 |
| Dieldrin [2C] | 0.5000 | 0.8735 | 175 | 60 - 130 |
| Endosulfan I | 0.5000 | 0.8632 | 173 | 50 - 110 |
| Endosulfan I [2C] | 0.5000 | 0.8209 | 164 | 50 - 110 |
| Endosulfan II | 0.5000 | 0.8755 | 175 | 30 - 130 |
| Endosulfan II [2C] | 0.5000 | 0.8403 | 168 | 30 - 130 |
| Endosulfan sulfate | 0.5000 | 0.8837 | 177 | 55 - 155 |
| Endosulfan sulfate [2C] | 0.5000 | 0.8762 | 175 | 55 - 155 |
| Endrin | 0.5000 | 0.9629 | 193 | 55 - 135 |
| Endrin [2C] | 0.5000 | 0.9098 | 182 | 55 - 135 |
| Endrin aldehyde | 0.5000 | 0.7460 | 149 | 55 - 135 |
| Endrin aldehyde [2C] | 0.5000 | 0.6933 | 139 | 55 - 135 |
| Endrin ketone | 0.5000 | 0.8621 | 172 | 75 - 125 |
| Endrin ketone [2C] | 0.5000 | 0.8558 | 171 | 75 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L06020
Laboratory ID: 0L06020-BS1
Preparation: EXT_3510
Initial/Final: 1000 mL / 10 mL

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| gamma-BHC (Lindane) | 0.5000 | 0.9243 | 185 | 25 - 135 |
| gamma-BHC (Lindane) [2C] | 0.5000 | 0.8834 | 177 | 25 - 135 |
| gamma-Chlordane | 0.5000 | 0.8809 | 176 | 60 - 125 |
| gamma-Chlordane [2C] | 0.5000 | 0.8204 | 164 | 60 - 125 |
| Heptachlor | 0.5000 | 1.005 | 201 | 40 - 130 |
| Heptachlor [2C] | 0.5000 | 0.8848 | 177 | 40 - 130 |
| Heptachlor epoxide | 0.5000 | 0.9689 | 194 | 60 - 130 |
| Heptachlor epoxide [2C] | 0.5000 | 0.8663 | 173 | 60 - 130 |
| Methoxychlor | 0.5000 | 0.9730 | 195 | 55 - 150 |
| Methoxychlor [2C] | 0.5000 | 0.9112 | 182 | 55 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDE | 0.5000 | 0.9651 | 193 * | 9.27 | 30 | 35 - 140 |
| 4,4'-DDE [2C] | 0.5000 | 0.9318 | 186 * | 10.9 | 30 | 35 - 140 |
| 4,4'-DDD | 0.5000 | 0.9892 | 198 * | 7.94 | 30 | 25 - 150 |
| 4,4'-DDD [2C] | 0.5000 | 0.9495 | 190 * | 12.1 | 30 | 25 - 150 |
| 4,4'-DDT | 0.5000 | 1.099 | 220 * | 5.87 | 30 | 45 - 140 |
| 4,4'-DDT [2C] | 0.5000 | 1.040 | 208 * | 10.2 | 30 | 45 - 140 |
| Aldrin | 0.5000 | 1.030 | 206 * | 9.20 | 30 | 25 - 140 |
| Aldrin [2C] | 0.5000 | 0.9913 | 198 * | 17.1 | 30 | 25 - 140 |
| alpha-BHC | 0.5000 | 1.070 | 214 * | 10.2 | 30 | 60 - 130 |
| alpha-BHC [2C] | 0.5000 | 1.057 | 211 * | 12.4 | 30 | 60 - 130 |
| alpha-Chlordane | 0.5000 | 0.9768 | 195 * | 11.6 | 30 | 65 - 125 |
| alpha-Chlordane [2C] | 0.5000 | 0.9214 | 184 * | 13.0 | 30 | 65 - 125 |
| beta-BHC | 0.5000 | 0.9457 | 189 * | 10.5 | 30 | 65 - 125 |
| beta-BHC [2C] | 0.5000 | 1.022 | 204 * | 13.9 | 30 | 65 - 125 |
| delta-BHC | 0.5000 | 1.055 | 211 * | 10.7 | 30 | 45 - 135 |
| delta-BHC [2C] | 0.5000 | 1.100 | 220 * | 14.1 | 30 | 45 - 135 |
| Dieldrin | 0.5000 | 1.036 | 207 * | 5.68 | 30 | 60 - 130 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06020 | Laboratory ID: | 0L06020-BSD1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| **Dieldrin [2C]** | **0.5000** | **0.9656** | **193** | * | **10.0** | **30** | **60 - 130** |
| **Endosulfan I** | **0.5000** | **0.9946** | **199** | * | **14.1** | **30** | **50 - 110** |
| **Endosulfan I [2C]** | **0.5000** | **0.9407** | **188** | * | **13.6** | **30** | **50 - 110** |
| **Endosulfan II** | **0.5000** | **0.9484** | **190** | * | **7.99** | **30** | **30 - 130** |
| **Endosulfan II [2C]** | **0.5000** | **0.9315** | **186** | * | **10.3** | **30** | **30 - 130** |
| **Endosulfan sulfate** | **0.5000** | **0.9601** | **192** | * | **8.29** | **30** | **55 - 155** |
| **Endosulfan sulfate [2C]** | **0.5000** | **0.9754** | **195** | * | **10.7** | **30** | **55 - 155** |
| **Endrin** | **0.5000** | **1.108** | **222** | * | **14.0** | **30** | **55 - 135** |
| **Endrin [2C]** | **0.5000** | **1.043** | **209** | * | **13.6** | **30** | **55 - 135** |
| **Endrin aldehyde** | **0.5000** | **0.7552** | **151** | * | **1.22** | **30** | **55 - 135** |
| **Endrin aldehyde [2C]** | **0.5000** | **0.7491** | **150** | * | **7.73** | **30** | **55 - 135** |
| **Endrin ketone** | **0.5000** | **0.9182** | **184** | * | **6.31** | **30** | **75 - 125** |
| **Endrin ketone [2C]** | **0.5000** | **0.9110** | **182** | * | **6.25** | **30** | **75 - 125** |
| **gamma-BHC (Lindane)** | **0.5000** | **1.052** | **210** | * | **12.9** | **30** | **25 - 135** |
| **gamma-BHC (Lindane) [2C]** | **0.5000** | **1.023** | **205** | * | **14.7** | **30** | **25 - 135** |
| **gamma-Chlordane** | **0.5000** | **0.9726** | **195** | * | **9.90** | **30** | **60 - 125** |
| **gamma-Chlordane [2C]** | **0.5000** | **0.9257** | **185** | * | **12.1** | **30** | **60 - 125** |
| **Heptachlor** | **0.5000** | **1.109** | **222** | * | **9.78** | **30** | **40 - 130** |
| **Heptachlor [2C]** | **0.5000** | **1.041** | **208** | * | **16.2** | **30** | **40 - 130** |
| **Heptachlor epoxide** | **0.5000** | **1.028** | **206** | * | **5.89** | **30** | **60 - 130** |
| **Heptachlor epoxide [2C]** | **0.5000** | **0.9736** | **195** | * | **11.7** | **30** | **60 - 130** |
| **Methoxychlor** | **0.5000** | **1.026** | **205** | * | **5.32** | **30** | **55 - 150** |
| **Methoxychlor [2C]** | **0.5000** | **0.9858** | **197** | * | **7.86** | **30** | **55 - 150** |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV1 ) ug/L** | | | | Lab File ID: 003F0301.D | | Analyzed: 12/10/10 12:06 | | |
| Tetrachloro-m-xylene | 100.0 | 90.4 | 80 - 120 | 5.122 | 5.122 | 0.0000 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 97.2 | 80 - 120 | 4.319 | 4.319 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 86.5 | 80 - 120 | 11.227 | 11.227 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 91.8 | 80 - 120 | 9.651 | 9.651 | 0.0000 | +/-0.030 | |
| **Blank (0L06020-BLK1 ) ug/L** | | | | Lab File ID: 009F0901.D | | Analyzed: 12/10/10 13:59 | | |
| Tetrachloro-m-xylene | 0.2000 | 96.3 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 112 | 25 - 140 | 4.317 | 4.319 | -0.0020 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 94.3 | 30 - 135 | 11.224 | 11.227 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 111 | 30 - 135 | 9.649 | 9.651 | -0.0020 | +/-0.030 | |
| **LCS (0L06020-BS1 ) ug/L** | | | | Lab File ID: 010F1001.D | | Analyzed: 12/10/10 14:18 | | |
| Tetrachloro-m-xylene | 0.2000 | 105 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 99.5 | 25 - 140 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 107 | 30 - 135 | 11.224 | 11.227 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 115 | 30 - 135 | 9.649 | 9.651 | -0.0020 | +/-0.030 | |
| **LCS Dup (0L06020-BSD1 ) ug/L** | | | | Lab File ID: 011F1101.D | | Analyzed: 12/10/10 14:37 | | |
| Tetrachloro-m-xylene | 0.2000 | 117 | 25 - 140 | 5.12 | 5.122 | -0.0020 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 126 | 25 - 140 | 4.317 | 4.319 | -0.0020 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 111 | 30 - 135 | 11.224 | 11.227 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 124 | 30 - 135 | 9.649 | 9.651 | -0.0020 | +/-0.030 | |
| **1011022-01 (1011260-01 ) ug/L** | | | | Lab File ID: 014F1401.D | | Analyzed: 12/10/10 15:33 | | |
| Tetrachloro-m-xylene | 0.2000 | 91.1 | 25 - 140 | 5.12 | 5.122 | -0.0020 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 103 | 25 - 140 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 92.4 | 30 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 94.5 | 30 - 135 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |
| **1011022-02 (1011260-02 ) ug/L** | | | | Lab File ID: 015F1501.D | | Analyzed: 12/10/10 15:52 | | |
| Tetrachloro-m-xylene | 0.2000 | 75.3 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 87.1 | 25 - 140 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 73.5 | 30 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 76.8 | 30 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **1011022-03 (1011260-03 ) ug/L** | | | | Lab File ID: 016F1601.D | | Analyzed: 12/10/10 16:11 | | |
| Tetrachloro-m-xylene | 0.2000 | 119 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 125 | 25 - 140 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 107 | 30 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 95.8 | 30 - 135 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV6 ) ug/L** | | | | Lab File ID: 031F3101.D | | Analyzed: 12/10/10 20:51 | | |
| Tetrachloro-m-xylene | 100.0 | 94.6 | 80 - 120 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 100 | 80 - 120 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 93.8 | 80 - 120 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 101 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011022-03

Lab Name: Empirical Laboratories, LLC

Lab Sample ID: 1011260-03 Date(s) Analyzed: 12/10/2010 12/10/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW FROM | RT WINDOW TO | CONCENTRATION | %D RPD |
|---|---|---|---|---|---|---|
| 4,4'-DDT | 1 | 8.82 | 9.16 | 9.22 | 0.00756 | |
| | 2 | 7.40 | 7.69 | 7.75 | 0.00855 | 12 |
| alpha-Chlordane | 1 | 7.62 | 7.96 | 8.02 | 0.00587 | |
| | 2 | 6.31 | 6.60 | 6.66 | 0.0258 | 126 |
| Methoxychlor | 1 | 9.43 | 9.76 | 9.82 | 0.00818 | |
| | 2 | 8.10 | 8.38 | 8.44 | 0.0123 | 40 |

* 1/13/11

Matrix Interference

# Data for SW8082A Forms

# HOLDING TIME SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011022-01 | 11/05/10 11:40 | 11/30/10 08:25 | 11/12/10 10:15 | 6.98 | 7.00 | 12/10/10 15:33 | 28.22 | 40.00 | |
| 1011022-02 | 11/05/10 10:35 | 11/30/10 08:25 | 11/12/10 10:15 | 7.03 | 7.00 | 12/10/10 15:52 | 28.23 | 40.00 | |
| 1011022-03 | 11/05/10 09:28 | 11/30/10 08:25 | 11/12/10 10:15 | 7.07 | 7.00 | 12/10/10 16:11 | 28.25 | 40.00 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32606 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0K32606-CAL1 | 001R0101.D | 11/18/10 12:48 |
| Cal Standard | 0K32606-CAL1 | 001F0101.D | 11/18/10 12:48 |
| Cal Standard | 0K32606-CAL2 | 002R0201.D | 11/18/10 13:07 |
| Cal Standard | 0K32606-CAL2 | 002F0201.D | 11/18/10 13:07 |
| Cal Standard | 0K32606-CAL3 | 003R0301.D | 11/18/10 13:25 |
| Cal Standard | 0K32606-CAL3 | 003F0301.D | 11/18/10 13:25 |
| Cal Standard | 0K32606-CAL4 | 004R0401.D | 11/18/10 13:44 |
| Cal Standard | 0K32606-CAL4 | 004F0401.D | 11/18/10 13:44 |
| Cal Standard | 0K32606-CAL5 | 005R0501.D | 11/18/10 14:03 |
| Cal Standard | 0K32606-CAL5 | 005F0501.D | 11/18/10 14:03 |
| Cal Standard | 0K32606-CAL6 | 006R0601.D | 11/18/10 14:22 |
| Cal Standard | 0K32606-CAL6 | 006F0601.D | 11/18/10 14:22 |
| Initial Cal Check | 0K32606-ICV1 | 007R0701.D | 11/18/10 14:40 |
| Initial Cal Check | 0K32606-ICV1 | 007F0701.D | 11/18/10 14:40 |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| Cal Standard | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34414 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34414-CAL1 | 007R0701.D | 12/10/10 13:21 |
| Cal Standard | 0L34414-CAL1 | 007F0701.D | 12/10/10 13:21 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32606 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10G0158 | Aro-1660 Cal1@2500/125 | 0K32606-CAL1 | 001R0101.D | 11/18/10 12:48 |
| 10G0158 | Aro-1660 Cal1@2500/125 | 0K32606-CAL1 | 001F0101.D | 11/18/10 12:48 |
| 10G0159 | Aro-1660 Cal2@1000/50 (CCV) | 0K32606-CAL2 | 002F0201.D | 11/18/10 13:07 |
| 10G0159 | Aro-1660 Cal2@1000/50 (CCV) | 0K32606-CAL2 | 002R0201.D | 11/18/10 13:07 |
| 10G0160 | Aro-1660 Cal3@750/37.5 | 0K32606-CAL3 | 003F0301.D | 11/18/10 13:25 |
| 10G0160 | Aro-1660 Cal3@750/37.5 | 0K32606-CAL3 | 003R0301.D | 11/18/10 13:25 |
| 10G0161 | Aro-1660 Cal4@500/25 | 0K32606-CAL4 | 004F0401.D | 11/18/10 13:44 |
| 10G0161 | Aro-1660 Cal4@500/25 | 0K32606-CAL4 | 004R0401.D | 11/18/10 13:44 |
| 10G0162 | Aro-1660 Cal5@100/5 | 0K32606-CAL5 | 005F0501.D | 11/18/10 14:03 |
| 10G0162 | Aro-1660 Cal5@100/5 | 0K32606-CAL5 | 005R0501.D | 11/18/10 14:03 |
| 10G0163 | Aro-1660 Cal6@50/2.5 | 0K32606-CAL6 | 006F0601.D | 11/18/10 14:22 |
| 10G0163 | Aro-1660 Cal6@50/2.5 | 0K32606-CAL6 | 006R0601.D | 11/18/10 14:22 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34414 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10L0258 | Aroclor-1242 CCV@ 1000ppm | 0L34414-CAL1 | 007R0701.D | 12/10/10 13:21 |
| 10L0258 | Aroclor-1242 CCV@ 1000ppm | 0L34414-CAL1 | 007F0701.D | 12/10/10 13:21 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 (1) | 1377.504 | 4.536308 | 6.700333 | 3.426844E-02 | | | 20 | |
| Aroclor-1016 (2) | 444.0847 | 4.44248 | 5.826833 | 3.181603E-02 | | | 20 | |
| Aroclor-1016 (3) | 649.9719 | 4.621188 | 6.179167 | 3.737598E-02 | | | 20 | |
| Aroclor-1016 (4) | 648.8554 | 3.928386 | 6.382333 | 4.135933E-02 | | | 20 | |
| Aroclor-1016 (5) | 518.3258 | 5.712167 | 6.986333 | 4.281168E-02 | | | 20 | |
| Aroclor-1016 (1) [2C] | 1116.305 | 22.05288 | 5.6205 | 8.742721E-02 | AVG | | 20 | * |
| Aroclor-1016 (2) [2C] | 482.1738 | 15.65584 | 5.207667 | 6.233316E-02 | | | 20 | |
| Aroclor-1016 (3) [2C] | 538.2843 | 19.29511 | 5.3845 | 6.561467E-02 | 19.92 | | 20 | |
| Aroclor-1016 (4) [2C] | 685.3173 | 23.96236 | 5.673333 | 7.372141E-02 | | | 20 | * |
| Aroclor-1016 (5) [2C] | 518.0925 | 18.33539 | 6.050167 | 3.093481E-02 | | | 20 | |
| Aroclor-1242 | | | | | | | 20 | |
| Aroclor-1242 (1) | | | | | | | 20 | |
| Aroclor-1242 (2) | | | | | | | 20 | |
| Aroclor-1242 (3) | | | | | | | 20 | |
| Aroclor-1242 (4) | | | | | | | 20 | |
| Aroclor-1242 (5) | | | | | | | 20 | |
| Aroclor-1242 [2C] | | | | | | | 20 | |
| Aroclor-1242 (1) [2C] | | | | | | | 20 | |
| Aroclor-1242 (2) [2C] | | | | | | | 20 | |
| Aroclor-1242 (3) [2C] | | | | | | | 20 | |
| Aroclor-1242 (4) [2C] | | | | | | | 20 | |
| Aroclor-1242 (5) [2C] | | | | | | | 20 | |
| Aroclor-1260 (1) | 3707.263 | 5.739381 | 9.985833 | 4.225337E-02 | | | 20 | |
| Aroclor-1260 (2) | 1987.077 | 5.271371 | 8.871167 | 0.0462616 | | | 20 | |
| Aroclor-1260 (3) | 2134.259 | 6.546249 | 9.215667 | 0.0358565 | | | 20 | |
| Aroclor-1260 (4) | 1615.479 | 6.430938 | 9.3155 | 3.563058E-02 | | | 20 | |
| Aroclor-1260 (5) | 907.6331 | 8.228581 | 11.0785 | 2.856956E-02 | | | 20 | |
| Aroclor-1260 (1) [2C] | 2013.278 | 16.31731 | 8.419 | 8.340063E-03 | | | 20 | |
| Aroclor-1260 (2) [2C] | 1028.947 | 20.55875 | 7.164667 | 1.777219E-02 | | | 20 | * |
| Aroclor-1260 (3) [2C] | 1227.66 | 19.18172 | 7.3915 | 0.0314888 | | | 20 | |
| Aroclor-1260 (4) [2C] | 1169.368 | 18.45489 | 7.554333 | 1.416947E-02 | | | 20 | |
| Aroclor-1260 (5) [2C] | 921.5547 | 18.06768 | 8.109833 | 0.0215561 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 28765.14 | 2.541019 | 5.388857 | 1.804526E-02 | | | 20 | |
| Tetrachloro-m-xylene [2C] | 21379.77 | 11.06958 | 4.526 | 6.298631E-02 | | | 20 | |
| Decachlorobiphenyl | 29956.87 | 5.97861 | 11.62329 | 1.578512E-02 | | | 20 | |
| Decachlorobiphenyl [2C] | 17512.73 | 17.45123 | 10.00071 | 1.794087E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1016 (1) | | | 50 | 1495.9 | 100 | 1379.86 | 500 | 1353.35 | 750 | 1351.843 | 1000 | 1371.552 |
| Aroclor-1016 (2) | | | 50 | 478.5 | 100 | 454.64 | 500 | 435.762 | 750 | 431.7173 | 1000 | 440.106 |
| Aroclor-1016 (3) | | | 50 | 704.12 | 100 | 664.9 | 500 | 637.41 | 750 | 627.5187 | 1000 | 640.493 |
| Aroclor-1016 (4) | | | 50 | 697.8 | 100 | 654.92 | 500 | 633.068 | 750 | 632.4706 | 1000 | 641.782 |
| Aroclor-1016 (5) | | | 50 | 572.92 | 100 | 530.08 | 500 | 501.912 | 750 | 503.0813 | 1000 | 509.949 |
| Aroclor-1016 (1) [2C] | | | 50 | 1518.82 | 100 | 1291.13 | 500 | 1062.188 | 750 | 1001.393 | 1000 | 986.116 |
| Aroclor-1016 (2) [2C] | | | 50 | 608.86 | 100 | 526.06 | 500 | 472.152 | 750 | 455.7093 | 1000 | 434.192 |
| Aroclor-1016 (3) [2C] | | | 50 | 699.36 | 100 | 628.97 | 500 | 514.674 | 750 | 484.9987 | 1000 | 474.112 |
| Aroclor-1016 (4) [2C] | | | 50 | 948.94 | 100 | 818.8 | 500 | 641.51 | 750 | 600.444 | 1000 | 585.566 |
| Aroclor-1016 (5) [2C] | | | 50 | 672.54 | 100 | 594.08 | 500 | 486.382 | 750 | 469.5453 | 1000 | 463.649 |
| Aroclor-1242 | | | | | | | | | | | | |
| Aroclor-1242 (1) | | | | | | | | | | | | |
| Aroclor-1242 (2) | | | | | | | | | | | | |
| Aroclor-1242 (3) | | | | | | | | | | | | |
| Aroclor-1242 (4) | | | | | | | | | | | | |
| Aroclor-1242 (5) | | | | | | | | | | | | |
| Aroclor-1242 [2C] | | | | | | | | | | | | |
| Aroclor-1242 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (1) | | | 50 | 4038.86 | 100 | 3838.16 | 500 | 3690.114 | 750 | 3447.547 | 1000 | 3698.998 |
| Aroclor-1260 (2) | | | 50 | 2181.16 | 100 | 2008.25 | 500 | 1934.762 | 750 | 1901.885 | 1000 | 1991.364 |
| Aroclor-1260 (3) | | | 50 | 2315.88 | 100 | 2297.87 | 500 | 2062.272 | 750 | 2005.591 | 1000 | 2115.154 |
| Aroclor-1260 (4) | | | 50 | 1812.3 | 100 | 1617.43 | 500 | 1591.534 | 750 | 1534.256 | 1000 | 1611.527 |
| Aroclor-1260 (5) | | | 50 | 1022.96 | 100 | 944.94 | 500 | 906.088 | 750 | 841.22 | 1000 | 916.282 |
| Aroclor-1260 (1) [2C] | | | 50 | 2541.76 | 100 | 2234.09 | 500 | 1975.376 | 750 | 1833.392 | 1000 | 1882.631 |
| Aroclor-1260 (2) [2C] | | | 50 | 1366.76 | 100 | 1199 | 500 | 974.864 | 750 | 918.148 | 1000 | 915.273 |
| Aroclor-1260 (3) [2C] | | | 50 | 1608.24 | 100 | 1405.76 | 500 | 1174.532 | 750 | 1105.324 | 1000 | 1104.948 |
| Aroclor-1260 (4) [2C] | | | 50 | 1514.18 | 100 | 1340.42 | 500 | 1115.872 | 750 | 1050.079 | 1000 | 1064.022 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | 50 | 1193.36 | 100 | 1040.37 | 500 | 889.262 | 750 | 825.8493 | 1000 | 844.715 |
| Tetrachloro-m-xylene | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Tetrachloro-m-xylene [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |

# INITIAL CALIBRATION DATA

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | | | | | | | | | | |
| Tetrachloro-m-xylene | 200 | 30396.38 | 100 | 28270.71 | 50 | 28442.38 | 25 | 28656.12 | 10 | 28496 | 5 | 28638.4 |
| Tetrachloro-m-xylene [2C] | 200 | 19072.68 | 100 | 19248.97 | 50 | 20109.36 | 25 | 20564.48 | 10 | 22076.7 | 5 | 22878.2 |
| Decachlorobiphenyl | 200 | 29960.3 | 100 | 27340.04 | 50 | 28005.84 | 25 | 29560.24 | 10 | 31558.5 | 5 | 31300.2 |
| Decachlorobiphenyl [2C] | 200 | 14811.62 | 100 | 14456.54 | 50 | 15435.18 | 25 | 16877.6 | 10 | 18462 | 5 | 19614.2 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | | | | | | | | | | |
| Tetrachloro-m-xylene | 1 | 28456 | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | 1 | 25708 | | | | | | | | | | |
| Decachlorobiphenyl | 1 | 31973 | | | | | | | | | | |
| Decachlorobiphenyl [2C] | 1 | 22932 | | | | | | | | | | |

# INITIAL CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 007F0701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32606 | Injection Date: | 11/18/10 |
| Lab Sample ID: | 0K32606-ICV1 | Injection Time: | 14:40 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) | |
| Aroclor-1016 (1) | A | 1000 | 965.8 | 1377.504 | 1330.475 | | -3.4 | 20 | |
| Aroclor-1016 (2) | A | 1000 | 954.1 | 444.0847 | 423.696 | | -4.6 | 20 | |
| Aroclor-1016 (3) | A | 1000 | 990.4 | 649.9719 | 643.709 | | -1.0 | 20 | |
| Aroclor-1016 (4) | A | 1000 | 1001 | 648.8554 | 649.524 | | 0.1 | 20 | |
| Aroclor-1016 (5) | A | 1000 | 1007 | 518.3258 | 521.878 | | 0.7 | 20 | |
| Aroclor-1016 (1) [2C] | A | 1000 | 770.6 | 1116.305 | 860.241 | | -22.9 | 20 | * |
| Aroclor-1016 (2) [2C] | A | 1000 | 955.3 | 482.1738 | 460.605 | | -4.5 | 20 | |
| Aroclor-1016 (3) [2C] | A | 1000 | 884.8 | 538.2843 | 476.271 | | -11.5 | 20 | |
| Aroclor-1016 (4) [2C] | A | 1000 | 869.8 | 685.3173 | 596.06 | | -13.0 | 20 | |
| Aroclor-1016 (5) [2C] | A | 1000 | 893.4 | 518.0925 | 462.882 | | -10.7 | 20 | |
| Aroclor-1260 (1) | A | 1000 | 914.4 | 3707.263 | 3390.072 | | -8.6 | 20 | |
| Aroclor-1260 (2) | A | 1000 | 999.0 | 1987.077 | 1985.004 | | -0.1 | 20 | |
| Aroclor-1260 (3) | A | 1000 | 1044 | 2134.259 | 2227.99 | | 4.4 | 20 | |
| Aroclor-1260 (4) | A | 1000 | 845.2 | 1615.479 | 1365.422 | | -15.5 | 20 | |
| Aroclor-1260 (5) | A | 1000 | 819.7 | 907.6331 | 744.024 | | -18.0 | 20 | |
| Aroclor-1260 (1) [2C] | A | 1000 | 848.7 | 2013.278 | 1708.677 | | -15.1 | 20 | |
| Aroclor-1260 (2) [2C] | A | 1000 | 914.8 | 1028.947 | 941.29 | | -8.5 | 20 | |
| Aroclor-1260 (3) [2C] | A | 1000 | 939.9 | 1227.66 | 1153.839 | | -6.0 | 20 | |
| Aroclor-1260 (4) [2C] | A | 1000 | 917.8 | 1169.368 | 1073.231 | | -8.2 | 20 | |
| Aroclor-1260 (5) [2C] | A | 1000 | 816.1 | 921.5547 | 752.068 | | -18.4 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003F0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Tetrachloro-m-xylene | A | 100.0 | 90.38 | 28765.14 | 25999.25 | | -9.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 97.24 | 21379.77 | 20790.76 | | -2.8 | 20 |
| Decachlorobiphenyl | A | 100.0 | 86.52 | 29956.87 | 25919.92 | | -13.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 91.76 | 17512.73 | 16070.47 | | -8.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35009 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L35009-CCV1 | 003F0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV1 | 003R0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV4 | 006R0601.D | 12/10/10 13:03 |
| Calibration Check | 0L35009-CCV4 | 006F0601.D | 12/10/10 13:03 |
| Calibration Check | 0L35009-CCV5 | 007R0701.D | 12/10/10 13:21 |
| Calibration Check | 0L35009-CCV5 | 007F0701.D | 12/10/10 13:21 |
| Blank | 0L06020-BLK1 | 009F0901.D | 12/10/10 13:59 |
| Blank | 0L06020-BLK1 | 009R0901.D | 12/10/10 13:59 |
| LCS | 0L06020-BS2 | 012F1201.D | 12/10/10 14:56 |
| LCS | 0L06020-BS2 | 012R1201.D | 12/10/10 14:56 |
| LCS Dup | 0L06020-BSD2 | 013R1301.D | 12/10/10 15:15 |
| LCS Dup | 0L06020-BSD2 | 013F1301.D | 12/10/10 15:15 |
| 1011022-01 | 1011260-01 | 014F1401.D | 12/10/10 15:33 |
| 1011022-01 | 1011260-01 | 014R1401.D | 12/10/10 15:33 |
| 1011022-02 | 1011260-02 | 015R1501.D | 12/10/10 15:52 |
| 1011022-02 | 1011260-02 | 015F1501.D | 12/10/10 15:52 |
| 1011022-03 | 1011260-03 | 016R1601.D | 12/10/10 16:11 |
| 1011022-03 | 1011260-03 | 016F1601.D | 12/10/10 16:11 |
| Calibration Check | 0L35009-CCV6 | 031F3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV6 | 031R3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV9 | 034F3401.D | 12/10/10 21:47 |
| Calibration Check | 0L35009-CCV9 | 034R3401.D | 12/10/10 21:47 |
| Calibration Check | 0L35009-CCVA | 035R3501.D | 12/10/10 22:05 |
| Calibration Check | 0L35009-CCVA | 035F3501.D | 12/10/10 22:05 |

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 006F0601.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV4 | Injection Time: | 13:03 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1016 (1) | A | 1000 | 951.3 | 1377.504 | 1310.397 | | -4.9 | 20 |
| Aroclor-1016 (2) | A | 1000 | 969.3 | 444.0847 | 430.444 | | -3.1 | 20 |
| Aroclor-1016 (3) | A | 1000 | 979.0 | 649.9719 | 636.323 | | -2.1 | 20 |
| Aroclor-1016 (4) | A | 1000 | 974.5 | 648.8554 | 632.336 | | -2.5 | 20 |
| Aroclor-1016 (5) | A | 1000 | 957.0 | 518.3258 | 496.025 | | -4.3 | 20 |
| Aroclor-1016 (1) [2C] | A | 1000 | 1032 | 1116.305 | 1152.408 | | 3.2 | 20 |
| Aroclor-1016 (2) [2C] | A | 1000 | 1084 | 482.1738 | 522.447 | | 8.4 | 20 |
| Aroclor-1016 (3) [2C] | A | 1000 | 1074 | 538.2843 | 577.849 | | 7.4 | 20 |
| Aroclor-1016 (4) [2C] | A | 1000 | 1085 | 685.3173 | 743.499 | | 8.5 | 20 |
| Aroclor-1016 (5) [2C] | A | 1000 | 1036 | 518.0925 | 536.731 | | 3.6 | 20 |
| Aroclor-1260 (1) | A | 1000 | 1026 | 3707.263 | 3802.841 | | 2.6 | 20 |
| Aroclor-1260 (2) | A | 1000 | 973.7 | 1987.077 | 1934.916 | | -2.6 | 20 |
| Aroclor-1260 (3) | A | 1000 | 947.6 | 2134.259 | 2022.331 | | -5.2 | 20 |
| Aroclor-1260 (4) | A | 1000 | 974.9 | 1615.479 | 1574.97 | | -2.5 | 20 |
| Aroclor-1260 (5) | A | 1000 | 991.1 | 907.6331 | 899.54 | | -0.9 | 20 |
| Aroclor-1260 (1) [2C] | A | 1000 | 1094 | 2013.278 | 2202.64 | | 9.4 | 20 |
| Aroclor-1260 (2) [2C] | A | 1000 | 1086 | 1028.947 | 1117.371 | | 8.6 | 20 |
| Aroclor-1260 (3) [2C] | A | 1000 | 1089 | 1227.66 | 1337.058 | | 8.9 | 20 |
| Aroclor-1260 (4) [2C] | A | 1000 | 1060 | 1169.368 | 1239.274 | | 6.0 | 20 |
| Aroclor-1260 (5) [2C] | A | 1000 | 1080 | 921.5547 | 995.047 | | 8.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 007F0701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV5 | Injection Time: | 13:21 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1242 (1) | A | 1000 | 1000 | | 963.925 | | | 20 |
| Aroclor-1242 (2) | A | 1000 | 1000 | | 476.295 | | | 20 |
| Aroclor-1242 (3) | A | 1000 | 1000 | | 477.985 | | | 20 |
| Aroclor-1242 (4) | A | 1000 | 1000 | | 365.484 | | | 20 |
| Aroclor-1242 (5) | A | 1000 | 1000 | | 469.786 | | | 20 |
| Aroclor-1242 (1) [2C] | A | 1000 | 1000 | | 904.338 | | | 20 |
| Aroclor-1242 (2) [2C] | A | 1000 | 1000 | | 311.165 | | | 20 |
| Aroclor-1242 (3) [2C] | A | 1000 | 1000 | | 446.828 | | | 20 |
| Aroclor-1242 (4) [2C] | A | 1000 | 1000 | | 573.747 | | | 20 |
| Aroclor-1242 (5) [2C] | A | 1000 | 1000 | | 482.003 | | | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031F3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Tetrachloro-m-xylene | A | 100.0 | 94.61 | 28765.14 | 27215.45 | | -5.4 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 100.5 | 21379.77 | 21496.84 | | 0.5 | 20 |
| Decachlorobiphenyl | A | 100.0 | 93.78 | 29956.87 | 28094.31 | | -6.2 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 101.0 | 17512.73 | 17696.02 | | 1.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 034F3401.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV9 | Injection Time: | 21:47 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Aroclor-1016 (1) | A | 1000 | 1021 | 1377.504 | 1406.546 | | 2.1 | 20 | |
| Aroclor-1016 (2) | A | 1000 | 1083 | 444.0847 | 480.87 | | 8.3 | 20 | |
| Aroclor-1016 (3) | A | 1000 | 1073 | 649.9719 | 697.735 | | 7.3 | 20 | |
| Aroclor-1016 (4) | A | 1000 | 1089 | 648.8554 | 706.812 | | 8.9 | 20 | |
| Aroclor-1016 (5) | A | 1000 | 1050 | 518.3258 | 544.351 | | 5.0 | 20 | |
| Aroclor-1016 (1) [2C] | A | 1000 | 1101 | 1116.305 | 1228.779 | | 10.1 | 20 | AVG |
| Aroclor-1016 (2) [2C] | A | 1000 | 1204 | 482.1738 | 580.539 | | 20.4 | 20 * | |
| Aroclor-1016 (3) [2C] | A | 1000 | 1123 | 538.2843 | 604.314 | | 12.3 | 20 | 8.62 |
| Aroclor-1016 (4) [2C] | A | 1000 | 1079 | 685.3173 | 739.261 | | 7.9 | 20 | |
| Aroclor-1016 (5) [2C] | A | 1000 | 1170 | 518.0925 | 606.449 | | 17.1 | 20 | |
| Aroclor-1260 (1) | A | 1000 | 1084 | 3707.263 | 4019.111 | | 8.4 | 20 | |
| Aroclor-1260 (2) | A | 1000 | 1043 | 1987.077 | 2073.009 | | 4.3 | 20 | |
| Aroclor-1260 (3) | A | 1000 | 1005 | 2134.259 | 2145.317 | | 0.5 | 20 | |
| Aroclor-1260 (4) | A | 1000 | 1024 | 1615.479 | 1654.279 | | 2.4 | 20 | |
| Aroclor-1260 (5) | A | 1000 | 1051 | 907.6331 | 954.183 | | 5.1 | 20 | |
| Aroclor-1260 (1) [2C] | A | 1000 | 1134 | 2013.278 | 2283.256 | | 13.4 | 20 | |
| Aroclor-1260 (2) [2C] | A | 1000 | 1108 | 1028.947 | 1140.68 | | 10.9 | 20 | |
| Aroclor-1260 (3) [2C] | A | 1000 | 1116 | 1227.66 | 1369.787 | | 11.6 | 20 | |
| Aroclor-1260 (4) [2C] | A | 1000 | 1132 | 1169.368 | 1323.483 | | 13.2 | 20 | |
| Aroclor-1260 (5) [2C] | A | 1000 | 1153 | 921.5547 | 1062.37 | | 15.3 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 035F3501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCVA | Injection Time: | 22:05 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1242 (1) | A | 1000 | 1129 | | 1088.652 | | | 20 |
| Aroclor-1242 (2) | A | 1000 | 1126 | | 536.214 | | | 20 |
| Aroclor-1242 (3) | A | 1000 | 1128 | | 539.074 | | | 20 |
| Aroclor-1242 (4) | A | 1000 | 1126 | | 411.732 | | | 20 |
| Aroclor-1242 (5) | A | 1000 | 1142 | | 536.652 | | | 20 |
| Aroclor-1242 (1) [2C] | A | 1000 | 1130 | | 1022.213 | | | 20 |
| Aroclor-1242 (2) [2C] | A | 1000 | 1101 | | 342.696 | | | 20 |
| Aroclor-1242 (3) [2C] | A | 1000 | 1050 | | 469.216 | | | 20 |
| Aroclor-1242 (4) [2C] | A | 1000 | 1103 | | 633.05 | | | 20 |
| Aroclor-1242 (5) [2C] | A | 1000 | 1182 | | 569.5 | | | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06020 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06020-BLK1 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| LCS | 0L06020-BS2 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| LCS Dup | 0L06020-BSD2 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| 1011022-01 | 1011260-01 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| 1011022-02 | 1011260-02 | 11/12/10 10:15 | 1,000.00 | 10.00 |
| 1011022-03 | 1011260-03 | 11/12/10 10:15 | 1,000.00 | 10.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L06020-BLK1 File ID: 009F0901.D

Sampled: Prepared: 11/12/10 10:15 Analyzed: 12/10/10 13:59

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L06020 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1927 | 96.3 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2242 | 112 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1886 | 94.3 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.2212 | 111 | 40 - 135 | |

* Values outside of QC limits

# LCS / LCS DUPLICATE RECOVERY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06020 | Laboratory ID: | 0L06020-BS2 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aroclor-1242 | 5.000 | 5.574 | 111 | 50 - 150 |
| Aroclor-1242 [2C] | 5.000 | 5.279 | 106 | 50 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Aroclor-1242 | 5.000 | 5.553 | 111 | 0.379 | 30 | 50 - 150 |
| Aroclor-1242 [2C] | 5.000 | 5.278 | 106 | 0.0293 | 30 | 50 - 150 |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35009

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV1 ) ug/L** | | | | Lab File ID: 003F0301.D | | Analyzed: 12/10/10 12:06 | | |
| Tetrachloro-m-xylene | 100.0 | 90.4 | 80 - 120 | 5.122 | 5.122 | 0.0000 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 97.2 | 80 - 120 | 4.319 | 4.319 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 86.5 | 80 - 120 | 11.227 | 11.227 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 91.8 | 80 - 120 | 9.651 | 9.651 | 0.0000 | +/-0.030 | |
| **Blank (0L06020-BLK1 ) ug/L** | | | | Lab File ID: 009F0901.D | | Analyzed: 12/10/10 13:59 | | |
| Tetrachloro-m-xylene | 0.2000 | 96.3 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 112 | 25 - 140 | 4.317 | 4.319 | -0.0020 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 94.3 | 40 - 135 | 11.224 | 11.227 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 111 | 40 - 135 | 9.649 | 9.651 | -0.0020 | +/-0.030 | |
| **LCS (0L06020-BS2 ) ug/L** | | | | Lab File ID: 012F1201.D | | Analyzed: 12/10/10 14:56 | | |
| Tetrachloro-m-xylene | 0.2000 | 93.7 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 99.6 | 25 - 140 | 4.317 | 4.319 | -0.0020 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 90.1 | 40 - 135 | 11.223 | 11.227 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 103 | 40 - 135 | 9.649 | 9.651 | -0.0020 | +/-0.030 | |
| **LCS Dup (0L06020-BSD2 ) ug/L** | | | | Lab File ID: 013F1301.D | | Analyzed: 12/10/10 15:15 | | |
| Tetrachloro-m-xylene | 0.2000 | 101 | 25 - 140 | 5.12 | 5.122 | -0.0020 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 107 | 25 - 140 | 4.317 | 4.319 | -0.0020 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 95.6 | 40 - 135 | 11.225 | 11.227 | -0.0020 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 108 | 40 - 135 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |
| **1011022-01 (1011260-01 ) ug/L** | | | | Lab File ID: 014F1401.D | | Analyzed: 12/10/10 15:33 | | |
| Tetrachloro-m-xylene | 0.2000 | 91.1 | 25 - 140 | 5.12 | 5.122 | -0.0020 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 103 | 25 - 140 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 92.4 | 40 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 94.5 | 40 - 135 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |
| **1011022-02 (1011260-02 ) ug/L** | | | | Lab File ID: 015F1501.D | | Analyzed: 12/10/10 15:52 | | |
| Tetrachloro-m-xylene | 0.2000 | 75.3 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 87.1 | 25 - 140 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 73.5 | 40 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 76.8 | 40 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **1011022-03 (1011260-03 ) ug/L** | | | | Lab File ID: 016F1601.D | | Analyzed: 12/10/10 16:11 | | |
| Tetrachloro-m-xylene | 0.2000 | 119 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 125 | 25 - 140 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 107 | 40 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 95.8 | 40 - 135 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV6 ) ug/L** | | | | Lab File ID: 031F3101.D | | Analyzed: 12/10/10 20:51 | | |
| Tetrachloro-m-xylene | 100.0 | 94.6 | 80 - 120 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 100 | 80 - 120 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 93.8 | 80 - 120 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 101 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_004

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** GL-ECD3

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aroclor-1016 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1221 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1232 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1242 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1248 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1254 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1260 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1262 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1268 | 0.120 | 0.500 | ug/L | SW8082A |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **TERRI L. SOLOMON** **COPIES:** **DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – METALS**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_004**

**SAMPLES:** 3/Aqueous

G01-MW-01-1010 G01-MW-02-1010 G01-MW-04-1010

19/Soil

GKHMS-SO-001-1010 GKHMS-SO-002-1010 GKHMS-SO-003-1010
GKHMS-SO-005-1010 GKHMS-SO-011-1010 GKHMS-SO-012-1010
GKHMS-SO-014-1010 GKHMS-SO-017-1010 GKHMS-SO-019-1010
GKHMS-SO-021-1010 GKHMS-SO-022-1010 GKHMS-SO-023-1010
GKHMS-SO-025-1010 GKHMS-SO-028-1010 GKHMS-SO-030-1010
GKHMS-SO-031-1010 GKHMS-SO-032-1010 GKHMS-SO-034-1010
GKHMS-SO-FD002-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_004, consists of three (3) aqueous environmental samples and nineteen (19) soil environmental samples. One (1) field duplicate pair (GKHMS-SO-031-1010 / GKHMS-SO-FD002-1010) was included within this data package.

All samples were analyzed for Target Analyte List (TAL) metals. The samples were collected by Tetra Tech on November 2 and 5, 2010 and analyzed by Empirical Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010B. Mercury analyses were conducted using SW-846 methods 7470A / 7471A

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
• Initial and Continuing Calibrations
• Laboratory Method / Preparation Blank Analyses
• Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Control Sample Recoveries
• ICP Serial Dilution Results
• Field Duplicate Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Initial and Continuing Calibrations

The continuing calibration percent recovery on 12/7/10 at 17:02 for magnesium was > 110% quality control limit affecting samples G01-MW-01-1010, G01-MW-02-1010 and G01-MW-04-1010. The positive results reported for magnesium in the affected samples were qualified as estimated, "J".

The continuing calibration percent recoveries on 12/7/10 at 18:26 for aluminum and magnesium were > 110% quality control limit and the percent recovery for calcium was < 90% quality control limit affecting samples G01-MW-01-1010, G01-MW-02-1010 and G01-MW-04-1010. The positive results reported for aluminum, magnesium and calcium in the affected samples were qualified as estimated, "J".

The continuing calibration percent recoveries on 12/9/10 at 20:30 for potassium and sodium were > 110% quality control limit affecting samples G01-MW-01-1010, G01-MW-02-1010 and G01-MW-04-1010. The positive results reported for potassium and sodium in the affected samples were qualified as estimated, "J".

Laboratory Method / Preparation Blank Analyses

The following contaminants were detected in the preparation blanks at the following maximum concentrations:

| Analyte | Maximum Concentration | Action Level |
|---|---|---|
| Sodium[(1)] | 389 ug/L | 1945 ug/L |
| Zinc[(2)] | 0.481 mg/kg | 2.405 mg/kg |

(1) Maximum concentration present in a preparation blank affecting the aqueous samples.
(2) Maximum concentration present in a preparation blank affecting the soil samples.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results greater than the action level for zinc were qualified as nondetected, "U".

Matrix Spike / Matrix Spike Duplicate Recoveries

The matrix spike / matrix spike duplicate percent recoveries for aluminum, antimony, arsenic, cadmium, copper and silver were > 120% quality control limit affecting the aqueous samples. The positive results reported for the aforementioned analytes in the affected samples were qualified as estimated, "J".

The matrix spike / matrix spike duplicate percent recoveries for antimony, arsenic, cadmium and manganese were > 120% quality control limit affecting the soil samples. The positive results reported for the aforementioned analytes in the affected samples were qualified as estimated, "J".

ICP Serial Dilution Results

The ICP serial dilution percent difference (sample result > 50X MDL) for magnesium was > 10% quality control limit affecting the aqueous samples. The positive results reported for magnesium in the affected samples were qualified as estimated, "J".

Field Duplicate Results

Field duplicate imprecision (RPD > 50% or difference > 4X LOQ) was noted for sample pair GKHMS-SO-031-1010 / GKHMS-SO-FD002-1010 for chromium, iron, lead and manganese. The positive and nondetected results reported for the aforementioned analytes were qualified as estimated, "J" and "UJ", respectively.

Notes

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) were qualified as estimated, "J".

The samples were originally received by Centuri Laboratories and given laboratory IDs. The samples were then sent to Empirical Laboratory for analysis and given a second set of sample IDs. The original chain of custody was not included by either laboratory. The sample ID listed in the EDD could not be confirmed to match either of the laboratory IDs. The issue was resolved.

Nondetected results are reported to the method detection limit.

Executive Summary

**Laboratory Performance:** Several continuing calibrations affecting the water analyses were outside the 90-110% quality control limits. Several analytes were present in the preparation blanks.

**Other Factors Affecting Data Quality:** Positive results reported below the LOQ but above the MDL were qualified as estimated. Several matrix spike / matrix spike duplicate percent recoveries were > 120% quality control limit. The ICP serial dilution percent difference for magnesium was > 10% quality control limit affecting the aqueous samples. Field duplicate imprecision was noted for sample pair GKHMS-SO-031010 / GKHMS-SO-FD002-1010 for chromium, iron, lead and manganese.

The data for these analyses were reviewed with reference to the "EPA Functional Guidelines for Organic Data Validation", October 1999, "National Functional Guidelines for Inorganic Review", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Terri L. Solomon
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | | | G01-MW-02-1010 | | | G01-MW-04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_004 | LAB_ID | 1011260-01 | | | 1011260-02 | | | 1011260-03 | | |
| FRACTION: M | SAMP_DATE | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 85 | J | CDP | 88.6 | J | CDP | 50.7 | J | CDP |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | | 5.3 | J | DP |
| BARIUM | | 8.97 | J | P | 7.6 | J | P | 14.2 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 5.09 | J | D | 5.45 | J | D | 6.39 | J | D |
| CALCIUM | | 110000 | J | C | 115000 | J | C | 198000 | J | C |
| CHROMIUM | | 2 | U | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 111 | | | 224 | | | 30 | U | |
| LEAD | | 1.5 | U | | 1.5 | U | | 1.5 | U | |
| MAGNESIUM | | 107000 | J | CI | 122000 | J | CI | 222000 | J | CI |
| MANGANESE | | 3 | U | | 3 | U | | 3 | U | |
| NICKEL | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 39300 | J | C | 31800 | J | C | 59700 | J | C |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 671000 | J | C | 791000 | J | C | 1770000 | J | C |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 5 | U | | 5 | U | | 5 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_004 | LAB_ID | 1011259-01 | | | 1011259-02 | | | 1011259-03 | | | 1011259-04 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.9 | | | 87.4 | | | 85.5 | | | 86.2 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 334 | | | 250 | | | 178 | J | P | 122 | J | P |
| ANTIMONY | | 1.07 | U | | 1.1 | U | | 1.17 | U | | 1 | U | |
| ARSENIC | | 0.644 | U | | 0.66 | U | | 0.702 | U | | 0.6 | U | |
| BARIUM | | 15 | | | 9.46 | | | 7.54 | J | P | 9.39 | | |
| BERYLLIUM | | 0.215 | U | | 0.22 | U | | 0.234 | U | | 0.2 | U | |
| CADMIUM | | 0.926 | J | DP | 0.859 | J | DP | 0.922 | J | DP | 0.81 | J | DP |
| CALCIUM | | 341000 | | | 374000 | | | 369000 | | | 355000 | | |
| CHROMIUM | | 4.39 | J | G | 3.49 | J | G | 2.92 | J | G | 3.75 | J | G |
| COBALT | | 1.07 | U | | 1.1 | U | | 1.17 | U | | 1 | U | |
| COPPER | | 1.53 | J | P | 1.1 | U | | 1.17 | U | | 1.01 | J | P |
| IRON | | 497 | J | G | 121 | J | G | 114 | J | G | 160 | J | G |
| LEAD | | 9.95 | J | G | 6.07 | J | G | 1.76 | UJ | G | 1.8 | J | GP |
| MAGNESIUM | | 992 | J | P | 1140 | | | 888 | J | P | 1010 | | |
| MANGANESE | | 4.49 | J | DG | 3.33 | J | DG | 2.49 | J | DGP | 2.43 | J | DGP |
| NICKEL | | 1.07 | U | | 1.1 | U | | 1.17 | U | | 1 | U | |
| POTASSIUM | | 215 | U | | 220 | U | | 234 | U | | 200 | U | |
| SELENIUM | | 0.668 | J | P | 0.823 | J | P | 0.702 | U | | 0.646 | J | P |
| SILVER | | 0.429 | U | | 0.44 | U | | 0.234 | U | | 0.4 | U | |
| SODIUM | | 1670 | | | 1390 | | | 1010 | J | P | 1640 | | |
| THALLIUM | | 0.858 | U | | 0.66 | U | | 0.702 | U | | 0.6 | U | |
| VANADIUM | | 1.68 | J | P | 2.08 | J | P | 2.67 | J | P | 1.9 | J | P |
| ZINC | | 21.1 | J | P | 5.5 | U | | 5.85 | U | | 5 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | | GKHMS-SO-017-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_004 | LAB_ID | 1011259-06 | | | 1011259-07 | | | 1011259-08 | | | 1011259-09 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 81.4 | | | 82.9 | | | 86.1 | | | 87.7 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 521 | | | 528 | | | 179 | J | P | 188 | J | P |
| ANTIMONY | | 1.04 | U | | 1.14 | U | | 1.04 | U | | 1.12 | U | |
| ARSENIC | | 0.625 | U | | 0.682 | U | | 0.622 | U | | 0.671 | U | |
| BARIUM | | 10.2 | | | 11.2 | | | 9.12 | | | 8.56 | J | P |
| BERYLLIUM | | 0.208 | U | | 0.227 | U | | 0.207 | U | | 0.224 | U | |
| CADMIUM | | 1.22 | J | D | 0.866 | J | DP | 0.861 | J | DP | 0.854 | J | DP |
| CALCIUM | | 360000 | | | 379000 | | | 376000 | | | 369000 | | |
| CHROMIUM | | 5.46 | J | G | 3.47 | J | G | 2.85 | J | G | 2.44 | J | G |
| COBALT | | 1.04 | U | | 1.14 | U | | 1.04 | U | | 1.12 | U | |
| COPPER | | 1.75 | J | P | 1.63 | J | P | 1.61 | J | P | 1.12 | U | |
| IRON | | 318 | J | G | 242 | J | G | 83.3 | J | G | 83.1 | J | G |
| LEAD | | 85 | J | G | 10.4 | J | G | 1.55 | UJ | G | 1.68 | UJ | G |
| MAGNESIUM | | 1930 | | | 1380 | | | 998 | J | P | 800 | J | P |
| MANGANESE | | 4.33 | J | DG | 10.3 | J | DG | 2.11 | J | DGP | 2.41 | J | DGP |
| NICKEL | | 1.04 | U | | 1.14 | U | | 1.04 | U | | 1.12 | U | |
| POTASSIUM | | 208 | U | | 227 | U | | 207 | U | | 224 | U | |
| SELENIUM | | 0.625 | U | | 0.725 | J | P | 1.14 | J | P | 1.07 | J | P |
| SILVER | | 0.417 | U | | 0.455 | U | | 0.207 | U | | 0.447 | U | |
| SODIUM | | 3370 | | | 1920 | | | 1310 | | | 1400 | | |
| THALLIUM | | 0.625 | U | | 0.91 | U | | 0.622 | U | | 0.671 | U | |
| VANADIUM | | 2.46 | J | P | 1.96 | J | P | 1.64 | J | P | 1.59 | J | P |
| ZINC | | 12.4 | U | A | 5.69 | U | | 5.18 | U | | 5.59 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | | GKHMS-SO-023-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_004 | LAB_ID | 1011259-10 | | | 1011259-11 | | | 1011259-12 | | | 1011259-13 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.3 | | | 87.2 | | | 86.8 | | | 86.6 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 243 | | | 195 | J | P | 162 | J | P | 332 | | |
| ANTIMONY | | 1.12 | U | | 1.01 | U | | 1.07 | U | | 1.15 | U | |
| ARSENIC | | 0.674 | U | | 0.604 | U | | 0.64 | U | | 0.693 | U | |
| BARIUM | | 7.5 | J | P | 8.13 | | | 8.78 | | | 9.81 | | |
| BERYLLIUM | | 0.225 | U | | 0.201 | U | | 0.213 | U | | 0.231 | U | |
| CADMIUM | | 0.879 | J | DP | 0.838 | J | DP | 0.971 | J | DP | 0.954 | J | DP |
| CALCIUM | | 370000 | | | 384000 | | | 365000 | | | 384000 | | |
| CHROMIUM | | 2.5 | J | G | 2.43 | J | G | 2.44 | J | G | 2.75 | J | G |
| COBALT | | 1.12 | U | | 1.01 | U | | 1.07 | U | | 1.15 | U | |
| COPPER | | 1.3 | J | P | 1.01 | U | | 1.13 | J | P | 1.15 | U | |
| IRON | | 157 | J | G | 118 | J | G | 72.6 | J | G | 139 | J | G |
| LEAD | | 1.68 | UJ | G | 1.51 | UJ | G | 2.25 | J | GP | 1.73 | UJ | G |
| MAGNESIUM | | 887 | J | P | 810 | J | P | 729 | J | P | 1130 | J | P |
| MANGANESE | | 2.61 | J | DGP | 2.14 | J | DGP | 2.15 | J | DGP | 2.95 | J | DGP |
| NICKEL | | 1.12 | U | | 1.01 | U | | 1.07 | U | | 1.15 | U | |
| POTASSIUM | | 225 | U | | 201 | U | | 213 | U | | 231 | U | |
| SELENIUM | | 0.674 | U | | 0.604 | U | | 0.98 | J | P | 1.21 | J | P |
| SILVER | | 0.225 | U | | 0.402 | | | 0.427 | U | | 0.462 | | |
| SODIUM | | 1150 | | | 1280 | | | 1250 | | | 1390 | | |
| THALLIUM | | 0.674 | U | | 0.604 | U | | 0.64 | U | | 0.693 | U | |
| VANADIUM | | 1.92 | J | P | 1.69 | J | P | 1.69 | J | P | 1.64 | J | P |
| ZINC | | 5.61 | U | | 5.03 | U | | 33 | | | 5.77 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | | GKHMS-SO-031-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_004 | LAB_ID | 1011259-14 | | | 1011259-15 | | | 1011259-16 | | | 1011259-17 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 85.7 | | | 86.3 | | | 88.0 | | | 87.9 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 222 | J | P | 201 | J | P | 146 | J | P | 210 | J | P |
| ANTIMONY | | 1.14 | U | | 1.03 | U | | 1.07 | U | | 1.09 | U | |
| ARSENIC | | 0.686 | U | | 0.621 | U | | 0.643 | U | | 0.656 | U | |
| BARIUM | | 8.2 | J | P | 9.76 | | | 7.6 | J | P | 7.99 | J | P |
| BERYLLIUM | | 0.229 | U | | 0.207 | U | | 0.214 | U | | 0.219 | U | |
| CADMIUM | | 0.933 | J | DP | 0.939 | J | DP | 0.873 | J | DP | 1.11 | J | D |
| CALCIUM | | 379000 | | | 364000 | | | 372000 | | | 396000 | | |
| CHROMIUM | | 2.72 | J | G | 3.03 | J | G | 2.43 | J | G | 15.9 | J | G |
| COBALT | | 1.14 | U | | 1.03 | U | | 1.07 | U | | 1.09 | U | |
| COPPER | | 1.14 | U | | 1.16 | J | P | 1.47 | J | P | 2.25 | | |
| IRON | | 79 | J | G | 129 | J | G | 71.7 | J | G | 194 | J | G |
| LEAD | | 1.71 | UJ | G | 10.3 | J | G | 3.18 | J | GP | 62.7 | J | G |
| MAGNESIUM | | 799 | J | P | 1090 | | | 1090 | | | 1230 | | |
| MANGANESE | | 2.48 | J | DGP | 2.71 | J | DGP | 1.98 | J | DGP | 3.22 | J | DGP |
| NICKEL | | 1.14 | U | | 1.03 | U | | 1.07 | U | | 1.09 | U | |
| POTASSIUM | | 229 | U | | 207 | U | | 214 | U | | 219 | U | |
| SELENIUM | | 0.922 | J | P | 0.621 | U | | 1.06 | | | 0.656 | U | |
| SILVER | | 0.457 | | | 0.414 | U | | 0.214 | U | | 0.438 | | |
| SODIUM | | 1300 | | | 1280 | | | 1150 | | | 1140 | | |
| THALLIUM | | 0.686 | U | | 0.828 | U | | 0.643 | U | | 0.656 | U | |
| VANADIUM | | 1.36 | J | P | 1.98 | J | P | 2.13 | J | P | 2.69 | J | P |
| ZINC | | 5.72 | U | | 5.56 | U | A | 5.36 | U | | 15.1 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD002-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_004 | LAB_ID | 1011259-18 | | | 1011259-19 | | | 1011259-20 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 79.4 | | | 85.5 | | | 88.4 | | |
| | DUP_OF | | | | | | | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 262 | | | 176 | J | P | 162 | J | P |
| ANTIMONY | | 1.17 | U | | 1.04 | U | | 1.05 | U | |
| ARSENIC | | 0.7 | U | | 0.626 | U | | 0.629 | U | |
| BARIUM | | 9.64 | | | 8.66 | | | 8.64 | | |
| BERYLLIUM | | 0.233 | U | | 0.209 | U | | 0.21 | U | |
| CADMIUM | | 1.17 | J | D | 0.86 | J | DP | 1.06 | J | D |
| CALCIUM | | 375000 | | | 374000 | | | 364000 | | |
| CHROMIUM | | 3.63 | J | G | 2.38 | J | G | 7.31 | J | G |
| COBALT | | 1.17 | U | | 1.04 | U | | 1.05 | U | |
| COPPER | | 2.63 | | | 1.1 | J | P | 2.67 | | |
| IRON | | 738 | J | G | 107 | J | G | 3830 | J | G |
| LEAD | | 44.6 | J | G | 1.57 | UJ | G | 19.1 | J | G |
| MAGNESIUM | | 1060 | J | P | 871 | J | P | 904 | J | P |
| MANGANESE | | 6.73 | J | DG | 1.71 | J | DGP | 19.3 | J | DG |
| NICKEL | | 1.17 | U | | 1.04 | U | | 1.05 | U | |
| POTASSIUM | | 233 | U | | 209 | U | | 210 | U | |
| SELENIUM | | 0.7 | U | | 1.24 | J | P | 0.629 | U | |
| SILVER | | 0.467 | | | 0.209 | U | | 0.21 | U | |
| SODIUM | | 1250 | | | 1420 | | | 1330 | | |
| THALLIUM | | 0.7 | U | | 0.626 | U | | 0.629 | U | |
| VANADIUM | | 1.75 | J | P | 1.45 | J | P | 1.57 | J | P |
| ZINC | | 13.1 | U | A | 5.22 | U | | 13.1 | U | A |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

# ANALYSIS DATA SHEET

1011013-01

GKHMS-SO-001-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 08:00
% Solids: 87.94

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.103 | 0.0130 | 0.0331 | 0.0331 | 1 | H3 | SW7471A | 0L10002 | 12/16/10 11:59 |
| 7429-90-5 | Aluminum | 334 | 53.6 | 107 | 215 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:02 |
| 7440-36-0 | Antimony | | 1.07 | 1.72 | 3.22 | 1 | UN | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-38-2 | Arsenic | | 0.644 | 1.07 | 1.07 | 1 | UN | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-39-3 | Barium | 15.0 | 1.07 | 2.15 | 8.58 | 1 | | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-41-7 | Beryllium | | 0.215 | 0.429 | 1.07 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-43-9 | Cadmium | 0.926 | 0.215 | 0.429 | 1.07 | 1 | IN | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-70-2 | Calcium | 341000 | 1070 | 2150 | 5360 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:02 |
| 7440-47-3 | Chromium | 4.39 | 0.429 | 0.858 | 2.15 | 1 | | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-48-4 | Cobalt | | 1.07 | 2.15 | 2.68 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-50-8 | Copper | 1.53 | 1.07 | 1.72 | 2.15 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7439-89-6 | Iron | 497 | 6.44 | 12.9 | 21.5 | 1 | N | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7439-92-1 | Lead | 9.95 | 1.61 | 3.22 | 3.22 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:02 |
| 7439-95-4 | Magnesium | 992 | 215 | 644 | 1070 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7439-96-5 | Manganese | 4.49 | 0.644 | 1.29 | 3.22 | 1 | N | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-02-0 | Nickel | | 1.07 | 1.29 | 2.15 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-09-7 | Potassium | | 215 | 644 | 1070 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7782-49-2 | Selenium | 0.668 | 0.644 | 1.07 | 2.15 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-22-4 | Silver | | 0.429 | 0.429 | 2.15 | 1 | M U | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-23-5 | Sodium | 1670 | 215 | 644 | 1070 | 1 | | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-28-0 | Thallium | | 0.858 | 0.858 | 1.72 | 1 | M U | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-62-2 | Vanadium | 1.68 | 1.07 | 2.15 | 2.68 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:53 |
| 7440-66-6 | Zinc | 21.1 | 5.36 | 10.7 | 21.5 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:02 |

# ANALYSIS DATA SHEET

1011013-02

6KHM5-SO-002-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 08:20
% Solids: 87.40

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-02
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0121 | 0.0306 | 0.0330 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:01 |
| 7429-90-5 | Aluminum | 250 | 55.0 | 110 | 220 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:07 |
| 7440-36-0 | Antimony | | 1.10 | 1.76 | 3.30 | 1 | UN | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-38-2 | Arsenic | | 0.660 | 1.10 | 1.10 | 1 | UN | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-39-3 | Barium | 9.46 | 1.10 | 2.20 | 8.80 | 1 | | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-41-7 | Beryllium | | 0.220 | 0.440 | 1.10 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-43-9 | Cadmium | 0.859 | 0.220 | 0.440 | 1.10 | 1 | IN | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-70-2 | Calcium | 374000 | 1100 | 2200 | 5500 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:07 |
| 7440-47-3 | Chromium | 3.49 | 0.440 | 0.880 | 2.20 | 1 | | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-48-4 | Cobalt | | 1.10 | 2.20 | 2.75 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-50-8 | Copper | | 1.10 | 1.76 | 2.20 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7439-89-6 | Iron | 121 | 6.60 | 13.2 | 22.0 | 1 | N | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7439-92-1 | Lead | 6.07 | 1.65 | 3.30 | 3.30 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:07 |
| 7439-95-4 | Magnesium | 1140 | 220 | 660 | 1100 | 1 | | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7439-96-5 | Manganese | 3.33 | 0.660 | 1.32 | 3.30 | 1 | N | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-02-0 | Nickel | | 1.10 | 1.32 | 2.20 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-09-7 | Potassium | | 220 | 660 | 1100 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7782-49-2 | Selenium | 0.823 | 0.660 | 1.10 | 2.20 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-22-4 | Silver | | 0.440 | 0.440 | 2.20 | 1 | M U | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-23-5 | Sodium | 1390 | 220 | 660 | 1100 | 1 | | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-28-0 | Thallium | | 0.660 | 0.880 | 1.76 | 1 | U | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-62-2 | Vanadium | 2.08 | 1.10 | 2.20 | 2.75 | 1 | I | SW6010C | 0L15009 | 12/16/10 11:58 |
| 7440-66-6 | Zinc | | 5.50 | 11.0 | 22.0 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:07 |

# ANALYSIS DATA SHEET

1011013-03

GKNMS-50-003-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 08:40
% Solids: 85.45

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-03
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0138 | 0.0351 | 0.0351 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:03 |
| 7429-90-5 | Aluminum | 178 | 58.5 | 117 | 234 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:12 |
| 7440-36-0 | Antimony | | 1.17 | 1.87 | 3.51 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-38-2 | Arsenic | | 0.702 | 1.17 | 1.17 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-39-3 | Barium | 7.54 | 1.17 | 2.34 | 9.36 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-41-7 | Beryllium | | 0.234 | 0.468 | 1.17 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-43-9 | Cadmium | 0.922 | 0.234 | 0.468 | 1.17 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-70-2 | Calcium | 369000 | 1170 | 2340 | 5850 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:12 |
| 7440-47-3 | Chromium | 2.92 | 0.468 | 0.936 | 2.34 | 1 | | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-48-4 | Cobalt | | 1.17 | 2.34 | 2.93 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-50-8 | Copper | | 1.17 | 1.87 | 2.34 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7439-89-6 | Iron | 114 | 7.02 | 14.0 | 23.4 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7439-92-1 | Lead | | 1.76 | 3.51 | 3.51 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:12 |
| 7439-95-4 | Magnesium | 888 | 234 | 702 | 1170 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7439-96-5 | Manganese | 2.49 | 0.702 | 1.40 | 3.51 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-02-0 | Nickel | | 1.17 | 1.40 | 2.34 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-09-7 | Potassium | | 234 | 702 | 1170 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7782-49-2 | Selenium | | 0.702 | 1.17 | 2.34 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-22-4 | Silver | | 0.234 | 0.468 | 2.34 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-23-5 | Sodium | 1010 | 234 | 702 | 1170 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-28-0 | Thallium | | 0.702 | 0.936 | 1.87 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-62-2 | Vanadium | 2.67 | 1.17 | 2.34 | 2.93 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:03 |
| 7440-66-6 | Zinc | | 5.85 | 11.7 | 23.4 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:12 |

# ANALYSIS DATA SHEET

1011013-04

GKHMS-SO-005-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 09:00
% Solids: 86.20

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-04
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0156 | 0.0396 | 0.0396 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:05 |
| 7429-90-5 | Aluminum | 122 | 50.0 | 100 | 200 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:17 |
| 7440-36-0 | Antimony | | 1.00 | 1.60 | 3.00 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-38-2 | Arsenic | | 0.600 | 1.00 | 1.00 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-39-3 | Barium | 9.39 | 1.00 | 2.00 | 8.00 | 1 | | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-41-7 | Beryllium | | 0.200 | 0.400 | 1.00 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-43-9 | Cadmium | 0.810 | 0.200 | 0.400 | 1.00 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-70-2 | Calcium | 355000 | 1000 | 2000 | 5000 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:17 |
| 7440-47-3 | Chromium | 3.75 | 0.400 | 0.800 | 2.00 | 1 | | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-48-4 | Cobalt | | 1.00 | 2.00 | 2.50 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-50-8 | Copper | 1.01 | 1.00 | 1.60 | 2.00 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7439-89-6 | Iron | 160 | 6.00 | 12.0 | 20.0 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7439-92-1 | Lead | 1.80 | 1.50 | 3.00 | 3.00 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:17 |
| 7439-95-4 | Magnesium | 1010 | 200 | 600 | 1000 | 1 | | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7439-96-5 | Manganese | 2.43 | 0.600 | 1.20 | 3.00 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-02-0 | Nickel | | 1.00 | 1.20 | 2.00 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-09-7 | Potassium | | 200 | 600 | 1000 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7782-49-2 | Selenium | 0.646 | 0.600 | 1.00 | 2.00 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-22-4 | Silver | | 0.400 | 0.400 | 2.00 | 1 | M U | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-23-5 | Sodium | 1640 | 200 | 600 | 1000 | 1 | | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-28-0 | Thallium | | 0.600 | 0.800 | 1.60 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-62-2 | Vanadium | 1.90 | 1.00 | 2.00 | 2.50 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:08 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:17 |

# ANALYSIS DATA SHEET

1011013-06

GKHMS-SO-011-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 09:40
% Solids: 81.36

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-06
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0185 | 0.0150 | 0.0380 | 0.0380 | 1 | H3 I | SW7471A | 0L10002 | 12/16/10 12:07 |
| 7429-90-5 | Aluminum | 521 | 52.1 | 104 | 208 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:22 |
| 7440-36-0 | Antimony | | 1.04 | 1.67 | 3.12 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-38-2 | Arsenic | | 0.625 | 1.04 | 1.04 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-39-3 | Barium | 10.2 | 1.04 | 2.08 | 8.33 | 1 | | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-41-7 | Beryllium | | 0.208 | 0.417 | 1.04 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-43-9 | Cadmium | 1.22 | 0.208 | 0.417 | 1.04 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-70-2 | Calcium | 360000 | 1040 | 2080 | 5210 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:22 |
| 7440-47-3 | Chromium | 5.46 | 0.417 | 0.833 | 2.08 | 1 | | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-48-4 | Cobalt | | 1.04 | 2.08 | 2.60 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-50-8 | Copper | 1.75 | 1.04 | 1.67 | 2.08 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7439-89-6 | Iron | 318 | 6.25 | 12.5 | 20.8 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7439-92-1 | Lead | 85.0 | 1.56 | 3.12 | 3.12 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:22 |
| 7439-95-4 | Magnesium | 1930 | 208 | 625 | 1040 | 1 | | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7439-96-5 | Manganese | 4.33 | 0.625 | 1.25 | 3.12 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-02-0 | Nickel | | 1.04 | 1.25 | 2.08 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-09-7 | Potassium | | 208 | 625 | 1040 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7782-49-2 | Selenium | | 0.625 | 1.04 | 2.08 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-22-4 | Silver | | 0.417 | 0.417 | 2.08 | 1 | M U | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-23-5 | Sodium | 3370 | 208 | 625 | 1040 | 1 | | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-28-0 | Thallium | | 0.625 | 0.833 | 1.67 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-62-2 | Vanadium | 2.46 | 1.04 | 2.08 | 2.60 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:13 |
| 7440-66-6 | Zinc | 12.4 | 5.21 | 10.4 | 20.8 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:22 |

# ANALYSIS DATA SHEET

1011013-07

GKHMS-50-012-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 12:00
% Solids: 82.94

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-07
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0162 | 0.0412 | 0.0412 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:09 |
| 7429-90-5 | Aluminum | 528 | 56.9 | 114 | 227 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:27 |
| 7440-36-0 | Antimony | | 1.14 | 1.82 | 3.41 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-38-2 | Arsenic | | 0.682 | 1.14 | 1.14 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-39-3 | Barium | 11.2 | 1.14 | 2.27 | 9.10 | 1 | | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-41-7 | Beryllium | | 0.227 | 0.455 | 1.14 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-43-9 | Cadmium | 0.866 | 0.227 | 0.455 | 1.14 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-70-2 | Calcium | 379000 | 1140 | 2270 | 5690 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:27 |
| 7440-47-3 | Chromium | 3.47 | 0.455 | 0.910 | 2.27 | 1 | | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-48-4 | Cobalt | | 1.14 | 2.27 | 2.84 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-50-8 | Copper | 1.63 | 1.14 | 1.82 | 2.27 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7439-89-6 | Iron | 242 | 6.82 | 13.6 | 22.7 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7439-92-1 | Lead | 10.4 | 1.71 | 3.41 | 3.41 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:27 |
| 7439-95-4 | Magnesium | 1380 | 227 | 682 | 1140 | 1 | | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7439-96-5 | Manganese | 10.3 | 0.682 | 1.36 | 3.41 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-02-0 | Nickel | | 1.14 | 1.36 | 2.27 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-09-7 | Potassium | | 227 | 682 | 1140 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7782-49-2 | Selenium | 0.725 | 0.682 | 1.14 | 2.27 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-22-4 | Silver | | 0.455 | 0.455 | 2.27 | 1 | M U | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-23-5 | Sodium | 1920 | 227 | 682 | 1140 | 1 | | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-28-0 | Thallium | | 0.910 | 0.910 | 1.82 | 1 | M U | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-62-2 | Vanadium | 1.96 | 1.14 | 2.27 | 2.84 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:17 |
| 7440-66-6 | Zinc | | 5.69 | 11.4 | 22.7 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:27 |

# ANALYSIS DATA SHEET

1011013-08

GKHMS-SO-014-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 14:00
% Solids: 86.14

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-08
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0137 | 0.0348 | 0.0348 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:25 |
| 7429-90-5 | Aluminum | 179 | 51.8 | 104 | 207 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:32 |
| 7440-36-0 | Antimony | | 1.04 | 1.66 | 3.11 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-38-2 | Arsenic | | 0.622 | 1.04 | 1.04 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-39-3 | Barium | 9.12 | 1.04 | 2.07 | 8.29 | 1 | | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-41-7 | Beryllium | | 0.207 | 0.415 | 1.04 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-43-9 | Cadmium | 0.861 | 0.207 | 0.415 | 1.04 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-70-2 | Calcium | 376000 | 1040 | 2070 | 5180 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:32 |
| 7440-47-3 | Chromium | 2.85 | 0.415 | 0.829 | 2.07 | 1 | | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-48-4 | Cobalt | | 1.04 | 2.07 | 2.59 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-50-8 | Copper | 1.61 | 1.04 | 1.66 | 2.07 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7439-89-6 | Iron | 83.3 | 6.22 | 12.4 | 20.7 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7439-92-1 | Lead | | 1.55 | 3.11 | 3.11 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:32 |
| 7439-95-4 | Magnesium | 998 | 207 | 622 | 1040 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7439-96-5 | Manganese | 2.11 | 0.622 | 1.24 | 3.11 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-02-0 | Nickel | | 1.04 | 1.24 | 2.07 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-09-7 | Potassium | | 207 | 622 | 1040 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7782-49-2 | Selenium | 1.14 | 0.622 | 1.04 | 2.07 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-22-4 | Silver | | 0.207 | 0.415 | 2.07 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-23-5 | Sodium | 1310 | 207 | 622 | 1040 | 1 | | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-28-0 | Thallium | | 0.622 | 0.829 | 1.66 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-62-2 | Vanadium | 1.64 | 1.04 | 2.07 | 2.59 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:22 |
| 7440-66-6 | Zinc | | 5.18 | 10.4 | 20.7 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:32 |

# ANALYSIS DATA SHEET

1011013-09

GKHMS-SO-017-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 10:00
% Solids: 87.72

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-09
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0139 | 0.0353 | 0.0353 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:27 |
| 7429-90-5 | Aluminum | 188 | 55.9 | 112 | 224 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:37 |
| 7440-36-0 | Antimony | | 1.12 | 1.79 | 3.35 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-38-2 | Arsenic | | 0.671 | 1.12 | 1.12 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-39-3 | Barium | 8.56 | 1.12 | 2.24 | 8.94 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-41-7 | Beryllium | | 0.224 | 0.447 | 1.12 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-43-9 | Cadmium | 0.854 | 0.224 | 0.447 | 1.12 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-70-2 | Calcium | 369000 | 1120 | 2240 | 5590 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:37 |
| 7440-47-3 | Chromium | 2.44 | 0.447 | 0.894 | 2.24 | 1 | | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-48-4 | Cobalt | | 1.12 | 2.24 | 2.79 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-50-8 | Copper | | 1.12 | 1.79 | 2.24 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7439-89-6 | Iron | 83.1 | 6.71 | 13.4 | 22.4 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7439-92-1 | Lead | | 1.68 | 3.35 | 3.35 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:37 |
| 7439-95-4 | Magnesium | 800 | 224 | 671 | 1120 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7439-96-5 | Manganese | 2.41 | 0.671 | 1.34 | 3.35 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-02-0 | Nickel | | 1.12 | 1.34 | 2.24 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-09-7 | Potassium | | 224 | 671 | 1120 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7782-49-2 | Selenium | 1.07 | 0.671 | 1.12 | 2.24 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-22-4 | Silver | | 0.447 | 0.447 | 2.24 | 1 | M U | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-23-5 | Sodium | 1400 | 224 | 671 | 1120 | 1 | | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-28-0 | Thallium | | 0.671 | 0.894 | 1.79 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-62-2 | Vanadium | 1.59 | 1.12 | 2.24 | 2.79 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:27 |
| 7440-66-6 | Zinc | | 5.59 | 11.2 | 22.4 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:37 |

# ANALYSIS DATA SHEET

1011013-10

GKHMS-50-019-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 10:20
% Solids: 87.33

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-10
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0118 | 0.0298 | 0.0330 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:29 |
| 7429-90-5 | Aluminum | 243 | 56.1 | 112 | 225 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:41 |
| 7440-36-0 | Antimony | | 1.12 | 1.80 | 3.37 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-38-2 | Arsenic | | 0.674 | 1.12 | 1.12 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-39-3 | Barium | 7.50 | 1.12 | 2.25 | 8.98 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-41-7 | Beryllium | | 0.225 | 0.449 | 1.12 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-43-9 | Cadmium | 0.879 | 0.225 | 0.449 | 1.12 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-70-2 | Calcium | 370000 | 1120 | 2250 | 5610 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:41 |
| 7440-47-3 | Chromium | 2.50 | 0.449 | 0.898 | 2.25 | 1 | | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-48-4 | Cobalt | | 1.12 | 2.25 | 2.81 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-50-8 | Copper | 1.30 | 1.12 | 1.80 | 2.25 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7439-89-6 | Iron | 157 | 6.74 | 13.5 | 22.5 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7439-92-1 | Lead | | 1.68 | 3.37 | 3.37 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:41 |
| 7439-95-4 | Magnesium | 887 | 225 | 674 | 1120 | 1 | J | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7439-96-5 | Manganese | 2.61 | 0.674 | 1.35 | 3.37 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-02-0 | Nickel | | 1.12 | 1.35 | 2.25 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-09-7 | Potassium | | 225 | 674 | 1120 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7782-49-2 | Selenium | | 0.674 | 1.12 | 2.25 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-22-4 | Silver | | 0.225 | 0.449 | 2.25 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-23-5 | Sodium | 1150 | 225 | 674 | 1120 | 1 | | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-28-0 | Thallium | | 0.674 | 0.898 | 1.80 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-62-2 | Vanadium | 1.92 | 1.12 | 2.25 | 2.81 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:32 |
| 7440-66-6 | Zinc | | 5.61 | 11.2 | 22.5 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:41 |

# ANALYSIS DATA SHEET

1011013-11

GKHMS-SO-021-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 10:40
% Solids: 87.19

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-11
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0121 | 0.0307 | 0.0330 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:31 |
| 7429-90-5 | Aluminum | 195 | 50.3 | 101 | 201 | 5 | D I | SW6010C | 0L15009 | 12/17/10 16:59 |
| 7440-36-0 | Antimony | | 1.01 | 1.61 | 3.02 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-38-2 | Arsenic | | 0.604 | 1.01 | 1.01 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-39-3 | Barium | 8.13 | 1.01 | 2.01 | 8.05 | 1 | | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-41-7 | Beryllium | | 0.201 | 0.402 | 1.01 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-43-9 | Cadmium | 0.838 | 0.201 | 0.402 | 1.01 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-70-2 | Calcium | 384000 | 1010 | 2010 | 5030 | 5 | D | SW6010C | 0L15009 | 12/17/10 16:59 |
| 7440-47-3 | Chromium | 2.43 | 0.402 | 0.805 | 2.01 | 1 | | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-48-4 | Cobalt | | 1.01 | 2.01 | 2.52 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-50-8 | Copper | | 1.01 | 1.61 | 2.01 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7439-89-6 | Iron | 118 | 6.04 | 12.1 | 20.1 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7439-92-1 | Lead | | 1.51 | 3.02 | 3.02 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:59 |
| 7439-95-4 | Magnesium | 810 | 201 | 604 | 1010 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7439-96-5 | Manganese | 2.14 | 0.604 | 1.21 | 3.02 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-02-0 | Nickel | | 1.01 | 1.21 | 2.01 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-09-7 | Potassium | | 201 | 604 | 1010 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7782-49-2 | Selenium | | 0.604 | 1.01 | 2.01 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-22-4 | Silver | | 0.402 | 0.402 | 2.01 | 1 | M Y U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-23-5 | Sodium | 1280 | 201 | 604 | 1010 | 1 | | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-28-0 | Thallium | | 0.604 | 0.805 | 1.61 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-62-2 | Vanadium | 1.69 | 1.01 | 2.01 | 2.52 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:52 |
| 7440-66-6 | Zinc | | 5.03 | 10.1 | 20.1 | 5 | U | SW6010C | 0L15009 | 12/17/10 16:59 |

# ANALYSIS DATA SHEET

1011013-12

GKHMS-50-022-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 11:00
% Solids: 86.77

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-12
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0136 | 0.0346 | 0.0346 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:32 |
| 7429-90-5 | Aluminum | 162 | 53.4 | 107 | 213 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:04 |
| 7440-36-0 | Antimony | | 1.07 | 1.71 | 3.20 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-38-2 | Arsenic | | 0.640 | 1.07 | 1.07 | 1 | UN | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-39-3 | Barium | 8.78 | 1.07 | 2.13 | 8.54 | 1 | | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-41-7 | Beryllium | | 0.213 | 0.427 | 1.07 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-43-9 | Cadmium | 0.971 | 0.213 | 0.427 | 1.07 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-70-2 | Calcium | 365000 | 1070 | 2130 | 5340 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:04 |
| 7440-47-3 | Chromium | 2.44 | 0.427 | 0.854 | 2.13 | 1 | | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-48-4 | Cobalt | | 1.07 | 2.13 | 2.67 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-50-8 | Copper | 1.13 | 1.07 | 1.71 | 2.13 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7439-89-6 | Iron | 72.6 | 6.40 | 12.8 | 21.3 | 1 | N | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7439-92-1 | Lead | 2.25 | 1.60 | 3.20 | 3.20 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:04 |
| 7439-95-4 | Magnesium | 729 | 213 | 640 | 1070 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7439-96-5 | Manganese | 2.15 | 0.640 | 1.28 | 3.20 | 1 | IN | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-02-0 | Nickel | | 1.07 | 1.28 | 2.13 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-09-7 | Potassium | | 213 | 640 | 1070 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7782-49-2 | Selenium | 0.980 | 0.640 | 1.07 | 2.13 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-22-4 | Silver | | 0.427 | 0.427 | 2.13 | 1 | M Y U | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-23-5 | Sodium | 1250 | 213 | 640 | 1070 | 1 | | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-28-0 | Thallium | | 0.640 | 0.854 | 1.71 | 1 | U | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-62-2 | Vanadium | 1.69 | 1.07 | 2.13 | 2.67 | 1 | I | SW6010C | 0L15009 | 12/16/10 12:56 |
| 7440-66-6 | Zinc | 33.0 | 5.34 | 10.7 | 21.3 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:04 |

# ANALYSIS DATA SHEET

1011013-13

6KHMS-SO-003-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 13:40
% Solids: 86.62

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-13
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0132 | 0.0336 | 0.0336 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:34 |
| 7429-90-5 | Aluminum | 332 | 57.7 | 115 | 231 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:09 |
| 7440-36-0 | Antimony | | 1.15 | 1.85 | 3.46 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-38-2 | Arsenic | | 0.693 | 1.15 | 1.15 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-39-3 | Barium | 9.81 | 1.15 | 2.31 | 9.24 | 1 | | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-41-7 | Beryllium | | 0.231 | 0.462 | 1.15 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-43-9 | Cadmium | 0.954 | 0.231 | 0.462 | 1.15 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-70-2 | Calcium | 384000 | 1150 | 2310 | 5770 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:09 |
| 7440-47-3 | Chromium | 2.75 | 0.462 | 0.924 | 2.31 | 1 | | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-48-4 | Cobalt | | 1.15 | 2.31 | 2.89 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-50-8 | Copper | | 1.15 | 1.85 | 2.31 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7439-89-6 | Iron | 139 | 6.93 | 13.9 | 23.1 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7439-92-1 | Lead | | 1.73 | 3.46 | 3.46 | 5 | U | SW6010C | 0L15009 | 12/17/10 17:09 |
| 7439-95-4 | Magnesium | 1130 | 231 | 693 | 1150 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7439-96-5 | Manganese | 2.95 | 0.693 | 1.39 | 3.46 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-02-0 | Nickel | | 1.15 | 1.39 | 2.31 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-09-7 | Potassium | | 231 | 693 | 1150 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7782-49-2 | Selenium | 1.21 | 0.693 | 1.15 | 2.31 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-22-4 | Silver | | 0.462 | 0.462 | 2.31 | 1 | M Y U | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-23-5 | Sodium | 1390 | 231 | 693 | 1150 | 1 | | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-28-0 | Thallium | | 0.693 | 0.924 | 1.85 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-62-2 | Vanadium | 1.64 | 1.15 | 2.31 | 2.89 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:01 |
| 7440-66-6 | Zinc | | 5.77 | 11.5 | 23.1 | 5 | U | SW6010C | 0L15009 | 12/17/10 17:09 |

# ANALYSIS DATA SHEET

1011013-14

GK HMS-SD-025-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 11:20
% Solids: 85.75

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-14
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0142 | 0.0361 | 0.0361 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:36 |
| 7429-90-5 | Aluminum | 222 | 57.2 | 114 | 229 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:14 |
| 7440-36-0 | Antimony | | 1.14 | 1.83 | 3.43 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-38-2 | Arsenic | | 0.686 | 1.14 | 1.14 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-39-3 | Barium | 8.20 | 1.14 | 2.29 | 9.15 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-41-7 | Beryllium | | 0.229 | 0.457 | 1.14 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-43-9 | Cadmium | 0.933 | 0.229 | 0.457 | 1.14 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-70-2 | Calcium | 379000 | 1140 | 2290 | 5720 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:14 |
| 7440-47-3 | Chromium | 2.72 | 0.457 | 0.915 | 2.29 | 1 | | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-48-4 | Cobalt | | 1.14 | 2.29 | 2.86 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-50-8 | Copper | | 1.14 | 1.83 | 2.29 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7439-89-6 | Iron | 79.0 | 6.86 | 13.7 | 22.9 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7439-92-1 | Lead | | 1.71 | 3.43 | 3.43 | 5 | U | SW6010C | 0L15009 | 12/17/10 17:14 |
| 7439-95-4 | Magnesium | 799 | 229 | 686 | 1140 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7439-96-5 | Manganese | 2.48 | 0.686 | 1.37 | 3.43 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-02-0 | Nickel | | 1.14 | 1.37 | 2.29 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-09-7 | Potassium | | 229 | 686 | 1140 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7782-49-2 | Selenium | 0.922 | 0.686 | 1.14 | 2.29 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-22-4 | Silver | | 0.457 | 0.457 | 2.29 | 1 | M Y U | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-23-5 | Sodium | 1300 | 229 | 686 | 1140 | 1 | | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-28-0 | Thallium | | 0.686 | 0.915 | 1.83 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-62-2 | Vanadium | 1.36 | 1.14 | 2.29 | 2.86 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:06 |
| 7440-66-6 | Zinc | | 5.72 | 11.4 | 22.9 | 5 | U | SW6010C | 0L15009 | 12/17/10 17:14 |

# ANALYSIS DATA SHEET

1011013-15

6KHMS-SO-028-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 13:20
% Solids: 86.31

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-15
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0137 | 0.0348 | 0.0348 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:38 |
| 7429-90-5 | Aluminum | 201 | 51.7 | 103 | 207 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:19 |
| 7440-36-0 | Antimony | | 1.03 | 1.66 | 3.10 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-38-2 | Arsenic | | 0.621 | 1.03 | 1.03 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-39-3 | Barium | 9.76 | 1.03 | 2.07 | 8.28 | 1 | | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-41-7 | Beryllium | | 0.207 | 0.414 | 1.03 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-43-9 | Cadmium | 0.939 | 0.207 | 0.414 | 1.03 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-70-2 | Calcium | 364000 | 1030 | 2070 | 5170 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:19 |
| 7440-47-3 | Chromium | 3.03 | 0.414 | 0.828 | 2.07 | 1 | | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-48-4 | Cobalt | | 1.03 | 2.07 | 2.59 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-50-8 | Copper | 1.16 | 1.03 | 1.66 | 2.07 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7439-89-6 | Iron | 129 | 6.21 | 12.4 | 20.7 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7439-92-1 | Lead | 10.3 | 1.55 | 3.10 | 3.10 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:19 |
| 7439-95-4 | Magnesium | 1090 | 207 | 621 | 1030 | 1 | | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7439-96-5 | Manganese | 2.71 | 0.621 | 1.24 | 3.10 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-02-0 | Nickel | | 1.03 | 1.24 | 2.07 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-09-7 | Potassium | | 207 | 621 | 1030 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7782-49-2 | Selenium | | 0.621 | 1.03 | 2.07 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-22-4 | Silver | | 0.414 | 0.414 | 2.07 | 1 | Y U | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-23-5 | Sodium | 1280 | 207 | 621 | 1030 | 1 | | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-28-0 | Thallium | | 0.828 | 0.828 | 1.66 | 1 | M U | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-62-2 | Vanadium | 1.98 | 1.03 | 2.07 | 2.59 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:11 |
| 7440-66-6 | Zinc | 5.56 | 5.17 | 10.3 | 20.7 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:19 |

# ANALYSIS DATA SHEET

1011013-16

GK HMS-SO-030-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 12:40
% Solids: 88.05

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-16
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0119 | 0.0117 | 0.0296 | 0.0330 | 1 | H3 I | SW7471A | 0L10002 | 12/16/10 12:40 |
| 7429-90-5 | Aluminum | 146 | 53.6 | 107 | 214 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:24 |
| 7440-36-0 | Antimony | | 1.07 | 1.71 | 3.21 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-38-2 | Arsenic | | 0.643 | 1.07 | 1.07 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-39-3 | Barium | 7.60 | 1.07 | 2.14 | 8.57 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-41-7 | Beryllium | | 0.214 | 0.429 | 1.07 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-43-9 | Cadmium | 0.873 | 0.214 | 0.429 | 1.07 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-70-2 | Calcium | 372000 | 1070 | 2140 | 5360 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:24 |
| 7440-47-3 | Chromium | 2.43 | 0.429 | 0.857 | 2.14 | 1 | | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-48-4 | Cobalt | | 1.07 | 2.14 | 2.68 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-50-8 | Copper | 1.47 | 1.07 | 1.71 | 2.14 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7439-89-6 | Iron | 71.7 | 6.43 | 12.9 | 21.4 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7439-92-1 | Lead | 3.18 | 1.61 | 3.21 | 3.21 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:24 |
| 7439-95-4 | Magnesium | 1090 | 214 | 643 | 1070 | 1 | | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7439-96-5 | Manganese | 1.98 | 0.643 | 1.29 | 3.21 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-02-0 | Nickel | | 1.07 | 1.29 | 2.14 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-09-7 | Potassium | | 214 | 643 | 1070 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7782-49-2 | Selenium | 1.06 | 0.643 | 1.07 | 2.14 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-22-4 | Silver | | 0.214 | 0.429 | 2.14 | 1 | Y U | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-23-5 | Sodium | 1150 | 214 | 643 | 1070 | 1 | | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-28-0 | Thallium | | 0.643 | 0.857 | 1.71 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-62-2 | Vanadium | 2.13 | 1.07 | 2.14 | 2.68 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:16 |
| 7440-66-6 | Zinc | | 5.36 | 10.7 | 21.4 | 5 | U | SW6010C | 0L15009 | 12/17/10 17:24 |

# ANALYSIS DATA SHEET

1011013-17

GKHMS-SO-031-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 11:40
% Solids: 87.88

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-17
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0123 | 0.0313 | 0.0330 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:42 |
| 7429-90-5 | Aluminum | 210 | 54.7 | 109 | 219 | 5 | D1 | SW6010C | 0L15009 | 12/17/10 17:29 |
| 7440-36-0 | Antimony | | 1.09 | 1.75 | 3.28 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-38-2 | Arsenic | | 0.656 | 1.09 | 1.09 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-39-3 | Barium | 7.99 | 1.09 | 2.19 | 8.75 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-41-7 | Beryllium | | 0.219 | 0.438 | 1.09 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-43-9 | Cadmium | 1.11 | 0.219 | 0.438 | 1.09 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-70-2 | Calcium | 396000 | 1090 | 2190 | 5470 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:29 |
| 7440-47-3 | Chromium | 15.9 | 0.438 | 0.875 | 2.19 | 1 | | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-48-4 | Cobalt | | 1.09 | 2.19 | 2.74 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-50-8 | Copper | 2.25 | 1.09 | 1.75 | 2.19 | 1 | | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7439-89-6 | Iron | 194 | 6.56 | 13.1 | 21.9 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7439-92-1 | Lead | 62.7 | 1.64 | 3.28 | 3.28 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:29 |
| 7439-95-4 | Magnesium | 1230 | 219 | 656 | 1090 | 1 | | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7439-96-5 | Manganese | 3.22 | 0.656 | 1.31 | 3.28 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-02-0 | Nickel | | 1.09 | 1.31 | 2.19 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-09-7 | Potassium | | 219 | 656 | 1090 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7782-49-2 | Selenium | | 0.656 | 1.09 | 2.19 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-22-4 | Silver | | 0.438 | 0.438 | 2.19 | 1 | M Y U | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-23-5 | Sodium | 1140 | 219 | 656 | 1090 | 1 | | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-28-0 | Thallium | | 0.656 | 0.875 | 1.75 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-62-2 | Vanadium | 2.69 | 1.09 | 2.19 | 2.74 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:21 |
| 7440-66-6 | Zinc | 15.1 | 5.47 | 10.9 | 21.9 | 5 | D1 | SW6010C | 0L15009 | 12/17/10 17:29 |

# ANALYSIS DATA SHEET

1011013-18

GKHMS-SO-032-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 12:20
% Solids: 79.36

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-18
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0164 | 0.0416 | 0.0416 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:47 |
| 7429-90-5 | Aluminum | 262 | 58.3 | 117 | 233 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:34 |
| 7440-36-0 | Antimony | | 1.17 | 1.87 | 3.50 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-38-2 | Arsenic | | 0.700 | 1.17 | 1.17 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-39-3 | Barium | 9.64 | 1.17 | 2.33 | 9.33 | 1 | | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-41-7 | Beryllium | | 0.233 | 0.467 | 1.17 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-43-9 | Cadmium | 1.17 | 0.233 | 0.467 | 1.17 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-70-2 | Calcium | 375000 | 1170 | 2330 | 5830 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:34 |
| 7440-47-3 | Chromium | 3.63 | 0.467 | 0.933 | 2.33 | 1 | | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-48-4 | Cobalt | | 1.17 | 2.33 | 2.92 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-50-8 | Copper | 2.63 | 1.17 | 1.87 | 2.33 | 1 | | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7439-89-6 | Iron | 738 | 7.00 | 14.0 | 23.3 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7439-92-1 | Lead | 44.6 | 1.75 | 3.50 | 3.50 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:34 |
| 7439-95-4 | Magnesium | 1060 | 233 | 700 | 1170 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7439-96-5 | Manganese | 6.73 | 0.700 | 1.40 | 3.50 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-02-0 | Nickel | | 1.17 | 1.40 | 2.33 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-09-7 | Potassium | | 233 | 700 | 1170 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7782-49-2 | Selenium | | 0.700 | 1.17 | 2.33 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-22-4 | Silver | | 0.467 | 0.467 | 2.33 | 1 | M Y U | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-23-5 | Sodium | 1250 | 233 | 700 | 1170 | 1 | | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-28-0 | Thallium | | 0.700 | 0.933 | 1.87 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-62-2 | Vanadium | 1.75 | 1.17 | 2.33 | 2.92 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:26 |
| 7440-66-6 | Zinc | 13.1 | 5.83 | 11.7 | 23.3 | 5 | D1 | SW6010C | 0L15009 | 12/17/10 17:34 |

# ANALYSIS DATA SHEET

1011013-19

GKHMS-SO-034.1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 13:00
% Solids: 85.54

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-19
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0147 | 0.0373 | 0.0373 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:48 |
| 7429-90-5 | Aluminum | 176 | 52.2 | 104 | 209 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:39 |
| 7440-36-0 | Antimony | | 1.04 | 1.67 | 3.13 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-38-2 | Arsenic | | 0.626 | 1.04 | 1.04 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-39-3 | Barium | 8.66 | 1.04 | 2.09 | 8.35 | 1 | | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-41-7 | Beryllium | | 0.209 | 0.418 | 1.04 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-43-9 | Cadmium | 0.860 | 0.209 | 0.418 | 1.04 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-70-2 | Calcium | 374000 | 1040 | 2090 | 5220 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:39 |
| 7440-47-3 | Chromium | 2.38 | 0.418 | 0.835 | 2.09 | 1 | | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-48-4 | Cobalt | | 1.04 | 2.09 | 2.61 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-50-8 | Copper | 1.10 | 1.04 | 1.67 | 2.09 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7439-89-6 | Iron | 107 | 6.26 | 12.5 | 20.9 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7439-92-1 | Lead | | 1.57 | 3.13 | 3.13 | 5 | U | SW6010C | 0L15009 | 12/17/10 17:39 |
| 7439-95-4 | Magnesium | 871 | 209 | 626 | 1040 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7439-96-5 | Manganese | 1.71 | 0.626 | 1.25 | 3.13 | 1 | IN | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-02-0 | Nickel | | 1.04 | 1.25 | 2.09 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-09-7 | Potassium | | 209 | 626 | 1040 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7782-49-2 | Selenium | 1.24 | 0.626 | 1.04 | 2.09 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-22-4 | Silver | | 0.209 | 0.418 | 2.09 | 1 | Y U | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-23-5 | Sodium | 1420 | 209 | 626 | 1040 | 1 | | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-28-0 | Thallium | | 0.626 | 0.835 | 1.67 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-62-2 | Vanadium | 1.45 | 1.04 | 2.09 | 2.61 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:31 |
| 7440-66-6 | Zinc | | 5.22 | 10.4 | 20.9 | 5 | U | SW6010C | 0L15009 | 12/17/10 17:39 |

# ANALYSIS DATA SHEET

1011013-20

GK HMS-SO-FD002010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 11/02/10 00:00
% Solids: 88.37

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011259-20
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (mg/Kg dry) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0126 | 0.0320 | 0.0330 | 1 | H3 U | SW7471A | 0L10002 | 12/16/10 12:50 |
| 7429-90-5 | Aluminum | 162 | 52.4 | 105 | 210 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:44 |
| 7440-36-0 | Antimony | | 1.05 | 1.68 | 3.14 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-38-2 | Arsenic | | 0.629 | 1.05 | 1.05 | 1 | UN | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-39-3 | Barium | 8.64 | 1.05 | 2.10 | 8.38 | 1 | | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-41-7 | Beryllium | | 0.210 | 0.419 | 1.05 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-43-9 | Cadmium | 1.06 | 0.210 | 0.419 | 1.05 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-70-2 | Calcium | 364000 | 1050 | 2100 | 5240 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:44 |
| 7440-47-3 | Chromium | 7.31 | 0.419 | 0.838 | 2.10 | 1 | | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-48-4 | Cobalt | | 1.05 | 2.10 | 2.62 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-50-8 | Copper | 2.67 | 1.05 | 1.68 | 2.10 | 1 | | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7439-89-6 | Iron | 3830 | 6.29 | 12.6 | 21.0 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7439-92-1 | Lead | 19.1 | 1.57 | 3.14 | 3.14 | 5 | D | SW6010C | 0L15009 | 12/17/10 17:44 |
| 7439-95-4 | Magnesium | 904 | 210 | 629 | 1050 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7439-96-5 | Manganese | 19.3 | 0.629 | 1.26 | 3.14 | 1 | N | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-02-0 | Nickel | | 1.05 | 1.26 | 2.10 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-09-7 | Potassium | | 210 | 629 | 1050 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7782-49-2 | Selenium | | 0.629 | 1.05 | 2.10 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-22-4 | Silver | | 0.210 | 0.419 | 2.10 | 1 | Y U | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-23-5 | Sodium | 1330 | 210 | 629 | 1050 | 1 | | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-28-0 | Thallium | | 0.629 | 0.838 | 1.68 | 1 | U | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-62-2 | Vanadium | 1.57 | 1.05 | 2.10 | 2.62 | 1 | I | SW6010C | 0L15009 | 12/16/10 13:35 |
| 7440-66-6 | Zinc | 13.1 | 5.24 | 10.5 | 21.0 | 5 | D I | SW6010C | 0L15009 | 12/17/10 17:44 |

# ANALYSIS DATA SHEET

1011022-01

GOI-MW-01-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/05/10 11:40
% Solids: 0.00

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011260-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:48 |
| 7429-90-5 | Aluminum | 85.0 | 50.0 | 100 | 200 | 1 | X IN | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-39-3 | Barium | 8.97 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-43-9 | Cadmium | 5.09 | 1.00 | 2.00 | 5.00 | 1 | N | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-70-2 | Calcium | 110000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7439-89-6 | Iron | 111 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7439-95-4 | Magnesium | 107000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-09-7 | Potassium | 39300 | 5000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06016 | 12/09/10 19:37 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-23-5 | Sodium | 671000 | 1000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06016 | 12/09/10 19:37 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:49 |

# ANALYSIS DATA SHEET

1011022-02

601-MW-02-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/05/10 10:35
% Solids: 0.00

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011260-02
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 12:56 |
| 7429-90-5 | Aluminum | 88.6 | 50.0 | 100 | 200 | 1 | X IN | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-39-3 | Barium | 7.60 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-43-9 | Cadmium | 5.45 | 1.00 | 2.00 | 5.00 | 1 | N | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-70-2 | Calcium | 115000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7439-89-6 | Iron | 224 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7439-95-4 | Magnesium | 122000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-09-7 | Potassium | 31800 | 5000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06016 | 12/09/10 19:42 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-23-5 | Sodium | 791000 | 1000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06016 | 12/09/10 19:42 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:54 |

# ANALYSIS DATA SHEET

1011022-03

GOI-MW-04-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/05/10 09:28
% Solids: 0.00

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 1011260-03
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 12:57 |
| 7429-90-5 | Aluminum | 50.7 | 50.0 | 100 | 200 | 1 | X IN | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-38-2 | Arsenic | 5.30 | 3.00 | 5.00 | 5.00 | 1 | IN | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-39-3 | Barium | 14.2 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-43-9 | Cadmium | 6.39 | 1.00 | 2.00 | 5.00 | 1 | N | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-70-2 | Calcium | 198000 | 1000 | 2000 | 5000 | 1 | Y | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7439-95-4 | Magnesium | 222000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-09-7 | Potassium | 59700 | 5000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06016 | 12/09/10 19:46 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | UN | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-23-5 | Sodium | 1770000 | 1000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06016 | 12/09/10 19:46 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06016 | 12/07/10 17:59 |

# APPENDIX C
# SUPPORT DOCUMENTATION

## Sample Delivery Group Case Narrative

### Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

All samples for SW7470A and SW7471A were received in the laboratory out of the EPA recommending holding time. Analyses for SW6010C and SW7471A were not able to be performed for samples 1011013-05 and 1011013-21 due to the samples being received in the laboratory with cracked lids.

### Changes to the Revision

This is an original submittal of the final report package.

### Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

### Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

### SW6010C/SW7470A/SW7471A:

Samples 1011259-01, -02, -03, -04, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, 1011260-01, -02 and -03 were received after the EPA recommended holding time for SW7470A and SW7471A.

Samples 1011259-01, -02, -04, -06, -07, -09, -12, -13, -14, -17 and -18 are qualified with an M for Silver to indicate that the DL was raised due to interference and samples 1011259—01, -07 and -15 are qualified with an M for Thallium to indicate that the DL was raised due to interference.

The continuing calibration verifications exceeded criteria in 0L34305--CCV4 with a positive bias for Magnesium, Potassium and Sodium, in 0L34305-CCV5 with a positive bias for Aluminum, Magnesium Potassium and Sodium and with a negative bias for Calcium, in 0L34705-CCV8 with a positive bias for Potassium and Sodium and in 0L35203-CV4 with a negative bias for Silver.

The continuing calibration blanks 0L34305-CCB3 and –CCB5 and digestion blank 0L06016-BLK1 have positive results for Sodium. The digestion blank 0L15009-BLK1 has a positive result for Zinc.

The matrix spikes associated to sample 1011259-03 exceeded criteria with a positive bias for Antimony, Arsenic and Cadmium and with a negative bias for Iron and Manganese. The post digestion spike associated to sample 1011259-20 exceeded criteria for Antimony, Arsenic and Cadmium. The matrix spikes associated to sample 1011260-02 exceeded criteria with a positive bias for Aluminum, Antimony, Arsenic, Cadmium, Copper and Silver. Calcium and Magnesium also exceeded criteria but the parent sample concentration was greater then 4 times the amount spiked. The post digestion spike associated to sample 1011260-03 exceeded criteria for Aluminum, Antimony, Arsenic, Barium, Cadmium, Calcium, Copper, Magnesium, Selenium, Silver and Thallium.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The batch spikes associated to batch 0L06020 exceeded criteria with a positive bias for all compounds. No positive results above the LOQ were detected in the associated samples.

The continuing calibration verifications exceeded criteria in 0L35009-CCV6 with a positive bias on column 2 for Delta-BHC and in 0L35009-CCV8 with a positive bias on column 2 for Toxaphene.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
No anomalies or deviations are noted.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

***:** An exceeding quality control criteria is associated with the reported result.

**B:** The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1:** The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J**: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N**: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-01** | **Solid** | **Sampled:11/02/10 08:00** | 10\|259-01 |
| Mercury, Total 7471B | | 11/30/10 08:00 | |
| 6010C Full | | 05/01/11 08:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-02** | **Solid** | **Sampled:11/02/10 08:20** | -02 |
| 6010C Full | | 05/01/11 08:20 | |
| Mercury, Total 7471B | | 11/30/10 08:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-03** | **Solid** | **Sampled:11/02/10 08:40** | -03 |
| 6010C Full | | 05/01/11 08:40 | |
| Mercury, Total 7471B | | 11/30/10 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-04** | **Solid** | **Sampled:11/02/10 09:00** | -04 |
| 6010C Full | | 05/01/11 09:00 | |
| Mercury, Total 7471B | | 11/30/10 09:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-05** | **Solid** | **Sampled:11/02/10 09:20** | -05 |
| Mercury, Total 7471B | | 11/30/10 09:20 | |
| 6010C Full | | 05/01/11 09:20 | |
| *Containers Supplied:* | | | |

1.20C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-06** | **Solid** | **Sampled:11/02/10 09:40** | 1011259-06 |
| 6010C Full | | 05/01/11 09:40 | |
| Mercury, Total 7471B | | 11/30/10 09:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-07** | **Solid** | **Sampled:11/02/10 12:00** | -07 |
| 6010C Full | | 05/01/11 12:00 | |
| Mercury, Total 7471B | | 11/30/10 12:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-08** | **Solid** | **Sampled:11/02/10 14:00** | -08 |
| 6010C Full | | 05/01/11 14:00 | |
| Mercury, Total 7471B | | 11/30/10 14:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-09** | **Solid** | **Sampled:11/02/10 10:00** | -09 |
| 6010C Full | | 05/01/11 10:00 | |
| Mercury, Total 7471B | | 11/30/10 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-10** | **Solid** | **Sampled:11/02/10 10:20** | -10 |
| 6010C Full | | 05/01/11 10:20 | |
| Mercury, Total 7471B | | 11/30/10 10:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-11** | **Solid** | **Sampled:11/02/10 10:40** | -11 |
| Mercury, Total 7471B | | 11/30/10 10:40 | |
| 6010C Full | | 05/01/11 10:40 | |
| *Containers Supplied:* | | | |

1.2°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] 11/30/10 | 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-12** | **Solid** | **Sampled:11/02/10 11:00** | 1011259-12 |
| 6010C Full | | 05/01/11 11:00 | |
| Mercury, Total 7471B | | 11/30/10 11:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-13** | **Solid** | **Sampled:11/02/10 13:40** | -13 |
| 6010C Full | | 05/01/11 13:40 | |
| Mercury, Total 7471B | | 11/30/10 13:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-14** | **Solid** | **Sampled:11/02/10 11:20** | -14 |
| 6010C Full | | 05/01/11 11:20 | |
| Mercury, Total 7471B | | 11/30/10 11:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-15** | **Solid** | **Sampled:11/02/10 13:20** | -15 |
| 6010C Full | | 05/01/11 13:20 | |
| Mercury, Total 7471B | | 11/30/10 13:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-16** | **Solid** | **Sampled:11/02/10 12:40** | -16 |
| 6010C Full | | 05/01/11 12:40 | |
| Mercury, Total 7471B | | 11/30/10 12:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-17** | **Solid** | **Sampled:11/02/10 11:40** | -17 |
| Mercury, Total 7471B | | 11/30/10 11:40 | |
| 6010C Full | | 05/01/11 11:40 | |
| *Containers Supplied:* | | | |

1.2°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-18** | **Solid** | **Sampled:11/02/10 12:20** | 1011259-18 |
| 6010C Full | | 05/01/11 12:20 | |
| Mercury, Total 7471B | | 11/30/10 12:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-19** | **Solid** | **Sampled:11/02/10 13:00** | -19 |
| 6010C Full | | 05/01/11 13:00 | |
| Mercury, Total 7471B | | 11/30/10 13:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-20** | **Solid** | **Sampled:11/02/10 00:00** | -20 |
| 6010C Full | | 05/01/11 00:00 | |
| Mercury, Total 7471B | | 11/30/10 00:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-21** | **Solid** | **Sampled:11/02/10 00:00** | -21 |
| Mercury, Total 7471B | | 11/30/10 00:00 | |
| 6010C Full | | 05/01/11 00:00 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/18/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

1.2°C

KW 11/29 — 11/30/10 08:25

Released By / Date / Received By / Date

Released By / Date / Received By / Date

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011022**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011022-01** | **Water** | **Sampled:11/05/10 11:40** | 1011260-01 |
| Mercury, Total 7470A | | 12/03/10 11:40 | |
| 8082 PCBs | | 11/12/10 11:40 | |
| 8081A Pesticides | | 11/12/10 11:40 | |
| 6020A Full | | 05/04/11 11:40 | |
| 6010C Full | | 05/04/11 11:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011022-02** | **Water** | **Sampled:11/05/10 10:35** | -02 |
| Mercury, Total 7470A | | 12/03/10 10:35 | |
| 8082 PCBs | | 11/12/10 10:35 | |
| 8081A Pesticides | | 11/12/10 10:35 | |
| 6020A Full | | 05/04/11 10:35 | |
| 6010C Full | | 05/04/11 10:35 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011022-03** | **Water** | **Sampled:11/05/10 09:28** | -03 |
| Mercury, Total 7470A | | 12/03/10 09:28 | |
| 8082 PCBs | | 11/12/10 09:28 | |
| 8081A Pesticides | | 11/12/10 09:28 | |
| 6020A Full | | 05/04/11 09:28 | |
| 6010C Full | | 05/04/11 09:28 | |
| *Containers Supplied:* | | | |

4.5°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |

HOLDTIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | 1011013-11 | 1011259-11 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-01 | 1011259-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-19 | 1011259-19 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-18 | 1011259-18 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-17 | 1011259-17 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-16 | 1011259-16 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-15 | 1011259-15 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-14 | 1011259-14 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-12 | 1011259-12 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-20 | 1011259-20 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-10 | 1011259-10 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-09 | 1011259-09 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-08 | 1011259-08 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-07 | 1011259-07 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-06 | 1011259-06 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | MG/KG | 1011013-04 | 1011259-04 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-03 | 1011259-03 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-02 | 1011259-02 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | MG/KG | 1011013-13 | 1011259-13 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| HG | UG/L | 1011022-03 | 1011260-03 | NM | 11/05/2010 | 12/06/2010 | 12/08/2010 | 31 | 2 | 33 |
| HG | UG/L | 1011022-01 | 1011260-01 | NM | 11/05/2010 | 12/06/2010 | 12/08/2010 | 31 | 2 | 33 |
| HG | UG/L | 1011022-02 | 1011260-02 | NM | 11/05/2010 | 12/06/2010 | 12/08/2010 | 31 | 2 | 33 |
| M | MG/KG | 1011013-04 | 1011259-04 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-10 | 1011259-10RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-09 | 1011259-09 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-08 | 1011259-08RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-08 | 1011259-08 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-07 | 1011259-07RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-07 | 1011259-07 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-06 | 1011259-06RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-04 | 1011259-04RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-10 | 1011259-10 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-03 | 1011259-03RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | MG/KG | 1011013-03 | 1011259-03 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-02 | 1011259-02RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-02 | 1011259-02 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-01 | 1011259-01RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-01 | 1011259-01 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-06 | 1011259-06 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-19 | 1011259-19RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-09 | 1011259-09RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-20 | 1011259-20 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-19 | 1011259-19 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-18 | 1011259-18RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-18 | 1011259-18 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-17 | 1011259-17RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-17 | 1011259-17 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-16 | 1011259-16RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-16 | 1011259-16 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-15 | 1011259-15 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-14 | 1011259-14RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | MG/KG | 1011013-14 | 1011259-14 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-13 | 1011259-13RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-13 | 1011259-13 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-12 | 1011259-12RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-12 | 1011259-12 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-11 | 1011259-11RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-11 | 1011259-11 | NM | 11/02/2010 | 12/15/2010 | 12/16/2010 | 43 | 1 | 44 |
| M | MG/KG | 1011013-20 | 1011259-20RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | MG/KG | 1011013-15 | 1011259-15RE1 | NM | 11/02/2010 | 12/15/2010 | 12/17/2010 | 43 | 2 | 45 |
| M | UG/L | 1011022-02 | 1011260-02 | NM | 11/05/2010 | 12/06/2010 | 12/07/2010 | 31 | 1 | 32 |
| M | UG/L | 1011022-03 | 1011260-03RE1 | NM | 11/05/2010 | 12/06/2010 | 12/09/2010 | 31 | 3 | 34 |
| M | UG/L | 1011022-02 | 1011260-02RE1 | NM | 11/05/2010 | 12/06/2010 | 12/09/2010 | 31 | 3 | 34 |
| M | UG/L | 1011022-01 | 1011260-01RE1 | NM | 11/05/2010 | 12/06/2010 | 12/09/2010 | 31 | 3 | 34 |
| M | UG/L | 1011022-01 | 1011260-01 | NM | 11/05/2010 | 12/06/2010 | 12/07/2010 | 31 | 1 | 32 |
| M | UG/L | 1011022-03 | 1011260-03 | NM | 11/05/2010 | 12/06/2010 | 12/07/2010 | 31 | 1 | 32 |
| PCB | UG/L | 1011022-01 | 1011260-01 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PCB | UG/L | 1011022-01 | 1011260-01 | SUR | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |
| PCB | UG/L | 1011022-02 | 1011260-02 | NM | 11/05/2010 | 11/12/2010 | 12/10/2010 | 7 | 28 | 35 |

# NAS KEY WEST
# SOIL DATA
# CTOJM16KW_004

| FRACTION | CHEMICAL | GKHMS-SO-031-1010 | UNITS | GKHMS-SO-FD002-1010 | RPD | D |
|---|---|---|---|---|---|---|
| M | ALUMINUM | 210 DI | MG/KG | 162 DI | 25.81 | 48.00 |
| M | BARIUM | 7.99 I | MG/KG | 8.64 | 7.82 | 0.65 |
| M | CADMIUM | 1.11 N | MG/KG | 1.06 N | 4.61 | 0.05 |
| M | CALCIUM | 396000 D | MG/KG | 364000 D | 8.42 | 32000.00 |
| M | CHROMIUM | 15.9 | MG/KG | 7.31 | **74.02** | 8.59 |
| M | COPPER | 2.25 | MG/KG | 2.67 | 17.07 | 0.42 |
| M | IRON | 194 N | MG/KG | 3830 N | **180.72** | 3636.00 |
| M | LEAD | 62.7 D | MG/KG | 19.1 D | **106.60** | 43.60 |
| M | MAGNESIUM | 1230 | MG/KG | 904 I | 30.55 | 326.00 |
| M | MANGANESE | 3.22 IN | MG/KG | 19.3 N | **142.81** | 16.08 |
| M | SILVER | 0.438 MY | MG/KG | ND | **200.00** | 0.44 |
| M | SODIUM | 1140 | MG/KG | 1330 | 15.38 | 190.00 |
| M | VANADIUM | 2.69 I | MG/KG | 1.57 I | **52.58** | 1.12 |
| M | ZINC | 15.1 DI | MG/KG | 13.1 DI | 14.18 | 2.00 |

**Current RPD Quality Control Limit: 50 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-ICV1 | Aluminum | 10000 | 9592 | 95.9 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 977.2 | 97.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 982.8 | 98.3 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1090 | 109 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 963.7 | 96.4 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47900 | 95.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 958.0 | 95.8 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 966.4 | 96.6 | ug/L | +/- 10.00% |
| | Copper | 1000 | 958.6 | 95.9 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9772 | 97.7 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.8 | 97.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 52330 | 105 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 957.9 | 95.8 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 960.6 | 96.1 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9476 | 94.8 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 986.2 | 98.6 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 468.8 | 93.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50550 | 101 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 939.5 | 93.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 953.1 | 95.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 972.5 | 97.2 | ug/L | +/- 10.00% |
| 0L34305-CCV1 | Aluminum | 10000 | 9799 | 98.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 987.0 | 98.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1012 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1046 | 105 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1037 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50720 | 101 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 999.4 | 99.9 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 960.8 | 96.1 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1018 | 102 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10380 | 104 | ug/L | +/- 10.00% |
| | Lead | 1000 | 957.7 | 95.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54130 | 108 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.0 | 98.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10060 | 101 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV1 | Selenium | 1000 | 972.7 | 97.3 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 501.7 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 54310 | 109 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.7 | 99.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 968.6 | 96.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| 0L34305-CCV3 | Aluminum | 10000 | 10070 | 101 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 988.6 | 98.9 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1015 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1005 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1028 | 103 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1026 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 49280 | 98.6 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 973.8 | 97.4 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 950.1 | 95.0 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1026 | 103 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10150 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 949.9 | 95.0 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54440 | 109 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1025 | 103 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 980.5 | 98.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10860 | 109 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 964.1 | 96.4 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 497.1 | 99.4 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 55080 | 110 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.2 | 99.2 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 937.2 | 93.7 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1008 | 101 | ug/L | +/- 10.00% |
| 0L34305-CCV4 | Aluminum | 10000 | 10530 | 105 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1027 | 103 | ug/L | +/- 10.00% |
| | Barium | 1000 | 998.2 | 99.8 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1043 | 104 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1035 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 48280 | 96.6 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 971.0 | 97.1 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 957.3 | 95.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1074 | 107 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV4 | Iron | 10000 | 10050 | 100 | ug/L | +/- 10.00% |
| | Lead | 1000 | 962.9 | 96.3 | ug/L | +/- 10.00% |
| | **Magnesium** | **50000** | **56360** | **113** | **ug/L** | +/- 10.00% |
| | Manganese | 1000 | 1039 | 104 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.5 | 98.9 | ug/L | +/- 10.00% |
| | **Potassium** | **10000** | **11760** | **118** | **ug/L** | +/- 10.00% |
| | Selenium | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 503.6 | 101 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **60530** | **121** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 961.9 | 96.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 994.1 | 99.4 | ug/L | +/- 10.00% |
| **0L34305-CCV5** | **Aluminum** | **10000** | **11160** | **112** | **ug/L** | +/- 10.00% |
| | Antimony | 1000 | 1047 | 105 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1045 | 104 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 989.9 | 99.0 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1034 | 103 | ug/L | +/- 10.00% |
| | **Calcium** | **50000** | **42920** | **85.8** | **ug/L** | +/- 10.00% |
| | Chromium | 1000 | 935.7 | 93.6 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 957.6 | 95.8 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1066 | 107 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9704 | 97.0 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.9 | 97.8 | ug/L | +/- 10.00% |
| | **Magnesium** | **50000** | **57790** | **116** | **ug/L** | +/- 10.00% |
| | Manganese | 1000 | 959.1 | 95.9 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 979.6 | 98.0 | ug/L | +/- 10.00% |
| | **Potassium** | **10000** | **13380** | **134** | **ug/L** | +/- 10.00% |
| | Selenium | 1000 | 1022 | 102 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 477.9 | 95.6 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **67120** | **134** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 1021 | 102 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 909.7 | 91.0 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 943.6 | 94.4 | ug/L | +/- 10.00% |

No sample affected

No samples

No samples

No samples

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0344004
Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34403-ICV1 | Mercury | 4.000 | 4.047 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV1 | Mercury | 4.000 | 4.030 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV2 | Mercury | 4.000 | 4.123 | 103 | ug/L | +/- 15.00% |
| 0L34403-CCV3 | Mercury | 2.000 | 1.845 | 92.2 | ug/L | +/- 15.00% |
| 0L34403-CCV4 | Mercury | 2.000 | 1.835 | 91.7 | ug/L | +/- 15.00% |
| 0L34403-CCV5 | Mercury | 4.000 | 4.052 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV6 | Mercury | 4.000 | 3.647 | 91.2 | ug/L | +/- 15.00% |
| 0L34403-CCV7 | Mercury | 2.000 | 1.860 | 93.0 | ug/L | +/- 15.00% |
| 0L34403-CCV8 | Mercury | 2.000 | 1.903 | 95.2 | ug/L | +/- 15.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0352001
Sequence: 0L34705

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34705-ICV1 | Potassium | 10000 | 9435 | 94.3 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49660 | 99.3 | ug/L | +/- 10.00% |
| 0L34705-CCV1 | Potassium | 10000 | 9686 | 96.9 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49940 | 99.9 | ug/L | +/- 10.00% |
| 0L34705-CCV6 | Potassium | 10000 | 10000 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49370 | 98.7 | ug/L | +/- 10.00% |
| **0L34705-CCV7** | **Potassium** | **10000** | **11190** | **112** | **ug/L** | +/- 10.00% |
| | **Sodium** | **50000** | **55960** | **112** | **ug/L** | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW7471A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350003
Sequence: 0L35013

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35013-ICV1 | Mercury | 4.000 | 4.254 | 106 | ug/L | +/- 15.00% |
| 0L35013-CCV1 | Mercury | 4.000 | 4.029 | 101 | ug/L | +/- 15.00% |
| 0L35013-CCV2 | Mercury | 4.000 | 4.019 | 100 | ug/L | +/- 15.00% |
| 0L35013-CCV3 | Mercury | 2.000 | 2.056 | 103 | ug/L | +/- 15.00% |
| 0L35013-CCV6 | Mercury | 4.000 | 4.073 | 102 | ug/L | +/- 15.00% |
| 0L35013-CCV7 | Mercury | 2.000 | 2.054 | 103 | ug/L | +/- 15.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35203-ICV1 | Aluminum | 10000 | 9763 | 97.6 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 986.7 | 98.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1005 | 100 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1048 | 105 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1029 | 103 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1060 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 53260 | 107 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 984.2 | 98.4 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 989.2 | 98.9 | ug/L | +/- 10.00% |
| | Copper | 1000 | 971.8 | 97.2 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10480 | 105 | ug/L | +/- 10.00% |
| | Lead | 1000 | 995.3 | 99.5 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 49890 | 99.8 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1020 | 102 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 989.0 | 98.9 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9093 | 90.9 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 979.7 | 98.0 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 499.6 | 99.9 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 48030 | 96.1 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 953.4 | 95.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 981.8 | 98.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1030 | 103 | ug/L | +/- 10.00% |
| 0L35203-CCV1 | Aluminum | 10000 | 9865 | 98.6 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1004 | 100 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1007 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1036 | 104 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1039 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50750 | 102 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 963.0 | 96.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 979.8 | 98.0 | ug/L | +/- 10.00% |
| | Copper | 1000 | 967.4 | 96.7 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10220 | 102 | ug/L | +/- 10.00% |
| | Lead | 1000 | 985.9 | 98.6 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 49230 | 98.5 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 972.6 | 97.3 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 984.3 | 98.4 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9849 | 98.5 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35203-CCV1 | Selenium | 1000 | 997.7 | 99.8 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 470.9 | 94.2 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49940 | 99.9 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 979.2 | 97.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 949.6 | 95.0 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 999.4 | 99.9 | ug/L | +/- 10.00% |
| 0L35203-CCV2 | Aluminum | 10000 | 9796 | 98.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1006 | 101 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1008 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1003 | 100 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1020 | 102 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1034 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 49190 | 98.4 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 962.7 | 96.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 983.2 | 98.3 | ug/L | +/- 10.00% |
| | Copper | 1000 | 980.8 | 98.1 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9896 | 99.0 | ug/L | +/- 10.00% |
| | Lead | 1000 | 998.0 | 99.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48520 | 97.0 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 965.5 | 96.5 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 980.1 | 98.0 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9554 | 95.5 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 995.2 | 99.5 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 463.8 | 92.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49390 | 98.8 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 979.3 | 97.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 948.7 | 94.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 983.7 | 98.4 | ug/L | +/- 10.00% |
| 0L35203-CCV3 | Aluminum | 10000 | 9756 | 97.6 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1044 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50210 | 100 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 953.0 | 95.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 981.0 | 98.1 | ug/L | +/- 10.00% |
| | Copper | 1000 | 987.1 | 98.7 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35203-CCV3 | Iron | 10000 | 9943 | 99.4 | ug/L | +/- 10.00% |
| | Lead | 1000 | 986.8 | 98.7 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48720 | 97.4 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 991.6 | 99.2 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 987.3 | 98.7 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9788 | 97.9 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 473.5 | 94.7 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49980 | 100 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 986.2 | 98.6 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 978.2 | 97.8 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1001 | 100 | ug/L | +/- 10.00% |
| 0L35203-CCV4 | Aluminum | 10000 | 9768 | 97.7 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1007 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 985.9 | 98.6 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1001 | 100 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1023 | 102 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47230 | 94.5 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 949.1 | 94.9 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 987.3 | 98.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 970.7 | 97.1 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9589 | 95.9 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 47730 | 95.5 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 927.6 | 92.8 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 974.7 | 97.5 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9340 | 93.4 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 992.3 | 99.2 | ug/L | +/- 10.00% |
| | **Silver** | **500.0** | **446.6** | **89.3** | **ug/L** | +/- 10.00% |
| | Sodium | 50000 | 49030 | 98.1 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 980.5 | 98.1 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 911.8 | 91.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 957.1 | 95.7 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0354001
Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35301-ICV1 | Aluminum | 10000 | 10030 | 100 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 53020 | 106 | ug/L | +/- 10.00% |
| | Lead | 1000 | 994.6 | 99.5 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| 0L35301-CCV1 | Aluminum | 10000 | 9839 | 98.4 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50970 | 102 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1009 | 101 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1029 | 103 | ug/L | +/- 10.00% |
| 0L35301-CCV2 | Aluminum | 10000 | 10110 | 101 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 49290 | 98.6 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1024 | 102 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1007 | 101 | ug/L | +/- 10.00% |
| 0L35301-CCV3 | Aluminum | 10000 | 10260 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47600 | 95.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 953.2 | 95.3 | ug/L | +/- 10.00% |
| 0L35301-CCV4 | Aluminum | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47600 | 95.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 993.5 | 99.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 961.9 | 96.2 | ug/L | +/- 10.00% |
| 0L35301-CCV5 | Aluminum | 10000 | 10110 | 101 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47600 | 95.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 991.8 | 99.2 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 965.0 | 96.5 | ug/L | +/- 10.00% |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34305-CRL1 | Aluminum | 100.0 | 99.73 | 99.7 | ug/L | 80 - 120 |
| | Antimony | 8.000 | 6.500 | 81.2 | ug/L | 80 - 120 |
| | Barium | 10.00 | 10.07 | 101 | ug/L | 80 - 120 |
| | Beryllium | 2.000 | 2.054 | 103 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 1.846 | 92.3 | ug/L | 80 - 120 |
| | Calcium | 2000 | 1966 | 98.3 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.982 | 99.6 | ug/L | 80 - 120 |
| | Cobalt | 10.00 | 9.079 | 90.8 | ug/L | 80 - 120 |
| | Copper | 8.000 | 7.542 | 94.3 | ug/L | 80 - 120 |
| | Iron | 60.00 | 64.06 | 107 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.566 | 85.5 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 3113 | 104 | ug/L | 80 - 120 |
| | Manganese | 6.000 | 6.735 | 112 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.898 | 98.3 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3020 | 101 | ug/L | 80 - 120 |
| | Silver | 2.000 | 1.893 | 94.7 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3298 | 110 | ug/L | 80 - 120 |
| | Thallium | 4.000 | 4.272 | 107 | ug/L | 80 - 120 |
| | Vanadium | 10.00 | 9.529 | 95.3 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.414 | 94.1 | ug/L | 80 - 120 |
| 0L34305-CRL2 | Arsenic | 5.000 | 4.042 | 80.8 | ug/L | 80 - 120 |
| | Selenium | 5.000 | 4.812 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW7470A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-FIMS

Calibration: 0344004

Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34403-CRL1 | Mercury | 0.2000 | 0.1985 | 99.3 | ug/L | 70 - 130 |
| 0L34403-CRL2 | Mercury | 0.2000 | 0.2066 | 103 | ug/L | 70 - 130 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0352001

Sequence: 0L34705

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34705-CRL1 | Potassium | 3000 | 2868 | 95.6 | ug/L | 80 - 120 |
| | Sodium | 3000 | 2916 | 97.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW7471A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-FIMS

Calibration: 0350003

Sequence: 0L35013

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35013-CRL1 | Mercury | 0.2000 | 0.2489 | 124 | ug/L | 70 - 130 |
| 0L35013-CRL2 | Mercury | 0.2000 | 0.2571 | 129 | ug/L | 70 - 130 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L35203

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35203-CRL1 | Aluminum | 100.0 | 102.9 | 103 | ug/L | 80 - 120 |
| | Antimony | 8.000 | 7.843 | 98.0 | ug/L | 80 - 120 |
| | Barium | 10.00 | 10.74 | 107 | ug/L | 80 - 120 |
| | Beryllium | 2.000 | 2.118 | 106 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 2.254 | 113 | ug/L | 80 - 120 |
| | Calcium | 2000 | 2036 | 102 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.946 | 98.6 | ug/L | 80 - 120 |
| | Cobalt | 10.00 | 9.614 | 96.1 | ug/L | 80 - 120 |
| | Copper | 8.000 | 8.067 | 101 | ug/L | 80 - 120 |
| | Iron | 60.00 | 64.54 | 108 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.460 | 82.0 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 2999 | 100 | ug/L | 80 - 120 |
| | Manganese | 6.000 | 6.503 | 108 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.570 | 92.8 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3026 | 101 | ug/L | 80 - 120 |
| | Silver | 2.000 | 2.012 | 101 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3125 | 104 | ug/L | 80 - 120 |
| | Thallium | 4.000 | 4.358 | 109 | ug/L | 80 - 120 |
| | Vanadium | 10.00 | 9.830 | 98.3 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 10.71 | 107 | ug/L | 80 - 120 |
| 0L35203-CRL2 | Arsenic | 5.000 | 4.855 | 97.1 | ug/L | 80 - 120 |
| | Selenium | 5.000 | 5.363 | 107 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0354001

Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35301-CRL1 | Aluminum | 100.0 | 110.4 | 110 | ug/L | 80 - 120 |
| | Calcium | 2000 | 2075 | 104 | ug/L | 80 - 120 |
| | Lead | 3.000 | 3.090 | 103 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.767 | 97.7 | ug/L | 80 - 120 |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-ICB1 | Aluminum | 1.815 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.0008800 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.4936 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.04896 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.1662 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.09110 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 10.71 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.06206 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.2396 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.006120 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.525 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.2232 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -0.1900 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.1529 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.3307 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 4.330 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.4155 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.1294 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 11.82 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.3133 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.09286 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.06542 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB1 | Aluminum | 4.29 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.141 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.226 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00225 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | -0.000740 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.0220 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.134 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.110 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.235 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.54 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB1 | Lead | -0.0467 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -1.90 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.120 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.488 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.671 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0628 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 8.23 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.0416 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.176 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 2.27 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB3 | Aluminum | 2.22 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.392 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -1.01 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0236 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.200 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.256 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 36.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.122 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0870 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0977 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.68 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.0672 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 43.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.143 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.253 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 47.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.195 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.111 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 657 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.404 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.00779 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0353 | 5.00 | 20.0 | ug/L | U | SW6010C |

no samples affected

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L06016-BLK1 | Aluminum | 2.27 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.693 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.0877 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0382 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0306 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.0747 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 17.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.116 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0301 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0758 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 1.18 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.507 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 4.83 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.114 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.326 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 34.0 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.971 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0703 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 389 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.355 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.213 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.263 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB4 | Aluminum | 0.0923 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.208 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -1.05 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00574 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0383 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.463 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 6.92 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.161 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.0575 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.134 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | -0.499 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB4 | Lead | 0.0754 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -7.85 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0545 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.0630 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 26.9 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.167 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.106 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 184 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.836 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.248 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0227 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB5 | Aluminum | 2.71 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.106 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.221 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.116 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0964 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.901 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 7.16 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.129 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.287 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.350 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.0675 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -1.41 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.66 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.139 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.0344 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 30.7 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.211 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.203 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 216 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.752 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.0128 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0866 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: CTOJM16 Key West 2010
Sequence: 0L34403
Calibration: 0344004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34403-ICB1 | Mercury | 0.02156 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB1 | Mercury | 0.0158 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB2 | Mercury | 0.0309 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L06007-BLK1 | Mercury | 0.00684 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB3 | Mercury | 0.0237 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB4 | Mercury | 0.0237 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB5 | Mercury | 0.0368 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L06008-BLK1 | Mercury | 0.0286 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB6 | Mercury | 0.0205 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB7 | Mercury | 0.0330 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB8 | Mercury | 0.0301 | 0.0800 | 0.200 | ug/L | U | SW7470A |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34705
Calibration: 0352001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34705-ICB1 | Potassium | 3.670 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | -14.41 | 200 | 5000 | ug/L | U | SW6010C |
| 0L34705-CCB1 | Potassium | 7.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 5.94 | 200 | 5000 | ug/L | U | SW6010C |
| 0L34705-CCB6 | Potassium | 17.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 52.6 | 200 | 5000 | ug/L | U | SW6010C |
| 0L34705-CCB7 | Potassium | 11.1 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 42.8 | 200 | 5000 | ug/L | U | SW6010C |

# BLANKS
## SW7471A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: CTOJM16 Key West 2010
Sequence: 0L35013
Calibration: 0350003

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35013-ICB1 | Mercury | 0.04747 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L10002-BLK1 | Mercury | 0.00774 | 0.0130 | 0.0330 | mg/Kg wet | U | SW7471A |
| 0L35013-CCB1 | Mercury | 0.0453 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L35013-CCB2 | Mercury | 0.0476 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L35013-CCB3 | Mercury | 0.0491 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L35013-CCB6 | Mercury | 0.0461 | 0.0780 | 0.198 | ug/L | U | SW7471A |
| 0L35013-CCB7 | Mercury | 0.0483 | 0.0780 | 0.198 | ug/L | U | SW7471A |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35203-ICB1 | Aluminum | -0.3931 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.3437 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | -0.2714 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.2165 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.04395 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.09989 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 5.350 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.01421 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | 0.07734 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.1403 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.9273 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.4778 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 10.56 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.1786 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.07111 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | -6.210 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.4396 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | 0.1450 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 12.81 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.05764 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.01923 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.1244 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35203-CCB1 | Aluminum | 0.709 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.608 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | -0.200 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.174 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.313 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.216 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 16.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.0896 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | 0.000690 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.211 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 3.14 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Sequence: 0L35203

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35203-CCB1 | Lead | -0.0926 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 20.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.119 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.181 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 2.77 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.231 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | -0.0807 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 28.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.176 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.191 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0183 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35203-CCB2 | Aluminum | 1.22 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.210 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | -0.120 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.181 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.115 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.337 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 9.40 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | 0.0977 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | 0.0375 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.244 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 1.08 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.0774 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 9.42 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0941 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.172 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | -6.54 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 1.02 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | -0.0379 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 15.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.00116 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.113 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0607 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L15009-BLK1 | Aluminum | 0.280 | 2.50 | 10.0 | mg/Kg wet | U | SW6010C |
| | Antimony | 0.0237 | 0.250 | 0.750 | mg/Kg wet | U | SW6010C |
| | Arsenic | -0.0307 | 0.150 | 0.250 | mg/Kg wet | U | SW6010C |
| | Barium | 0.0185 | 0.250 | 2.00 | mg/Kg wet | U | SW6010C |
| | Beryllium | -0.000767 | 0.0500 | 0.250 | mg/Kg wet | U | SW6010C |
| | Cadmium | 0.0417 | 0.0500 | 0.250 | mg/Kg wet | U | SW6010C |
| | Calcium | 21.3 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Chromium | 0.0789 | 0.100 | 0.500 | mg/Kg wet | U | SW6010C |
| | Cobalt | -0.00110 | 0.250 | 0.625 | mg/Kg wet | U | SW6010C |
| | Copper | 0.00705 | 0.250 | 0.500 | mg/Kg wet | U | SW6010C |
| | Iron | 0.190 | 1.50 | 5.00 | mg/Kg wet | U | SW6010C |
| | Lead | -0.0196 | 0.0750 | 0.150 | mg/Kg wet | U | SW6010C |
| | Magnesium | 0.240 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Manganese | 0.0131 | 0.150 | 0.750 | mg/Kg wet | U | SW6010C |
| | Nickel | -0.0181 | 0.250 | 0.500 | mg/Kg wet | U | SW6010C |
| | Potassium | 0.494 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Selenium | 0.113 | 0.150 | 0.500 | mg/Kg wet | U | SW6010C |
| | Silver | -0.0114 | 0.0500 | 0.500 | mg/Kg wet | U | SW6010C |
| | Sodium | 0.734 | 50.0 | 250 | mg/Kg wet | U | SW6010C |
| | Thallium | -0.0804 | 0.150 | 0.400 | mg/Kg wet | U | SW6010C |
| | Vanadium | -0.0112 | 0.250 | 0.625 | mg/Kg wet | U | SW6010C |
| | Zinc | 0.481 | 0.250 | 1.00 | mg/Kg wet | I | SW6010C |
| 0L35203-CCB3 | Aluminum | 0.361 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.153 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | 0.706 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.114 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0456 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.245 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 99.9 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.205 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | -0.0724 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.182 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.338 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35203-CCB3 | Lead | -0.117 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 5.31 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0382 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.183 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 4.94 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.745 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | -0.0310 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 8.06 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.142 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.116 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0941 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35203-CCB4 | Aluminum | -0.120 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.457 | 5.00 | 15.0 | ug/L | U | SW6010C |
| | Arsenic | -0.324 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Barium | 0.0640 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0779 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.588 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 57.4 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.0984 | 2.00 | 5.00 | ug/L | U | SW6010C |
| | Cobalt | -0.00105 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.501 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 1.12 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.0609 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 7.55 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0334 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.582 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 3.89 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.145 | 3.00 | 6.00 | ug/L | U | SW6010C |
| | Silver | -0.132 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Sodium | 6.63 | 1000 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.0519 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.349 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0510 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35301
Calibration: 0354001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35301-ICB1 | Aluminum | 2.164 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -2.810 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.03316 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Zinc | -0.6995 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB1 | Aluminum | 1.79 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -1.44 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | 0.289 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Zinc | -0.707 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB2 | Aluminum | 1.26 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -8.80 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.458 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Zinc | -0.883 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB3 | Aluminum | 0.928 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | -15.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | 0.296 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Zinc | -0.830 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB4 | Aluminum | 0.398 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | 0.270 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.419 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Zinc | -0.846 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L35301-CCB5 | Aluminum | 2.97 | 50.0 | 200 | ug/L | U | SW6010C |
| | Calcium | 2.35 | 1000 | 5000 | ug/L | U | SW6010C |
| | Lead | -0.414 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Zinc | -0.769 | 5.00 | 20.0 | ug/L | U | SW6010C |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW6010C**

**1011022-03**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06016

% Solids:

Source Sample Name: **1011260-03**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Aluminum | 2000 | 50.70 | 2518 | 123 | N | 80 - 120 |
| Antimony | 250.0 | ND | 363.4 | 145 | N | 80 - 120 |
| Arsenic | 250.0 | 5.297 | 363.4 | 143 | N | 80 - 120 |
| Barium | 2000 | 14.23 | 2362 | 117 | | 80 - 120 |
| Beryllium | 50.00 | ND | 46.71 | 93.4 | | 80 - 120 |
| Cadmium | 125.0 | 6.395 | 194.6 | 151 | N | 80 - 120 |
| Calcium | 5000 | 197800 | 192700 | -101 | | 80 - 120 |
| Chromium | 200.0 | ND | 177.4 | 88.7 | | 80 - 120 |
| Cobalt | 500.0 | ND | 503.5 | 101 | | 80 - 120 |
| Copper | 250.0 | ND | 307.6 | 123 | N | 80 - 120 |
| Iron | 1000 | ND | 982.4 | 98.2 | | 80 - 120 |
| Lead | 250.0 | ND | 245.2 | 98.1 | | 80 - 120 |
| Magnesium | 5000 | 221900 | 223200 | 26.6 | | 80 - 120 |
| Manganese | 500.0 | ND | 466.2 | 93.2 | | 80 - 120 |
| Nickel | 500.0 | ND | 502.4 | 100 | | 80 - 120 |
| Selenium | 250.0 | ND | 255.8 | 102 | | 80 - 120 |
| Silver | 250.0 | ND | 324.4 | 130 | N | 80 - 120 |
| Thallium | 250.0 | ND | 217.7 | 87.1 | | 80 - 120 |
| Vanadium | 500.0 | ND | 448.7 | 89.7 | | 80 - 120 |
| Zinc | 500.0 | ND | 524.0 | 105 | | 80 - 120 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW6010C**

**1011022-03**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06016

% Solids:

Source Sample Name: **1011260-03**

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Aluminum | 2000 | 2635 | 129 | 4.53 | N | 20 | 80 - 120 |
| Antimony | 250.0 | 373.2 | 149 | 2.68 | N | 20 | 80 - 120 |
| Arsenic | 250.0 | 376.0 | 148 | 3.40 | N | 20 | 80 - 120 |
| Barium | 2000 | 2361 | 117 | 0.0169 | | 20 | 80 - 120 |
| Beryllium | 50.00 | 46.08 | 92.2 | 1.36 | | 20 | 80 - 120 |
| Cadmium | 125.0 | 197.2 | 153 | 1.33 | N | 20 | 80 - 120 |
| Calcium | 5000 | 183500 | -285 | 4.88 | | 20 | 80 - 120 |
| Chromium | 200.0 | 176.2 | 88.1 | 0.667 | | 20 | 80 - 120 |
| Cobalt | 500.0 | 509.3 | 102 | 1.16 | | 20 | 80 - 120 |
| Copper | 250.0 | 311.3 | 125 | 1.22 | N | 20 | 80 - 120 |
| Iron | 1000 | 1003 | 100 | 2.05 | | 20 | 80 - 120 |
| Lead | 250.0 | 249.9 | 100 | 1.90 | | 20 | 80 - 120 |
| Magnesium | 5000 | 222800 | 18.8 | 0.175 | | 20 | 80 - 120 |
| Manganese | 500.0 | 465.0 | 93.0 | 0.266 | | 20 | 80 - 120 |
| Nickel | 500.0 | 510.6 | 102 | 1.62 | | 20 | 80 - 120 |
| Selenium | 250.0 | 274.7 | 110 | 7.14 | | 20 | 80 - 120 |
| Silver | 250.0 | 327.2 | 131 | 0.872 | N | 20 | 80 - 120 |
| Thallium | 250.0 | 221.4 | 88.5 | 1.69 | | 20 | 80 - 120 |
| Vanadium | 500.0 | 444.2 | 88.8 | 1.01 | | 20 | 80 - 120 |
| Zinc | 500.0 | 531.8 | 106 | 1.47 | | 20 | 80 - 120 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW7471A**

**1011013-20**

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Solid
Batch: 0L10002
% Solids: 88.37
Source Sample Name: **1011259-20**

| ANALYTE | SPIKE ADDED (mg/Kg dry) | SAMPLE CONCENTRATION (mg/Kg dry) | MS CONCENTRATION (mg/Kg dry) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Mercury | 0.3328 | ND | 0.3826 | 115 | | 80 - 120 |

| ANALYTE | SPIKE ADDED (mg/Kg dry) | MSD CONCENTRATION (mg/Kg dry) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Mercury | 0.3328 | 0.3718 | 112 | 2.88 | | 20 | 80 - 120 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW6010C**

**1011013-20**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L15009

% Solids: 88.37

Source Sample Name: **1011259-20**

| ANALYTE | SPIKE ADDED (mg/Kg dry) | SAMPLE CONCENTRATION (mg/Kg dry) | MS CONCENTRATION (mg/Kg dry) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Antimony | 55.47 | ND | 69.83 | 126 | N | 80 - 120 |
| Arsenic | 55.47 | ND | 69.62 | 126 | N | 80 - 120 |
| Barium | 443.8 | 8.640 | 521.2 | 115 | | 80 - 120 |
| Beryllium | 11.09 | ND | 11.08 | 99.9 | | 80 - 120 |
| Cadmium | 27.73 | 1.062 | 36.91 | 129 | N | 80 - 120 |
| Chromium | 44.38 | 7.309 | 46.59 | 88.5 | | 80 - 120 |
| Cobalt | 110.9 | ND | 120.2 | 108 | | 80 - 120 |
| Copper | 55.47 | 2.673 | 62.45 | 108 | | 80 - 120 |
| Iron | 221.9 | 3829 | 469.0 | -1510 | N | 80 - 120 |
| Magnesium | 1109 | 903.7 | 2134 | 111 | | 80 - 120 |
| Manganese | 110.9 | 19.27 | 107.2 | 79.3 | N | 80 - 120 |
| Nickel | 110.9 | ND | 117.6 | 106 | | 80 - 120 |
| Potassium | 1109 | ND | 1226 | 111 | | 80 - 120 |
| Selenium | 55.47 | ND | 65.46 | 118 | | 80 - 120 |
| Silver | 55.47 | ND | 58.77 | 106 | | 80 - 120 |
| Sodium | 1109 | 1329 | 2527 | 108 | | 80 - 120 |
| Thallium | 55.47 | ND | 49.86 | 89.9 | | 80 - 120 |
| Vanadium | 110.9 | 1.574 | 105.9 | 94.1 | | 80 - 120 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW6010C**

**1011013-20**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L15009

% Solids: 88.37

Source Sample Name: **1011259-20**

| ANALYTE | SPIKE ADDED (mg/Kg dry) | MSD CONCENTRATION (mg/Kg dry) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Antimony | 53.38 | 66.85 | 125 | 4.37 | N | 20 | 80 - 120 |
| Arsenic | 53.38 | 66.51 | 125 | 4.58 | N | 20 | 80 - 120 |
| Barium | 427.0 | 495.3 | 114 | 5.08 | | 20 | 80 - 120 |
| Beryllium | 10.68 | 10.26 | 96.1 | 7.64 | | 20 | 80 - 120 |
| Cadmium | 26.69 | 35.05 | 127 | 5.15 | N | 20 | 80 - 120 |
| Chromium | 42.70 | 44.64 | 87.4 | 4.29 | | 20 | 80 - 120 |
| Cobalt | 106.8 | 114.5 | 107 | 4.85 | | 20 | 80 - 120 |
| Copper | 53.38 | 59.26 | 106 | 5.25 | | 20 | 80 - 120 |
| Iron | 213.5 | 405.2 | -1600 | 14.6 | N | 20 | 80 - 120 |
| Magnesium | 1068 | 2161 | 118 | 1.28 | | 20 | 80 - 120 |
| Manganese | 106.8 | 100.5 | 76.0 | 6.51 | N | 20 | 80 - 120 |
| Nickel | 106.8 | 111.7 | 105 | 5.15 | | 20 | 80 - 120 |
| Potassium | 1068 | 1163 | 109 | 5.28 | | 20 | 80 - 120 |
| Selenium | 53.38 | 62.21 | 117 | 5.09 | | 20 | 80 - 120 |
| Silver | 53.38 | 55.25 | 104 | 6.17 | | 20 | 80 - 120 |
| Sodium | 1068 | 2426 | 103 | 4.07 | | 20 | 80 - 120 |
| Thallium | 53.38 | 47.78 | 89.5 | 4.27 | | 20 | 80 - 120 |
| Vanadium | 106.8 | 98.78 | 91.1 | 6.99 | | 20 | 80 - 120 |

# POST DIGEST SPIKE SAMPLE RECOVERY

## SW6010C

1011022-03

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L06016

Preparation: MET_3005A

SDG: CTOJM16KW_004

Project: CTOJM16 Key West 2010

Laboratory ID: 0L06016-PS1

Lab Source ID: 1011260-03

Initial/Final: 20 mL / 20 mL

| Analyte | Spike Sample Result (SSR) (ug/L) | Sample Result (SR) (ug/L) | Spike Added (SA) (ug/L) | %R | Control Limit %R |
|---|---|---|---|---|---|
| **Aluminum** | **2813** | **50.70** | **2000** | **138** | **80 - 120** |
| **Antimony** | **393.8** | **ND** | **250.0** | **156** | **80 - 120** |
| **Arsenic** | **399.4** | **5.297** | **250.0** | **158** | **80 - 120** |
| **Barium** | **2430** | **14.23** | **2000** | **121** | **80 - 120** |
| Beryllium | 49.49 | ND | 50.00 | 98.9 | 80 - 120 |
| **Cadmium** | **209.0** | **6.395** | **125.0** | **162** | **80 - 120** |
| **Calcium** | **189800** | **197800** | **5000** | **-158** | **80 - 120** |
| Chromium | 180.8 | ND | 200.0 | 91.0 | 80 - 120 |
| Cobalt | 530.1 | ND | 500.0 | 106 | 80 - 120 |
| **Copper** | **336.5** | **ND** | **250.0** | **135** | **80 - 120** |
| Iron | 1013 | ND | 1000 | 100 | 80 - 120 |
| Lead | 239.4 | ND | 250.0 | 96.5 | 80 - 120 |
| **Magnesium** | **232500** | **221900** | **5000** | **212** | **80 - 120** |
| Manganese | 497.3 | ND | 500.0 | 99.0 | 80 - 120 |
| Nickel | 534.0 | ND | 500.0 | 107 | 80 - 120 |
| **Selenium** | **372.7** | **ND** | **250.0** | **148** | **80 - 120** |
| **Silver** | **348.2** | **ND** | **250.0** | **139** | **80 - 120** |
| **Thallium** | **189.0** | **ND** | **250.0** | **75.9** | **80 - 120** |
| Vanadium | 476.2 | ND | 500.0 | 94.8 | 80 - 120 |
| Zinc | 549.6 | ND | 500.0 | 109 | 80 - 120 |

# POST DIGEST SPIKE SAMPLE RECOVERY

## SW6010C

1011013-20

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Solid

Batch: 0L15009

Preparation: MET_3050B

SDG: CTOJM16KW_004

Project: CTOJM16 Key West 2010

Laboratory ID: 0L15009-PS1

Lab Source ID: 1011259-20

Initial/Final: 0.54 g / 100 mL

| Analyte | Spike Sample Result (SSR) (ug/L) | Sample Result (SR) (ug/L) | Spike Added (SA) (ug/L) | %R | Control Limit %R |
|---|---|---|---|---|---|
| **Antimony** | **312.0** | **ND** | **250.0** | **125** | **80 - 120** |
| **Arsenic** | **318.5** | **ND** | **250.0** | **127** | **80 - 120** |
| Barium | 2274 | 41.23 | 2000 | 112 | 80 - 120 |
| Beryllium | 47.91 | ND | 50.00 | 95.6 | 80 - 120 |
| **Cadmium** | **166.4** | **5.066** | **125.0** | **129** | **80 - 120** |
| Chromium | 214.6 | 34.88 | 200.0 | 89.8 | 80 - 120 |
| Cobalt | 524.4 | ND | 500.0 | 104 | 80 - 120 |
| Copper | 277.3 | 12.76 | 250.0 | 106 | 80 - 120 |
| Iron | 19300 | 18270 | 1000 | 103 | 80 - 120 |
| Magnesium | 9076 | 4312 | 5000 | 95.3 | 80 - 120 |
| Manganese | 542.5 | 91.98 | 500.0 | 90.1 | 80 - 120 |
| Nickel | 514.6 | ND | 500.0 | 102 | 80 - 120 |
| Potassium | 5311 | ND | 5000 | 104 | 80 - 120 |
| Selenium | 297.1 | ND | 250.0 | 118 | 80 - 120 |
| Silver | 253.1 | ND | 250.0 | 102 | 80 - 120 |
| Sodium | 11790 | 6341 | 5000 | 109 | 80 - 120 |
| Thallium | 222.6 | ND | 250.0 | 89.8 | 80 - 120 |
| Vanadium | 463.0 | 7.510 | 500.0 | 91.1 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06007 | Laboratory ID: | 0L06007-BS1 |
| Preparation: | pMercury-W SW 7470A | Initial/Final: | 30 mL / 30 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 2.000 | 2.024 | 101 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06008 | Laboratory ID: | 0L06008-BS1 |
| Preparation: | pMercury-W EPA 245.1/7470A | Initial/Final: | 30 mL / 30 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 2.000 | 2.128 | 106 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L06016
Laboratory ID: 0L06016-BS1
Preparation: MET_3005A
Initial/Final: 50 mL / 50 mL

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 2000 | 1956 | 97.8 | 80 - 120 |
| Antimony | 250.0 | 231.2 | 92.5 | 80 - 120 |
| Arsenic | 250.0 | 235.9 | 94.3 | 80 - 120 |
| Barium | 2000 | 2016 | 101 | 80 - 120 |
| Beryllium | 50.00 | 54.42 | 109 | 80 - 120 |
| Cadmium | 125.0 | 121.3 | 97.0 | 80 - 120 |
| Calcium | 5000 | 4635 | 92.7 | 80 - 120 |
| Chromium | 200.0 | 198.6 | 99.3 | 80 - 120 |
| Cobalt | 500.0 | 472.7 | 94.5 | 80 - 120 |
| Copper | 250.0 | 247.8 | 99.1 | 80 - 120 |
| Iron | 1000 | 1042 | 104 | 80 - 120 |
| Lead | 250.0 | 241.0 | 96.4 | 80 - 120 |
| Magnesium | 5000 | 5197 | 104 | 80 - 120 |
| Manganese | 500.0 | 533.0 | 107 | 80 - 120 |
| Nickel | 500.0 | 489.9 | 98.0 | 80 - 120 |
| Potassium | 5000 | 5193 | 104 | 80 - 120 |
| Selenium | 250.0 | 222.9 | 89.2 | 80 - 120 |
| Silver | 250.0 | 234.8 | 93.9 | 80 - 120 |
| Sodium | 5000 | 5776 | 116 | 80 - 120 |
| Thallium | 250.0 | 241.0 | 96.4 | 80 - 120 |
| Vanadium | 500.0 | 481.8 | 96.4 | 80 - 120 |
| Zinc | 500.0 | 494.9 | 99.0 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW7471A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L10002 | Laboratory ID: | 0L10002-BS1 |
| Preparation: | MET_HG_S | Initial/Final: | 0.3 g / 50 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 0.3333 | 0.3678 | 110 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L15009 | Laboratory ID: | 0L15009-BS1 |
| Preparation: | MET_3050B | Initial/Final: | 2 g / 100 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 100.0 | 101.4 | 101 | 80 - 120 |
| Antimony | 12.50 | 12.71 | 102 | 80 - 120 |
| Arsenic | 12.50 | 12.34 | 98.7 | 80 - 120 |
| Barium | 100.0 | 111.6 | 112 | 80 - 120 |
| Beryllium | 2.500 | 2.556 | 102 | 80 - 120 |
| Cadmium | 6.250 | 6.445 | 103 | 80 - 120 |
| Calcium | 250.0 | 280.3 | 112 | 80 - 120 |
| Chromium | 10.00 | 10.45 | 104 | 80 - 120 |
| Cobalt | 25.00 | 26.93 | 108 | 80 - 120 |
| Copper | 12.50 | 12.29 | 98.3 | 80 - 120 |
| Iron | 50.00 | 55.64 | 111 | 80 - 120 |
| Lead | 12.50 | 12.95 | 104 | 80 - 120 |
| Magnesium | 250.0 | 240.0 | 96.0 | 80 - 120 |
| Manganese | 25.00 | 25.53 | 102 | 80 - 120 |
| Nickel | 25.00 | 26.92 | 108 | 80 - 120 |
| Potassium | 250.0 | 246.2 | 98.5 | 80 - 120 |
| Selenium | 12.50 | 11.70 | 93.6 | 80 - 120 |
| Silver | 12.50 | 11.66 | 93.2 | 80 - 120 |
| Sodium | 250.0 | 254.4 | 102 | 80 - 120 |
| Thallium | 12.50 | 12.06 | 96.5 | 80 - 120 |
| Vanadium | 25.00 | 24.36 | 97.5 | 80 - 120 |
| Zinc | 25.00 | 26.34 | 105 | 80 - 120 |

# SERIAL DILUTION

## SW6010C

1011022-03

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Laboratory ID: 0L06016-DUP1
Sequence: 0L34305
Lab Source ID: 1011260-03
Preparation: MET_3005A
Initial/Final: 50 / 50

| Analyte | Initial Sample Result (I) ug/L | Serial Dilution Result (S) ug/L | % Difference | Q | Method | QC Limits % Difference |
|---|---|---|---|---|---|---|
| Aluminum | 50.705 | ND | | | SW6010C | 10.00 |
| Antimony | ND | ND | | | SW6010C | 10.00 |
| Arsenic | 5.2967 | ND | | | SW6010C | 10.00 |
| Barium | 14.233 | ND | | | SW6010C | 10.00 |
| Beryllium | ND | ND | | | SW6010C | 10.00 |
| Cadmium | 6.3947 | 18.63 | 191 | | SW6010C | 10.00 |
| Calcium | 197750 | 178930 | -9.52 | | SW6010C | 10.00 |
| Chromium | ND | ND | | | SW6010C | 10.00 |
| Cobalt | ND | ND | | | SW6010C | 10.00 |
| Copper | ND | ND | | | SW6010C | 10.00 |
| Iron | ND | ND | | | SW6010C | 10.00 |
| Lead | ND | ND | | | SW6010C | 10.00 |
| Magnesium | 221900 | 249850 | 12.6 | E | SW6010C | 10.00 |
| Manganese | ND | ND | | | SW6010C | 10.00 |
| Nickel | ND | ND | | | SW6010C | 10.00 |
| Selenium | ND | ND | | | SW6010C | 10.00 |
| Silver | ND | ND | | | SW6010C | 10.00 |
| Thallium | ND | ND | | | SW6010C | 10.00 |
| Vanadium | ND | ND | | | SW6010C | 10.00 |
| Zinc | ND | ND | | | SW6010C | 10.00 |

# SERIAL DILUTION

## SW6010C

1011022-03

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sequence: 0L34705
Preparation: MET_3005A

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 0L06016-DUP2
Lab Source ID: 1011260-03RE1
Initial/Final: 50 / 50

| Analyte | Initial Sample Result (I) ug/L | Serial Dilution Result (S) ug/L | % Difference | Q | Method | QC Limits % Difference |
|---|---|---|---|---|---|---|
| Potassium | 11944 | 11034 | -7.62 | | SW6010C | 10.00 |
| Sodium | 354220 | 348220 | -1.7 | | SW6010C | 10.00 |

# SERIAL DILUTION

## SW6010C

1011013-20

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sequence: 0L35203
Preparation: MET_3050B

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 0L15009-DUP1
Lab Source ID: 1011259-20
Initial/Final: 0.54 / 100

| Analyte | Initial Sample Result (I) ug/L | Serial Dilution Result (S) ug/L | % Difference | Q | Method | QC Limits % Difference |
|---|---|---|---|---|---|---|
| Antimony | ND | ND | | | SW6010C | 10.00 |
| Arsenic | ND | ND | | | SW6010C | 10.00 |
| Barium | 41.232 | 40.198 | -2.51 | | SW6010C | 10.00 |
| Beryllium | ND | ND | | | SW6010C | 10.00 |
| Cadmium | 5.0661 | 10.947 | 116 | | SW6010C | 10.00 |
| Chromium | 34.881 | 36.752 | 5.36 | | SW6010C | 10.00 |
| Cobalt | ND | ND | | | SW6010C | 10.00 |
| Copper | 12.758 | ND | | | SW6010C | 10.00 |
| Iron | 18272 | 19387 | 6.1 | | SW6010C | 10.00 |
| Magnesium | 4312.5 | ND | | | SW6010C | 10.00 |
| Manganese | 91.979 | 95.795 | 4.15 | | SW6010C | 10.00 |
| Nickel | ND | ND | | | SW6010C | 10.00 |
| Potassium | ND | ND | | | SW6010C | 10.00 |
| Selenium | ND | ND | | | SW6010C | 10.00 |
| Silver | ND | ND | | | SW6010C | 10.00 |
| Sodium | 6340.5 | 6195.5 | -2.29 | | SW6010C | 10.00 |
| Thallium | ND | ND | | | SW6010C | 10.00 |
| Vanadium | 7.5098 | ND | | | SW6010C | 10.00 |

# SERIAL DILUTION

## SW6010C

1011013-20

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sequence: 0L35301
Preparation: MET_3050B

SDG: CTOJM16KW_004
Project: CTOJM16 Key West 2010
Laboratory ID: 0L15009-DUP2
Lab Source ID: 1011259-20RE1
Initial/Final: 0.54 / 100

| Analyte | Initial Sample Result (I) ug/L | Serial Dilution Result (S) ug/L | % Difference | Q | Method | QC Limits % Difference |
|---|---|---|---|---|---|---|
| Aluminum | 154.68 | 587.55 | 280 | | SW6010C | 10.00 |
| Calcium | 347500 | 369640 | 6.37 | | SW6010C | 10.00 |
| Lead | 18.259 | 21.839 | 19.6 | | SW6010C | 10.00 |
| Zinc | 12.492 | ND | | | SW6010C | 10.00 |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_004

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-FIMS

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Mercury | 0.0800 | 0.200 | ug/L | SW7470A |
| | 0.0130 | 0.0330 | mg/Kg | SW7471A |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_004

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Solid **Instrument:** ME-ICP

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aluminum | 2.50 | 10.0 | mg/Kg | SW6010C |
| | 12.5 | 50.0 | ug/L | SW6010C |
| | 50.0 | 200 | ug/L | SW6010C |
| Antimony | 0.250 | 0.750 | mg/Kg | SW6010C |
| | 5.00 | 10.0 | ug/L | SW6010C |
| | 1.25 | 3.75 | ug/L | SW6010C |
| Arsenic | 0.150 | 0.250 | mg/Kg | SW6010C |
| | 0.750 | 1.50 | ug/L | SW6010C |
| | 3.00 | 10.0 | ug/L | SW6010C |
| Barium | 0.250 | 2.00 | mg/Kg | SW6010C |
| | 1.25 | 10.0 | ug/L | SW6010C |
| | 5.00 | 40.0 | ug/L | SW6010C |
| Beryllium | 0.0500 | 0.250 | mg/Kg | SW6010C |
| | 1.00 | 5.00 | ug/L | SW6010C |
| | 0.250 | 1.25 | ug/L | SW6010C |
| Cadmium | 0.0500 | 0.250 | mg/Kg | SW6010C |
| | 0.250 | 1.25 | ug/L | SW6010C |
| | 1.00 | 5.00 | ug/L | SW6010C |
| Calcium | 50.0 | 250 | mg/Kg | SW6010C |
| | 1000 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Chromium | 0.100 | 0.500 | mg/Kg | SW6010C |
| | 0.500 | 1.25 | ug/L | SW6010C |
| | 2.00 | 10.0 | ug/L | SW6010C |
| Cobalt | 0.250 | 0.625 | mg/Kg | SW6010C |
| | 1.25 | 3.12 | ug/L | SW6010C |
| | 5.00 | 12.5 | ug/L | SW6010C |
| Copper | 0.250 | 0.500 | mg/Kg | SW6010C |
| | 4.00 | 10.0 | ug/L | SW6010C |
| | 1.25 | 2.50 | ug/L | SW6010C |
| Iron | 1.50 | 5.00 | mg/Kg | SW6010C |
| | 30.0 | 100 | ug/L | SW6010C |
| | 7.50 | 25.0 | ug/L | SW6010C |
| Lead | 0.0750 | 0.150 | mg/Kg | SW6010C |
| | 0.375 | 0.750 | ug/L | SW6010C |
| | 1.50 | 3.00 | ug/L | SW6010C |
| Magnesium | 50.0 | 250 | mg/Kg | SW6010C |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_004

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-ICP

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Magnesium | 1000 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Manganese | 0.150 | 0.750 | mg/Kg | SW6010C |
| | 3.00 | 15.0 | ug/L | SW6010C |
| | 0.750 | 3.75 | ug/L | SW6010C |
| Nickel | 0.250 | 0.500 | mg/Kg | SW6010C |
| | 3.00 | 10.0 | ug/L | SW6010C |
| | 0.750 | 2.50 | ug/L | SW6010C |
| Potassium | 50.0 | 250 | mg/Kg | SW6010C |
| | 1000 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Selenium | 0.150 | 0.500 | mg/Kg | SW6010C |
| | 0.750 | 1.50 | ug/L | SW6010C |
| | 3.00 | 10.0 | ug/L | SW6010C |
| Silver | 0.0500 | 0.500 | mg/Kg | SW6010C |
| | 1.00 | 10.0 | ug/L | SW6010C |
| | 0.250 | 1.25 | ug/L | SW6010C |
| Sodium | 50.0 | 250 | mg/Kg | SW6010C |
| | 200 | 5000 | ug/L | SW6010C |
| | 250 | 1250 | ug/L | SW6010C |
| Thallium | 0.150 | 0.400 | mg/Kg | SW6010C |
| | 0.750 | 2.00 | ug/L | SW6010C |
| | 3.00 | 8.00 | ug/L | SW6010C |
| Vanadium | 0.250 | 0.625 | mg/Kg | SW6010C |
| | 1.25 | 3.12 | ug/L | SW6010C |
| | 5.00 | 12.5 | ug/L | SW6010C |
| Zinc | 0.250 | 1.00 | mg/Kg | SW6010C |
| | 1.25 | 5.00 | ug/L | SW6010C |
| | 5.00 | 20.0 | ug/L | SW6010C |

# PREPARATION BATCH SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06007 Batch Matrix: Water Preparation: pMercury-W SW 7470A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06007-BLK1 | 12/06/10 07:47 | 30.00 | 30.00 |
| LCS | 0L06007-BS1 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011022-01 | 1011260-01 | 12/06/10 07:47 | 30.00 | 30.00 |

# PREPARATION BATCH SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Batch: 0L06008 Batch Matrix: Water

Preparation: pMercury-W EPA 245.1/7470A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06008-BLK1 | 12/06/10 07:49 | 30.00 | 30.00 |
| LCS | 0L06008-BS1 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011022-02 | 1011260-02 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011022-03 | 1011260-03 | 12/06/10 07:49 | 30.00 | 30.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06016 Batch Matrix: Water Preparation: MET_3005A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06016-BLK1 | 12/06/10 11:05 | 50.00 | 50.00 |
| LCS | 0L06016-BS1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-03 | 0L06016-DUP1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-03 | 0L06016-DUP2 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-03 | 0L06016-MS1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-03 | 0L06016-MSD1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-03 | 0L06016-PS1 | 12/06/10 11:05 | 20.00 | 20.00 |
| 1011022-01 | 1011260-01 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-01 | 1011260-01RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-02 | 1011260-02 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-02 | 1011260-02RE1 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-03 | 1011260-03 | 12/06/10 11:05 | 50.00 | 50.00 |
| 1011022-03 | 1011260-03RE1 | 12/06/10 11:05 | 50.00 | 50.00 |

# PREPARATION BATCH SUMMARY

## SW7471A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L10002 Batch Matrix: Solid Preparation: MET_HG_S

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L10002-BLK1 | 12/15/10 07:30 | 0.30 | 50.00 |
| LCS | 0L10002-BS1 | 12/15/10 07:30 | 0.30 | 50.00 |
| 1011013-20 | 0L10002-MS1 | 12/15/10 07:30 | 0.34 | 50.00 |
| 1011013-20 | 0L10002-MSD1 | 12/15/10 07:30 | 0.34 | 50.00 |
| 1011013-01 | 1011259-01 | 12/15/10 07:30 | 0.34 | 50.00 |
| 1011013-02 | 1011259-02 | 12/15/10 07:30 | 0.37 | 50.00 |
| 1011013-03 | 1011259-03 | 12/15/10 07:30 | 0.33 | 50.00 |
| 1011013-04 | 1011259-04 | 12/15/10 07:30 | 0.29 | 50.00 |
| 1011013-06 | 1011259-06 | 12/15/10 07:30 | 0.32 | 50.00 |
| 1011013-07 | 1011259-07 | 12/15/10 07:30 | 0.29 | 50.00 |
| 1011013-08 | 1011259-08 | 12/15/10 07:30 | 0.33 | 50.00 |
| 1011013-09 | 1011259-09 | 12/15/10 07:30 | 0.32 | 50.00 |
| 1011013-10 | 1011259-10 | 12/15/10 07:30 | 0.38 | 50.00 |
| 1011013-11 | 1011259-11 | 12/15/10 07:30 | 0.37 | 50.00 |
| 1011013-12 | 1011259-12 | 12/15/10 07:30 | 0.33 | 50.00 |
| 1011013-13 | 1011259-13 | 12/15/10 07:30 | 0.34 | 50.00 |
| 1011013-14 | 1011259-14 | 12/15/10 07:30 | 0.32 | 50.00 |
| 1011013-15 | 1011259-15 | 12/15/10 07:30 | 0.33 | 50.00 |
| 1011013-16 | 1011259-16 | 12/15/10 07:30 | 0.38 | 50.00 |
| 1011013-17 | 1011259-17 | 12/15/10 07:30 | 0.36 | 50.00 |
| 1011013-18 | 1011259-18 | 12/15/10 07:30 | 0.30 | 50.00 |
| 1011013-19 | 1011259-19 | 12/15/10 07:30 | 0.31 | 50.00 |
| 1011013-20 | 1011259-20 | 12/15/10 07:30 | 0.35 | 50.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L15009 Batch Matrix: Solid Preparation: MET_3050B

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L15009-BLK1 | 12/15/10 11:00 | 2.00 | 100.00 |
| LCS | 0L15009-BS1 | 12/15/10 11:00 | 2.00 | 100.00 |
| 1011013-20 | 0L15009-DUP1 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-20 | 0L15009-DUP2 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-20 | 0L15009-MS1 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011013-20 | 0L15009-MSD1 | 12/15/10 11:00 | 0.53 | 100.00 |
| 1011013-20 | 0L15009-PS1 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-01 | 1011259-01 | 12/15/10 11:00 | 0.53 | 100.00 |
| 1011013-01 | 1011259-01RE1 | 12/15/10 11:00 | 0.53 | 100.00 |
| 1011013-02 | 1011259-02 | 12/15/10 11:00 | 0.52 | 100.00 |
| 1011013-02 | 1011259-02RE1 | 12/15/10 11:00 | 0.52 | 100.00 |
| 1011013-03 | 1011259-03 | 12/15/10 11:00 | 0.50 | 100.00 |
| 1011013-03 | 1011259-03RE1 | 12/15/10 11:00 | 0.50 | 100.00 |
| 1011013-04 | 1011259-04 | 12/15/10 11:00 | 0.58 | 100.00 |
| 1011013-04 | 1011259-04RE1 | 12/15/10 11:00 | 0.58 | 100.00 |
| 1011013-06 | 1011259-06 | 12/15/10 11:00 | 0.59 | 100.00 |
| 1011013-06 | 1011259-06RE1 | 12/15/10 11:00 | 0.59 | 100.00 |
| 1011013-07 | 1011259-07 | 12/15/10 11:00 | 0.53 | 100.00 |
| 1011013-07 | 1011259-07RE1 | 12/15/10 11:00 | 0.53 | 100.00 |
| 1011013-08 | 1011259-08 | 12/15/10 11:00 | 0.56 | 100.00 |
| 1011013-08 | 1011259-08RE1 | 12/15/10 11:00 | 0.56 | 100.00 |
| 1011013-09 | 1011259-09 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011013-09 | 1011259-09RE1 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011013-10 | 1011259-10 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011013-10 | 1011259-10RE1 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011013-11 | 1011259-11 | 12/15/10 11:00 | 0.57 | 100.00 |
| 1011013-11 | 1011259-11RE1 | 12/15/10 11:00 | 0.57 | 100.00 |
| 1011013-12 | 1011259-12 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-12 | 1011259-12RE1 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-13 | 1011259-13 | 12/15/10 11:00 | 0.50 | 100.00 |
| 1011013-13 | 1011259-13RE1 | 12/15/10 11:00 | 0.50 | 100.00 |
| 1011013-14 | 1011259-14 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011013-14 | 1011259-14RE1 | 12/15/10 11:00 | 0.51 | 100.00 |
| 1011013-15 | 1011259-15 | 12/15/10 11:00 | 0.56 | 100.00 |
| 1011013-15 | 1011259-15RE1 | 12/15/10 11:00 | 0.56 | 100.00 |
| 1011013-16 | 1011259-16 | 12/15/10 11:00 | 0.53 | 100.00 |
| 1011013-16 | 1011259-16RE1 | 12/15/10 11:00 | 0.53 | 100.00 |
| 1011013-17 | 1011259-17 | 12/15/10 11:00 | 0.52 | 100.00 |
| 1011013-17 | 1011259-17RE1 | 12/15/10 11:00 | 0.52 | 100.00 |
| 1011013-18 | 1011259-18 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-18 | 1011259-18RE1 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-19 | 1011259-19 | 12/15/10 11:00 | 0.56 | 100.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_004

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L15009 Batch Matrix: Solid Preparation: MET_3050B

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| 1011013-19 | 1011259-19RE1 | 12/15/10 11:00 | 0.56 | 100.00 |
| 1011013-20 | 1011259-20 | 12/15/10 11:00 | 0.54 | 100.00 |
| 1011013-20 | 1011259-20RE1 | 12/15/10 11:00 | 0.54 | 100.00 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Instrument: ME-ICP
Calibration: 0350004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34305-CAL1 | 120710A-001 | 12/07/10 10:19 |
| Cal Standard | 0L34305-CAL2 | 120710A-002 | 12/07/10 10:24 |
| Cal Standard | 0L34305-CAL3 | 120710A-003 | 12/07/10 10:28 |
| Cal Standard | 0L34305-CAL4 | 120710A-004 | 12/07/10 10:32 |
| Cal Standard | 0L34305-CAL5 | 120710A-005 | 12/07/10 10:37 |
| Cal Standard | 0L34305-CAL6 | 120710A-006 | 12/07/10 10:41 |
| Cal Standard | 0L34305-CAL7 | 120710A-007 | 12/07/10 10:46 |
| Cal Standard | 0L34305-CAL8 | 120710A-008 | 12/07/10 10:51 |
| Initial Cal Check | 0L34305-ICV1 | 120710B-001 | 12/07/10 11:44 |
| Initial Cal Blank | 0L34305-ICB1 | 120710B-002 | 12/07/10 11:51 |
| Instrument RL Check | 0L34305-CRL1 | 120710B-004 | 12/07/10 12:01 |
| Instrument RL Check | 0L34305-CRL2 | 120710B-006 | 12/07/10 12:13 |
| Interference Check A | 0L34305-IFA1 | 120710B-007 | 12/07/10 12:18 |
| Interference Check B | 0L34305-IFB1 | 120710B-008 | 12/07/10 12:25 |
| Interference Check B | 0L34305-IFB2 | 120710B-009 | 12/07/10 12:32 |
| Calibration Check | 0L34305-CCV1 | 120710B-011 | 12/07/10 12:52 |
| Calibration Blank | 0L34305-CCB1 | 120710B-012 | 12/07/10 13:04 |
| Calibration Check | 0L34305-CCV3 | 120710B-041 | 12/07/10 15:46 |
| Calibration Blank | 0L34305-CCB3 | 120710B-042 | 12/07/10 15:54 |
| Blank | 0L06016-BLK1 | 120710B-043 | 12/07/10 15:58 |
| LCS | 0L06016-BS1 | 120710B-044 | 12/07/10 16:03 |
| Calibration Check | 0L34305-CCV4 | 120710B-055 | 12/07/10 17:02 |
| Calibration Blank | 0L34305-CCB4 | 120710B-056 | 12/07/10 17:09 |
| 1011022-01 | 1011260-01 | 120710B-064 | 12/07/10 17:49 |
| 1011022-02 | 1011260-02 | 120710B-065 | 12/07/10 17:54 |
| 1011022-03 | 1011260-03 | 120710B-066 | 12/07/10 17:59 |
| 1011022-03 | 0L06016-MS1 | 120710B-067 | 12/07/10 18:04 |
| 1011022-03 | 0L06016-MSD1 | 120710B-068 | 12/07/10 18:08 |
| 1011022-03 | 0L06016-PS1 | 120710B-069 | 12/07/10 18:13 |
| 1011022-03 | 0L06016-DUP1 | 120710B-070 | 12/07/10 18:19 |
| Calibration Check | 0L34305-CCV5 | 120710B-071 | 12/07/10 18:26 |
| Calibration Blank | 0L34305-CCB5 | 120710B-072 | 12/07/10 18:33 |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34403
Instrument: ME-FIMS
Calibration: 0344004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34403-CAL1 | COPY120810W-002 | 12/08/10 10:42 |
| Cal Standard | 0L34403-CAL2 | COPY120810W-003 | 12/08/10 10:43 |
| Cal Standard | 0L34403-CAL3 | COPY120810W-004 | 12/08/10 10:45 |
| Cal Standard | 0L34403-CAL4 | COPY120810W-005 | 12/08/10 10:47 |
| Cal Standard | 0L34403-CAL5 | COPY120810W-006 | 12/08/10 10:49 |
| Cal Standard | 0L34403-CAL6 | COPY120810W-007 | 12/08/10 10:51 |
| Cal Standard | 0L34403-CAL7 | COPY120810W-008 | 12/08/10 10:53 |
| Initial Cal Check | 0L34403-ICV1 | COPY120810W-009 | 12/08/10 10:59 |
| Initial Cal Blank | 0L34403-ICB1 | COPY120810W-010 | 12/08/10 11:00 |
| Instrument RL Check | 0L34403-CRL1 | COPY120810W-011 | 12/08/10 11:02 |
| Calibration Check | 0L34403-CCV1 | COPY120810W-021 | 12/08/10 11:28 |
| Calibration Blank | 0L34403-CCB1 | COPY120810W-022 | 12/08/10 11:29 |
| Calibration Check | 0L34403-CCV2 | COPY120810W-033 | 12/08/10 11:49 |
| Calibration Blank | 0L34403-CCB2 | COPY120810W-034 | 12/08/10 11:50 |
| LCS | 0L06007-BS1 | COPY120810W-042 | 12/08/10 12:02 |
| Blank | 0L06007-BLK1 | COPY120810W-043 | 12/08/10 12:04 |
| Calibration Check | 0L34403-CCV3 | COPY120810W-045 | 12/08/10 12:12 |
| Calibration Blank | 0L34403-CCB3 | COPY120810W-046 | 12/08/10 12:13 |
| Calibration Check | 0L34403-CCV4 | COPY120810W-057 | 12/08/10 12:30 |
| Calibration Blank | 0L34403-CCB4 | COPY120810W-058 | 12/08/10 12:32 |
| 1011022-01 | 1011260-01 | COPY120810W-067 | 12/08/10 12:48 |
| Calibration Check | 0L34403-CCV5 | COPY120810W-068 | 12/08/10 12:49 |
| Calibration Blank | 0L34403-CCB5 | COPY120810W-069 | 12/08/10 12:51 |
| LCS | 0L06008-BS1 | COPY120810W-070 | 12/08/10 12:53 |
| Blank | 0L06008-BLK1 | COPY120810W-071 | 12/08/10 12:54 |
| 1011022-02 | 1011260-02 | COPY120810W-072 | 12/08/10 12:56 |
| 1011022-03 | 1011260-03 | COPY120810W-073 | 12/08/10 12:57 |
| Calibration Check | 0L34403-CCV6 | COPY120810W-080 | 12/08/10 13:16 |
| Calibration Blank | 0L34403-CCB6 | COPY120810W-081 | 12/08/10 13:17 |
| Calibration Check | 0L34403-CCV7 | COPY120810W-092 | 12/08/10 13:35 |
| Calibration Blank | 0L34403-CCB7 | COPY120810W-093 | 12/08/10 13:37 |
| Instrument RL Check | 0L34403-CRL2 | COPY120810W-097 | 12/08/10 13:42 |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34403 | Instrument: | ME-FIMS |
| Calibration: | 0344004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L34403-CCV8 | COPY120810W-098 | 12/08/10 13:44 |
| Calibration Blank | 0L34403-CCB8 | COPY120810W-099 | 12/08/10 13:46 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34705 | Instrument: | ME-ICP |
| Calibration: | 0352001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34705-CAL1 | 120910A-001 | 12/09/10 11:18 |
| Cal Standard | 0L34705-CAL2 | 120910A-002 | 12/09/10 11:22 |
| Cal Standard | 0L34705-CAL3 | 120910A-003 | 12/09/10 11:27 |
| Cal Standard | 0L34705-CAL7 | 120910A-007 | 12/09/10 11:46 |
| Cal Standard | 0L34705-CAL8 | 120910A-008 | 12/09/10 11:51 |
| Initial Cal Check | 0L34705-ICV1 | 120910B-001 | 12/09/10 12:22 |
| Initial Cal Blank | 0L34705-ICB1 | 120910B-002 | 12/09/10 12:30 |
| Instrument RL Check | 0L34705-CRL1 | 120910B-003 | 12/09/10 12:34 |
| Interference Check A | 0L34705-IFA1 | 120910B-005 | 12/09/10 12:43 |
| Interference Check B | 0L34705-IFB1 | 120910B-006 | 12/09/10 12:57 |
| Calibration Check | 0L34705-CCV1 | 120910C-002 | 12/09/10 13:11 |
| Calibration Blank | 0L34705-CCB1 | 120910C-003 | 12/09/10 13:18 |
| Calibration Check | 0L34705-CCV6 | 120910C-073 | 12/09/10 19:18 |
| Calibration Blank | 0L34705-CCB6 | 120910C-074 | 12/09/10 19:26 |
| 1011022-01 | 1011260-01RE1 | 120910C-076 | 12/09/10 19:37 |
| 1011022-02 | 1011260-02RE1 | 120910C-077 | 12/09/10 19:42 |
| 1011022-03 | 1011260-03RE1 | 120910C-078 | 12/09/10 19:46 |
| 1011022-03 | 0L06016-DUP2 | 120910C-079 | 12/09/10 19:51 |
| Calibration Check | 0L34705-CCV7 | 120910C-087 | 12/09/10 20:30 |
| Calibration Blank | 0L34705-CCB7 | 120910C-088 | 12/09/10 20:37 |

# ANALYSIS SEQUENCE SUMMARY

## SW7471A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35013
Instrument: ME-FIMS
Calibration: 0350003

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35013-CAL1 | 121610S-002 | 12/16/10 11:21 |
| Cal Standard | 0L35013-CAL2 | 121610S-003 | 12/16/10 11:22 |
| Cal Standard | 0L35013-CAL3 | 121610S-004 | 12/16/10 11:24 |
| Cal Standard | 0L35013-CAL4 | 121610S-005 | 12/16/10 11:26 |
| Cal Standard | 0L35013-CAL5 | 121610S-006 | 12/16/10 11:28 |
| Cal Standard | 0L35013-CAL6 | 121610S-007 | 12/16/10 11:30 |
| Cal Standard | 0L35013-CAL7 | 121610S-008 | 12/16/10 11:32 |
| Cal Standard | 0L35013-CAL8 | 121610S-009 | 12/16/10 11:34 |
| Initial Cal Check | 0L35013-ICV1 | 121610S-010 | 12/16/10 11:48 |
| Initial Cal Blank | 0L35013-ICB1 | 121610S-011 | 12/16/10 11:50 |
| Instrument RL Check | 0L35013-CRL1 | 121610S-012 | 12/16/10 11:53 |
| LCS | 0L10002-BS1 | 121610S-013 | 12/16/10 11:54 |
| Blank | 0L10002-BLK1 | 121610S-014 | 12/16/10 11:56 |
| 1011013-01 | 1011259-01 | 121610S-016 | 12/16/10 11:59 |
| 1011013-02 | 1011259-02 | 121610S-017 | 12/16/10 12:01 |
| 1011013-03 | 1011259-03 | 121610S-018 | 12/16/10 12:03 |
| 1011013-04 | 1011259-04 | 121610S-019 | 12/16/10 12:05 |
| 1011013-06 | 1011259-06 | 121610S-020 | 12/16/10 12:07 |
| 1011013-07 | 1011259-07 | 121610S-021 | 12/16/10 12:09 |
| Calibration Check | 0L35013-CCV1 | 121610S-022 | 12/16/10 12:10 |
| Calibration Blank | 0L35013-CCB1 | 121610S-023 | 12/16/10 12:12 |
| 1011013-08 | 1011259-08 | 121610S-024 | 12/16/10 12:25 |
| 1011013-09 | 1011259-09 | 121610S-025 | 12/16/10 12:27 |
| 1011013-10 | 1011259-10 | 121610S-026 | 12/16/10 12:29 |
| 1011013-11 | 1011259-11 | 121610S-027 | 12/16/10 12:31 |
| 1011013-12 | 1011259-12 | 121610S-028 | 12/16/10 12:32 |
| 1011013-13 | 1011259-13 | 121610S-029 | 12/16/10 12:34 |
| 1011013-14 | 1011259-14 | 121610S-030 | 12/16/10 12:36 |
| 1011013-15 | 1011259-15 | 121610S-031 | 12/16/10 12:38 |
| 1011013-16 | 1011259-16 | 121610S-032 | 12/16/10 12:40 |
| 1011013-17 | 1011259-17 | 121610S-033 | 12/16/10 12:42 |
| Calibration Check | 0L35013-CCV2 | 121610S-034 | 12/16/10 12:43 |

# ANALYSIS SEQUENCE SUMMARY

## SW7471A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35013 | Instrument: | ME-FIMS |
| Calibration: | 0350003 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Blank | 0L35013-CCB2 | 121610S-035 | 12/16/10 12:45 |
| 1011013-18 | 1011259-18 | 121610S-036 | 12/16/10 12:47 |
| 1011013-19 | 1011259-19 | 121610S-037 | 12/16/10 12:48 |
| 1011013-20 | 1011259-20 | 121610S-038 | 12/16/10 12:50 |
| 1011013-20 | 0L10002-MS1 | 121610S-039 | 12/16/10 12:52 |
| 1011013-20 | 0L10002-MSD1 | 121610S-040 | 12/16/10 12:53 |
| Calibration Check | 0L35013-CCV3 | 121610S-046 | 12/16/10 13:04 |
| Calibration Blank | 0L35013-CCB3 | 121610S-047 | 12/16/10 13:06 |
| Calibration Check | 0L35013-CCV6 | 121610S-082 | 12/16/10 14:08 |
| Calibration Blank | 0L35013-CCB6 | 121610S-083 | 12/16/10 14:10 |
| Instrument RL Check | 0L35013-CRL2 | 121610S-091 | 12/16/10 14:25 |
| Calibration Check | 0L35013-CCV7 | 121610S-092 | 12/16/10 14:27 |
| Calibration Blank | 0L35013-CCB7 | 121610S-093 | 12/16/10 14:28 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_004
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35203
Instrument: ME-ICP
Calibration: 0350004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35203-CAL1 | 121610A-001 | 12/16/10 08:52 |
| Cal Standard | 0L35203-CAL2 | 121610A-002 | 12/16/10 08:57 |
| Cal Standard | 0L35203-CAL3 | 121610A-003 | 12/16/10 09:01 |
| Cal Standard | 0L35203-CAL4 | 121610A-004 | 12/16/10 09:06 |
| Cal Standard | 0L35203-CAL5 | 121610A-005 | 12/16/10 09:11 |
| Cal Standard | 0L35203-CAL6 | 121610A-006 | 12/16/10 09:16 |
| Cal Standard | 0L35203-CAL7 | 121610A-007 | 12/16/10 09:21 |
| Cal Standard | 0L35203-CAL8 | 121610A-008 | 12/16/10 09:26 |
| Initial Cal Check | 0L35203-ICV1 | 121610B-001 | 12/16/10 10:06 |
| Initial Cal Blank | 0L35203-ICB1 | 121610B-002 | 12/16/10 10:14 |
| Instrument RL Check | 0L35203-CRL1 | 121610B-005 | 12/16/10 10:29 |
| Instrument RL Check | 0L35203-CRL2 | 121610B-006 | 12/16/10 10:34 |
| Interference Check A | 0L35203-IFA1 | 121610B-007 | 12/16/10 10:39 |
| Interference Check B | 0L35203-IFB1 | 121610B-008 | 12/16/10 10:45 |
| Calibration Check | 0L35203-CCV1 | 121610B-010 | 12/16/10 10:57 |
| Calibration Blank | 0L35203-CCB1 | 121610B-011 | 12/16/10 11:04 |
| Calibration Check | 0L35203-CCV2 | 121610B-015 | 12/16/10 11:25 |
| Calibration Blank | 0L35203-CCB2 | 121610B-016 | 12/16/10 11:33 |
| Blank | 0L15009-BLK1 | 121610B-017 | 12/16/10 11:37 |
| LCS | 0L15009-BS1 | 121610B-018 | 12/16/10 11:42 |
| 1011013-01 | 1011259-01 | 121610B-020 | 12/16/10 11:53 |
| 1011013-02 | 1011259-02 | 121610B-021 | 12/16/10 11:58 |
| 1011013-03 | 1011259-03 | 121610B-022 | 12/16/10 12:03 |
| 1011013-04 | 1011259-04 | 121610B-023 | 12/16/10 12:08 |
| 1011013-06 | 1011259-06 | 121610B-024 | 12/16/10 12:13 |
| 1011013-07 | 1011259-07 | 121610B-025 | 12/16/10 12:17 |
| 1011013-08 | 1011259-08 | 121610B-026 | 12/16/10 12:22 |
| 1011013-09 | 1011259-09 | 121610B-027 | 12/16/10 12:27 |
| 1011013-10 | 1011259-10 | 121610B-028 | 12/16/10 12:32 |
| Calibration Check | 0L35203-CCV3 | 121610B-029 | 12/16/10 12:40 |
| Calibration Blank | 0L35203-CCB3 | 121610B-030 | 12/16/10 12:47 |
| 1011013-11 | 1011259-11 | 121610B-031 | 12/16/10 12:52 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35203 | Instrument: | ME-ICP |
| Calibration: | 0350004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| 1011013-12 | 1011259-12 | 121610B-032 | 12/16/10 12:56 |
| 1011013-13 | 1011259-13 | 121610B-033 | 12/16/10 13:01 |
| 1011013-14 | 1011259-14 | 121610B-034 | 12/16/10 13:06 |
| 1011013-15 | 1011259-15 | 121610B-035 | 12/16/10 13:11 |
| 1011013-16 | 1011259-16 | 121610B-036 | 12/16/10 13:16 |
| 1011013-17 | 1011259-17 | 121610B-037 | 12/16/10 13:21 |
| 1011013-18 | 1011259-18 | 121610B-038 | 12/16/10 13:26 |
| 1011013-19 | 1011259-19 | 121610B-039 | 12/16/10 13:31 |
| 1011013-20 | 1011259-20 | 121610B-040 | 12/16/10 13:35 |
| 1011013-20 | 0L15009-MS1 | 121610B-041 | 12/16/10 13:40 |
| 1011013-20 | 0L15009-MSD1 | 121610B-042 | 12/16/10 13:45 |
| 1011013-20 | 0L15009-PS1 | 121610B-043 | 12/16/10 13:50 |
| 1011013-20 | 0L15009-DUP1 | 121610B-044 | 12/16/10 13:55 |
| Calibration Check | 0L35203-CCV4 | 121610B-045 | 12/16/10 14:03 |
| Calibration Blank | 0L35203-CCB4 | 121610B-046 | 12/16/10 14:10 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35301 | Instrument: | ME-ICP |
| Calibration: | 0354001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35301-CAL1 | 121710A-001 | 12/17/10 09:50 |
| Cal Standard | 0L35301-CAL2 | 121710A-002 | 12/17/10 09:54 |
| Cal Standard | 0L35301-CAL3 | 121710A-003 | 12/17/10 09:59 |
| Cal Standard | 0L35301-CAL5 | 121710A-005 | 12/17/10 10:11 |
| Cal Standard | 0L35301-CAL6 | 121710A-006 | 12/17/10 10:16 |
| Cal Standard | 0L35301-CAL7 | 121710A-007 | 12/17/10 10:23 |
| Cal Standard | 0L35301-CAL8 | 121710A-008 | 12/17/10 10:28 |
| Initial Cal Check | 0L35301-ICV1 | 121710C-001 | 12/17/10 11:19 |
| Initial Cal Blank | 0L35301-ICB1 | 121710C-002 | 12/17/10 11:27 |
| Instrument RL Check | 0L35301-CRL1 | 121710C-003 | 12/17/10 11:31 |
| Interference Check A | 0L35301-IFA1 | 121710C-006 | 12/17/10 11:47 |
| Interference Check B | 0L35301-IFB1 | 121710C-007 | 12/17/10 11:55 |
| Calibration Check | 0L35301-CCV1 | 121710C-009 | 12/17/10 12:15 |
| Calibration Blank | 0L35301-CCB1 | 121710C-010 | 12/17/10 12:23 |
| Calibration Check | 0L35301-CCV2 | 121710C-026 | 12/17/10 13:47 |
| Calibration Blank | 0L35301-CCB2 | 121710C-027 | 12/17/10 13:54 |
| Calibration Check | 0L35301-CCV3 | 121710C-047 | 12/17/10 15:38 |
| Calibration Blank | 0L35301-CCB3 | 121710C-048 | 12/17/10 15:46 |
| 1011013-01 | 1011259-01RE1 | 121710D-003 | 12/17/10 16:02 |
| 1011013-02 | 1011259-02RE1 | 121710D-004 | 12/17/10 16:07 |
| 1011013-03 | 1011259-03RE1 | 121710D-005 | 12/17/10 16:12 |
| 1011013-04 | 1011259-04RE1 | 121710D-006 | 12/17/10 16:17 |
| 1011013-06 | 1011259-06RE1 | 121710D-007 | 12/17/10 16:22 |
| 1011013-07 | 1011259-07RE1 | 121710D-008 | 12/17/10 16:27 |
| 1011013-08 | 1011259-08RE1 | 121710D-009 | 12/17/10 16:32 |
| 1011013-09 | 1011259-09RE1 | 121710D-010 | 12/17/10 16:37 |
| 1011013-10 | 1011259-10RE1 | 121710D-011 | 12/17/10 16:41 |
| Calibration Check | 0L35301-CCV4 | 121710D-012 | 12/17/10 16:47 |
| Calibration Blank | 0L35301-CCB4 | 121710D-013 | 12/17/10 16:55 |
| 1011013-11 | 1011259-11RE1 | 121710D-014 | 12/17/10 16:59 |
| 1011013-12 | 1011259-12RE1 | 121710D-015 | 12/17/10 17:04 |
| 1011013-13 | 1011259-13RE1 | 121710D-016 | 12/17/10 17:09 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_004 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35301 | Instrument: | ME-ICP |
| Calibration: | 0354001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| 1011013-14 | 1011259-14RE1 | 121710D-017 | 12/17/10 17:14 |
| 1011013-15 | 1011259-15RE1 | 121710D-018 | 12/17/10 17:19 |
| 1011013-16 | 1011259-16RE1 | 121710D-019 | 12/17/10 17:24 |
| 1011013-17 | 1011259-17RE1 | 121710D-020 | 12/17/10 17:29 |
| 1011013-18 | 1011259-18RE1 | 121710D-021 | 12/17/10 17:34 |
| 1011013-19 | 1011259-19RE1 | 121710D-022 | 12/17/10 17:39 |
| 1011013-20 | 1011259-20RE1 | 121710D-023 | 12/17/10 17:44 |
| 1011013-20 | 0L15009-DUP2 | 121710D-024 | 12/17/10 17:49 |
| Calibration Check | 0L35301-CCV5 | 121710D-025 | 12/17/10 17:54 |
| Calibration Blank | 0L35301-CCB5 | 121710D-026 | 12/17/10 18:02 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 14, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – PEST/PCB**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_005**

**SAMPLES:** 7 / Aqueous / PEST / PCB

| | | |
|---|---|---|
| G01-MW-01A-1010 | G01-MW-03-1010 | G01-MW-05-1010 |
| G01-MW-07-1010 | G01-MW-08-1010 | G01-MW-12-1010 |
| GKHMS-GW-FD04-1010 | | |

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_005 consisted of seven (7) aqueous environmental samples, including one (1) field duplicate pair sample. All samples were analyzed for the organochloride pesticides (PEST) and polychlorinated biphenyls (PCB) as indicated above. The field duplicate pair in the Sample Delivery Group (SDG) was: GKHMS-GW-FD04-1010 / G01-MW-08-1010.

The samples were collected by Tetra Tech NUS on November 6 and 7, 2010 and analyzed by Empirical Laboratories LLC upon transfer from Centauri Labs who performed the initial sample method extractions. All analyses were conducted in accordance with SW-846 Method 8081A and 8082A analytical and reporting protocols. The data contained in this SDG were fully validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
• Initial and Continuing Calibration
* • Laboratory Blank Analyses
• Blank Spike Results
• System Monitoring Compound/Surrogate Recovery
• Field Duplicate Results
* • Compound Identification
• Compound Quantitation
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

PEST

The closing CCV %D was greater than 15% quality control limit for instrument GL-ECD3 on 12/10/10 @ 20:51 for the column ZB-MR-2 for alpha-BHC and for the ZB-MR-1 column for heptachlor, affecting all the SDG samples. The positive alpha-BHC results for samples G01-MW-12-1010 and GKHMS-GW-FD04-1010 were qualified estimated, (J), as they were reported from the ZB-MR-2 column. The positive heptachlor result for sample G01-MW-05-1010 was qualified estimated, (J), as it was reported from the ZB-MR-1

column. The non-detected heptachlor and alpha-BHC results were not qualified as the alternate column CCV %Ds for heptachlor and alpha-BHC were within the quality control limit.

The PEST laboratory control sample (LCS) percent recoveries (%Rs) for batch 0L06021 exceeded the quality control limits for all PEST analytes affecting all samples. The non-detected PEST analytes for all samples were not qualified. The positive PEST analytes for all samples were qualified estimated, (J).

The matrix spike (MS) and the MS duplicate (MSD) %Rs were greater than the quality control limit for a number of PEST analytes for spiked sample G01-MW-05-1010. No action was taken for this issue for the non-detected analytes for the sample. The positive result for endosulfan sulfate was not qualified as the %Rs for the MS and the MSD were within the quality control limits. The positive results for beta-BHC and heptachlor were qualified estimated, (J), as both the analytical column %Rs for these analytes for the MS and MSD were greater than the quality control limits.

The relative percent difference (RPD) was greater than the 40% quality control limit for positive PEST results as listed below and the positive results greater than 40% were qualified estimated, (J).

| Sample | Analyte | RPD | Qualified |
|---|---|---|---|
| G01-MW-08-1010 | 4,4'-DDD | 60 | J |
| | Alpha-chlordane | 92 | J |
| | Endosulfan I | 170 | J |
| | Heptachlor Epoxide | 80.8 | J |
| G01-MW12-1010 | Gamma-BHC | 143 | J |
| GKHMS-GW-FD04-1010 | Alpha-BHC | 109 | J |
| | Alpha-chlordane | 75 | J |
| | Gamma-BHC | 47 | J |
| G01-MW-05-1010 | Endosulfan sulfate | 153 | J |

The higher of the two column PEST results was reported except in cases where the laboratory determined that there was a sample matrix interference in which case the alternate column result was reported. Due to the matrix interference the positive results reported from the alternate column were qualified estimated, (J).

All positive and non-detected sample results with matrix interferences as indicated by the laboratory results were qualified estimated, (J) and (UJ), respectively. The matrix interferences also resulted in elevated method detection limits for non-detected analytes affected by the interferences. The affected samples were G01-MW-03-1010, G01-MW-07-1010, G01-MW-08-1010, G01-MW-12-1010, and GKHMS-GW-FD04-1010. The associated analytes affected by the matrix interferences are listed below.

| Sample | Analytes with matrix interference |
|---|---|
| G01-MW-03-1010 | 4,4'-DDE, aldrin, alpha-chlordane, beta-BHC, delta-BHC, dieldrin, gamma-chlordane, heptachlor, heptachlor epoxide |
| G01-MW-05-1010 | endosulfan sulfate |
| G01-MW-07-1010 | 4,4'-DDE, aldrin, alpha-chlordane, beta-BHC, delta-BHC, dieldrin, gamma-chlordane, heptachlor, heptachlor epoxide |
| G01-MW-08-1010 | 4,4'-DDE, aldrin, alpha-chlordane, beta-BHC, delta-BHC, dieldrin, gamma-chlordane, endosulfan I, heptachlor, heptachlor epoxide |
| G01-MW-12-1010 | 4,4'-DDE, aldrin, alpha-chlordane, beta-BHC, delta-BHC, dieldrin, gamma-BHC, gamma-chlordane, heptachlor, heptachlor epoxide |
| GKHMS-GW-FD04-1010 | 4,4'-DDE, aldrin, alpha-BHC, alpha-chlordane, beta-BHC, delta-BHC, dieldrin, gamma-BHC, gamma-chlordane, heptachlor, heptachlor epoxide |

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

PCB

No issues were identified.

Additional Comments

The samples were initially sent to Centauri Labs for analysis but the laboratory closed prior to sample analysis completion. The laboratory extracted the samples for PESTs and PCBs prior to closure. The extracts were sent to Empirical for the completion of the analyses. Not all of the samples made it to Empirical Laboratory for analysis as indicated on the Chain of Custodies (COC). Samples were logged in to Empirical using the Centauri Labs identification instead of the sample identification. The Form I results for this SDG have been manually edited to indicate the actually sample name.

The opening CCV %D was greater than 15% quality control limit for instrument GL-ECD3 on 12/10/10 @ 12:06 for the column ZB-MR-1 for endrin and on 12/10/10 @ 12:44 for the column ZB-MR-2 for toxaphene affecting all the SDG samples. The closing CCV %D was greater than 15% quality control limit for instrument GL-ECD3 on 12/10/10 @ 20:51 for the column ZB-MR-2 for 4,4'-DDT and delta-BHC, and for the ZB-MR-1 column for heptachlor, and on 12/10/10 @ 21:28 for the column ZB-MR-2 for toxaphene affecting all the SDG samples. The endrin, 4,4'-DDT, delta-BHC, and toxaphene results for all the samples were non-detected and the %R was within the quality control limits for both the opening and closing CCVs for the alternate columns. No validation action was taken for the non-detected sample results for endrin, 4,4'-DDT, delta-BHC, and toxaphene.

The closing CCV %D was greater than 15% quality control limit for instrument GL-ECD3 on 12/10/10 @ 20:51 for the column ZB-MR-2 for gamma-BHC affecting all the SDG samples. The positive gamma-BHC results for samples GKHMS-GW-FD04-1010 and G01-MW-12-1010 were reported from the ZB-MR-1 column which had %Ds within the quality control limits and the positive sample results were not qualified.

The PEST and PCB surrogate decachlorobiphenyl %R was greater than the quality control limit for the ZB-MR-2 column for sample G01-MW-01A-1010. All sample analytes were non-detected and the surrogate %R for the alternate column was within the quality control limits, therefore no action was taken for this issue.

The PCB MSD %R was less than the quality control limit and the RPD for the MS/MSD was greater than the quality control limit for Aroclor-1242. As the PCB MS for Aroclor-1242 was within the quality control limits no action was taken.

## Executive Summary

**Laboratory Performance:** PEST continuing calibration verification %Ds which exceeded the quality control limits resulted in the qualification of pesticide positive results. PEST results were qualified due to analyte matrix interferences.

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

## Appendix A

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01A-1010 | | | G01-MW-03-1010 | | | G01-MW-05-1010 | | | G01-MW-07-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_005 | LAB_ID | 1011261-01 | | | 1011261-02 | | | 1011261-05 | | | 1011261-03 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/7/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.005 | U | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| 4,4'-DDE | | 0.005 | U | | 0.02 | UJ | Q | 0.005 | U | | 0.02 | UJ | Q |
| 4,4'-DDT | | 0.005 | U | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ALDRIN | | 0.0033 | U | | 0.02 | UJ | Q | 0.0033 | U | | 0.02 | UJ | Q |
| ALPHA-BHC | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| ALPHA-CHLORDANE | | 0.0033 | U | | 0.01 | UJ | Q | 0.0033 | U | | 0.01 | UJ | Q |
| AROCLOR-1016 | | 0.12 | U | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1221 | | 0.12 | U | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1232 | | 0.12 | U | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1242 | | 0.12 | U | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1248 | | 0.12 | U | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1254 | | 0.12 | U | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1260 | | 0.12 | U | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| BETA-BHC | | 0.0033 | U | | 0.02 | UJ | Q | 0.00621 | J | DEP | 0.02 | UJ | Q |
| DELTA-BHC | | 0.0033 | U | | 0.02 | UJ | Q | 0.0033 | U | | 0.02 | UJ | Q |
| DIELDRIN | | 0.005 | U | | 0.05 | UJ | Q | 0.005 | U | | 0.05 | UJ | Q |
| ENDOSULFAN I | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| ENDOSULFAN II | | 0.005 | U | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN SULFATE | | 0.005 | U | | 0.005 | U | | 0.00549 | J | EPQU | 0.005 | U | |
| ENDRIN | | 0.005 | U | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN ALDEHYDE | | 0.005 | U | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN KETONE | | 0.005 | U | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| GAMMA-BHC (LINDANE) | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| GAMMA-CHLORDANE | | 0.0033 | U | | 0.02 | UJ | Q | 0.0033 | U | | 0.02 | UJ | Q |
| HEPTACHLOR | | 0.0033 | U | | 0.02 | UJ | Q | 0.00408 | J | CDEP | 0.02 | UJ | Q |
| HEPTACHLOR EPOXIDE | | 0.0033 | U | | 0.01 | UJ | Q | 0.0033 | U | | 0.01 | UJ | Q |
| METHOXYCHLOR | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| TOXAPHENE | | 0.33 | U | | 0.33 | U | | 0.33 | U | | 0.33 | U | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-08-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_005 | LAB_ID | 1011261-06 | | | 1011261-04 | | | 1011261-07 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/7/2010 | | | 11/6/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | G01-MW-08-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.0202 | J | EU | 0.005 | U | | 0.0324 | J | E |
| 4,4'-DDE | | 0.02 | UJ | Q | 0.02 | UJ | Q | 0.02 | UJ | Q |
| 4,4'-DDT | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ALDRIN | | 0.02 | UJ | Q | 0.02 | UJ | Q | 0.02 | UJ | Q |
| ALPHA-BHC | | 0.0033 | U | | 0.0378 | J | E | 0.00831 | J | EPQU |
| ALPHA-CHLORDANE | | 0.0292 | J | EQU | 0.01 | UJ | Q | 0.0281 | J | EQU |
| AROCLOR-1016 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1221 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1232 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1242 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1248 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1254 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| AROCLOR-1260 | | 0.12 | U | | 0.12 | U | | 0.12 | U | |
| BETA-BHC | | 0.04 | UJ | Q | 0.02 | UJ | Q | 0.02 | UJ | Q |
| DELTA-BHC | | 0.02 | UJ | Q | 0.02 | UJ | Q | 0.02 | UJ | Q |
| DIELDRIN | | 0.05 | UJ | Q | 0.05 | UJ | Q | 0.05 | U | |
| ENDOSULFAN I | | 0.00855 | J | EPQU | 0.0033 | U | | 0.0033 | U | |
| ENDOSULFAN II | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDOSULFAN SULFATE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN ALDEHYDE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| ENDRIN KETONE | | 0.005 | U | | 0.005 | U | | 0.005 | U | |
| GAMMA-BHC (LINDANE) | | 0.0033 | U | | 0.0191 | J | EPQU | 0.0141 | J | EPU |
| GAMMA-CHLORDANE | | 0.02 | UJ | Q | 0.02 | UJ | Q | 0.02 | UJ | Q |
| HEPTACHLOR | | 0.02 | UJ | Q | 0.02 | UJ | Q | 0.02 | UJ | Q |
| HEPTACHLOR EPOXIDE | | 0.0151 | J | EPQU | 0.01 | UJ | Q | 0.018 | J | EPQ |
| METHOXYCHLOR | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| TOXAPHENE | | 0.33 | U | | 0.33 | U | | 0.33 | U | |

## Appendix B

Results as Reported by the Laboratory

# ANALYSIS DATA SHEET

1011026-01

GØI-MW-ØIA-1010

JK 1/11/11

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011261-01 File ID: 020F2001.D

Sampled: 11/06/10 10:31 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 17:26

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 309-00-2 | Aldrin | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-84-6 | alpha-BHC [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-71-9 | alpha-Chlordane | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-85-7 | beta-BHC | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 319-86-8 | delta-BHC | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 60-57-1 | Dieldrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 959-98-8 | Endosulfan I | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 1031-07-8 | Endosulfan sulfate [2C] | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-74-2 | gamma-Chlordane | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 76-44-8 | Heptachlor [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 1024-57-3 | Heptachlor epoxide | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.2458 | 123 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2673 | 134 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.2647 | 132 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.2796 | 140 | 30 - 135 | * |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-05

GDI-MW-05-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011261-05 File ID: 024F2401.D

Sampled: 11/07/10 09:35 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 18:41

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.00500 | 0.0100 | 0.0200 | UO, N |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UO |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UO, N |
| 309-00-2 | Aldrin | | 0.00330 | 0.0100 | 0.0200 | UO, N |
| 319-84-6 | alpha-BHC [2C] | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 5103-71-9 | alpha-Chlordane [2C] | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 319-85-7 | beta-BHC [2C] | 0.00621 | 0.00330 | 0.0100 | 0.0200 | IN, O |
| 319-86-8 | delta-BHC [2C] | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 60-57-1 | Dieldrin | | 0.00500 | 0.0100 | 0.0200 | UN, O |
| 959-98-8 | Endosulfan I | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UN, O |
| 1031-07-8 | Endosulfan sulfate [2C] | 0.00549 | 0.00500 | 0.0100 | 0.0200 | IPM, O |
| 72-20-8 | Endrin [2C] | | 0.00500 | 0.0100 | 0.0200 | UN, O |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UO |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UN, O |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 76-44-8 | Heptachlor | 0.00408 | 0.00330 | 0.0100 | 0.0200 | IN, O |
| 1024-57-3 | Heptachlor epoxide | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UN, O |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1956 | 97.8 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1987 | 99.3 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1756 | 87.8 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1923 | 96.1 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-02

GD1-MW-03-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | ~~CTOJM16 Key West 2010~~ |
| Matrix: | Water | Laboratory ID: | 1011261-02 | File ID: | 021F2101.D |
| Sampled: | 11/06/10 10:01 | Prepared: | 11/12/10 14:15 | Analyzed: | 12/10/10 17:45 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L06021 | Sequence: | 0L35009 | Calibration: | 0344005 |
| Instrument: | GL-ECD3 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.0200 | 0.0200 | 0.0200 | UO, Z-01 |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UO |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UO |
| 309-00-2 | Aldrin | | 0.0200 | 0.0200 | 0.0200 | UZ-01, O |
| 319-84-6 | alpha-BHC [2C] | | 0.00330 | 0.0100 | 0.0200 | UO |
| 5103-71-9 | alpha-Chlordane | | 0.0100 | 0.0100 | 0.0200 | UO, Z-01 |
| 319-85-7 | beta-BHC | | 0.0200 | 0.0200 | 0.0200 | UZ-01, O |
| 319-86-8 | delta-BHC | | 0.0200 | 0.0200 | 0.0200 | UO, Z-01 |
| 60-57-1 | Dieldrin | | 0.0500 | 0.0500 | 0.0500 | UO, Z-01 |
| 959-98-8 | Endosulfan I [2C] | | 0.00330 | 0.0100 | 0.0200 | UO |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UO |
| 1031-07-8 | Endosulfan sulfate [2C] | | 0.00500 | 0.0100 | 0.0200 | UO |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UO |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UO |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UO |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | UO |
| 5103-74-2 | gamma-Chlordane | | 0.0200 | 0.0200 | 0.0200 | UO, Z-01 |
| 76-44-8 | Heptachlor | | 0.0200 | 0.0200 | 0.0200 | UZ-01, O |
| 1024-57-3 | Heptachlor epoxide | | 0.0100 | 0.0100 | 0.0200 | UO, Z-01 |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UO |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1776 | 88.8 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1945 | 97.3 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1311 | 65.6 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1241 | 62.1 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-03

GØ1-MW-07-1010

1/11/11

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | Laboratory ID: | 1011261-03 | File ID: | 022F2201.D |
| Sampled: | 11/06/10 11:38 | Prepared: | 11/12/10 14:15 | Analyzed: | 12/10/10 18:03 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L06021 | Sequence: | 0L35009 | Calibration: | 0344005 |
| Instrument: | GL-ECD3 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 309-00-2 | Aldrin | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 319-84-6 | alpha-BHC [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-71-9 | alpha-Chlordane | | 0.0100 | 0.0100 | 0.0200 | UQ, Z-01 |
| 319-85-7 | beta-BHC | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 319-86-8 | delta-BHC [2C] | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 60-57-1 | Dieldrin | | 0.0500 | 0.0500 | 0.0500 | UQ, Z-01 |
| 959-98-8 | Endosulfan I [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 1031-07-8 | Endosulfan sulfate [2C] | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 76-44-8 | Heptachlor [2C] | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 1024-57-3 | Heptachlor epoxide | | 0.0100 | 0.0100 | 0.0200 | UZ-01, Q |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1671 | 83.5 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1683 | 84.2 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1514 | 75.7 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1605 | 80.2 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-06

GW01-MW-08-1018

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005 JK 1/11/11

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011261-06 File ID: 029F2901.D

Sampled: 11/07/10 11:15 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 20:14

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 72-54-8 | 4,4'-DDD | 0.0202 | 0.00500 | 0.0100 | 0.0200 | PQ |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 309-00-2 | Aldrin | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 319-84-6 | alpha-BHC [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-71-9 | alpha-Chlordane [2C] | 0.0292 | 0.0100 | 0.0100 | 0.0200 | PZ-01, Q |
| 319-85-7 | beta-BHC | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 319-86-8 | delta-BHC | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 60-57-1 | Dieldrin | | 0.0500 | 0.0500 | 0.0500 | UZ-01, Q |
| 959-98-8 | Endosulfan I [2C] | 0.00855 | 0.00330 | 0.0100 | 0.0200 | IPM, Q |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 1031-07-8 | Endosulfan sulfate [2C] | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 58-89-9 | gamma-BHC (Lindane) [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 76-44-8 | Heptachlor | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 1024-57-3 | Heptachlor epoxide [2C] | 0.0151 | 0.0100 | 0.0100 | 0.0200 | IZ-01, Q |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1887 | 94.3 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1910 | 95.5 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1618 | 80.9 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1692 | 84.6 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

~~GOL~~ GOL-MW-12-1010

1011026-04

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010 * 1/11/11

Matrix: Water Laboratory ID: 1011261-04 File ID: 023F2301.D

Sampled: 11/06/10 12:32 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 18:22

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 309-00-2 | Aldrin | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 319-84-6 | alpha-BHC [2C] | 0.0378 | 0.00330 | 0.0100 | 0.0200 | Q |
| 5103-71-9 | alpha-Chlordane | | 0.0100 | 0.0100 | 0.0200 | UZ-01, Q |
| 319-85-7 | beta-BHC | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 319-86-8 | delta-BHC | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 60-57-1 | Dieldrin | | 0.0500 | 0.0500 | 0.0500 | UQ, Z-01 |
| 959-98-8 | Endosulfan I [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 1031-07-8 | Endosulfan sulfate [2C] | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 58-89-9 | gamma-BHC (Lindane) | 0.0191 | 0.00330 | 0.0100 | 0.0200 | IPM, Q |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 76-44-8 | Heptachlor | | 0.0200 | 0.0200 | 0.0200 | UQ, Z-01 |
| 1024-57-3 | Heptachlor epoxide [2C] | | 0.0100 | 0.0100 | 0.0200 | UQ, Z-01 |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1888 | 94.4 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1630 | 81.5 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1415 | 70.8 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1335 | 66.8 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-07

GKHMS-GW-FD04-1D10

ok 1/11/11

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Laboratory ID: 1011261-07
File ID: 030R3001.D
Sampled: 11/07/10 00:00
Prepared: 11/12/10 14:15
Analyzed: 12/10/10 20:32
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 0L06021
Sequence: 0L35009
Calibration: 0344005
Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE [2C] | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 72-54-8 | 4,4'-DDD | 0.0324 | 0.00500 | 0.0100 | 0.0200 | Q |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 309-00-2 | Aldrin | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 319-84-6 | alpha-BHC [2C] | 0.00831 | 0.00330 | 0.0100 | 0.0200 | IPQ, M |
| 5103-71-9 | alpha-Chlordane [2C] | 0.0281 | 0.0100 | 0.0100 | 0.0200 | PQ, Z-01 |
| 319-85-7 | beta-BHC [2C] | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 319-86-8 | delta-BHC [2C] | | 0.0200 | 0.0200 | 0.0200 | UXZ-01, , Q |
| 60-57-1 | Dieldrin | | 0.0500 | 0.0500 | 0.0500 | UZ-01, Q |
| 959-98-8 | Endosulfan I [2C] | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 33213-65-9 | Endosulfan II [2C] | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 1031-07-8 | Endosulfan sulfate [2C] | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | UQ |
| 58-89-9 | gamma-BHC (Lindane) | 0.0141 | 0.00330 | 0.0100 | 0.0200 | IPQ |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 76-44-8 | Heptachlor | | 0.0200 | 0.0200 | 0.0200 | UZ-01, Q |
| 1024-57-3 | Heptachlor epoxide [2C] | 0.0180 | 0.0100 | 0.0100 | 0.0200 | IQ, Z-01 |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | UQ |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1970 | 98.5 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1992 | 99.6 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1785 | 89.2 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1874 | 93.7 | 30 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-01

GD1-MW-01A-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | Laboratory ID: | 1011261-01 | File ID: | 020F2001.D |
| Sampled: | 11/06/10 10:31 | Prepared: | 11/12/10 14:15 | Analyzed: | 12/10/10 17:26 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L06021 | Sequence: | 0L35009 | Calibration: | 0344005 |
| Instrument: | GL-ECD3 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.2458 | 123 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2673 | 134 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.2647 | 132 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.2796 | 140 | 40 - 135 | * |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-05

JK 1/11/11 GD1-MW-05-1D10

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011261-05 File ID: 024F2401.D

Sampled: 11/07/10 09:35 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 18:41

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | UN |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1956 | 97.8 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1987 | 99.3 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1756 | 87.8 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1923 | 96.1 | 40 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-02

GCA-MW-03-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011261-02 File ID: 021F2101.D

Sampled: 11/06/10 10:01 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 17:45

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1776 | 88.8 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1945 | 97.3 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1311 | 65.6 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1241 | 62.1 | 40 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-03

GOI-MW-07-1010

Laboratory: Empirical Laboratories, LLC | SDG: CTOJM16KW_005 | 1/11/11

Client: Tetra Tech NUS, Inc. (T010) | Project: CTOJM16 Key West 2010

Matrix: Water | Laboratory ID: 1011261-03 | File ID: 022F2201.D

Sampled: 11/06/10 11:38 | Prepared: 11/12/10 14:15 | Analyzed: 12/10/10 18:03

Solids: | Preparation: EXT_3510 | Dilution: 1

Batch: 0L06021 | Sequence: 0L35009 | Calibration: 0344005 | Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1671 | 83.5 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1683 | 84.2 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1514 | 75.7 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1605 | 80.2 | 40 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-06

GW01-MW-08-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005 * 1/11/11

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011261-06 File ID: 029F2901.D

Sampled: 11/07/10 11:15 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 20:14

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1887 | 94.3 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1910 | 95.5 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1618 | 80.9 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1692 | 84.6 | 40 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-04

GD1-MW-12-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005 *11/11

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1011261-04 File ID: 023F2301.D

Sampled: 11/06/10 12:32 Prepared: 11/12/10 14:15 Analyzed: 12/10/10 18:22

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1888 | 94.4 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1630 | 81.5 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1415 | 70.8 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1335 | 66.8 | 40 - 135 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011026-07

GKHM5-GW-FD04-1010

* 1/11/11

Laboratory: Empirical Laboratories, LLC | SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) | Project: CTOJM16 Key West 2010

Matrix: Water | Laboratory ID: 1011261-07 | File ID: 030F3001.D

Sampled: 11/07/10 00:00 | Prepared: 11/12/10 14:15 | Analyzed: 12/10/10 20:32

Solids: | Preparation: EXT_3510 | Dilution: 1

Batch: 0L06021 | Sequence: 0L35009 | Calibration: 0344005 | Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.1970 | 98.5 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.1992 | 99.6 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.1785 | 89.2 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.1874 | 93.7 | 40 - 135 | |

* Values outside of QC limits

**Appendix C**

Support Documentation

HOLD TIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | 1011026-06 | 1011261-06 | NM | 11/07/2010 | 12/06/2010 | 12/08/2010 | 29 | 2 | 31 |
| HG | UG/L | 1011026-07 | 1011261-07 | NM | 11/07/2010 | 12/06/2010 | 12/08/2010 | 29 | 2 | 31 |
| HG | UG/L | 1011026-05 | 1011261-05 | NM | 11/07/2010 | 12/06/2010 | 12/08/2010 | 29 | 2 | 31 |
| HG | UG/L | 1011026-04 | 1011261-04 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011026-03 | 1011261-03 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011026-02 | 1011261-02 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011026-01 | 1011261-01 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011015-03 | 1011264-03 | NM | 11/04/2010 | 12/06/2010 | 12/08/2010 | 32 | 2 | 34 |
| HG | UG/L | 1011015-02 | 1011264-02 | NM | 11/04/2010 | 12/06/2010 | 12/08/2010 | 32 | 2 | 34 |
| HG | UG/L | 1011015-01 | 1011264-01 | NM | 11/04/2010 | 12/06/2010 | 12/08/2010 | 32 | 2 | 34 |
| M | UG/L | 1011015-03 | 1011264-03 | NM | 11/04/2010 | 12/06/2010 | 12/07/2010 | 32 | 1 | 33 |
| M | UG/L | 1011026-02 | 1011261-02RE2 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-05 | 1011261-05RE1 | NM | 11/07/2010 | 12/06/2010 | 12/17/2010 | 29 | 11 | 40 |
| M | UG/L | 1011026-05 | 1011261-05 | NM | 11/07/2010 | 12/06/2010 | 12/07/2010 | 29 | 1 | 30 |
| M | UG/L | 1011026-04 | 1011261-04RE1 | NM | 11/06/2010 | 12/06/2010 | 12/17/2010 | 30 | 11 | 41 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1011026-04 | 1011261-04 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-03 | 1011261-03RE2 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-03 | 1011261-03RE1 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-03 | 1011261-03 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-02 | 1011261-02RE1 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-02 | 1011261-02 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-01 | 1011261-01RE2 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-06 | 1011261-06RE1 | NM | 11/07/2010 | 12/06/2010 | 12/21/2010 | 29 | 15 | 44 |
| M | UG/L | 1011026-01 | 1011261-01 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-07 | 1011261-07 | NM | 11/07/2010 | 12/06/2010 | 12/07/2010 | 29 | 1 | 30 |
| M | UG/L | 1011015-02 | 1011264-02RE1 | NM | 11/04/2010 | 12/06/2010 | 12/09/2010 | 32 | 3 | 35 |
| M | UG/L | 1011015-02 | 1011264-02 | NM | 11/04/2010 | 12/06/2010 | 12/07/2010 | 32 | 1 | 33 |
| M | UG/L | 1011015-01 | 1011264-01RE1 | NM | 11/04/2010 | 12/06/2010 | 12/17/2010 | 32 | 11 | 43 |
| M | UG/L | 1011015-01 | 1011264-01 | NM | 11/04/2010 | 12/06/2010 | 12/07/2010 | 32 | 1 | 33 |
| M | UG/L | 1011026-01 | 1011261-01RE1 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-07 | 1011261-07RE1 | NM | 11/07/2010 | 12/06/2010 | 12/21/2010 | 29 | 15 | 44 |
| M | UG/L | 1011026-06 | 1011261-06 | NM | 11/07/2010 | 12/06/2010 | 12/07/2010 | 29 | 1 | 30 |
| PCB | UG/L | 1011026-07 | 1011261-07 | NM | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB | UG/L | 1011026-07 | 1011261-07 | SUR | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PCB | UG/L | 1011026-06 | 1011261-06 | SUR | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PCB | UG/L | 1011026-06 | 1011261-06 | NM | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PCB | UG/L | 1011026-05 | 1011261-05 | SUR | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PCB | UG/L | 1011026-05 | 1011261-05 | NM | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PCB | UG/L | 1011026-04 | 1011261-04 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PCB | UG/L | 1011026-03 | 1011261-03 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PCB | UG/L | 1011026-03 | 1011261-03 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PCB | UG/L | 1011026-02 | 1011261-02 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PCB | UG/L | 1011026-02 | 1011261-02 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PCB | UG/L | 1011026-01 | 1011261-01 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PCB | UG/L | 1011026-01 | 1011261-01 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PCB | UG/L | 1011026-04 | 1011261-04 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-02 | 1011261-02 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-07 | 1011261-07 | NM | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PEST | UG/L | 1011026-06 | 1011261-06 | SUR | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PEST | UG/L | 1011026-06 | 1011261-06 | NM | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PEST | UG/L | 1011026-05 | 1011261-05 | SUR | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PEST | UG/L | 1011026-05 | 1011261-05 | NM | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PEST | UG/L | 1011026-04 | 1011261-04 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-04 | 1011261-04 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-03 | 1011261-03 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-01 | 1011261-01 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-02 | 1011261-02 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-01 | 1011261-01 | SUR | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |
| PEST | UG/L | 1011026-07 | 1011261-07 | SUR | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |
| PEST | UG/L | 1011026-03 | 1011261-03 | NM | 11/06/2010 | 11/12/2010 | 12/10/2010 | 6 | 28 | 34 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-14

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs** **7210 Corporate Court** **Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz** **301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8260B** | G01-MW-01A | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8720D/8270DSIM** | G01-MW-01A | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8082A** | G01-MW-01A | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 8081B** | G01-MW-01A | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-01A-1010 | 10:31 | **SW846 6020A** | G01-MW-01A | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8260B** | G01-MW-03 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8720D/8270DSIM** | G01-MW-03 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8082A** | G01-MW-03 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 8081B** | G01-MW-03 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-03-1010 | 10:01 | **SW846 6020A** | G01-MW-03 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8260B** | G01-MW-07 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8720D/8270DSIM** | G01-MW-07 | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8082A** | G01-MW-07 | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 8081B** | G01-MW-07 | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-07-1010 | 11:38 | **SW846 6020A** | G01-MW-07 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8260B** | G01-MW-12 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8720D/8270DSIM** | G01-MW-12 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8082A** | G01-MW-12 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 8081B** | G01-MW-12 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/06/2010 | G01-MW-12-1010 | 12:32 | **SW846 6020A** | G01-MW-12 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8260B** | G01-MW-05 | GW | VOCs (low level analysis) | 4°C/HCL | 9 | Glass - Clear | 40ml vials | Run MS/MSD |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8720D/8270DSIM** | G01-MW-05 | GW | SVOCs (low level) and SIM PAHs | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |

1011026

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8082A** | G01-MW-05 | GW | PCBs | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 8081B** | G01-MW-05 | GW | Pesticides | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 11/07/2010 | G01-MW-05-1010 | 09:35 | **SW846 6020A** | G01-MW-05 | GW | Metals | 4°C/HNO3 | 3 | Plastic - PE | 1L | Run MS/MSD |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8260B** | G01-MW-08 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8720D/8270DSIM** | G01-MW-08 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8082A** | G01-MW-08 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 8081B** | G01-MW-08 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/07/2010 | G01-MW-08-1010 | 11:15 | **SW846 6020A** | G01-MW-08 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8082A** | QC | GW | PCBs | 4°C | 1 | Glass - Amber | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8260B** | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 6020A** | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8081B** | QC | GW | Pesticides | 4°C | 1 | Glass - Amber | 1L | |
| 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | **SW846 8720D/8270DSIM** | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 1 | Glass - Amber | 1L | |
| 11/08/2010 | GKHMS-TB-06-1010 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By: **Gary Braganza** | Date: 11/08/2010 | Time: 15:02 | Received By: **Federal Express** | Date: 11/08/2010 | Time: 16:02 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: 11/9/10 | Time: 9:45 |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

Comments:

1011026

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-10

WO# 1011015

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Centauri Labs**<br>**7210 Corporate Court**<br>**Fredrick, MD 21703** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Chino Ortiz**<br>**301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8260B** | G01-MW-06 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8720D/8270DSIM** | G01-MW-06 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8082A** | G01-MW-06 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8081B** | G01-MW-06 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 6020A** | G01-MW-06 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8260B** | G01-MW-09 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8720D/8270DSIM** | G01-MW-09 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8082A** | G01-MW-09 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8081B** | G01-MW-09 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 6020A** | G01-MW-09 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8260B** | G01-MW-10 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8720D/8270DSIM** | G01-MW-10 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8082A** | G01-MW-10 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8081B** | G01-MW-10 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 6020A** | G01-MW-10 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | GKHMS-TB-04 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/04/2010 | 15:13 | **Federal Express** | 11/04/2010 | 16:13 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: 11/5/10 | Time: 0940 |

Comments:

WO# 1011015

CENTAURI LABS™

WORK ORDER

Printed: 11/9/2010 3:18:35PM

**1011026**

**Approved**

*Due Date: 11/23/10 00:00 (14 day TAT)*

*Date Received: 11/09/10 09:45*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!!

| Analysis | Expires | Comments |
|---|---|---|
| 1011026-01 G01-MW-01A-1010 [Water] Sampled 11/06/10 10:31 Eastern | | |
| 8081A Pesticides | 11/13/10 10:31 | |
| 8082 PCBs | 11/13/10 10:31 | |
| 8260B LL VOA | 11/20/10 10:31 | |
| 8270D LL SVOC TCL | 11/13/10 10:31 | PLUS SIMs PAHs |
| Mercury, Total 7470A | 12/04/10 10:31 | |
| 6020A Full | 05/05/11 10:31 | |
| 1011026-02 G01-MW-03-1010 [Water] Sampled 11/06/10 10:01 Eastern | | |
| 8260B LL VOA | 11/20/10 10:01 | |
| 8270D LL SVOC TCL | 11/13/10 10:01 | PLUS SIMs PAHs |
| 8082 PCBs | 11/13/10 10:01 | |
| 8081A Pesticides | 11/13/10 10:01 | |
| 6020A Full | 05/05/11 10:01 | |
| Mercury, Total 7470A | 12/04/10 10:01 | |
| 1011026-03 G01-MW-07-1010 [Water] Sampled 11/06/10 11:38 Eastern | | |
| 6020A Full | 05/05/11 11:38 | |
| 8081A Pesticides | 11/13/10 11:38 | |
| 8082 PCBs | 11/13/10 11:38 | |
| 8260B LL VOA | 11/20/10 11:38 | |
| 8270D LL SVOC TCL | 11/13/10 11:38 | PLUS SIMs PAHs |
| Mercury, Total 7470A | 12/04/10 11:38 | |
| 1011026-04 G01-MW-12-1010 [Water] Sampled 11/06/10 12:32 Eastern | | |
| 8270D LL SVOC TCL | 11/13/10 12:32 | PLUS SIMs PAHs |
| 6020A Full | 05/05/11 12:32 | |
| 8081A Pesticides | 11/13/10 12:32 | |
| Mercury, Total 7470A | 12/04/10 12:32 | |
| 8260B LL VOA | 11/20/10 12:32 | |
| 8082 PCBs | 11/13/10 12:32 | |

CENTAURI LABS™

WORK ORDER

Printed: 11/9/2010 3:18:35PM

1011026

Approved

JK 11/10/11

*Due Date: 11/23/10 00:00 (14 day TAT)*

*Date Received: 11/09/10 09:45*

| Analysis | Expires | Comments | |
|---|---|---|---|
| 1011026-05 G01-MW-02-1010 | [Water] Sampled 11/07/10 09:35 Eastern | | *Use for QC* |
| 6020A Full | 05/06/11 09:35 | | |
| 8081A Pesticides | 11/14/10 09:35 | | |
| 8082 PCBs | 11/14/10 09:35 | | |
| 8260B LL VOA | 11/21/10 09:35 | | |
| 8270D LL SVOC TCL | 11/14/10 09:35 | PLUS SIMs PAHs | |
| Mercury, Total 7470A | 12/05/10 09:35 | | |
| 1011026-06 G01-MW08-1010 | [Water] Sampled 11/07/10 11:15 Eastern | | |
| 8081A Pesticides | 11/14/10 11:15 | | |
| Mercury, Total 7470A | 12/05/10 11:15 | | |
| 8270D LL SVOC TCL | 11/14/10 11:15 | | |
| 8082 PCBs | 11/14/10 11:15 | | |
| 6020A Full | 05/06/11 11:15 | | |
| 8260B LL VOA | 11/21/10 11:15 | | |
| 1011026-07 GKHMS-GW-FD04-1010 | [Water] Sampled 11/07/10 00:00 Eastern | | |
| 6020A Full | 05/06/11 00:00 | | |
| 8081A Pesticides | 11/14/10 00:00 | | |
| 8082 PCBs | 11/14/10 00:00 | | |
| 8260B LL VOA | 11/21/10 00:00 | | |
| 8270D LL SVOC TCL | 11/14/10 00:00 | | |
| Mercury, Total 7470A | 12/05/10 00:00 | | |
| 1011026-08 GKHMS-TB-06-1010 | [Water] Sampled 11/08/10 00:00 Eastern | | |
| 8260B LL VOA | 11/22/10 00:00 | | |

Container Locations

| | |
|---|---|
| 32oz Am | WG-5 |
| 32oz HDPE w/ HNO3 | WG-5 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11/9/10

Date

CENTAURI LABS™

WORK ORDER

Printed: 11/5/2010 11:08:37AM

1011015

Approved

*Due Date: 11/19/10 00:00 (14 day TAT)*

*Date Received: 11/05/10 09:40*

| | | | |
|---|---|---|---|
| Client: | Tetra Tech NUS, Inc | Lab PM: | Chino Ortiz |
| Contact: | Shauna Stotler-Hardy | Project: | KEY WEST NAS |
| Address | 661 Andersen Dr., Foster Plaza 7 | Project # | [none] |
| | Pittsburgh, PA 15220 | Comments: | LEVEL 3 |
| Phone: | (803) 641-4944 | | Organic Extractions holding times are 7 days for water AND SOIL!!! |
| Fax: | (803) 642-8454 | | |

| Analysis | Expires | Comments |
|---|---|---|
| 1011015-01 GKHMS-GW-006-1010 [Water] Sampled 11/04/10 13:45 Eastern | | |
| 8081B Pesticides | 11/11/10 13:45 | |
| 8082 PCBs | 11/11/10 13:45 | |
| 8260B LL VOA | 11/18/10 13:45 | |
| 8270D LL SVOC TCL | 11/11/10 13:45 | PLUS SIM PAHs |
| Mercury, Total 7470A | 12/02/10 13:45 | |
| 6020A QSM TAL | 05/03/11 13:45 | |
| 1011015-02 GKHMS-GW-09-1010 [Water] Sampled 11/04/10 12:25 Eastern | | |
| Mercury, Total 7470A | 12/02/10 12:25 | |
| 6020A QSM TAL | 05/03/11 12:25 | |
| 8081B Pesticides | 11/11/10 12:25 | |
| 8082 PCBs | 11/11/10 12:25 | |
| 8260B LL VOA | 11/18/10 12:25 | |
| 8270D LL SVOC TCL | 11/11/10 12:25 | PLUS SIM PAHs |
| 1011015-03 GKHMS-GW-10-1010 [Water] Sampled 11/04/10 11:10 Eastern | | |
| 8081B Pesticides | 11/11/10 11:10 | |
| 8082 PCBs | 11/11/10 11:10 | |
| 8260B LL VOA | 11/18/10 11:10 | |
| 8270D LL SVOC TCL | 11/11/10 11:10 | PLUS SIM PAHs |
| Mercury, Total 7470A | 12/02/10 11:10 | |
| 6020A QSM TAL | 05/03/11 11:10 | |
| 1011015-04 GKHMS-TB-04 [Water] Sampled 11/04/10 00:00 Eastern | | |
| Mercury, Total 7470A | 12/02/10 00:00 | |
| 6020A QSM TAL | 05/03/11 00:00 | |
| 8081B Pesticides | 11/11/10 00:00 | |
| 8082 PCBs | 11/11/10 00:00 | |
| 8260B LL VOA | 11/18/10 00:00 | |
| 8270D LL SVOC TCL | 11/11/10 00:00 | PLUS SIM PAHs |

Chino — Reviewed By

11/5/10 — Date

CENTAURI LABS™

WORK ORDER

Printed: 11/5/2010 11:08:37AM

1011015

Approved

*Due Date: 11/19/10 00:00 (14 day TAT)*

*Date Received: 11/05/10 09:40*

Container Locations

| | |
|---|---|
| 32oz Am | WG-4 |
| 32oz HDPE w/ HNO3 | WB-1 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

Date 11/5/10

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011015**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | Expires | Comments |
|---|---|---|
| **Sample ID: 1011015-01 Water Sampled:11/04/10 13:45** | | 1011264-01 |
| Mercury, Total 7470A | 12/02/10 13:45 | |
| 8081B Pesticides → No volume reid | 11/11/10 13:45 | |
| 6020A QSM TAL | 05/03/11 13:45 | |
| *Containers Supplied:* | | |
| **Sample ID: 1011015-02 Water Sampled:11/04/10 12:25** | | -02 |
| Mercury, Total 7470A | 12/02/10 12:25 | |
| 8081B Pesticides → No volume reid | 11/11/10 12:25 | |
| 6020A QSM TAL | 05/03/11 12:25 | |
| *Containers Supplied:* | | |
| **Sample ID: 1011015-03 Water Sampled:11/04/10 11:10** | | -03 |
| Mercury, Total 7470A | 12/02/10 11:10 | |
| 8081B Pesticides → No volume reid | 11/11/10 11:10 | |
| 6020A QSM TAL | 05/03/11 11:10 | |
| *Containers Supplied:* | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/19/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

1.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011264 Number of Coolers: 1 of 1

Client: Centaur Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature): _____

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9675

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 1.6 °C Correction Factor: -0.3 °C Final Value: 1.3 °C

Dates samples were logged-in: 11/30/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schaaf (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | (Yes) | No | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | Yes | (No) | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

No sample volume rec'd for tests!

pH < 2 for all metals

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011026**

| SENDING LABORATORY: | RECEIVING LABORATORY: |
|---|---|
| Centauri Labs, LLC<br>7210 Corporate Court<br>Frederick, MD 21703<br>Phone: 301.694.5310<br>Fax: 301.620.0731<br>Project Manager: Chino Ortiz | EMPERICAL LABS<br>621 MAINSTREAM DR SUITE 270<br>NASHVILLE, TN 37228<br>Phone :(615) 345-1115<br>Fax: (000) 000-0000 |

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011026-01** | **Water** | **Sampled:11/06/10 10:31** | 1011261-01 |
| 8081A Pesticides | | 11/13/10 10:31 | |
| 8082 PCBs | | 11/13/10 10:31 | |
| Mercury, Total 7470A | | 12/04/10 10:31 | |
| 6020A Full | | 05/05/11 10:31 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-02** | **Water** | **Sampled:11/06/10 10:01** | -02 |
| 6020A Full | | 05/05/11 10:01 | |
| 8081A Pesticides | | 11/13/10 10:01 | |
| 8082 PCBs | | 11/13/10 10:01 | |
| Mercury, Total 7470A | | 12/04/10 10:01 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-03** | **Water** | **Sampled:11/06/10 11:38** | -03 |
| 6020A Full | | 05/05/11 11:38 | |
| 8081A Pesticides | | 11/13/10 11:38 | |
| 8082 PCBs | | 11/13/10 11:38 | |
| Mercury, Total 7470A | | 12/04/10 11:38 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-04** | **Water** | **Sampled:11/06/10 12:32** | -04 |
| 8082 PCBs | | 11/13/10 12:32 | |
| 8081A Pesticides | | 11/13/10 12:32 | |
| Mercury, Total 7470A | | 12/04/10 12:32 | |
| 6020A Full | | 05/05/11 12:32 | |
| *Containers Supplied:* | | | 4 SOC |

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | | |
| | | | 11/30/10 08:25 |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011026**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011026-05** | **Water** | **Sampled: 11/07/10 09:35** | 1011261-05 |
| 6020A Full | | 05/06/11 09:35 | |
| 8081A Pesticides | | 11/14/10 09:35 | |
| 8082 PCBs | | 11/14/10 09:35 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-06** | **Water** | **Sampled: 11/07/10 11:15** | -06 |
| 6020A Full | | 05/06/11 11:15 | |
| 8081A Pesticides | | 11/14/10 11:15 | |
| 8082 PCBs | | 11/14/10 11:15 | |
| Mercury, Total 7470A | | 12/05/10 11:15 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-07** | **Water** | **Sampled: 11/07/10 00:00** | -07 |
| Mercury, Total 7470A | | 12/05/10 00:00 | |
| 6020A Full | | 05/06/11 00:00 | |
| 8081A Pesticides | | 11/14/10 00:00 | |
| 8082 PCBs | | 11/14/10 00:00 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/23/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

kvanwyck@centaurilabs.com
vzusman@centaurilabs.com

4.5°C

KW 11/29

| Released By | Date | Received By | Date |
|---|---|---|---|
| | | | 11/30/10 08:25 |
| Released By | Date | Received By | Date |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011261 Number of Coolers: 1 of 2

Client: Centaur Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0515

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: WET DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 4.8 °C Correction Factor: -0.3 °C Final Value: 4.5 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | Yes | (No) | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | (No) | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | (Yes) | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

Rec'd BICs1 & DRSD/ ~~extra~~ not on COC. Tossed as -08-09

Rec'd triple volume for 1011026-05.

pH = 7 for all metals

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011261 Number of Coolers: 2 of 2

Client: Centauri Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature):

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: —

If applicable, enter airbill number here: 9675

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 1.6 °C Correction Factor: -0.3 °C Final Value: 1.3 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): — (Initial): —

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | Yes | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | Yes | No | N/A |
| 12. Was all required bottle label information complete? ..... | Yes | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | Yes | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | Yes | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | No | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | N/A |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | Yes | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | N/A |

See 1 of 2

If Non-Conformance issues were present, list by sample ID: —

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011015**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011015-01** | **Water** | **Sampled:11/04/10 13:45** | 1011264-01 |
| Mercury, Total 7470A | | 12/02/10 13:45 | |
| 8081B Pesticides | | 11/11/10 13:45 | |
| 6020A QSM TAL | | 05/03/11 13:45 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011015-02** | **Water** | **Sampled:11/04/10 12:25** | -02 |
| Mercury, Total 7470A | | 12/02/10 12:25 | |
| 8081B Pesticides | | 11/11/10 12:25 | |
| 6020A QSM TAL | | 05/03/11 12:25 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011015-03** | **Water** | **Sampled:11/04/10 11:10** | -03 |
| Mercury, Total 7470A | | 12/02/10 11:10 | |
| 8081B Pesticides | | 11/11/10 11:10 | |
| 6020A QSM TAL | | 05/03/11 11:10 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/19/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

1.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011264 Number of Coolers: 1 of 1

Client: Centuri/APS Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature): _____

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9675

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 1.6 °C Correction Factor: -0.3 °C Final Value: 1.3 °C

Dates samples were logged-in: 11/30/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schaaf (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | (Yes) | No | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | Yes | (No) | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

No sample volume rec'd for pests!

pH < 2 for all metals

WORK ORDER

**1011261**

Printed: 12/22/2010 1:18:09PM

# Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/21/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 11/30/2010 08:25
Date Logged In 11/30/2010 16:19

Samples Received at: **4.5°C**
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011261-01 1011026-01 [Water] Sampled 11/06/2010 10:31 Eastern** | | | | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/13/2010 09:31 | | Sample is an extract!! |
| SW7470A | 12/16/2010 14:00 | 15 | 12/04/2010 09:31 | | Preserved in house by CD on 12/2/10 at 11:15 |
| SW6010C | 12/16/2010 14:00 | 15 | 05/05/2011 09:31 | client list | Preserved in house by CD on 12/2/10 at 11:15 |
| SW8081A | 12/16/2010 14:00 | 15 | 11/13/2010 09:31 | | Sample is an extract!! |
| **1011261-02 1011026-02 [Water] Sampled 11/06/2010 10:01 Eastern** | | | | | |
| SW8081A | 12/16/2010 14:00 | 15 | 11/13/2010 09:01 | | Sample is an extract!! |
| SW8082A | 12/16/2010 14:00 | 15 | 11/13/2010 09:01 | | Sample is an extract!! |
| SW6010C | 12/16/2010 14:00 | 15 | 05/05/2011 09:01 | client list | Preserved in house by CD on 12/2/10 at 11:15 |
| SW7470A | 12/16/2010 14:00 | 15 | 12/04/2010 09:01 | | Preserved in house by CD on 12/2/10 at 11:15 |

WORK ORDER

**1011261**

Printed: 12/22/2010 1:18:09PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011261-03 1011026-03 [Water] Sampled 11/06/2010 11:38 Eastern** | | | | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/13/2010 10:38 | | Sample is an extract!! |
| SW6010C | 12/16/2010 14:00 | 15 | 05/05/2011 10:38 | client list | Preserved in house by CD on 12/2/10 at 11:15 |
| SW7470A | 12/16/2010 14:00 | 15 | 12/04/2010 10:38 | | Preserved in house by CD on 12/2/10 at 11:15 |
| SW8081A | 12/16/2010 14:00 | 15 | 11/13/2010 10:38 | | Sample is an extract!! |
| **1011261-04 1011026-04 [Water] Sampled 11/06/2010 12:32 Eastern** | | | | | |
| SW8082A | 12/16/2010 14:00 | 15 | 11/13/2010 11:32 | | Sample is an extract!! |
| SW7470A | 12/16/2010 14:00 | 15 | 12/04/2010 11:32 | | Preserved in house by CD on 12/2/10 at 11:15 |
| SW6010C | 12/16/2010 14:00 | 15 | 05/05/2011 11:32 | client list | Preserved in house by CD on 12/2/10 at 11:15 |
| SW8081A | 12/16/2010 14:00 | 15 | 11/13/2010 11:32 | | Sample is an extract!! |
| **1011261-05 1011026-05 [Water] Sampled 11/07/2010 09:35 Eastern** | | | | | **MS/MSD.** |
| SW6010C | 12/16/2010 14:00 | 15 | 05/06/2011 08:35 | client list | MS/MSD. Preserved in house by CD on 12/2/10 at 11:15 |
| SW8082A | 12/16/2010 14:00 | 15 | 11/14/2010 08:35 | | MS/MSD. Sample is an extract!! |
| SW8081A | 12/16/2010 14:00 | 15 | 11/14/2010 08:35 | | MS/MSD. Sample is an extract!! |
| SW7470A | 12/16/2010 14:00 | 15 | 12/05/2010 08:35 | | MS/MSD. Preserved in house by CD on 12/2/10 at 11:15 |
| **1011261-06 1011026-06 [Water] Sampled 11/07/2010 11:15 Eastern** | | | | | |
| SW8081A | 12/16/2010 14:00 | 15 | 11/14/2010 10:15 | | Sample is an extract!! |
| SW8082A | 12/16/2010 14:00 | 15 | 11/14/2010 10:15 | | Sample is an extract!! |
| SW6010C | 12/16/2010 14:00 | 15 | 05/06/2011 10:15 | client list | Preserved in house by CD on 12/2/10 at 11:15 |
| SW7470A | 12/16/2010 14:00 | 15 | 12/05/2010 10:15 | | Preserved in house by CD on 12/2/10 at 11:15 |

WORK ORDER

**1011261**

Printed: 12/22/2010 1:18:09PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011261-07 1011026-07 [Water] Sampled 11/07/2010 00:00 Eastern** | | | | | |
| SW7470A | 12/16/2010 14:00 | 15 | 12/04/2010 23:00 | | Preserved in house by CD on 12/2/10 at 11:15 |
| SW6010C | 12/16/2010 14:00 | 15 | 05/05/2011 23:00 | client list | Preserved in house by CD on 12/2/10 at 11:15 |
| SW8081A | 12/16/2010 14:00 | 15 | 11/13/2010 23:00 | | Sample is an extract!! |
| SW8082A | 12/16/2010 14:00 | 15 | 11/13/2010 23:00 | | Sample is an extract!! |
| **1011261-08 1011026 BKS1 [Water] Sampled 11/07/2010 00:00 Eastern** | | | | | |
| SW8081A | 12/16/2010 14:00 | 15 | 11/13/2010 23:00 | | Sample is an extract!! LOW VOLUME!!! |
| **1011261-09 1011026 BKSD1 [Water] Sampled 11/07/2010 00:00 Eastern** | | | | | |
| SW8081A | 12/16/2010 14:00 | 15 | 11/13/2010 23:00 | | Sample is an extract!! LOW VOLUME!!! |

WORK ORDER

**1011264**

Printed: 12/22/2010 1:18:31PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/21/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 11/30/2010 08:25
Date Logged In 11/30/2010 16:40

Samples Received at: 1.3°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1011264-01 1011015-01 [Water] Sampled 11/04/2010 13:45 Eastern** | | | | | **NO PEST VOLUME RECEIVED!!!** |
| SW6010C | 12/16/2010 14:00 | 15 | 05/03/2011 12:45 | client list | |
| SW7470A | 12/16/2010 14:00 | 15 | 12/02/2010 12:45 | | |
| **1011264-02 1011015-02 [Water] Sampled 11/04/2010 12:25 Eastern** | | | | | **NO PEST VOLUME RECEIVED!!!** |
| SW6010C | 12/16/2010 14:00 | 15 | 05/03/2011 11:25 | client list | |
| SW7470A | 12/16/2010 14:00 | 15 | 12/02/2010 11:25 | | |
| **1011264-03 1011015-03 [Water] Sampled 11/04/2010 11:10 Eastern** | | | | | **NO PEST VOLUME RECEIVED!!!** |
| SW6010C | 12/16/2010 14:00 | 15 | 05/03/2011 10:10 | client list | |
| SW7470A | 12/16/2010 14:00 | 15 | 12/02/2010 10:10 | | |

WORK ORDER

1011264

Printed: 12/22/2010 1:18:31PM

## Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010

Project Manager: Kim Kostzer
Project Number: CTOJM16 Key West 2010

# Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: CTOJM16 Key West 2010
SDG #: CTOJM16KW_005
MATRIX: Water

QC LEVEL: EDD/IVQSM
Report Due: 12/21/2010
Client Sample Count: 12

| Sample Type | Sampled | Received | Lab ID | Client ID | SW6010C | SW7470A | SW8081A | SW8082A |
|---|---|---|---|---|---|---|---|---|
| Client Sample | 11/6/2010 | 11/30/2010 | 1011261-01 | 1011026-01 | X | X | X | X |
| Client Sample | 11/6/2010 | 11/30/2010 | 1011261-02 | 1011026-02 | X | X | X | X |
| Client Sample | 11/6/2010 | 11/30/2010 | 1011261-03 | 1011026-03 | X | X | X | X |
| Client Sample | 11/6/2010 | 11/30/2010 | 1011261-04 | 1011026-04 | X | X | X | X |
| Client Sample | 11/7/2010 | 11/30/2010 | 1011261-05 | 1011026-05 | MS/MSD. | MS/MSD. | MS/MSD. | MS/MSD. |
| Client Sample | 11/7/2010 | 11/30/2010 | 1011261-06 | 1011026-06 | X | X | X | X |
| Client Sample | 11/7/2010 | 11/30/2010 | 1011261-07 | 1011026-07 | X | X | X | X |
| Client Sample | 11/7/2010 | 11/30/2010 | 1011261-08 | 1011026 BKS1 | | | X | |
| Client Sample | 11/7/2010 | 11/30/2010 | 1011261-09 | 1011026 BKSD1 | | | X | |
| Client Sample | 11/4/2010 | 11/30/2010 | 1011264-01 | 1011015-01 | NO PEST VOLUME RECEIVED!!! | NO PEST VOLUME RECEIVED! !! | | |
| Client Sample | 11/4/2010 | 11/30/2010 | 1011264-02 | 1011015-02 | NO PEST VOLUME RECEIVED!!! | NO PEST VOLUME RECEIVED! !! | | |
| Client Sample | 11/4/2010 | 11/30/2010 | 1011264-03 | 1011015-03 | NO PEST VOLUME RECEIVED!!! | NO PEST VOLUME RECEIVED! !! | | |

## Sample Delivery Group Case Narrative

**Receipt Information**
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

All samples for SW7470A were received in the laboratory out of the EPA recommending holding time. Sample volume was not received for SW8081 for samples 1011015-01, -02 and -03. Samples 1011026-01, -02, -03, -04, -05, -06 and -07 were received in the laboratory for SW6010C analyses with a pH of 7. These samples were preserved upon receipt to the laboratory.

**Changes to the Revision**
This is an original submittal of the final report package.

**Analytical Information**
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

**Chromatographic Flags for Manual Integration:**
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

**SW6010C/SW7470A:**
Samples 1011261-01, -02, -03, -04, -05, -06, -07, 1011264-01, -02 and -03 were received after the EPA recommended holding time for SW7470A.

Samples 1011261-01, -02, -03, -05 and 1011264-01 are qualified with an M for Lead to indicate that the DL was raised due to interference and sample 1011261-01 is qualified with an M for Copper to indicate that the DL was raised due to interference.

The batch spike associated to batch 0L06017 exceeded criteria with a negative bias for Calcium.

The continuing calibration verifications exceeded criteria in 0L34305-CCV5 with a positive bias for Aluminum, Magnesium, Potassium and Sodium and with a negative bias for Calcium, in 0L34705-CCV7 with a positive bias for Potassium and Sodium.

The continuing calibration blanks 0L34305-CCB5 has positive results for Sodium. The digestion blank 0L06017-BLK1 has a positive result for Cadmium.

The matrix spikes associated to sample 1011261-05 exceeded criteria with a positive bias for Antimony, Arsenic and Cadmium. Calcium also exceeded criteria but the concentration in the parent sample is greater then 4 times the amount spiked. The post digestion spike associated to sample 1011261-05 exceeded criteria for Arsenic, Cadmium, Calcium, Magnesium, Thallium and Sodium.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The batch spikes associated to batch 0L06021 exceeded criteria with a positive bias for all compounds. Most samples did not have positive results above the LOQ samples that did have positive results above the LOQ were not able to be re-extracted due to sample extracts being received from another laboratory and holding time expiration.

The continuing calibration verifications exceeded criteria in 0L35009-CCV6 with a positive bias on column 2 for Delta-BHC and in 0L35009-CCV8 with a positive bias on column 2 for Toxaphene.

Due to matrix interference, samples 1011261-02, -03, -04, -06 and -07 had detection and/or reporting limits raised for some of their analytes.

The matrix spikes associated to sample 1011261-05 exceeded criteria on columns 1 and 2 with a positive bias for 4,4'-DDE, 4,4'-DDT, Aldrin, Alpha-BHC, Alpha-Chlordane, B-BHC, Delta-BHC, Dieldrin, Endosulfan I, Endosulfan II, Endrin Ketone, Gamma-BHC, Gamma-Chlordane, Heptachlor, Heptachlor Epoxide and Methoxychlor and on column 1 with a positive bias for 4,4'-DDD.

The surrogated Decachlorobiphenyl exceeded criteria with a positive bias on column 2 in sample 1011261-01.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The surrogate Decachlorobiphenyl exceeded criteria with a positive bias on column 2 in sample 1011261-01 and in 1011261-05MSD with a negative bias on both columns.

The matrix spike duplicate associated to sample 1011261-05 exceeded criteria with a negative bias for Aroclor-1242 on column 1 and 2 and the relative percent difference criteria was exceeded as well.

No additional anomalies or deviations are noted.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

***:** An exceeding quality control criteria is associated with the reported result.

**B:** The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1:** The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

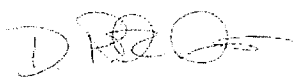
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

# Data for SW8081A Forms

# HOLDING TIME SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011026-01 | 11/06/10 10:31 | 11/30/10 08:25 | 11/12/10 14:15 | 6.20 | 7.00 | 12/10/10 17:26 | 28.13 | 40.00 | |
| 1011026-02 | 11/06/10 10:01 | 11/30/10 08:25 | 11/12/10 14:15 | 6.22 | 7.00 | 12/10/10 17:45 | 28.15 | 40.00 | |
| 1011026-03 | 11/06/10 11:38 | 11/30/10 08:25 | 11/12/10 14:15 | 6.15 | 7.00 | 12/10/10 18:03 | 28.16 | 40.00 | |
| 1011026-04 | 11/06/10 12:32 | 11/30/10 08:25 | 11/12/10 14:15 | 6.11 | 7.00 | 12/10/10 18:22 | 28.17 | 40.00 | |
| 1011026-05 | 11/07/10 09:35 | 11/30/10 08:25 | 11/12/10 14:15 | 5.24 | 7.00 | 12/10/10 18:41 | 28.18 | 40.00 | |
| 1011026-06 | 11/07/10 11:15 | 11/30/10 08:25 | 11/12/10 14:15 | 5.17 | 7.00 | 12/10/10 20:14 | 28.25 | 40.00 | |
| 1011026-07 | 11/07/10 00:00 | 11/30/10 08:25 | 11/12/10 14:15 | 5.68 | 7.00 | 12/10/10 20:32 | 28.26 | 40.00 | |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_005

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** GL-ECD3

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| 4,4'-DDD | 0.00500 | 0.0200 | ug/L | SW8081A |
| 4,4'-DDE | 0.00500 | 0.0200 | ug/L | SW8081A |
| 4,4'-DDE [2C] | 0.00500 | 0.0200 | ug/L | SW8081A |
| 4,4'-DDT | 0.00500 | 0.0200 | ug/L | SW8081A |
| Aldrin | 0.00330 | 0.0200 | ug/L | SW8081A |
| alpha-BHC [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| alpha-Chlordane | 0.00330 | 0.0200 | ug/L | SW8081A |
| alpha-Chlordane [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| beta-BHC | 0.00330 | 0.0200 | ug/L | SW8081A |
| beta-BHC [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| delta-BHC | 0.00330 | 0.0200 | ug/L | SW8081A |
| delta-BHC [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Dieldrin | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endosulfan I | 0.00330 | 0.0200 | ug/L | SW8081A |
| Endosulfan I [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Endosulfan II | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endosulfan II [2C] | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endosulfan sulfate [2C] | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin [2C] | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin aldehyde | 0.00500 | 0.0200 | ug/L | SW8081A |
| Endrin ketone | 0.00500 | 0.0200 | ug/L | SW8081A |
| gamma-BHC (Lindane) | 0.00330 | 0.0200 | ug/L | SW8081A |
| gamma-BHC (Lindane) [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| gamma-Chlordane | 0.00330 | 0.0200 | ug/L | SW8081A |
| gamma-Chlordane [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Heptachlor | 0.00330 | 0.0200 | ug/L | SW8081A |
| Heptachlor [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Heptachlor epoxide | 0.00330 | 0.0200 | ug/L | SW8081A |
| Heptachlor epoxide [2C] | 0.00330 | 0.0200 | ug/L | SW8081A |
| Methoxychlor | 0.00330 | 0.0200 | ug/L | SW8081A |
| Toxaphene | 0.330 | 1.00 | ug/L | SW8081A |

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | 0K32715-PEM1 | 002F0201.D | 11/19/10 13:08 |
| Performance Mix | 0K32715-PEM1 | 002R0201.D | 11/19/10 13:08 |
| Cal Standard | 0K32715-CAL7 | 011R1101.D | 11/19/10 15:56 |
| Cal Standard | 0K32715-CAL7 | 011F1101.D | 11/19/10 15:56 |
| Cal Standard | 0K32715-CAL8 | 012F1201.D | 11/19/10 16:14 |
| Cal Standard | 0K32715-CAL8 | 012R1201.D | 11/19/10 16:14 |
| Cal Standard | 0K32715-CAL9 | 013R1301.D | 11/19/10 16:33 |
| Cal Standard | 0K32715-CAL9 | 013F1301.D | 11/19/10 16:33 |
| Cal Standard | 0K32715-CALA | 014F1401.D | 11/19/10 16:52 |
| Cal Standard | 0K32715-CALA | 014R1401.D | 11/19/10 16:52 |
| Cal Standard | 0K32715-CALB | 015F1501.D | 11/19/10 17:10 |
| Cal Standard | 0K32715-CALB | 015R1501.D | 11/19/10 17:10 |
| Cal Standard | 0K32715-CALC | 016F1601.D | 11/19/10 17:29 |
| Cal Standard | 0K32715-CALC | 016R1601.D | 11/19/10 17:29 |
| Initial Cal Check | 0K32715-ICV2 | 017F1701.D | 11/19/10 17:47 |
| Initial Cal Check | 0K32715-ICV2 | 017R1701.D | 11/19/10 17:47 |
| Cal Standard | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |
| Cal Standard | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| Initial Cal Check | 0K32715-ICV3 | 025F2501.D | 11/19/10 20:16 |
| Initial Cal Check | 0K32715-ICV3 | 025R2501.D | 11/19/10 20:16 |

# INITIAL CALIBRATION STANDARDS

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011R1101.D | 11/19/10 15:56 |
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011F1101.D | 11/19/10 15:56 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012F1201.D | 11/19/10 16:14 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012R1201.D | 11/19/10 16:14 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013F1301.D | 11/19/10 16:33 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013R1301.D | 11/19/10 16:33 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014F1401.D | 11/19/10 16:52 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014R1401.D | 11/19/10 16:52 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015F1501.D | 11/19/10 17:10 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015R1501.D | 11/19/10 17:10 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016R1601.D | 11/19/10 17:29 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016F1601.D | 11/19/10 17:29 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Calibration: 0344005

Instrument: GL-ECD3

Matrix: Water

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 33546.52 | 6.000484 | 8.184572 | 2.267959E-02 | | | 20 | |
| 4,4'-DDE [2C] | 21057.32 | 11.07954 | 6.824143 | 2.103318E-02 | | | 20 | |
| 4,4'-DDD | 27664.89 | 7.540731 | 8.810143 | 5.248612E-03 | | | 20 | |
| 4,4'-DDD [2C] | 18693.78 | 11.44265 | 7.438286 | 2.802734E-02 | | | 20 | |
| 4,4'-DDT | 24740.67 | 14.5165 | 9.189857 | 7.068491E-03 | | | 20 | |
| 4,4'-DDT [2C] | 15729.51 | 4.871312 | 7.721286 | 1.954911E-02 | | | 20 | |
| Aldrin | 36147.13 | 7.456226 | 7.128143 | 1.296638E-02 | | | 20 | |
| Aldrin [2C] | 22656.45 | 9.98282 | 5.819 | 1.806906E-02 | | | 20 | |
| alpha-BHC | 40409.75 | 10.16852 | 5.832857 | 2.119288E-02 | | | 20 | |
| alpha-BHC [2C] | 26238.33 | 5.215596 | 4.972572 | 0.0158976 | | | 20 | |
| alpha-Chlordane | 32821.21 | 4.761104 | 7.986286 | 3.589714E-03 | | | 20 | |
| alpha-Chlordane [2C] | 21675.65 | 14.21858 | 6.625714 | 1.577067E-02 | | | 20 | |
| beta-BHC | 15846.9 | 4.976926 | 6.370286 | 1.550503E-02 | | | 20 | |
| beta-BHC [2C] | 9658.734 | 12.56008 | 5.537714 | 3.655615E-02 | | | 20 | |
| delta-BHC | 33539.38 | 10.83928 | 6.629143 | 1.181652E-02 | | | 20 | |
| delta-BHC [2C] | 20704.78 | 4.437113 | 5.747714 | 3.745169E-02 | | | 20 | |
| Dieldrin | 33895.65 | 7.310364 | 8.373143 | 1.230849E-02 | | | 20 | |
| Dieldrin [2C] | 22375.56 | 11.72956 | 6.969286 | 1.351574E-02 | | | 20 | |
| Endosulfan I | 31729.01 | 5.810311 | 8.049428 | 2.163559E-02 | | | 20 | |
| Endosulfan I [2C] | 20934.91 | 11.92243 | 6.689286 | 0.0156653 | | | 20 | |
| Endosulfan II | 29666.08 | 4.320259 | 8.922857 | 9.499018E-03 | | | 20 | |
| Endosulfan II [2C] | 19402.61 | 13.50319 | 7.609286 | 1.172058E-02 | | | 20 | |
| Endosulfan sulfate | 25616.99 | 5.703931 | 9.372 | 2.124432E-02 | | | 20 | |
| Endosulfan sulfate [2C] | 16791.83 | 11.98722 | 8.077286 | 1.600537E-02 | | | 20 | |
| Endrin | 24735.1 | 8.585635 | 8.649143 | 0.0197868 | | | 20 | |
| Endrin [2C] | 16756.72 | 11.09602 | 7.271286 | 0.0204429 | | | 20 | |
| Endrin aldehyde | 24109.03 | 3.96554 | 9.082714 | 8.921441E-03 | | | 20 | |
| Endrin aldehyde [2C] | 17038.67 | 16.23379 | 7.816857 | 2.146648E-02 | | | 20 | |
| Endrin ketone | 34636.65 | 4.514572 | 9.976571 | 1.195761E-02 | | | 20 | |
| Endrin ketone [2C] | 23263.99 | 13.77737 | 8.678857 | 2.201704E-02 | | | 20 | |
| gamma-BHC (Lindane) | 36031.77 | 8.801481 | 6.163429 | 8.315358E-03 | | | 20 | |
| gamma-BHC (Lindane) [2C] | 24013.09 | 7.287553 | 5.262857 | 1.952569E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | 33961.2 | 5.579594 | 7.897286 | 4.623527E-03 | | | 20 | |
| gamma-Chlordane [2C] | 21621.04 | 13.53738 | 6.561 | 1.259477E-02 | | | 20 | |
| Heptachlor | 29722.9 | 11.59268 | 6.759857 | 1.171619E-02 | | | 20 | |
| Heptachlor [2C] | 21682.7 | 10.66915 | 5.559143 | 1.004687E-02 | | | 20 | |
| Heptachlor epoxide | 33684.73 | 4.993924 | 7.605 | 3.240937E-03 | | | 20 | |
| Heptachlor epoxide [2C] | 21633.25 | 13.96005 | 6.309286 | 1.977155E-02 | | | 20 | |
| Methoxychlor | 12781.08 | 8.3161 | 9.791 | 1.095047E-02 | | | 20 | |
| Methoxychlor [2C] | 8700.811 | 14.35167 | 8.413714 | 0.0173794 | | | 20 | |
| Chlordane (tech) | 2265.814 | 2.036435 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (1) | 4560.136 | 2.206321 | 7.989 | 1.416297E-02 | | | 20 | |
| Chlordane (2) | 1011.213 | 4.748592 | 6.536 | 1.188001E-02 | | | 20 | |
| Chlordane (3) | 1003.996 | 8.624511 | 6.760834 | 8.797502E-03 | | | 20 | |
| Chlordane (4) | 3753.811 | 2.957383 | 7.897833 | 8.880134E-03 | | | 20 | |
| Chlordane (5) | 999.9125 | 4.559042 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (tech) [2C] | 1234.277 | 10.59888 | 7.605 | 3.28691E-03 | | | 20 | |
| Chlordane (1) [2C] | 2188.726 | 14.89601 | 6.6265 | 1.838167E-02 | | | 20 | |
| Chlordane (2) [2C] | 750.7542 | 8.135717 | 5.401333 | 1.394675E-02 | | | 20 | |
| Chlordane (3) [2C] | 797.21 | 5.579656 | 5.56 | 3.498735E-03 | | | 20 | |
| Chlordane (4) [2C] | 1630.041 | 13.84368 | 6.581167 | 8.453161E-03 | | | 20 | |
| Chlordane (5) [2C] | 804.6533 | 7.142321 | 7.605 | 3.28691E-03 | | | 20 | |
| Toxaphene (1) | 1251.284 | 13.26694 | 9.874667 | 1.008505E-02 | | | 20 | |
| Toxaphene (2) | 499.794 | 18.79183 | 8.578 | 1.896147E-02 | | | 20 | |
| Toxaphene (3) | 983.0718 | 13.15648 | 9.2395 | 1.502643E-02 | | | 20 | |
| Toxaphene (4) | 1115.536 | 19.14758 | 9.35 | 0.0145175 | | | 20 | |
| Toxaphene (5) | 582.2432 | 13.0691 | 10.32517 | 1.365035E-02 | | | 20 | |
| Toxaphene (1) [2C] | 1311.742 | 9.570442 | 8.5295 | 5.472725E-03 | | | 20 | |
| Toxaphene (2) [2C] | 357.144 | 23.44747 | 7.601 | 1.768119E-02 | | | 20 | * |
| Toxaphene (3) [2C] | 863.2383 | 11.36044 | 7.942333 | 2.059764E-02 | | | 20 | |
| Toxaphene (4) [2C] | 613.1725 | 12.22375 | 8.908834 | 1.237003E-02 | | | 20 | |
| Toxaphene (5) [2C] | 327.2323 | 16.07536 | 9.074667 | 1.398232E-02 | | | 20 | |
| Tetrachloro-m-xylene | 28765.14 | 2.541019 | 5.388857 | 1.804526E-02 | | | 20 | |
| Tetrachloro-m-xylene [2C] | 21379.77 | 11.06958 | 4.526 | 6.298631E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Decachlorobiphenyl | 29956.87 | 5.97861 | 11.62329 | 1.578512E-02 | | | 20 | |
| Decachlorobiphenyl [2C] | 17512.73 | 17.45123 | 10.00071 | 1.794087E-02 | | | 20 | |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 200 | 37513.33 | 100 | 33730.93 | 50 | 34388.64 | 25 | 33301.96 | 10 | 32327.8 | 5 | 31612 |
| 4,4'-DDE [2C] | 200 | 18257.3 | 100 | 18338.82 | 50 | 20151.58 | 25 | 21368.44 | 10 | 22221.1 | 5 | 22326 |
| 4,4'-DDD | 200 | 31518.02 | 100 | 28321.8 | 50 | 28748.18 | 25 | 27328.36 | 10 | 26325.1 | 5 | 25505.8 |
| 4,4'-DDD [2C] | 200 | 16513.82 | 100 | 16419.14 | 50 | 17910.14 | 25 | 18290.88 | 10 | 19251.5 | 5 | 19909 |
| 4,4'-DDT | 200 | 31197.69 | 100 | 26071.43 | 50 | 25942.18 | 25 | 24957.56 | 10 | 22888.2 | 5 | 22055.6 |
| 4,4'-DDT [2C] | 200 | 15542.91 | 100 | 14446.41 | 50 | 15476.54 | 25 | 15916.8 | 10 | 16093.1 | 5 | 15635.8 |
| Aldrin | 200 | 40767.94 | 100 | 37299.45 | 50 | 37537.34 | 25 | 36051.2 | 10 | 34777 | 5 | 33953 |
| Aldrin [2C] | 200 | 19617.71 | 100 | 20294.77 | 50 | 21953.9 | 25 | 22503.8 | 10 | 23712.4 | 5 | 24651.6 |
| alpha-BHC | 200 | 47167.84 | 100 | 42289.44 | 50 | 42861.2 | 25 | 40287.04 | 10 | 38376.7 | 5 | 36953 |
| alpha-BHC [2C] | 200 | 25165.1 | 100 | 24453.88 | 50 | 26202.34 | 25 | 25862.96 | 10 | 26405.8 | 5 | 26809.2 |
| alpha-Chlordane | 200 | 36000.86 | 100 | 32733.34 | 50 | 33417.76 | 25 | 32553 | 10 | 32043.1 | 5 | 31429.4 |
| alpha-Chlordane [2C] | 200 | 18546.3 | 100 | 18517.16 | 50 | 20113.24 | 25 | 21125.88 | 10 | 22565.8 | 5 | 23774.2 |
| beta-BHC | 200 | 16661.48 | 100 | 15277.28 | 50 | 15642.24 | 25 | 15286.52 | 10 | 15203.2 | 5 | 15623.6 |
| beta-BHC [2C] | 200 | 9426.75 | 100 | 8924.51 | 50 | 9284.36 | 25 | 9176.12 | 10 | 9017.8 | 5 | 9404.6 |
| delta-BHC | 200 | 39647.29 | 100 | 35123.66 | 50 | 36041.72 | 25 | 33068.12 | 10 | 31230.7 | 5 | 29532.2 |
| delta-BHC [2C] | 200 | 21031.8 | 100 | 19998.31 | 50 | 21501.58 | 25 | 20358.56 | 10 | 19943.4 | 5 | 19848.8 |
| Dieldrin | 200 | 38496.14 | 100 | 34608.85 | 50 | 35074.08 | 25 | 33560.2 | 10 | 32585.1 | 5 | 31793.2 |
| Dieldrin [2C] | 200 | 19662.69 | 100 | 19504.01 | 50 | 21226.14 | 25 | 22038.96 | 10 | 23246.3 | 5 | 24006.8 |
| Endosulfan I | 200 | 35075.56 | 100 | 31932.15 | 50 | 32708.06 | 25 | 31682.4 | 10 | 31095.7 | 5 | 30242.2 |
| Endosulfan I [2C] | 200 | 17977.4 | 100 | 18059.23 | 50 | 20018.4 | 25 | 21082.56 | 10 | 21729.4 | 5 | 22837.4 |
| Endosulfan II | 200 | 32415.48 | 100 | 29233.23 | 50 | 29896.28 | 25 | 29325.6 | 10 | 28538 | 5 | 28919 |
| Endosulfan II [2C] | 200 | 16730.24 | 100 | 16636.04 | 50 | 17930.88 | 25 | 19021.6 | 10 | 20551.5 | 5 | 21079 |
| Endosulfan sulfate | 200 | 28655.84 | 100 | 25484.04 | 50 | 26055.9 | 25 | 24786.24 | 10 | 24957.3 | 5 | 24179.6 |
| Endosulfan sulfate [2C] | 200 | 15083.04 | 100 | 14820.32 | 50 | 15997.64 | 25 | 16290.4 | 10 | 17059 | 5 | 17493.4 |
| Endrin | 200 | 28873.78 | 100 | 24723.13 | 50 | 25349.54 | 25 | 25170.56 | 10 | 23415.3 | 5 | 23110.4 |
| Endrin [2C] | 200 | 15221.71 | 100 | 14379.04 | 50 | 15716.62 | 25 | 16628 | 10 | 17495.9 | 5 | 18016.8 |
| Endrin aldehyde | 200 | 26063.46 | 100 | 23971.36 | 50 | 23857.48 | 25 | 23122.04 | 10 | 23556.1 | 5 | 23707.8 |
| Endrin aldehyde [2C] | 200 | 14492.01 | 100 | 14601.62 | 50 | 15568 | 25 | 16051.84 | 10 | 17817.6 | 5 | 18427.6 |
| Endrin ketone | 200 | 37851.39 | 100 | 34261.26 | 50 | 34676.24 | 25 | 33902.16 | 10 | 33884.3 | 5 | 32911.2 |
| Endrin ketone [2C] | 200 | 19946.04 | 100 | 19965.76 | 50 | 21730.44 | 25 | 22773.36 | 10 | 24427.3 | 5 | 25021 |
| gamma-BHC (Lindane) | 200 | 41557.52 | 100 | 37289.21 | 50 | 37763.9 | 25 | 35892.32 | 10 | 34220.6 | 5 | 33185.8 |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 200 | 22560.79 | 100 | 22019.83 | 50 | 23457.66 | 25 | 23621.84 | 10 | 24180.3 | 5 | 24926.2 |
| gamma-Chlordane | 200 | 37678.01 | 100 | 34110.69 | 50 | 34834.82 | 25 | 33600.4 | 10 | 32976.7 | 5 | 32060.8 |
| gamma-Chlordane [2C] | 200 | 18741.21 | 100 | 18638.62 | 50 | 20193.42 | 25 | 21045.52 | 10 | 22343.3 | 5 | 23488.2 |
| Heptachlor | 200 | 35954.45 | 100 | 31207.27 | 50 | 31243.86 | 25 | 29497.2 | 10 | 27414.9 | 5 | 26224.6 |
| Heptachlor [2C] | 200 | 19133.32 | 100 | 18879.69 | 50 | 20417.26 | 25 | 21733.52 | 10 | 22929.1 | 5 | 23873 |
| Heptachlor epoxide | 200 | 37029.96 | 100 | 33434.91 | 50 | 34511.94 | 25 | 33438.32 | 10 | 33013.2 | 5 | 32270.8 |
| Heptachlor epoxide [2C] | 200 | 18183.73 | 100 | 18799.95 | 50 | 20518.56 | 25 | 20888.88 | 10 | 22351.8 | 5 | 23774.8 |
| Methoxychlor | 200 | 14869.25 | 100 | 12633.48 | 50 | 12981.86 | 25 | 12793.56 | 10 | 12299.8 | 5 | 11342.6 |
| Methoxychlor [2C] | 200 | 7716.485 | 100 | 7239.67 | 50 | 8103.94 | 25 | 8548.48 | 10 | 9115.5 | 5 | 9132.6 |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 200 | 30396.38 | 100 | 28270.71 | 50 | 28442.38 | 25 | 28656.12 | 10 | 28496 | 5 | 28638.4 |
| Tetrachloro-m-xylene [2C] | 200 | 19072.68 | 100 | 19248.97 | 50 | 20109.36 | 25 | 20564.48 | 10 | 22076.7 | 5 | 22878.2 |
| Decachlorobiphenyl | 200 | 29960.3 | 100 | 27340.04 | 50 | 28005.84 | 25 | 29560.24 | 10 | 31558.5 | 5 | 31300.2 |
| Decachlorobiphenyl [2C] | 200 | 14811.62 | 100 | 14456.54 | 50 | 15435.18 | 25 | 16877.6 | 10 | 18462 | 5 | 19614.2 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 1 | 31951 | | | | | | | | | | |
| 4,4'-DDE [2C] | 1 | 24738 | | | | | | | | | | |
| 4,4'-DDD | 1 | 25907 | | | | | | | | | | |
| 4,4'-DDD [2C] | 1 | 22562 | | | | | | | | | | |
| 4,4'-DDT | 1 | 20072 | | | | | | | | | | |
| 4,4'-DDT [2C] | 1 | 16995 | | | | | | | | | | |
| Aldrin | 1 | 32644 | | | | | | | | | | |
| Aldrin [2C] | 1 | 25861 | | | | | | | | | | |
| alpha-BHC | 1 | 34933 | | | | | | | | | | |
| alpha-BHC [2C] | 1 | 28769 | | | | | | | | | | |
| alpha-Chlordane | 1 | 31571 | | | | | | | | | | |
| alpha-Chlordane [2C] | 1 | 27087 | | | | | | | | | | |
| beta-BHC | 1 | 17234 | | | | | | | | | | |
| beta-BHC [2C] | 1 | 12377 | | | | | | | | | | |
| delta-BHC | 1 | 30132 | | | | | | | | | | |
| delta-BHC [2C] | 1 | 22251 | | | | | | | | | | |
| Dieldrin | 1 | 31152 | | | | | | | | | | |
| Dieldrin [2C] | 1 | 26944 | | | | | | | | | | |
| Endosulfan I | 1 | 29367 | | | | | | | | | | |
| Endosulfan I [2C] | 1 | 24840 | | | | | | | | | | |
| Endosulfan II | 1 | 29335 | | | | | | | | | | |
| Endosulfan II [2C] | 1 | 23869 | | | | | | | | | | |
| Endosulfan sulfate | 1 | 25200 | | | | | | | | | | |
| Endosulfan sulfate [2C] | 1 | 20799 | | | | | | | | | | |
| Endrin | 1 | 22503 | | | | | | | | | | |
| Endrin [2C] | 1 | 19839 | | | | | | | | | | |
| Endrin aldehyde | 1 | 24485 | | | | | | | | | | |
| Endrin aldehyde [2C] | 1 | 22312 | | | | | | | | | | |
| Endrin ketone | 1 | 34970 | | | | | | | | | | |
| Endrin ketone [2C] | 1 | 28984 | | | | | | | | | | |
| gamma-BHC (Lindane) | 1 | 32313 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 1 | 27325 | | | | | | | | | | |
| gamma-Chlordane | 1 | 32467 | | | | | | | | | | |
| gamma-Chlordane [2C] | 1 | 26897 | | | | | | | | | | |
| Heptachlor | 1 | 26518 | | | | | | | | | | |
| Heptachlor [2C] | 1 | 24813 | | | | | | | | | | |
| Heptachlor epoxide | 1 | 32094 | | | | | | | | | | |
| Heptachlor epoxide [2C] | 1 | 26915 | | | | | | | | | | |
| Methoxychlor | 1 | 12547 | | | | | | | | | | |
| Methoxychlor [2C] | 1 | 11049 | | | | | | | | | | |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | 100 | 1011.74 | 250 | 1138.296 | 500 | 1329.082 | 750 | 1350.244 | 1000 | 1473.986 |
| Toxaphene (2) | | | 100 | 355.43 | 250 | 435.488 | 500 | 522.674 | 750 | 553.6027 | 1000 | 624.948 |
| Toxaphene (3) | | | 100 | 802.53 | 250 | 873.748 | 500 | 1043.166 | 750 | 1063.331 | 1000 | 1152.338 |
| Toxaphene (4) | | | 100 | 764.03 | 250 | 1017.328 | 500 | 1190.532 | 750 | 1224.499 | 1000 | 1393.516 |
| Toxaphene (5) | | | 100 | 505.48 | 250 | 515.472 | 500 | 613.14 | 750 | 609.9133 | 1000 | 706.184 |
| Toxaphene (1) [2C] | | | 100 | 1099.76 | 250 | 1365.06 | 500 | 1316.87 | 750 | 1459.457 | 1000 | 1382.324 |
| Toxaphene (2) [2C] | | | 100 | 281.3 | 250 | 293.268 | 500 | 391.276 | 750 | 486.7773 | 1000 | 404.162 |
| Toxaphene (3) [2C] | | | 100 | 795.76 | 250 | 866.04 | 500 | 961.43 | 750 | 762.968 | 1000 | 1000.542 |
| Toxaphene (4) [2C] | | | 100 | 538.2 | 250 | 581.584 | 500 | 642.586 | 750 | 715.0347 | 1000 | 671.258 |
| Toxaphene (5) [2C] | | | 100 | 267.14 | 250 | 287.752 | 500 | 344.098 | 750 | 400.944 | 1000 | 369.859 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 1 | 28456 | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | 1 | 25708 | | | | | | | | | | |
| Decachlorobiphenyl | 1 | 31973 | | | | | | | | | | |
| Decachlorobiphenyl [2C] | 1 | 22932 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | | | 5 | 2280.04 | 10 | 2255.94 | 20 | 2254.73 | 50 | 2214.676 | 100 | 2349.214 |
| Chlordane (1) | | | 5 | 4651.4 | 10 | 4498 | 20 | 4586.1 | 50 | 4440.14 | 100 | 4695.65 |
| Chlordane (2) | | | 5 | 961 | 10 | 953.3 | 20 | 1010.75 | 50 | 1015.74 | 100 | 1073.7 |
| Chlordane (3) | | | 5 | 924.8 | 10 | 1165.8 | 20 | 984 | 50 | 956.96 | 100 | 1030.14 |
| Chlordane (4) | | | 5 | 3814.6 | 10 | 3608.6 | 20 | 3721.45 | 50 | 3693.02 | 100 | 3932.96 |
| Chlordane (5) | | | 5 | 1048.4 | 10 | 1054 | 20 | 971.35 | 50 | 967.52 | 100 | 1013.62 |
| Chlordane (tech) [2C] | | | 5 | 1214.8 | 10 | 1413.52 | 20 | 1337.26 | 50 | 1235.78 | 100 | 1163.546 |
| Chlordane (1) [2C] | | | 5 | 2063.8 | 10 | 2727.2 | 20 | 2329.95 | 50 | 2229.98 | 100 | 2006.16 |
| Chlordane (2) [2C] | | | 5 | 804.6 | 10 | 805.6 | 20 | 793.6 | 50 | 731.02 | 100 | 715.14 |
| Chlordane (3) [2C] | | | 5 | 810.6 | 10 | 832.3 | 20 | 797.25 | 50 | 816.9 | 100 | 816.81 |
| Chlordane (4) [2C] | | | 5 | 1539.2 | 10 | 1853.8 | 20 | 1945.95 | 50 | 1608.14 | 100 | 1465.95 |
| Chlordane (5) [2C] | | | 5 | 855.8 | 10 | 848.7 | 20 | 819.55 | 50 | 792.86 | 100 | 813.67 |
| Toxaphene (1) | 2000 | 1204.354 | | | | | | | | | | |
| Toxaphene (2) | 2000 | 506.6215 | | | | | | | | | | |
| Toxaphene (3) | 2000 | 963.318 | | | | | | | | | | |
| Toxaphene (4) | 2000 | 1103.312 | | | | | | | | | | |
| Toxaphene (5) | 2000 | 543.27 | | | | | | | | | | |
| Toxaphene (1) [2C] | 2000 | 1246.983 | | | | | | | | | | |
| Toxaphene (2) [2C] | 2000 | 286.0805 | | | | | | | | | | |
| Toxaphene (3) [2C] | 2000 | 792.6895 | | | | | | | | | | |
| Toxaphene (4) [2C] | 2000 | 530.3725 | | | | | | | | | | |
| Toxaphene (5) [2C] | 2000 | 293.6005 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | 200 | 2240.281 | | | | | | | | | | |
| Chlordane (1) | 200 | 4489.525 | | | | | | | | | | |
| Chlordane (2) | 200 | 1052.785 | | | | | | | | | | |
| Chlordane (3) | 200 | 962.275 | | | | | | | | | | |
| Chlordane (4) | 200 | 3752.235 | | | | | | | | | | |
| Chlordane (5) | 200 | 944.585 | | | | | | | | | | |
| Chlordane (tech) [2C] | 200 | 1040.755 | | | | | | | | | | |
| Chlordane (1) [2C] | 200 | 1775.265 | | | | | | | | | | |
| Chlordane (2) [2C] | 200 | 654.565 | | | | | | | | | | |
| Chlordane (3) [2C] | 200 | 709.4 | | | | | | | | | | |
| Chlordane (4) [2C] | 200 | 1367.205 | | | | | | | | | | |
| Chlordane (5) [2C] | 200 | 697.34 | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM1 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 0.00 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.83 |
| Endrin | 6.09 |

# BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM2 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.24 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.32 |

# BREAKDOWN REPORT

**Lab Sample ID:** 0K32715-PEM1 **Analyzed:** 11/19/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.85 |
| Endrin | 9.88 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 5.52 |
| Endrin | 10.41 |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 017F1701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV2 | Injection Time: | 17:47 |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| | | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1110 | 1251.284 | 1389.576 | | 11.1 | 20 | |
| Toxaphene (2) | A | 1000 | 1136 | 499.794 | 567.613 | | 13.6 | 20 | |
| Toxaphene (3) | A | 1000 | 1110 | 983.0718 | 1091.295 | | 11.0 | 20 | |
| Toxaphene (4) | A | 1000 | 1150 | 1115.536 | 1283.494 | | 15.1 | 20 | |
| Toxaphene (5) | A | 1000 | 1129 | 582.2432 | 657.346 | | 12.9 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 1006 | 1311.742 | 1318.988 | | 0.6 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1214 | 357.144 | 433.465 | | 21.4 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1153 | 863.2383 | 995.34 | | 15.3 | 20 | |
| Toxaphene (4) [2C] | A | 1000 | 1033 | 613.1725 | 633.434 | | 3.3 | 20 | |
| Toxaphene (5) [2C] | A | 1000 | 1003 | 327.2323 | 328.351 | | 0.3 | 20 | |

AVG 12.7%

AVG 8.2%

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025F2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 104.8 | 33546.52 | 35173.04 | | 4.8 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 91.21 | 21057.32 | 19206.02 | | -8.8 | 20 |
| 4,4'-DDD | A | 100.0 | 104.0 | 27664.89 | 28779.14 | | 4.0 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 89.33 | 18693.78 | 16698.8 | | -10.7 | 20 |
| 4,4'-DDT | A | 100.0 | 106.8 | 24740.67 | 26437.44 | | 6.9 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 92.11 | 15729.51 | 14489.01 | | -7.9 | 20 |
| Aldrin | A | 100.0 | 105.8 | 36147.13 | 38246.73 | | 5.8 | 20 |
| Aldrin [2C] | A | 100.0 | 92.49 | 22656.45 | 20955.53 | | -7.5 | 20 |
| alpha-BHC | A | 100.0 | 109.5 | 40409.75 | 44244.95 | | 9.5 | 20 |
| alpha-BHC [2C] | A | 100.0 | 97.38 | 26238.33 | 25550.97 | | -2.6 | 20 |
| alpha-Chlordane | A | 100.0 | 104.0 | 32821.21 | 34128.09 | | 4.0 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 88.98 | 21675.65 | 19286.5 | | -11.0 | 20 |
| beta-BHC | A | 100.0 | 104.2 | 15846.9 | 16511.38 | | 4.2 | 20 |
| beta-BHC [2C] | A | 100.0 | 102.0 | 9658.734 | 9850.8 | | 2.0 | 20 |
| delta-BHC | A | 100.0 | 109.9 | 33539.38 | 36866.04 | | 9.9 | 20 |
| delta-BHC [2C] | A | 100.0 | 101.0 | 20704.78 | 20920.6 | | 1.0 | 20 |
| Dieldrin | A | 100.0 | 103.6 | 33895.65 | 35122.84 | | 3.6 | 20 |
| Dieldrin [2C] | A | 100.0 | 88.17 | 22375.56 | 19728.31 | | -11.8 | 20 |
| Endosulfan I | A | 100.0 | 105.5 | 31729.01 | 33463.25 | | 5.5 | 20 |
| Endosulfan I [2C] | A | 100.0 | 90.93 | 20934.91 | 19035.91 | | -9.1 | 20 |
| Endosulfan II | A | 100.0 | 99.65 | 29666.08 | 29561.55 | | -0.4 | 20 |
| Endosulfan II [2C] | A | 100.0 | 86.57 | 19402.61 | 16796.12 | | -13.4 | 20 |
| Endosulfan sulfate | A | 100.0 | 102.5 | 25616.99 | 26259 | | 2.5 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 90.41 | 16791.83 | 15181.22 | | -9.6 | 20 |
| Endrin | A | 100.0 | 96.91 | 24735.1 | 23971.57 | | -3.1 | 20 |
| Endrin [2C] | A | 100.0 | 84.35 | 16756.72 | 14134.37 | | -15.6 | 20 |
| Endrin aldehyde | A | 100.0 | 99.85 | 24109.03 | 24072.34 | | -0.2 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 85.73 | 17038.67 | 14606.93 | | -14.3 | 20 |
| Endrin ketone | A | 100.0 | 100.7 | 34636.65 | 34880.58 | | 0.7 | 20 |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025R2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 87.14 | 23263.99 | 20271.19 | | -12.9 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 109.0 | 36031.77 | 39277 | | 9.0 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 95.47 | 24013.09 | 22925.86 | | -4.5 | 20 |
| gamma-Chlordane | A | 100.0 | 105.1 | 33961.2 | 35701.47 | | 5.1 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 89.96 | 21621.04 | 19451 | | -10.0 | 20 |
| Heptachlor | A | 100.0 | 110.8 | 29722.9 | 32936.84 | | 10.8 | 20 |
| Heptachlor [2C] | A | 100.0 | 89.51 | 21682.7 | 19408.4 | | -10.5 | 20 |
| Heptachlor epoxide | A | 100.0 | 104.2 | 33684.73 | 35102.63 | | 4.2 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 89.32 | 21633.25 | 19321.83 | | -10.7 | 20 |
| Methoxychlor | A | 100.0 | 104.1 | 12781.08 | 13303.99 | | 4.1 | 20 |
| Methoxychlor [2C] | A | 100.0 | 87.23 | 8700.811 | 7589.37 | | -12.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35009 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | 0L35009-PEM1 | 002R0201.D | 12/10/10 11:47 |
| Performance Mix | 0L35009-PEM1 | 002F0201.D | 12/10/10 11:47 |
| Calibration Check | 0L35009-CCV1 | 003F0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV1 | 003R0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV3 | 005R0501.D | 12/10/10 12:44 |
| Calibration Check | 0L35009-CCV3 | 005F0501.D | 12/10/10 12:44 |
| Performance Mix | 0L35009-PEM2 | 008F0801.D | 12/10/10 13:40 |
| Performance Mix | 0L35009-PEM2 | 008R0801.D | 12/10/10 13:40 |
| Blank | 0L06021-BLK1 | 017R1701.D | 12/10/10 16:30 |
| Blank | 0L06021-BLK1 | 017F1701.D | 12/10/10 16:30 |
| LCS | 0L06021-BS1 | 018R1801.D | 12/10/10 16:48 |
| LCS | 0L06021-BS1 | 018F1801.D | 12/10/10 16:48 |
| 1011026-01 | 1011261-01 | 020F2001.D | 12/10/10 17:26 |
| 1011026-01 | 1011261-01 | 020R2001.D | 12/10/10 17:26 |
| 1011026-02 | 1011261-02 | 021R2101.D | 12/10/10 17:45 |
| 1011026-02 | 1011261-02 | 021F2101.D | 12/10/10 17:45 |
| 1011026-03 | 1011261-03 | 022R2201.D | 12/10/10 18:03 |
| 1011026-03 | 1011261-03 | 022F2201.D | 12/10/10 18:03 |
| 1011026-04 | 1011261-04 | 023R2301.D | 12/10/10 18:22 |
| 1011026-04 | 1011261-04 | 023F2301.D | 12/10/10 18:22 |
| 1011026-05 | 1011261-05 | 024R2401.D | 12/10/10 18:41 |
| 1011026-05 | 1011261-05 | 024F2401.D | 12/10/10 18:41 |
| 1011026-05 | 0L06021-MS1 | 025F2501.D | 12/10/10 18:59 |
| 1011026-05 | 0L06021-MS1 | 025R2501.D | 12/10/10 18:59 |
| 1011026-05 | 0L06021-MSD1 | 026F2601.D | 12/10/10 19:18 |
| 1011026-05 | 0L06021-MSD1 | 026R2601.D | 12/10/10 19:18 |
| 1011026-06 | 1011261-06 | 029R2901.D | 12/10/10 20:14 |
| 1011026-06 | 1011261-06 | 029F2901.D | 12/10/10 20:14 |
| 1011026-07 | 1011261-07 | 030R3001.D | 12/10/10 20:32 |
| 1011026-07 | 1011261-07 | 030F3001.D | 12/10/10 20:32 |
| Calibration Check | 0L35009-CCV6 | 031F3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV6 | 031R3101.D | 12/10/10 20:51 |

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35009 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L35009-CCV8 | 033R3301.D | 12/10/10 21:28 |
| Calibration Check | 0L35009-CCV8 | 033F3301.D | 12/10/10 21:28 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003F0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 95.06 | 33546.52 | 31888.7 | | -4.9 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 100.0 | 21057.32 | 21064.45 | | 0.03 | 20 |
| 4,4'-DDD | A | 100.0 | 95.57 | 27664.89 | 26440.41 | | -4.4 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 98.26 | 18693.78 | 18368.22 | | -1.7 | 20 |
| 4,4'-DDT | A | 100.0 | 106.1 | 24740.67 | 26244.44 | | 6.1 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 109.8 | 15729.51 | 17280.22 | | 9.9 | 20 |
| Aldrin | A | 100.0 | 101.0 | 36147.13 | 36522.16 | | 1.0 | 20 |
| Aldrin [2C] | A | 100.0 | 105.8 | 22656.45 | 23975.62 | | 5.8 | 20 |
| alpha-BHC | A | 100.0 | 103.6 | 40409.75 | 41864.64 | | 3.6 | 20 |
| alpha-BHC [2C] | A | 100.0 | 110.9 | 26238.33 | 29096.28 | | 10.9 | 20 |
| alpha-Chlordane | A | 100.0 | 96.05 | 32821.21 | 31524.94 | | -3.9 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 97.22 | 21675.65 | 21073.43 | | -2.8 | 20 |
| beta-BHC | A | 100.0 | 92.91 | 15846.9 | 14723.35 | | -7.1 | 20 |
| beta-BHC [2C] | A | 100.0 | 105.7 | 9658.734 | 10213.81 | | 5.7 | 20 |
| delta-BHC | A | 100.0 | 102.9 | 33539.38 | 34521.92 | | 2.9 | 20 |
| delta-BHC [2C] | A | 100.0 | 113.0 | 20704.78 | 23401.31 | | 13.0 | 20 |
| Dieldrin | A | 100.0 | 99.30 | 33895.65 | 33657.62 | | -0.7 | 20 |
| Dieldrin [2C] | A | 100.0 | 99.90 | 22375.56 | 22352.35 | | -0.1 | 20 |
| Endosulfan I | A | 100.0 | 98.79 | 31729.01 | 31346.03 | | -1.2 | 20 |
| Endosulfan I [2C] | A | 100.0 | 100.6 | 20934.91 | 21052.3 | | 0.6 | 20 |
| Endosulfan II | A | 100.0 | 94.01 | 29666.08 | 27888.18 | | -6.0 | 20 |
| Endosulfan II [2C] | A | 100.0 | 95.93 | 19402.61 | 18613 | | -4.1 | 20 |
| Endosulfan sulfate | A | 100.0 | 94.30 | 25616.99 | 24156.69 | | -5.7 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 99.04 | 16791.83 | 16630.45 | | -1.0 | 20 |
| Endrin | A | 100.0 | 115.7 | 24735.1 | 28622.15 | | 15.7 | 20 |
| Endrin [2C] | A | 100.0 | 114.5 | 16756.72 | 19189.85 | | 14.5 | 20 |
| Endrin aldehyde | A | 100.0 | 92.06 | 24109.03 | 22194.94 | | -7.9 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 94.16 | 17038.67 | 16044.42 | | -5.8 | 20 |
| Endrin ketone | A | 100.0 | 91.67 | 34636.65 | 31751.26 | | -8.3 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003R0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 94.14 | 23263.99 | 21901.02 | | -5.9 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 101.7 | 36031.77 | 36639.85 | | 1.7 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 107.5 | 24013.09 | 25804.91 | | 7.5 | 20 |
| gamma-Chlordane | A | 100.0 | 96.86 | 33961.2 | 32896.08 | | -3.1 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 98.55 | 21621.04 | 21307.95 | | -1.4 | 20 |
| Heptachlor | A | 100.0 | 105.6 | 29722.9 | 31389.52 | | 5.6 | 20 |
| Heptachlor [2C] | A | 100.0 | 109.9 | 21682.7 | 23835.42 | | 9.9 | 20 |
| Heptachlor epoxide | A | 100.0 | 98.15 | 33684.73 | 33060.71 | | -1.9 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 99.81 | 21633.25 | 21592.45 | | -0.2 | 20 |
| Methoxychlor | A | 100.0 | 102.8 | 12781.08 | 13145.66 | | 2.9 | 20 |
| Methoxychlor [2C] | A | 100.0 | 101.7 | 8700.811 | 8846.79 | | 1.7 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 90.38 | 28765.14 | 25999.25 | | -9.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 97.24 | 21379.77 | 20790.76 | | -2.8 | 20 |
| Decachlorobiphenyl | A | 100.0 | 86.52 | 29956.87 | 25919.92 | | -13.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 91.76 | 17512.73 | 16070.47 | | -8.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 005F0501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV3 | Injection Time: | 12:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 959.4 | 1251.284 | 1200.434 | | -4.1 | 20 | |
| Toxaphene (2) | A | 1000 | 976.8 | 499.794 | 488.208 | | -2.3 | 20 | |
| Toxaphene (3) | A | 1000 | 980.5 | 983.0718 | 963.89 | | -2.0 | 20 | |
| Toxaphene (4) | A | 1000 | 989.6 | 1115.536 | 1103.948 | | -1.0 | 20 | |
| Toxaphene (5) | A | 1000 | 884.8 | 582.2432 | 515.191 | | -11.5 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 826.6 | 1311.742 | 1084.238 | | -17.3 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1311 | 357.144 | 468.215 | | 31.1 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1230 | 863.2383 | 1061.713 | | 23.0 | 20 | * |
| Toxaphene (4) [2C] | A | 1000 | 1072 | 613.1725 | 657.243 | | 7.2 | 20 | |
| Toxaphene (5) [2C] | A | 1000 | 1043 | 327.2323 | 341.423 | | 4.3 | 20 | |

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# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031F3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 100.3 | 33546.52 | 33639.75 | | 0.3 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 101.4 | 21057.32 | 21355.1 | | 1.4 | 20 |
| 4,4'-DDD | A | 100.0 | 103.3 | 27664.89 | 28570.6 | | 3.3 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 104.6 | 18693.78 | 19546.39 | | 4.6 | 20 |
| 4,4'-DDT | A | 100.0 | 110.4 | 24740.67 | 27324.32 | | 10.4 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 115.8 | 15729.51 | 18223.18 | | 15.9 | 20 |
| Aldrin | A | 100.0 | 106.0 | 36147.13 | 38328 | | 6.0 | 20 |
| Aldrin [2C] | A | 100.0 | 106.8 | 22656.45 | 24201.48 | | 6.8 | 20 |
| alpha-BHC | A | 100.0 | 114.1 | 40409.75 | 46112.18 | | 14.1 | 20 |
| alpha-BHC [2C] | A | 100.0 | 119.7 | 26238.33 | 31413.67 | | 19.7 | 20 |
| alpha-Chlordane | A | 100.0 | 99.88 | 32821.21 | 32782.2 | | -0.1 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 102.2 | 21675.65 | 22144.07 | | 2.2 | 20 |
| beta-BHC | A | 100.0 | 100.7 | 15846.9 | 15956.51 | | 0.7 | 20 |
| beta-BHC [2C] | A | 100.0 | 110.0 | 9658.734 | 10622 | | 10.0 | 20 |
| delta-BHC | A | 100.0 | 115.0 | 33539.38 | 38572.21 | | 15.0 | 20 |
| delta-BHC [2C] | A | 100.0 | 128.2 | 20704.78 | 26539.96 | | 28.2 | 20 * |
| Dieldrin | A | 100.0 | 104.1 | 33895.65 | 35280.86 | | 4.1 | 20 |
| Dieldrin [2C] | A | 100.0 | 102.4 | 22375.56 | 22908.72 | | 2.4 | 20 |
| Endosulfan I | A | 100.0 | 101.0 | 31729.01 | 32059.15 | | 1.0 | 20 |
| Endosulfan I [2C] | A | 100.0 | 101.2 | 20934.91 | 21180.75 | | 1.2 | 20 |
| Endosulfan II | A | 100.0 | 98.86 | 29666.08 | 29327.82 | | -1.1 | 20 |
| Endosulfan II [2C] | A | 100.0 | 102.3 | 19402.61 | 19847.8 | | 2.3 | 20 |
| Endosulfan sulfate | A | 100.0 | 101.5 | 25616.99 | 26009.05 | | 1.5 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 107.4 | 16791.83 | 18029.59 | | 7.4 | 20 |
| Endrin | A | 100.0 | 107.6 | 24735.1 | 26624.33 | | 7.6 | 20 |
| Endrin [2C] | A | 100.0 | 110.5 | 16756.72 | 18517.45 | | 10.5 | 20 |
| Endrin aldehyde | A | 100.0 | 101.5 | 24109.03 | 24470.41 | | 1.5 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 103.7 | 17038.67 | 17671.18 | | 3.7 | 20 |
| Endrin ketone | A | 100.0 | 101.0 | 34636.65 | 34989.36 | | 1.0 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031R3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 102.5 | 23263.99 | 23853.72 | | 2.5 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 111.4 | 36031.77 | 40125.7 | | 11.4 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 116.3 | 24013.09 | 27934.94 | | 16.3 | 20 |
| gamma-Chlordane | A | 100.0 | 100.2 | 33961.2 | 34043.75 | | 0.2 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 103.8 | 21621.04 | 22450.69 | | 3.8 | 20 |
| Heptachlor | A | 100.0 | 118.7 | 29722.9 | 35283.51 | | 18.7 | 20 |
| Heptachlor [2C] | A | 100.0 | 112.9 | 21682.7 | 24487.38 | | 12.9 | 20 |
| Heptachlor epoxide | A | 100.0 | 103.6 | 33684.73 | 34912.7 | | 3.6 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 103.0 | 21633.25 | 22288.54 | | 3.0 | 20 |
| Methoxychlor | A | 100.0 | 106.7 | 12781.08 | 13635.6 | | 6.7 | 20 |
| Methoxychlor [2C] | A | 100.0 | 105.5 | 8700.811 | 9183.64 | | 5.5 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 94.61 | 28765.14 | 27215.45 | | -5.4 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 100.5 | 21379.77 | 21496.84 | | 0.5 | 20 |
| Decachlorobiphenyl | A | 100.0 | 93.78 | 29956.87 | 28094.31 | | -6.2 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 101.0 | 17512.73 | 17696.02 | | 1.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 033F3301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV8 | Injection Time: | 21:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1034 | 1251.284 | 1293.902 | | 3.4 | 20 | |
| Toxaphene (2) | A | 1000 | 1084 | 499.794 | 541.667 | | 8.4 | 20 | |
| Toxaphene (3) | A | 1000 | 1049 | 983.0718 | 1031.635 | | 4.9 | 20 | |
| Toxaphene (4) | A | 1000 | 1028 | 1115.536 | 1147.046 | | 2.8 | 20 | |
| Toxaphene (5) | A | 1000 | 906.7 | 582.2432 | 527.931 | | -9.3 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 964.9 | 1311.742 | 1265.7 | | -3.5 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1301 | 357.144 | 464.811 | | 30.1 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1335 | 863.2383 | 1152.173 | | 33.5 | 20 | * |
| Toxaphene (4) [2C] | A | 1000 | 1280 | 613.1725 | 785.22 | | 28.1 | 20 | * |
| Toxaphene (5) [2C] | A | 1000 | 1278 | 327.2323 | 418.067 | | 27.8 | 20 | * |

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#Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06021 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06021-BLK1 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| LCS | 0L06021-BS1 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-05 | 0L06021-MS1 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-05 | 0L06021-MSD1 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-01 | 1011261-01 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-02 | 1011261-02 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-03 | 1011261-03 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-04 | 1011261-04 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-05 | 1011261-05 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-06 | 1011261-06 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-07 | 1011261-07 | 11/12/10 14:15 | 1,000.00 | 10.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L06021-BLK1 File ID: 017F1701.D

Sampled: Prepared: 11/12/10 14:15 Analyzed: 12/10/10 16:30

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.00500 | 0.0100 | 0.0200 | U |
| 72-54-8 | 4,4'-DDD | | 0.00500 | 0.0100 | 0.0200 | U |
| 50-29-3 | 4,4'-DDT | | 0.00500 | 0.0100 | 0.0200 | U |
| 309-00-2 | Aldrin | | 0.00330 | 0.0100 | 0.0200 | U |
| 319-84-6 | alpha-BHC | | 0.00330 | 0.0100 | 0.0200 | U |
| 5103-71-9 | alpha-Chlordane | | 0.00330 | 0.0100 | 0.0200 | U |
| 319-85-7 | beta-BHC | | 0.00330 | 0.0100 | 0.0200 | U |
| 319-86-8 | delta-BHC | | 0.00330 | 0.0100 | 0.0200 | U |
| 60-57-1 | Dieldrin | | 0.00500 | 0.0100 | 0.0200 | U |
| 959-98-8 | Endosulfan I | | 0.00330 | 0.0100 | 0.0200 | U |
| 33213-65-9 | Endosulfan II | | 0.00500 | 0.0100 | 0.0200 | U |
| 1031-07-8 | Endosulfan sulfate | | 0.00500 | 0.0100 | 0.0200 | U |
| 72-20-8 | Endrin | | 0.00500 | 0.0100 | 0.0200 | U |
| 7421-93-4 | Endrin aldehyde | | 0.00500 | 0.0100 | 0.0200 | U |
| 53494-70-5 | Endrin ketone | | 0.00500 | 0.0100 | 0.0200 | U |
| 58-89-9 | gamma-BHC (Lindane) | | 0.00330 | 0.0100 | 0.0200 | U |
| 5103-74-2 | gamma-Chlordane | | 0.00330 | 0.0100 | 0.0200 | U |
| 76-44-8 | Heptachlor | | 0.00330 | 0.0100 | 0.0200 | U |
| 1024-57-3 | Heptachlor epoxide | | 0.00330 | 0.0100 | 0.0200 | U |
| 72-43-5 | Methoxychlor | | 0.00330 | 0.0100 | 0.0200 | U |
| 8001-35-2 | Toxaphene | | 0.330 | 0.667 | 1.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.2086 | 104 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2443 | 122 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.2071 | 104 | 30 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.2222 | 111 | 30 - 135 | |

* Values outside of QC limits

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06021 | Laboratory ID: | 0L06021-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 4,4'-DDE | 0.5000 | 0.9704 | 194 | 35 - 140 |
| 4,4'-DDE [2C] | 0.5000 | 0.9426 | 189 | 35 - 140 |
| 4,4'-DDD | 0.5000 | 0.9919 | 198 | 25 - 150 |
| 4,4'-DDD [2C] | 0.5000 | 0.9616 | 192 | 25 - 150 |
| 4,4'-DDT | 0.5000 | 1.070 | 214 | 45 - 140 |
| 4,4'-DDT [2C] | 0.5000 | 1.024 | 205 | 45 - 140 |
| Aldrin | 0.5000 | 1.105 | 221 | 25 - 140 |
| Aldrin [2C] | 0.5000 | 1.039 | 208 | 25 - 140 |
| alpha-BHC | 0.5000 | 1.177 | 235 | 60 - 130 |
| alpha-BHC [2C] | 0.5000 | 1.139 | 228 | 60 - 130 |
| alpha-Chlordane | 0.5000 | 1.020 | 204 | 65 - 125 |
| alpha-Chlordane [2C] | 0.5000 | 0.9579 | 192 | 65 - 125 |
| beta-BHC | 0.5000 | 1.007 | 201 | 65 - 125 |
| beta-BHC [2C] | 0.5000 | 0.9976 | 200 | 65 - 125 |
| delta-BHC | 0.5000 | 1.135 | 227 | 45 - 135 |
| delta-BHC [2C] | 0.5000 | 1.158 | 232 | 45 - 135 |
| Dieldrin | 0.5000 | 1.089 | 218 | 60 - 130 |
| Dieldrin [2C] | 0.5000 | 1.007 | 201 | 60 - 130 |
| Endosulfan I | 0.5000 | 1.039 | 208 | 50 - 110 |
| Endosulfan I [2C] | 0.5000 | 0.9739 | 195 | 50 - 110 |
| Endosulfan II | 0.5000 | 0.9666 | 193 | 30 - 130 |
| Endosulfan II [2C] | 0.5000 | 0.9579 | 192 | 30 - 130 |
| Endosulfan sulfate | 0.5000 | 0.9623 | 192 | 55 - 155 |
| Endosulfan sulfate [2C] | 0.5000 | 0.9749 | 195 | 55 - 155 |
| Endrin | 0.5000 | 1.088 | 218 | 55 - 135 |
| Endrin [2C] | 0.5000 | 1.043 | 209 | 55 - 135 |
| Endrin aldehyde | 0.5000 | 0.7931 | 159 | 55 - 135 |
| Endrin aldehyde [2C] | 0.5000 | 0.7947 | 159 | 55 - 135 |
| Endrin ketone | 0.5000 | 0.9421 | 188 | 75 - 125 |
| Endrin ketone [2C] | 0.5000 | 0.9345 | 187 | 75 - 125 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06021 | Laboratory ID: | 0L06021-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **gamma-BHC (Lindane)** | **0.5000** | **1.145** | **229** | **25 - 135** |
| **gamma-BHC (Lindane) [2C]** | **0.5000** | **1.090** | **218** | **25 - 135** |
| **gamma-Chlordane** | **0.5000** | **1.007** | **201** | **60 - 125** |
| **gamma-Chlordane [2C]** | **0.5000** | **0.9539** | **191** | **60 - 125** |
| **Heptachlor** | **0.5000** | **1.182** | **236** | **40 - 130** |
| **Heptachlor [2C]** | **0.5000** | **1.096** | **219** | **40 - 130** |
| **Heptachlor epoxide** | **0.5000** | **1.087** | **217** | **60 - 130** |
| **Heptachlor epoxide [2C]** | **0.5000** | **1.013** | **203** | **60 - 130** |
| **Methoxychlor** | **0.5000** | **0.9857** | **197** | **55 - 150** |
| **Methoxychlor [2C]** | **0.5000** | **0.9629** | **193** | **55 - 150** |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35009

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV1 ) ug/L** | | | | Lab File ID: 003F0301.D | | Analyzed: 12/10/10 12:06 | | |
| Tetrachloro-m-xylene | 100.0 | 90.4 | 80 - 120 | 5.122 | 5.122 | 0.0000 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 97.2 | 80 - 120 | 4.319 | 4.319 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 86.5 | 80 - 120 | 11.227 | 11.227 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 91.8 | 80 - 120 | 9.651 | 9.651 | 0.0000 | +/-0.030 | |
| **Blank (0L06021-BLK1 ) ug/L** | | | | Lab File ID: 017F1701.D | | Analyzed: 12/10/10 16:30 | | |
| Tetrachloro-m-xylene | 0.2000 | 104 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 122 | 25 - 140 | 4.314 | 4.319 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 104 | 30 - 135 | 11.224 | 11.227 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 111 | 30 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **LCS (0L06021-BS1 ) ug/L** | | | | Lab File ID: 018F1801.D | | Analyzed: 12/10/10 16:48 | | |
| Tetrachloro-m-xylene | 0.2000 | 114 | 25 - 140 | 5.12 | 5.122 | -0.0020 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 120 | 25 - 140 | 4.316 | 4.319 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 99.5 | 30 - 135 | 11.224 | 11.227 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 111 | 30 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **1011026-01 (1011261-01 ) ug/L** | | | | Lab File ID: 020F2001.D | | Analyzed: 12/10/10 17:26 | | |
| Tetrachloro-m-xylene | 0.2000 | 123 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 134 | 25 - 140 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 132 | 30 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 140 | 30 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | * |
| **1011026-02 (1011261-02 ) ug/L** | | | | Lab File ID: 021F2101.D | | Analyzed: 12/10/10 17:45 | | |
| Tetrachloro-m-xylene | 0.2000 | 88.8 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 97.3 | 25 - 140 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 65.6 | 30 - 135 | 11.22 | 11.227 | -0.0070 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 62.1 | 30 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **1011026-03 (1011261-03 ) ug/L** | | | | Lab File ID: 022F2201.D | | Analyzed: 12/10/10 18:03 | | |
| Tetrachloro-m-xylene | 0.2000 | 83.5 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 84.2 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 75.7 | 30 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 80.2 | 30 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **1011026-04 (1011261-04 ) ug/L** | | | | Lab File ID: 023F2301.D | | Analyzed: 12/10/10 18:22 | | |
| Tetrachloro-m-xylene | 0.2000 | 94.4 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 81.5 | 25 - 140 | 4.31 | 4.319 | -0.0090 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 70.8 | 30 - 135 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 66.8 | 30 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011026-05 (1011261-05 ) ug/L** | | | | Lab File ID: 024F2401.D | | Analyzed: 12/10/10 18:41 | | |
| Tetrachloro-m-xylene | 0.2000 | 97.8 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 99.3 | 25 - 140 | 4.31 | 4.319 | -0.0090 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 87.8 | 30 - 135 | 11.223 | 11.227 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 96.1 | 30 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Matrix Spike (0L06021-MS1 ) ug/L** | | | | Lab File ID: 025F2501.D | | Analyzed: 12/10/10 18:59 | | |
| Tetrachloro-m-xylene | 0.2000 | 94.0 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 87.6 | 25 - 140 | 4.312 | 4.319 | -0.0070 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 81.8 | 30 - 135 | 11.22 | 11.227 | -0.0070 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 84.3 | 30 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Matrix Spike Dup (0L06021-MSD1 ) ug/L** | | | | Lab File ID: 026F2601.D | | Analyzed: 12/10/10 19:18 | | |
| Tetrachloro-m-xylene | 0.2000 | 95.0 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 91.4 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 90.4 | 30 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 93.0 | 30 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **1011026-06 (1011261-06 ) ug/L** | | | | Lab File ID: 029F2901.D | | Analyzed: 12/10/10 20:14 | | |
| Tetrachloro-m-xylene | 0.2000 | 94.3 | 25 - 140 | 5.117 | 5.122 | -0.0050 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 95.5 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 80.9 | 30 - 135 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 84.6 | 30 - 135 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |
| **1011026-07 (1011261-07 ) ug/L** | | | | Lab File ID: 030F3001.D | | Analyzed: 12/10/10 20:32 | | |
| Tetrachloro-m-xylene | 0.2000 | 98.5 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 99.6 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 89.2 | 30 - 135 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 93.7 | 30 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Calibration Check (0L35009-CCV6 ) ug/L** | | | | Lab File ID: 031F3101.D | | Analyzed: 12/10/10 20:51 | | |
| Tetrachloro-m-xylene | 100.0 | 94.6 | 80 - 120 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 100 | 80 - 120 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 93.8 | 80 - 120 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 101 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06021

% Solids:

Source Sample Name: **1011261-05**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDE | 0.5000 | ND | 0.6932 | 139 | | 35 - 140 |
| 4,4'-DDE [2C] | 0.5000 | ND | 0.6279 | 126 | | 35 - 140 |
| 4,4'-DDD | 0.5000 | ND | 0.7230 | 145 | | 25 - 150 |
| 4,4'-DDD [2C] | 0.5000 | ND | 0.6486 | 130 | | 25 - 150 |
| 4,4'-DDT | 0.5000 | ND | 0.7829 | 157 | * | 45 - 140 |
| 4,4'-DDT [2C] | 0.5000 | ND | 0.7036 | 141 | * | 45 - 140 |
| Aldrin | 0.5000 | ND | 0.7166 | 143 | * | 25 - 140 |
| Aldrin [2C] | 0.5000 | ND | 0.6494 | 130 | | 25 - 140 |
| alpha-BHC | 0.5000 | 0.02962 | 0.8003 | 154 | * | 60 - 130 |
| alpha-BHC [2C] | 0.5000 | ND | 0.7350 | 147 | * | 60 - 130 |
| alpha-Chlordane | 0.5000 | 0.005002 | 0.7087 | 141 | * | 65 - 125 |
| alpha-Chlordane [2C] | 0.5000 | ND | 0.6019 | 120 | | 65 - 125 |
| beta-BHC | 0.5000 | 0.005024 | 0.6850 | 136 | * | 65 - 125 |
| beta-BHC [2C] | 0.5000 | 0.006211 | 0.7534 | 149 | * | 65 - 125 |
| delta-BHC | 0.5000 | 0.004809 | 0.7669 | 152 | * | 45 - 135 |
| delta-BHC [2C] | 0.5000 | ND | 0.7386 | 148 | * | 45 - 135 |
| Dieldrin | 0.5000 | ND | 0.7571 | 151 | * | 60 - 130 |
| Dieldrin [2C] | 0.5000 | ND | 0.6618 | 132 | * | 60 - 130 |
| Endosulfan I | 0.5000 | ND | 0.7287 | 146 | * | 50 - 110 |
| Endosulfan I [2C] | 0.5000 | ND | 0.5944 | 119 | * | 50 - 110 |
| Endosulfan II | 0.5000 | ND | 0.6948 | 139 | * | 30 - 130 |
| Endosulfan II [2C] | 0.5000 | ND | 0.6272 | 125 | | 30 - 130 |
| Endosulfan sulfate | 0.5000 | 0.04090 | 0.7353 | 139 | | 55 - 155 |
| Endosulfan sulfate [2C] | 0.5000 | 0.005490 | 0.6858 | 136 | | 55 - 155 |
| Endrin | 0.5000 | 0.009949 | 0.8754 | 173 | * | 55 - 135 |
| Endrin [2C] | 0.5000 | ND | 0.7337 | 147 | * | 55 - 135 |
| Endrin aldehyde | 0.5000 | ND | 0.5155 | 103 | | 55 - 135 |
| Endrin aldehyde [2C] | 0.5000 | ND | 0.4608 | 92.2 | | 55 - 135 |
| Endrin ketone | 0.5000 | ND | 0.6773 | 135 | * | 75 - 125 |
| Endrin ketone [2C] | 0.5000 | ND | 0.6336 | 127 | * | 75 - 125 |
| gamma-BHC (Lindane) | 0.5000 | ND | 0.7651 | 153 | * | 25 - 135 |
| gamma-BHC (Lindane) [2C] | 0.5000 | ND | 0.7047 | 141 | * | 25 - 135 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L06021

% Solids:

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Source Sample Name: **1011261-05**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| gamma-Chlordane | 0.5000 | 0.005809 | 0.7037 | 140 | * | 60 - 125 |
| gamma-Chlordane [2C] | 0.5000 | ND | 0.6134 | 123 | | 60 - 125 |
| Heptachlor | 0.5000 | 0.004076 | 0.8319 | 166 | * | 40 - 130 |
| Heptachlor [2C] | 0.5000 | 0.003724 | 0.6861 | 136 | * | 40 - 130 |
| Heptachlor epoxide | 0.5000 | ND | 0.7394 | 148 | * | 60 - 130 |
| Heptachlor epoxide [2C] | 0.5000 | ND | 0.6554 | 131 | * | 60 - 130 |
| Methoxychlor | 0.5000 | ND | 0.7836 | 157 | * | 55 - 150 |
| Methoxychlor [2C] | 0.5000 | ND | 0.6901 | 138 | | 55 - 150 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06021

% Solids:

Source Sample Name: **1011261-05**

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 0.5000 | 0.7811 | 156 | 11.9 | * | 30 | 35 - 140 |
| 4,4'-DDE [2C] | 0.5000 | 0.7073 | 141 | 11.9 | * | 30 | 35 - 140 |
| 4,4'-DDD | 0.5000 | 0.8177 | 164 | 12.3 | * | 30 | 25 - 150 |
| 4,4'-DDD [2C] | 0.5000 | 0.7319 | 146 | 12.1 | | 30 | 25 - 150 |
| 4,4'-DDT | 0.5000 | 0.8951 | 179 | 13.4 | * | 30 | 45 - 140 |
| 4,4'-DDT [2C] | 0.5000 | 0.8047 | 161 | 13.4 | * | 30 | 45 - 140 |
| Aldrin | 0.5000 | 0.7949 | 159 | 10.4 | * | 30 | 25 - 140 |
| Aldrin [2C] | 0.5000 | 0.7225 | 145 | 10.7 | * | 30 | 25 - 140 |
| alpha-BHC | 0.5000 | 0.8891 | 172 | 10.5 | * | 30 | 60 - 130 |
| alpha-BHC [2C] | 0.5000 | 0.8135 | 163 | 10.1 | * | 30 | 60 - 130 |
| alpha-Chlordane | 0.5000 | 0.7861 | 156 | 10.4 | * | 30 | 65 - 125 |
| alpha-Chlordane [2C] | 0.5000 | 0.6788 | 136 | 12.0 | * | 30 | 65 - 125 |
| beta-BHC | 0.5000 | 0.7594 | 151 | 10.3 | * | 30 | 65 - 125 |
| beta-BHC [2C] | 0.5000 | 0.8089 | 161 | 7.09 | * | 30 | 65 - 125 |
| delta-BHC | 0.5000 | 0.8491 | 169 | 10.2 | * | 30 | 45 - 135 |
| delta-BHC [2C] | 0.5000 | 0.8185 | 164 | 10.3 | * | 30 | 45 - 135 |
| Dieldrin | 0.5000 | 0.8409 | 168 | 10.5 | * | 30 | 60 - 130 |
| Dieldrin [2C] | 0.5000 | 0.7351 | 147 | 10.5 | * | 30 | 60 - 130 |
| Endosulfan I | 0.5000 | 0.8081 | 162 | 10.3 | * | 30 | 50 - 110 |
| Endosulfan I [2C] | 0.5000 | 0.6929 | 139 | 15.3 | * | 30 | 50 - 110 |
| Endosulfan II | 0.5000 | 0.7845 | 157 | 12.1 | * | 30 | 30 - 130 |
| Endosulfan II [2C] | 0.5000 | 0.7131 | 143 | 12.8 | * | 30 | 30 - 130 |
| Endosulfan sulfate | 0.5000 | 0.8135 | 155 | 10.1 | | 30 | 55 - 155 |
| Endosulfan sulfate [2C] | 0.5000 | 0.7668 | 152 | 11.1 | | 30 | 55 - 155 |
| Endrin | 0.5000 | 0.9523 | 188 | 8.41 | * | 30 | 55 - 135 |
| Endrin [2C] | 0.5000 | 0.8060 | 161 | 9.40 | * | 30 | 55 - 135 |
| Endrin aldehyde | 0.5000 | 0.5625 | 112 | 8.72 | | 30 | 55 - 135 |
| Endrin aldehyde [2C] | 0.5000 | 0.5155 | 103 | 11.2 | | 30 | 55 - 135 |
| Endrin ketone | 0.5000 | 0.7531 | 151 | 10.6 | * | 30 | 75 - 125 |
| Endrin ketone [2C] | 0.5000 | 0.7020 | 140 | 10.2 | * | 30 | 75 - 125 |
| gamma-BHC (Lindane) | 0.5000 | 0.8457 | 169 | 10.0 | * | 30 | 25 - 135 |
| gamma-BHC (Lindane) [2C] | 0.5000 | 0.7789 | 156 | 9.99 | * | 30 | 25 - 135 |
| gamma-Chlordane | 0.5000 | 0.7825 | 155 | 10.6 | * | 30 | 60 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06021

% Solids:

Source Sample Name: **1011261-05**

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| gamma-Chlordane [2C] | 0.5000 | 0.6866 | 137 | 11.3 | * | 30 | 60 - 125 |
| Heptachlor | 0.5000 | 0.9177 | 183 | 9.80 | * | 30 | 40 - 130 |
| Heptachlor [2C] | 0.5000 | 0.7705 | 153 | 11.6 | * | 30 | 40 - 130 |
| Heptachlor epoxide | 0.5000 | 0.8261 | 165 | 11.1 | * | 30 | 60 - 130 |
| Heptachlor epoxide [2C] | 0.5000 | 0.7257 | 145 | 10.2 | * | 30 | 60 - 130 |
| Methoxychlor | 0.5000 | 0.8700 | 174 | 10.4 | * | 30 | 55 - 150 |
| Methoxychlor [2C] | 0.5000 | 0.7804 | 156 | 12.3 | * | 30 | 55 - 150 |

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011026-05

Lab Name: Empirical Laboratories, LLC

GDI-MW-05-1018

Lab Sample ID: 1011261-05 Date(s) Analyzed: 12/10/2010 12/10/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW | | CONCENTRATION | %D |
|---|---|---|---|---|---|---|
| | | | FROM | TO | | |
| beta-BHC | 1 | 6.08 | 6.34 | 6.40 | 0.00502 | |
| | 2 | 5.29 | 5.51 | 5.57 | 0.00621 | 21 |
| Endosulfan sulfate | 1 | 8.99 | 9.34 | 9.40 | 0.0409 | |
| | 2 | 7.77 | 8.05 | 8.11 | 0.00549 | 153 |
| Heptachlor | 1 | 6.43 | 6.73 | 6.79 | 0.00408 | |
| | 2 | 5.32 | 5.53 | 5.59 | 0.00372 | 9 |

Matrix Interference

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011026-06

Lab Name: Empirical Laboratories, LLC

GP1-MW-08-1010

Lab Sample ID: 1011261-06 Date(s) Analyzed: 12/10/2010 12/10/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW FROM | RT WINDOW TO | CONCENTRATION | %D |
|---|---|---|---|---|---|---|
| 4,4'-DDD | 1 | 8.44 | 8.78 | 8.84 | 0.0202 | |
| | 2 | 7.14 | 7.41 | 7.47 | 0.0108 | 60 |
| alpha-Chlordane | 1 | 7.62 | 7.96 | 8.02 | 0.0108 | |
| | 2 | 6.35 | 6.60 | 6.66 | 0.0292 | 92 |
| Endosulfan I | 1 | 7.70 | 8.02 | 8.08 | 0.107 | |
| | 2 | 6.37 | 6.66 | 6.72 | 0.00855 | 170 |

Matrix interference

Heptachlor Epoxide (1) (2)

0.00644

0.0151

80.8%

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011026-04

Lab Name: Empirical Laboratories, LLC

GØ1-MW-12_1Ø1Ø

Lab Sample ID: 1011261-04 Date(s) Analyzed: 12/10/2010 12/10/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW | | CONCENTRATION | %D |
|---|---|---|---|---|---|---|
| | | | FROM | TO | | |
| alpha-BHC | 1 | 5.56 | 5.80 | 5.86 | 0.0312 | |
| | 2 | 4.78 | 4.94 | 5.00 | 0.0378 | 19 |
| gamma-BHC (Lindane) | 1 | 5.88 | 6.13 | 6.19 | 0.0191 | |
| | 2 | 5.04 | 5.23 | 5.29 | 0.114 | 143 |

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011026-07

Lab Name: Empirical Laboratories, LLC GKHMS-GW_FD04-1010

Lab Sample ID: 1011261-07 Date(s) Analyzed: 12/10/2010 12/10/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW | | CONCENTRATION | %D |
|---|---|---|---|---|---|---|
| | | | FROM | TO | | |
| 4,4'-DDD | 1 | 8.45 | 8.78 | 8.84 | 0.0324 | |
| | 2 | 7.14 | 7.41 | 7.47 | 0.0256 | 24 |
| alpha-BHC | 1 | 5.56 | 5.80 | 5.86 | 0.0281 | |
| | 2 | 4.76 | 4.94 | 5.00 | 0.00831 | 109 |
| alpha-Chlordane | 1 | 7.62 | 7.96 | 8.02 | 0.0128 | |
| | 2 | 6.35 | 6.60 | 6.66 | 0.0281 | 75 |
| gamma-BHC (Lindane) | 1 | 5.88 | 6.13 | 6.19 | 0.0141 | |
| | 2 | 5.05 | 5.23 | 5.29 | 0.00873 | 47 |
| Heptachlor epoxide | 1 | 7.27 | 7.58 | 7.64 | 0.0157 | |
| | 2 | 6.03 | 6.28 | 6.34 | 0.0180 | 14 |

Matrix Interference

# Data for SW8082A Forms

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_005

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** GL-ECD3

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aroclor-1016 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1221 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1232 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1242 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1248 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1254 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1260 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1262 | 0.120 | 0.500 | ug/L | SW8082A |
| Aroclor-1268 | 0.120 | 0.500 | ug/L | SW8082A |

# HOLDING TIME SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011026-01 | 11/06/10 10:31 | 11/30/10 08:25 | 11/12/10 14:15 | 6.20 | 7.00 | 12/10/10 17:26 | 28.13 | 40.00 | |
| 1011026-02 | 11/06/10 10:01 | 11/30/10 08:25 | 11/12/10 14:15 | 6.22 | 7.00 | 12/10/10 17:45 | 28.15 | 40.00 | |
| 1011026-03 | 11/06/10 11:38 | 11/30/10 08:25 | 11/12/10 14:15 | 6.15 | 7.00 | 12/10/10 18:03 | 28.16 | 40.00 | |
| 1011026-04 | 11/06/10 12:32 | 11/30/10 08:25 | 11/12/10 14:15 | 6.11 | 7.00 | 12/10/10 18:22 | 28.17 | 40.00 | |
| 1011026-05 | 11/07/10 09:35 | 11/30/10 08:25 | 11/12/10 14:15 | 5.24 | 7.00 | 12/10/10 18:41 | 28.18 | 40.00 | |
| 1011026-06 | 11/07/10 11:15 | 11/30/10 08:25 | 11/12/10 14:15 | 5.17 | 7.00 | 12/10/10 20:14 | 28.25 | 40.00 | |
| 1011026-07 | 11/07/10 00:00 | 11/30/10 08:25 | 11/12/10 14:15 | 5.68 | 7.00 | 12/10/10 20:32 | 28.26 | 40.00 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32606 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0K32606-CAL1 | 001R0101.D | 11/18/10 12:48 |
| Cal Standard | 0K32606-CAL1 | 001F0101.D | 11/18/10 12:48 |
| Cal Standard | 0K32606-CAL2 | 002R0201.D | 11/18/10 13:07 |
| Cal Standard | 0K32606-CAL2 | 002F0201.D | 11/18/10 13:07 |
| Cal Standard | 0K32606-CAL3 | 003R0301.D | 11/18/10 13:25 |
| Cal Standard | 0K32606-CAL3 | 003F0301.D | 11/18/10 13:25 |
| Cal Standard | 0K32606-CAL4 | 004R0401.D | 11/18/10 13:44 |
| Cal Standard | 0K32606-CAL4 | 004F0401.D | 11/18/10 13:44 |
| Cal Standard | 0K32606-CAL5 | 005R0501.D | 11/18/10 14:03 |
| Cal Standard | 0K32606-CAL5 | 005F0501.D | 11/18/10 14:03 |
| Cal Standard | 0K32606-CAL6 | 006R0601.D | 11/18/10 14:22 |
| Cal Standard | 0K32606-CAL6 | 006F0601.D | 11/18/10 14:22 |
| Initial Cal Check | 0K32606-ICV1 | 007R0701.D | 11/18/10 14:40 |
| Initial Cal Check | 0K32606-ICV1 | 007F0701.D | 11/18/10 14:40 |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| Cal Standard | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34414 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34414-CAL1 | 007R0701.D | 12/10/10 13:21 |
| Cal Standard | 0L34414-CAL1 | 007F0701.D | 12/10/10 13:21 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32606 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10G0158 | Aro-1660 Cal1@2500/125 | 0K32606-CAL1 | 001R0101.D | 11/18/10 12:48 |
| 10G0158 | Aro-1660 Cal1@2500/125 | 0K32606-CAL1 | 001F0101.D | 11/18/10 12:48 |
| 10G0159 | Aro-1660 Cal2@1000/50 (CCV) | 0K32606-CAL2 | 002F0201.D | 11/18/10 13:07 |
| 10G0159 | Aro-1660 Cal2@1000/50 (CCV) | 0K32606-CAL2 | 002R0201.D | 11/18/10 13:07 |
| 10G0160 | Aro-1660 Cal3@750/37.5 | 0K32606-CAL3 | 003F0301.D | 11/18/10 13:25 |
| 10G0160 | Aro-1660 Cal3@750/37.5 | 0K32606-CAL3 | 003R0301.D | 11/18/10 13:25 |
| 10G0161 | Aro-1660 Cal4@500/25 | 0K32606-CAL4 | 004F0401.D | 11/18/10 13:44 |
| 10G0161 | Aro-1660 Cal4@500/25 | 0K32606-CAL4 | 004R0401.D | 11/18/10 13:44 |
| 10G0162 | Aro-1660 Cal5@100/5 | 0K32606-CAL5 | 005F0501.D | 11/18/10 14:03 |
| 10G0162 | Aro-1660 Cal5@100/5 | 0K32606-CAL5 | 005R0501.D | 11/18/10 14:03 |
| 10G0163 | Aro-1660 Cal6@50/2.5 | 0K32606-CAL6 | 006F0601.D | 11/18/10 14:22 |
| 10G0163 | Aro-1660 Cal6@50/2.5 | 0K32606-CAL6 | 006R0601.D | 11/18/10 14:22 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34414 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10L0258 | Aroclor-1242 CCV@ 1000ppm | 0L34414-CAL1 | 007R0701.D | 12/10/10 13:21 |
| 10L0258 | Aroclor-1242 CCV@ 1000ppm | 0L34414-CAL1 | 007F0701.D | 12/10/10 13:21 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 (1) | 1377.504 | 4.536308 | 6.700333 | 3.426844E-02 | | | 20 | |
| Aroclor-1016 (2) | 444.0847 | 4.44248 | 5.826833 | 3.181603E-02 | | | 20 | |
| Aroclor-1016 (3) | 649.9719 | 4.621188 | 6.179167 | 3.737598E-02 | | | 20 | |
| Aroclor-1016 (4) | 648.8554 | 3.928386 | 6.382333 | 4.135933E-02 | | | 20 | |
| Aroclor-1016 (5) | 518.3258 | 5.712167 | 6.986333 | 4.281168E-02 | | | 20 | |
| Aroclor-1016 (1) [2C] | 1116.305 | 22.05288 | 5.6205 | 8.742721E-02 | AVG | | 20 | * |
| Aroclor-1016 (2) [2C] | 482.1738 | 15.65584 | 5.207667 | 6.233316E-02 | = 19.9 | | 20 | |
| Aroclor-1016 (3) [2C] | 538.2843 | 19.29511 | 5.3845 | 6.561467E-02 | | | 20 | |
| Aroclor-1016 (4) [2C] | 685.3173 | 23.96236 | 5.673333 | 7.372141E-02 | | | 20 | * |
| Aroclor-1016 (5) [2C] | 518.0925 | 18.33539 | 6.050167 | 3.093481E-02 | | | 20 | |
| Aroclor-1242 | | | | | | | 20 | |
| Aroclor-1242 (1) | | | | | | | 20 | |
| Aroclor-1242 (2) | | | | | | | 20 | |
| Aroclor-1242 (3) | | | | | | | 20 | |
| Aroclor-1242 (4) | | | | | | | 20 | |
| Aroclor-1242 (5) | | | | | | | 20 | |
| Aroclor-1242 [2C] | | | | | | | 20 | |
| Aroclor-1242 (1) [2C] | | | | | | | 20 | |
| Aroclor-1242 (2) [2C] | | | | | | | 20 | |
| Aroclor-1242 (3) [2C] | | | | | | | 20 | |
| Aroclor-1242 (4) [2C] | | | | | | | 20 | |
| Aroclor-1242 (5) [2C] | | | | | | | 20 | |
| Aroclor-1260 (1) | 3707.263 | 5.739381 | 9.985833 | 4.225337E-02 | | | 20 | |
| Aroclor-1260 (2) | 1987.077 | 5.271371 | 8.871167 | 0.0462616 | | | 20 | |
| Aroclor-1260 (3) | 2134.259 | 6.546249 | 9.215667 | 0.0358565 | | | 20 | |
| Aroclor-1260 (4) | 1615.479 | 6.430938 | 9.3155 | 3.563058E-02 | | | 20 | |
| Aroclor-1260 (5) | 907.6331 | 8.228581 | 11.0785 | 2.856956E-02 | | | 20 | |
| Aroclor-1260 (1) [2C] | 2013.278 | 16.31731 | 8.419 | 8.340063E-03 | AVG | | 20 | |
| Aroclor-1260 (2) [2C] | 1028.947 | 20.55875 | 7.164667 | 1.777219E-02 | = 18.5 | | 20 | * |
| Aroclor-1260 (3) [2C] | 1227.66 | 19.18172 | 7.3915 | 0.0314888 | | | 20 | |
| Aroclor-1260 (4) [2C] | 1169.368 | 18.45489 | 7.554333 | 1.416947E-02 | | | 20 | |
| Aroclor-1260 (5) [2C] | 921.5547 | 18.06768 | 8.109833 | 0.0215561 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 28765.14 | 2.541019 | 5.388857 | 1.804526E-02 | | | 20 | |
| Tetrachloro-m-xylene [2C] | 21379.77 | 11.06958 | 4.526 | 6.298631E-02 | | | 20 | |
| Decachlorobiphenyl | 29956.87 | 5.97861 | 11.62329 | 1.578512E-02 | | | 20 | |
| Decachlorobiphenyl [2C] | 17512.73 | 17.45123 | 10.00071 | 1.794087E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1016 (1) | | | 50 | 1495.9 | 100 | 1379.86 | 500 | 1353.35 | 750 | 1351.843 | 1000 | 1371.552 |
| Aroclor-1016 (2) | | | 50 | 478.5 | 100 | 454.64 | 500 | 435.762 | 750 | 431.7173 | 1000 | 440.106 |
| Aroclor-1016 (3) | | | 50 | 704.12 | 100 | 664.9 | 500 | 637.41 | 750 | 627.5187 | 1000 | 640.493 |
| Aroclor-1016 (4) | | | 50 | 697.8 | 100 | 654.92 | 500 | 633.068 | 750 | 632.4706 | 1000 | 641.782 |
| Aroclor-1016 (5) | | | 50 | 572.92 | 100 | 530.08 | 500 | 501.912 | 750 | 503.0813 | 1000 | 509.949 |
| Aroclor-1016 (1) [2C] | | | 50 | 1518.82 | 100 | 1291.13 | 500 | 1062.188 | 750 | 1001.393 | 1000 | 986.116 |
| Aroclor-1016 (2) [2C] | | | 50 | 608.86 | 100 | 526.06 | 500 | 472.152 | 750 | 455.7093 | 1000 | 434.192 |
| Aroclor-1016 (3) [2C] | | | 50 | 699.36 | 100 | 628.97 | 500 | 514.674 | 750 | 484.9987 | 1000 | 474.112 |
| Aroclor-1016 (4) [2C] | | | 50 | 948.94 | 100 | 818.8 | 500 | 641.51 | 750 | 600.444 | 1000 | 585.566 |
| Aroclor-1016 (5) [2C] | | | 50 | 672.54 | 100 | 594.08 | 500 | 486.382 | 750 | 469.5453 | 1000 | 463.649 |
| Aroclor-1242 | | | | | | | | | | | | |
| Aroclor-1242 (1) | | | | | | | | | | | | |
| Aroclor-1242 (2) | | | | | | | | | | | | |
| Aroclor-1242 (3) | | | | | | | | | | | | |
| Aroclor-1242 (4) | | | | | | | | | | | | |
| Aroclor-1242 (5) | | | | | | | | | | | | |
| Aroclor-1242 [2C] | | | | | | | | | | | | |
| Aroclor-1242 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (1) | | | 50 | 4038.86 | 100 | 3838.16 | 500 | 3690.114 | 750 | 3447.547 | 1000 | 3698.998 |
| Aroclor-1260 (2) | | | 50 | 2181.16 | 100 | 2008.25 | 500 | 1934.762 | 750 | 1901.885 | 1000 | 1991.364 |
| Aroclor-1260 (3) | | | 50 | 2315.88 | 100 | 2297.87 | 500 | 2062.272 | 750 | 2005.591 | 1000 | 2115.154 |
| Aroclor-1260 (4) | | | 50 | 1812.3 | 100 | 1617.43 | 500 | 1591.534 | 750 | 1534.256 | 1000 | 1611.527 |
| Aroclor-1260 (5) | | | 50 | 1022.96 | 100 | 944.94 | 500 | 906.088 | 750 | 841.22 | 1000 | 916.282 |
| Aroclor-1260 (1) [2C] | | | 50 | 2541.76 | 100 | 2234.09 | 500 | 1975.376 | 750 | 1833.392 | 1000 | 1882.631 |
| Aroclor-1260 (2) [2C] | | | 50 | 1366.76 | 100 | 1199 | 500 | 974.864 | 750 | 918.148 | 1000 | 915.273 |
| Aroclor-1260 (3) [2C] | | | 50 | 1608.24 | 100 | 1405.76 | 500 | 1174.532 | 750 | 1105.324 | 1000 | 1104.948 |
| Aroclor-1260 (4) [2C] | | | 50 | 1514.18 | 100 | 1340.42 | 500 | 1115.872 | 750 | 1050.079 | 1000 | 1064.022 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | 50 | 1193.36 | 100 | 1040.37 | 500 | 889.262 | 750 | 825.8493 | 1000 | 844.715 |
| Tetrachloro-m-xylene | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Tetrachloro-m-xylene [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |

# INITIAL CALIBRATION DATA

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | | | | | | | | | | |
| Tetrachloro-m-xylene | 200 | 30396.38 | 100 | 28270.71 | 50 | 28442.38 | 25 | 28656.12 | 10 | 28496 | 5 | 28638.4 |
| Tetrachloro-m-xylene [2C] | 200 | 19072.68 | 100 | 19248.97 | 50 | 20109.36 | 25 | 20564.48 | 10 | 22076.7 | 5 | 22878.2 |
| Decachlorobiphenyl | 200 | 29960.3 | 100 | 27340.04 | 50 | 28005.84 | 25 | 29560.24 | 10 | 31558.5 | 5 | 31300.2 |
| Decachlorobiphenyl [2C] | 200 | 14811.62 | 100 | 14456.54 | 50 | 15435.18 | 25 | 16877.6 | 10 | 18462 | 5 | 19614.2 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | | | | | | | | | | |
| Tetrachloro-m-xylene | 1 | 28456 | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | 1 | 25708 | | | | | | | | | | |
| Decachlorobiphenyl | 1 | 31973 | | | | | | | | | | |
| Decachlorobiphenyl [2C] | 1 | 22932 | | | | | | | | | | |

# INITIAL CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 007F0701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32606 | Injection Date: | 11/18/10 |
| Lab Sample ID: | 0K32606-ICV1 | Injection Time: | 14:40 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) | |
| Aroclor-1016 (1) | A | 1000 | 965.8 | 1377.504 | 1330.475 | | -3.4 | 20 | |
| Aroclor-1016 (2) | A | 1000 | 954.1 | 444.0847 | 423.696 | | -4.6 | 20 | |
| Aroclor-1016 (3) | A | 1000 | 990.4 | 649.9719 | 643.709 | | -1.0 | 20 | |
| Aroclor-1016 (4) | A | 1000 | 1001 | 648.8554 | 649.524 | | 0.1 | 20 | |
| Aroclor-1016 (5) | A | 1000 | 1007 | 518.3258 | 521.878 | | 0.7 | 20 | |
| Aroclor-1016 (1) [2C] | A | 1000 | 770.6 | 1116.305 | 860.241 | | -22.9 | 20 | * |
| Aroclor-1016 (2) [2C] | A | 1000 | 955.3 | 482.1738 | 460.605 | | -4.5 | 20 | |
| Aroclor-1016 (3) [2C] | A | 1000 | 884.8 | 538.2843 | 476.271 | | -11.5 | 20 | |
| Aroclor-1016 (4) [2C] | A | 1000 | 869.8 | 685.3173 | 596.06 | | -13.0 | 20 | |
| Aroclor-1016 (5) [2C] | A | 1000 | 893.4 | 518.0925 | 462.882 | | -10.7 | 20 | |
| Aroclor-1260 (1) | A | 1000 | 914.4 | 3707.263 | 3390.072 | | -8.6 | 20 | |
| Aroclor-1260 (2) | A | 1000 | 999.0 | 1987.077 | 1985.004 | | -0.1 | 20 | |
| Aroclor-1260 (3) | A | 1000 | 1044 | 2134.259 | 2227.99 | | 4.4 | 20 | |
| Aroclor-1260 (4) | A | 1000 | 845.2 | 1615.479 | 1365.422 | | -15.5 | 20 | |
| Aroclor-1260 (5) | A | 1000 | 819.7 | 907.6331 | 744.024 | | -18.0 | 20 | |
| Aroclor-1260 (1) [2C] | A | 1000 | 848.7 | 2013.278 | 1708.677 | | -15.1 | 20 | |
| Aroclor-1260 (2) [2C] | A | 1000 | 914.8 | 1028.947 | 941.29 | | -8.5 | 20 | |
| Aroclor-1260 (3) [2C] | A | 1000 | 939.9 | 1227.66 | 1153.839 | | -6.0 | 20 | |
| Aroclor-1260 (4) [2C] | A | 1000 | 917.8 | 1169.368 | 1073.231 | | -8.2 | 20 | |
| Aroclor-1260 (5) [2C] | A | 1000 | 816.1 | 921.5547 | 752.068 | | -18.4 | 20 | |

AVG. 12.5

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L35009-CCV1 | 003F0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV1 | 003R0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV4 | 006F0601.D | 12/10/10 13:03 |
| Calibration Check | 0L35009-CCV4 | 006R0601.D | 12/10/10 13:03 |
| Calibration Check | 0L35009-CCV5 | 007R0701.D | 12/10/10 13:21 |
| Calibration Check | 0L35009-CCV5 | 007F0701.D | 12/10/10 13:21 |
| Blank | 0L06021-BLK1 | 017R1701.D | 12/10/10 16:30 |
| Blank | 0L06021-BLK1 | 017F1701.D | 12/10/10 16:30 |
| LCS | 0L06021-BS2 | 019R1901.D | 12/10/10 17:07 |
| LCS | 0L06021-BS2 | 019F1901.D | 12/10/10 17:07 |
| 1011026-01 | 1011261-01 | 020F2001.D | 12/10/10 17:26 |
| 1011026-01 | 1011261-01 | 020R2001.D | 12/10/10 17:26 |
| 1011026-02 | 1011261-02 | 021R2101.D | 12/10/10 17:45 |
| 1011026-02 | 1011261-02 | 021F2101.D | 12/10/10 17:45 |
| 1011026-03 | 1011261-03 | 022R2201.D | 12/10/10 18:03 |
| 1011026-03 | 1011261-03 | 022F2201.D | 12/10/10 18:03 |
| 1011026-04 | 1011261-04 | 023F2301.D | 12/10/10 18:22 |
| 1011026-04 | 1011261-04 | 023R2301.D | 12/10/10 18:22 |
| 1011026-05 | 1011261-05 | 024F2401.D | 12/10/10 18:41 |
| 1011026-05 | 1011261-05 | 024R2401.D | 12/10/10 18:41 |
| 1011026-05 | 0L06021-MS2 | 027R2701.D | 12/10/10 19:36 |
| 1011026-05 | 0L06021-MS2 | 027F2701.D | 12/10/10 19:36 |
| 1011026-05 | 0L06021-MSD2 | 028F2801.D | 12/10/10 19:55 |
| 1011026-05 | 0L06021-MSD2 | 028R2801.D | 12/10/10 19:55 |
| 1011026-06 | 1011261-06 | 029R2901.D | 12/10/10 20:14 |
| 1011026-06 | 1011261-06 | 029F2901.D | 12/10/10 20:14 |
| 1011026-07 | 1011261-07 | 030R3001.D | 12/10/10 20:32 |
| 1011026-07 | 1011261-07 | 030F3001.D | 12/10/10 20:32 |
| Calibration Check | 0L35009-CCV6 | 031F3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV6 | 031R3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV9 | 034R3401.D | 12/10/10 21:47 |
| Calibration Check | 0L35009-CCV9 | 034F3401.D | 12/10/10 21:47 |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35009 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L35009-CCVA | 035F3501.D | 12/10/10 22:05 |
| Calibration Check | 0L35009-CCVA | 035R3501.D | 12/10/10 22:05 |

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003F0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Tetrachloro-m-xylene | A | 100.0 | 90.38 | 28765.14 | 25999.25 | | -9.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 97.24 | 21379.77 | 20790.76 | | -2.8 | 20 |
| Decachlorobiphenyl | A | 100.0 | 86.52 | 29956.87 | 25919.92 | | -13.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 91.76 | 17512.73 | 16070.47 | | -8.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 006F0601.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV4 | Injection Time: | 13:03 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1016 (1) | A | 1000 | 951.3 | 1377.504 | 1310.397 | | -4.9 | 20 |
| Aroclor-1016 (2) | A | 1000 | 969.3 | 444.0847 | 430.444 | | -3.1 | 20 |
| Aroclor-1016 (3) | A | 1000 | 979.0 | 649.9719 | 636.323 | | -2.1 | 20 |
| Aroclor-1016 (4) | A | 1000 | 974.5 | 648.8554 | 632.336 | | -2.5 | 20 |
| Aroclor-1016 (5) | A | 1000 | 957.0 | 518.3258 | 496.025 | | -4.3 | 20 |
| Aroclor-1016 (1) [2C] | A | 1000 | 1032 | 1116.305 | 1152.408 | | 3.2 | 20 |
| Aroclor-1016 (2) [2C] | A | 1000 | 1084 | 482.1738 | 522.447 | | 8.4 | 20 |
| Aroclor-1016 (3) [2C] | A | 1000 | 1074 | 538.2843 | 577.849 | | 7.4 | 20 |
| Aroclor-1016 (4) [2C] | A | 1000 | 1085 | 685.3173 | 743.499 | | 8.5 | 20 |
| Aroclor-1016 (5) [2C] | A | 1000 | 1036 | 518.0925 | 536.731 | | 3.6 | 20 |
| Aroclor-1260 (1) | A | 1000 | 1026 | 3707.263 | 3802.841 | | 2.6 | 20 |
| Aroclor-1260 (2) | A | 1000 | 973.7 | 1987.077 | 1934.916 | | -2.6 | 20 |
| Aroclor-1260 (3) | A | 1000 | 947.6 | 2134.259 | 2022.331 | | -5.2 | 20 |
| Aroclor-1260 (4) | A | 1000 | 974.9 | 1615.479 | 1574.97 | | -2.5 | 20 |
| Aroclor-1260 (5) | A | 1000 | 991.1 | 907.6331 | 899.54 | | -0.9 | 20 |
| Aroclor-1260 (1) [2C] | A | 1000 | 1094 | 2013.278 | 2202.64 | | 9.4 | 20 |
| Aroclor-1260 (2) [2C] | A | 1000 | 1086 | 1028.947 | 1117.371 | | 8.6 | 20 |
| Aroclor-1260 (3) [2C] | A | 1000 | 1089 | 1227.66 | 1337.058 | | 8.9 | 20 |
| Aroclor-1260 (4) [2C] | A | 1000 | 1060 | 1169.368 | 1239.274 | | 6.0 | 20 |
| Aroclor-1260 (5) [2C] | A | 1000 | 1080 | 921.5547 | 995.047 | | 8.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 007F0701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV5 | Injection Time: | 13:21 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1242 (1) | A | 1000 | 1000 | | 963.925 | | | 20 |
| Aroclor-1242 (2) | A | 1000 | 1000 | | 476.295 | | | 20 |
| Aroclor-1242 (3) | A | 1000 | 1000 | | 477.985 | | | 20 |
| Aroclor-1242 (4) | A | 1000 | 1000 | | 365.484 | | | 20 |
| Aroclor-1242 (5) | A | 1000 | 1000 | | 469.786 | | | 20 |
| Aroclor-1242 (1) [2C] | A | 1000 | 1000 | | 904.338 | | | 20 |
| Aroclor-1242 (2) [2C] | A | 1000 | 1000 | | 311.165 | | | 20 |
| Aroclor-1242 (3) [2C] | A | 1000 | 1000 | | 446.828 | | | 20 |
| Aroclor-1242 (4) [2C] | A | 1000 | 1000 | | 573.747 | | | 20 |
| Aroclor-1242 (5) [2C] | A | 1000 | 1000 | | 482.003 | | | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031F3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Tetrachloro-m-xylene | A | 100.0 | 94.61 | 28765.14 | 27215.45 | | -5.4 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 100.5 | 21379.77 | 21496.84 | | 0.5 | 20 |
| Decachlorobiphenyl | A | 100.0 | 93.78 | 29956.87 | 28094.31 | | -6.2 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 101.0 | 17512.73 | 17696.02 | | 1.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 034F3401.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV9 | Injection Time: | 21:47 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Aroclor-1016 (1) | A | 1000 | 1021 | 1377.504 | 1406.546 | | 2.1 | 20 | |
| Aroclor-1016 (2) | A | 1000 | 1083 | 444.0847 | 480.87 | | 8.3 | 20 | |
| Aroclor-1016 (3) | A | 1000 | 1073 | 649.9719 | 697.735 | | 7.3 | 20 | |
| Aroclor-1016 (4) | A | 1000 | 1089 | 648.8554 | 706.812 | | 8.9 | 20 | |
| Aroclor-1016 (5) | A | 1000 | 1050 | 518.3258 | 544.351 | | 5.0 | 20 | |
| Aroclor-1016 (1) [2C] | A | 1000 | 1101 | 1116.305 | 1228.779 | | 10.1 | 20 | |
| Aroclor-1016 (2) [2C] | A | 1000 | 1204 | 482.1738 | 580.539 | | 20.4 | 20 | * |
| Aroclor-1016 (3) [2C] | A | 1000 | 1123 | 538.2843 | 604.314 | | 12.3 | 20 | |
| Aroclor-1016 (4) [2C] | A | 1000 | 1079 | 685.3173 | 739.261 | | 7.9 | 20 | |
| Aroclor-1016 (5) [2C] | A | 1000 | 1170 | 518.0925 | 606.449 | | 17.1 | 20 | |
| Aroclor-1260 (1) | A | 1000 | 1084 | 3707.263 | 4019.111 | | 8.4 | 20 | |
| Aroclor-1260 (2) | A | 1000 | 1043 | 1987.077 | 2073.009 | | 4.3 | 20 | |
| Aroclor-1260 (3) | A | 1000 | 1005 | 2134.259 | 2145.317 | | 0.5 | 20 | |
| Aroclor-1260 (4) | A | 1000 | 1024 | 1615.479 | 1654.279 | | 2.4 | 20 | |
| Aroclor-1260 (5) | A | 1000 | 1051 | 907.6331 | 954.183 | | 5.1 | 20 | |
| Aroclor-1260 (1) [2C] | A | 1000 | 1134 | 2013.278 | 2283.256 | | 13.4 | 20 | |
| Aroclor-1260 (2) [2C] | A | 1000 | 1108 | 1028.947 | 1140.68 | | 10.9 | 20 | |
| Aroclor-1260 (3) [2C] | A | 1000 | 1116 | 1227.66 | 1369.787 | | 11.6 | 20 | |
| Aroclor-1260 (4) [2C] | A | 1000 | 1132 | 1169.368 | 1323.483 | | 13.2 | 20 | |
| Aroclor-1260 (5) [2C] | A | 1000 | 1153 | 921.5547 | 1062.37 | | 15.3 | 20 | |

AVG 13.6%

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 035F3501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCVA | Injection Time: | 22:05 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1242 (1) | A | 1000 | 1129 | | 1088.652 | | | 20 |
| Aroclor-1242 (2) | A | 1000 | 1126 | | 536.214 | | | 20 |
| Aroclor-1242 (3) | A | 1000 | 1128 | | 539.074 | | | 20 |
| Aroclor-1242 (4) | A | 1000 | 1126 | | 411.732 | | | 20 |
| Aroclor-1242 (5) | A | 1000 | 1142 | | 536.652 | | | 20 |
| Aroclor-1242 (1) [2C] | A | 1000 | 1130 | | 1022.213 | | | 20 |
| Aroclor-1242 (2) [2C] | A | 1000 | 1101 | | 342.696 | | | 20 |
| Aroclor-1242 (3) [2C] | A | 1000 | 1050 | | 469.216 | | | 20 |
| Aroclor-1242 (4) [2C] | A | 1000 | 1103 | | 633.05 | | | 20 |
| Aroclor-1242 (5) [2C] | A | 1000 | 1182 | | 569.5 | | | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06021 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| ~~Blank~~ | 0L06021-BLK1 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| LCS | 0L06021-BS2 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-05 | 0L06021-MS2 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-05 | 0L06021-MSD2 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-01 | 1011261-01 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-02 | 1011261-02 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-03 | 1011261-03 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-04 | 1011261-04 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-05 | 1011261-05 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-06 | 1011261-06 | 11/12/10 14:15 | 1,000.00 | 10.00 |
| 1011026-07 | 1011261-07 | 11/12/10 14:15 | 1,000.00 | 10.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L06021-BLK1 File ID: 017F1701.D

Sampled: Prepared: 11/12/10 14:15 Analyzed: 12/10/10 16:30

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L06021 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 0.120 | 0.250 | 0.500 | U |
| 11104-28-2 | Aroclor-1221 | | 0.120 | 0.250 | 0.500 | U |
| 11141-16-5 | Aroclor-1232 | | 0.120 | 0.250 | 0.500 | U |
| 53469-21-9 | Aroclor-1242 | | 0.120 | 0.250 | 0.500 | U |
| 12672-29-6 | Aroclor-1248 | | 0.120 | 0.250 | 0.500 | U |
| 11097-69-1 | Aroclor-1254 | | 0.120 | 0.250 | 0.500 | U |
| 11096-82-5 | Aroclor-1260 | | 0.120 | 0.250 | 0.500 | U |
| 37324-23-5 | Aroclor-1262 | | 0.120 | 0.250 | 0.500 | U |
| 11100-14-4 | Aroclor-1268 | | 0.120 | 0.250 | 0.500 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 0.2000 | 0.2086 | 104 | 25 - 140 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 0.2443 | 122 | 25 - 140 | |
| Decachlorobiphenyl | 0.2000 | 0.2071 | 104 | 40 - 135 | |
| Decachlorobiphenyl [2C] | 0.2000 | 0.2222 | 111 | 40 - 135 | |

* Values outside of QC limits

# LCS / LCS DUPLICATE RECOVERY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06021 | Laboratory ID: | 0L06021-BS2 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 10 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aroclor-1242 | 5.000 | 5.173 | 103 | 50 - 150 |
| Aroclor-1242 [2C] | 5.000 | 4.894 | 97.9 | 50 - 150 |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV1 ) ug/L** | | | | Lab File ID: 003F0301.D | | Analyzed: 12/10/10 12:06 | | |
| Tetrachloro-m-xylene | 100.0 | 90.4 | 80 - 120 | 5.122 | 5.122 | 0.0000 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 97.2 | 80 - 120 | 4.319 | 4.319 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 86.5 | 80 - 120 | 11.227 | 11.227 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 91.8 | 80 - 120 | 9.651 | 9.651 | 0.0000 | +/-0.030 | |
| **Blank (0L06021-BLK1 ) ug/L** | | | | Lab File ID: 017F1701.D | | Analyzed: 12/10/10 16:30 | | |
| Tetrachloro-m-xylene | 0.2000 | 104 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 122 | 25 - 140 | 4.314 | 4.319 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 104 | 40 - 135 | 11.224 | 11.227 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 111 | 40 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **LCS (0L06021-BS2 ) ug/L** | | | | Lab File ID: 019F1901.D | | Analyzed: 12/10/10 17:07 | | |
| Tetrachloro-m-xylene | 0.2000 | 90.6 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 96.8 | 25 - 140 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 81.7 | 40 - 135 | 11.223 | 11.227 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 93.4 | 40 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **1011026-01 (1011261-01 ) ug/L** | | | | Lab File ID: 020F2001.D | | Analyzed: 12/10/10 17:26 | | |
| Tetrachloro-m-xylene | 0.2000 | 123 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 134 | 25 - 140 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 132 | 40 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 140 | 40 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | * |
| **1011026-02 (1011261-02 ) ug/L** | | | | Lab File ID: 021F2101.D | | Analyzed: 12/10/10 17:45 | | |
| Tetrachloro-m-xylene | 0.2000 | 88.8 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 97.3 | 25 - 140 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 65.6 | 40 - 135 | 11.22 | 11.227 | -0.0070 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 62.1 | 40 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **1011026-03 (1011261-03 ) ug/L** | | | | Lab File ID: 022F2201.D | | Analyzed: 12/10/10 18:03 | | |
| Tetrachloro-m-xylene | 0.2000 | 83.5 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 84.2 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 75.7 | 40 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 80.2 | 40 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **1011026-04 (1011261-04 ) ug/L** | | | | Lab File ID: 023F2301.D | | Analyzed: 12/10/10 18:22 | | |
| Tetrachloro-m-xylene | 0.2000 | 94.4 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 81.5 | 25 - 140 | 4.31 | 4.319 | -0.0090 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 70.8 | 40 - 135 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 66.8 | 40 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011026-05 (1011261-05 ) ug/L** | | | | Lab File ID: 024F2401.D | | Analyzed: 12/10/10 18:41 | | |
| Tetrachloro-m-xylene | 0.2000 | 97.8 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 99.3 | 25 - 140 | 4.31 | 4.319 | -0.0090 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 87.8 | 40 - 135 | 11.223 | 11.227 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 96.1 | 40 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Matrix Spike (0L06021-MS2 ) ug/L** | | | | Lab File ID: 027F2701.D | | Analyzed: 12/10/10 19:36 | | |
| Tetrachloro-m-xylene | 0.2000 | 88.3 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 94.5 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 77.8 | 40 - 135 | 11.22 | 11.227 | -0.0070 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 80.2 | 40 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **Matrix Spike Dup (0L06021-MSD2 ) ug/L** | | | | Lab File ID: 028F2801.D | | Analyzed: 12/10/10 19:55 | | |
| Tetrachloro-m-xylene | 0.2000 | 29.7 | 25 - 140 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 31.7 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 27.7 | 40 - 135 | 11.221 | 11.227 | -0.0060 | +/-0.030 | * |
| Decachlorobiphenyl [2C] | 0.2000 | 30.0 | 40 - 135 | 9.646 | 9.651 | -0.0050 | +/-0.030 | * |
| **1011026-06 (1011261-06 ) ug/L** | | | | Lab File ID: 029F2901.D | | Analyzed: 12/10/10 20:14 | | |
| Tetrachloro-m-xylene | 0.2000 | 94.3 | 25 - 140 | 5.117 | 5.122 | -0.0050 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 95.5 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 80.9 | 40 - 135 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 84.6 | 40 - 135 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |
| **1011026-07 (1011261-07 ) ug/L** | | | | Lab File ID: 030F3001.D | | Analyzed: 12/10/10 20:32 | | |
| Tetrachloro-m-xylene | 0.2000 | 98.5 | 25 - 140 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 0.2000 | 99.6 | 25 - 140 | 4.311 | 4.319 | -0.0080 | +/-0.030 | |
| Decachlorobiphenyl | 0.2000 | 89.2 | 40 - 135 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 0.2000 | 93.7 | 40 - 135 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Calibration Check (0L35009-CCV6 ) ug/L** | | | | Lab File ID: 031F3101.D | | Analyzed: 12/10/10 20:51 | | |
| Tetrachloro-m-xylene | 100.0 | 94.6 | 80 - 120 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 100 | 80 - 120 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 93.8 | 80 - 120 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 101 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8082A**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L06021

% Solids:

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Source Sample Name: **1011261-05**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Aroclor-1242 | 5.000 | ND | 4.470 | 89.4 | | 50 - 150 |
| Aroclor-1242 [2C] | 5.000 | ND | 4.184 | 83.7 | | 50 - 150 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Aroclor-1242 | 5.000 | 1.686 | 33.7 | 90.5 | * * | 30 | 50 - 150 |
| Aroclor-1242 [2C] | 5.000 | 1.553 | 31.1 | 91.7 | * * | 30 | 50 - 150 |

# NAS KEY WEST
# WATER DATA
# CTOJM16KW_005

| FRACTION | CHEMICAL | GKHMS-GW-FD04-1010 | UNITS | G01-MW-08-1010 | RPD | D | |
|---|---|---|---|---|---|---|---|
| PEST/PCB | 4,4'-DDD | 0.0324 | UG/L | 0.0202 | 46.39 | 0.01 | N/A < 2x R.L. |
| PEST/PCB | ALPHA-BHC | 0.00831 J | UG/L | ND | 200.00 | 0.01 | N/A < 2x R.L. |
| PEST/PCB | ALPHA-CHLORDANE | 0.0281 J | UG/L | 0.0292 J | 3.84 | 0.00 | |
| PEST/PCB | ENDOSULFAN I | ND | UG/L | 0.00855 J | 200.00 | 0.01 | N/A < 2x R.L. |
| PEST/PCB | GAMMA-BHC (LINDANE) | 0.0141 J | UG/L | ND | 200.00 | 0.01 | N/A < 2x R.L. |
| PEST/PCB | HEPTACHLOR EPOXIDE | 0.018 J | UG/L | 0.0151 J | 17.52 | 0.00 | |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **TERRI L. SOLOMON** **COPIES:** **DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – METALS**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_005**

**SAMPLES:** 10/Aqueous

| | | |
|---|---|---|
| G01-MW-01A-1010 | G01-MW-03-1010 | G01-MW-05-1010 |
| G01-MW-06-1010 | G01-MW-07-1010 | G01-MW-08-1010 |
| G01-MW-12-1010 | GKHMS-GW-09-1010 | GKHMS-GW-10-1010 |
| GKHMS-GW-FD04-1010 | | |

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_005, consists of ten (10) aqueous environmental samples. One (1) field duplicate pair (G01-MW-08-1010 / GKHMS-GW-FD04-1010) was included within this data package.

All samples were analyzed for Target Analyte List (TAL) metals. The samples were collected by Tetra Tech on November 4,6 and 7, 2010 and analyzed by Empirical Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010B. Mercury analyses were conducted using SW-846 methods 7470A / 7471A

These data were evaluated based on the following parameters:

* • Data Completeness
• Holding Times
• Initial and Continuing Calibrations
• Laboratory Method / Preparation Blank Analyses
• Matrix Spike / Matrix Spike Duplicate Recoveries
• Laboratory Control Sample Recoveries
* • ICP Serial Dilution Results
* • Field Duplicate Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Holding Times

The aqueous samples were analyzed 3-6 days past the 28 day hold time for mercury. The nondetected results reported for mercury were qualified as estimated, "UJ".

Initial and Continuing Calibrations

The continuing calibration percent recoveries on 12/7/10 at 18:26 for aluminum, magnesium and potassium were > 110% quality control limit and the percent recovery for calcium was < 90% quality control limit affecting several samples. The positive results reported for aluminum and magnesium for samples G01-MW-03-1010, G01-MW-12-1010, G01-MW-05-1010, G01-MW-08-1010, GKHMS-GW-FD04-1010, GD1-MW-06-1010 and GKHMS-GW-09-1010 were qualified as estimated, "J". The positive results reported for calcium for samples G01-MW-01A-1010, G01-MW-03-1010, G01-MW-07-1010, G01-MW-12-1010, G01-MW-05-1010, G01-MW-08-1010, GKHMS-GW-FD04-1010, GD1-MW-06-1010 and GKHMS-GW-09-1010 were qualified as estimated, "J". The positive result reported for potassium was qualified as estimated, "J".

The continuing calibration percent recoveries on 12/9/10 at 20:30 for potassium and sodium were > 110% quality control limit affecting several samples. The positive results reported for potassium and sodium for samples G01-MW-01A-1010, G01-MW-03-1010, G01-MW-07-1010 and GKHMS-GW-09-1010 were qualified as estimated, "J".

Laboratory Method / Preparation Blank Analyses

The following contaminant was detected in the preparation blank at the following maximum concentration:

| Analyte | Maximum Concentration | Action Level |
|---|---|---|
| Cadmium | 1.36 ug/L | 6.8 ug/L |

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results greater than the action level for cadmium were qualified as nondetected, "U".

Matrix Spike / Matrix Spike Duplicate Recoveries

The matrix spike and/or matrix spike duplicate percent recoveries for cadmium, antimony and arsenic were > 120% quality control limit. The positive results reported for the aforementioned analytes were qualified as estimated, "J".

Laboratory Control Standard Recoveries

The laboratory control standard (LCS) percent recovery for calcium was < 80% quality control limit affecting all samples. The positive results reported for calcium were qualified as estimated, "J".

Notes

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) were qualified as estimated, "J".

The samples were originally received by Centuri Laboratories and given laboratory IDs. The samples were then sent to Empirical Laboratory for analysis and given a second set of sample

IDs. The original chain of custody was not included by either laboratory. The sample ID listed in the EDD could not be confirmed to match either of the laboratory IDs. This issue was resolved.

Nondetected results are reported to the method detection limit.

Executive Summary

**Laboratory Performance:** The 28 day hold time for all of the mercury analyses was exceeded. Several continuing calibrations were outside the 90-110% quality control limits. Cadmium was were present in the preparation blank.

**Other Factors Affecting Data Quality:** Positive results reported below the LOQ but above the MDL were qualified as estimated. Several matrix spike and/or matrix spike duplicate percent recoveries were > 120% quality control limit. The LCS percent recovery for calcium was < 80% quality control limit affecting all samples.

The data for these analyses were reviewed with reference to the "EPA Functional Guidelines for Organic Data Validation", October 1999, "National Functional Guidelines for Inorganic Review", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Terri L. Solomon
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

| | | |
|---|---|---|
| A | = | Lab Blank Contamination |
| B | = | Field Blank Contamination |
| C | = | Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.) |
| C01 | = | GC/MS Tuning Noncompliance |
| D | = | MS/MSD Recovery Noncompliance |
| E | = | LCS/LCSD Recovery Noncompliance |
| F | = | Lab Duplicate Imprecision |
| G | = | Field Duplicate Imprecision |
| H | = | Holding Time Exceedance |
| I | = | ICP Serial Dilution Noncompliance |
| J | = | GFAA PDS - GFAA MSA's $r < 0.995$ |
| K | = | ICP Interference - includes ICS % R Noncompliance |
| L | = | Instrument Calibration Range Exceedance |
| M | = | Sample Preservation Noncompliance |
| N | = | Internal Standard Noncompliance |
| N01 | = | Internal Standard Recovery Noncompliance Dioxins |
| N02 | = | Recovery Standard Noncompliance Dioxins |
| N03 | = | Clean-up Standard Noncompliance Dioxins |
| O | = | Poor Instrument Performance (e.g. base-line drifting) |
| P | = | Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics) |
| Q | = | Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.) |
| R | = | Surrogates Recovery Noncompliance |
| S | = | Pesticide/PCB Resolution |
| T | = | % Breakdown Noncompliance for DDT and Endrin |
| U | = | % Difference between columns/detectors >25% for positive results determined via GC/HPLC |
| V | = | Non-linear calibrations; correlation coefficient $r < 0.995$ |
| W | = | EMPC result |
| X | = | Signal to noise response drop |
| Y | = | Percent solids <30% |
| Z | = | Uncertainty at 2 sigma deviation is greater than sample activity |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01A-1010 | | | G01-MW-03-1010 | | | G01-MW-05-1010 | | | G01-MW-06-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_005 | LAB_ID | 1011261-01 | | | 1011261-02 | | | 1011261-05 | | | 1011264-01 | | |
| FRACTION: M | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/7/2010 | | | 11/4/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 619 | J | P | 55.9 | J | CP | 80.9 | J | CP | 77.7 | J | CP |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3.92 | J | DP | 19 | J | D | 3 | U | | 3 | U | |
| BARIUM | | 38.9 | J | P | 27.4 | J | P | 6.44 | J | P | 5.01 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 15.2 | U | A | 9.69 | J | D | 4.09 | U | A | 3.57 | U | A |
| CALCIUM | | 440000 | J | CE | 262000 | J | CE | 98200 | J | CE | 103000 | J | CE |
| CHROMIUM | | 10 | U | | 2 | U | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 8 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 30 | U | | 952 | | | 30 | U | | 30 | U | |
| LEAD | | 10 | U | | 2 | U | | 2 | U | | 2 | U | |
| MAGNESIUM | | 1080000 | | | 400000 | J | C | 58700 | J | C | 98400 | J | C |
| MANGANESE | | 9.91 | J | P | 21.2 | | | 3 | U | | 3 | U | |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 15 | U | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 440000 | J | C | 138000 | J | C | 12500 | | | 20400 | | |
| SELENIUM | | 5.09 | J | P | 7.78 | J | P | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 10200000 | J | C | 3620000 | J | C | 333000 | | | 363000 | | |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 25 | U | | 9.98 | J | P | 5 | U | | 5.21 | J | P |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-07-1010 | | | G01-MW-08-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-09-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_005 | LAB_ID | 1011261-03 | | | 1011261-06 | | | 1011261-04 | | | 1011264-02 | | |
| FRACTION: M | SAMP_DATE | 11/6/2010 | | | 11/7/2010 | | | 11/6/2010 | | | 11/4/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 473 | J | P | 70.2 | J | CP | 79.8 | J | CP | 81 | J | CP |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 4.02 | J | JP | 3 | U | | 3 | U | | 3 | U | |
| BARIUM | | 12.5 | J | P | 6.45 | J | P | 5.78 | J | P | 8.69 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 13.8 | U | A | 1.91 | U | A | 3.24 | U | A | 4.49 | U | A |
| CALCIUM | | 242000 | J | CE | 110000 | J | CE | 110000 | J | CE | 119000 | J | CE |
| CHROMIUM | | 10 | U | | 2 | U | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 30 | U | | 50.1 | J | P | 30 | U | | 32.2 | J | P |
| LEAD | | 15 | U | | 1.5 | U | | 1.5 | U | | 1.5 | U | |
| MAGNESIUM | | 551000 | | | 8750 | J | C | 21600 | J | C | 138000 | J | C |
| MANGANESE | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 218000 | J | C | 1000 | U | | 5030 | J | C | 37400 | J | C |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 5280000 | J | C | 16700 | | | 80900 | | | 847000 | J | C |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 25 | U | | 5 | U | | 7.47 | J | P | 8.95 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-10-1010 | | | GKHMS-GW-FD04-1010 | | |
|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_005 | LAB_ID | 1011264-03 | | | 1011261-07 | | |
| FRACTION: M | SAMP_DATE | 11/4/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | G01-MW-08-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 87.4 | J | P | 68.6 | J | CP |
| ANTIMONY | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | |
| BARIUM | | 5.45 | J | P | 6.28 | J | P |
| BERYLLIUM | | 1 | U | | 1 | U | |
| CADMIUM | | 1.84 | U | A | 1.83 | U | A |
| CALCIUM | | 108000 | J | E | 106000 | J | CE |
| CHROMIUM | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | |
| IRON | | 132 | | | 48 | J | P |
| LEAD | | 1.5 | U | | 1.5 | U | |
| MAGNESIUM | | 5650 | | | 8390 | J | C |
| MANGANESE | | 3 | U | | 3 | U | |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 3 | U | | 3 | U | |
| POTASSIUM | | 1170 | J | P | 1000 | U | |
| SELENIUM | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | |
| SODIUM | | 16600 | | | 16300 | | |
| THALLIUM | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | |
| ZINC | | 5.7 | J | P | 5 | U | |

# APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

# ANALYSIS DATA SHEET

1011026-01

60-MW-01A-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/06/10 10:31
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011261-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 12:58 |
| 7429-90-5 | Aluminum | 619 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06017 | 12/09/10 19:56 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-38-2 | Arsenic | 3.92 | 3.00 | 5.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-39-3 | Barium | 38.9 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-43-9 | Cadmium | 15.2 | 5.00 | 10.0 | 25.0 | 5 | D IN | SW6010C | 0L06017 | 12/09/10 19:56 |
| 7440-70-2 | Calcium | 440000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06017 | 12/09/10 19:56 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-50-8 | Copper | | 8.00 | 8.00 | 10.0 | 1 | M U | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7439-92-1 | Lead | | 10.0 | 15.0 | 15.0 | 5 | M U | SW6010C | 0L06017 | 12/09/10 19:56 |
| 7439-95-4 | Magnesium | 1080000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06017 | 12/09/10 19:56 |
| 7439-96-5 | Manganese | 9.91 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-02-0 | Nickel | | 15.0 | 30.0 | 50.0 | 5 | U | SW6010C | 0L06017 | 12/09/10 19:56 |
| 7440-09-7 | Potassium | 440000 | 5000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06017 | 12/09/10 19:56 |
| 7782-49-2 | Selenium | 5.09 | 3.00 | 5.00 | 10.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-23-5 | Sodium | 10200000 | 5000 | 75000 | 125000 | 25 | X D | SW6010C | 0L06017 | 12/09/10 20:00 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:49 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06017 | 12/09/10 19:56 |

# ANALYSIS DATA SHEET

1011026-02

601-MW-03-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/06/10 10:01
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011261-02
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:00 |
| 7429-90-5 | Aluminum | 55.9 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-38-2 | Arsenic | 19.0 | 3.00 | 5.00 | 5.00 | 1 | N | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-39-3 | Barium | 27.4 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-43-9 | Cadmium | 9.69 | 1.00 | 2.00 | 5.00 | 1 | N | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-70-2 | Calcium | 262000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7439-89-6 | Iron | 952 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7439-92-1 | Lead | | 2.00 | 3.00 | 3.00 | 1 | M U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7439-95-4 | Magnesium | 400000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7439-96-5 | Manganese | 21.2 | 3.00 | 6.00 | 15.0 | 1 | | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-09-7 | Potassium | 138000 | 5000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06017 | 12/09/10 20:05 |
| 7782-49-2 | Selenium | 7.78 | 3.00 | 5.00 | 10.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-23-5 | Sodium | 3620000 | 5000 | 75000 | 125000 | 25 | X D | SW6010C | 0L06017 | 12/09/10 20:10 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:54 |
| 7440-66-6 | Zinc | 9.98 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 18:54 |

# ANALYSIS DATA SHEET

1011026-05

601-MW-05-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/07/10 09:35
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011261-05
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:04 |
| 7429-90-5 | Aluminum | 80.9 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-39-3 | Barium | 6.44 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-43-9 | Cadmium | 4.09 | 1.00 | 2.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-70-2 | Calcium | 98200 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7439-92-1 | Lead | | 2.00 | 3.00 | 3.00 | 1 | M U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7439-95-4 | Magnesium | 58700 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-09-7 | Potassium | 12500 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/17/10 13:02 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-23-5 | Sodium | 333000 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/17/10 13:02 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:09 |

# ANALYSIS DATA SHEET

1011015-01

GDI-MW-06-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/04/10 13:45
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011264-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:25 |
| 7429-90-5 | Aluminum | 77.7 | 50.0 | 100 | 200 | 1 | X 1 | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-39-3 | Barium | 5.01 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-43-9 | Cadmium | 3.57 | 1.00 | 2.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-70-2 | Calcium | 103000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7439-92-1 | Lead | | 2.00 | 3.00 | 3.00 | 1 | M U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7439-95-4 | Magnesium | 98400 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-09-7 | Potassium | 20400 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/17/10 13:27 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-23-5 | Sodium | 363000 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/17/10 13:27 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:43 |
| 7440-66-6 | Zinc | 5.21 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:43 |

# ANALYSIS DATA SHEET

1011026-03

601-MW-07-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/06/10 11:38
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011261-03
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:02 |
| 7429-90-5 | Aluminum | 473 | 250 | 500 | 1000 | 5 | D I | SW6010C | 0L06017 | 12/09/10 20:15 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-38-2 | Arsenic | 4.02 | 3.00 | 5.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-39-3 | Barium | 12.5 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-43-9 | Cadmium | 13.8 | 5.00 | 10.0 | 25.0 | 5 | D IN | SW6010C | 0L06017 | 12/09/10 20:15 |
| 7440-70-2 | Calcium | 242000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-47-3 | Chromium | | 10.0 | 20.0 | 50.0 | 5 | U | SW6010C | 0L06017 | 12/09/10 20:15 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7439-92-1 | Lead | | 15.0 | 15.0 | 15.0 | 5 | M U | SW6010C | 0L06017 | 12/09/10 20:15 |
| 7439-95-4 | Magnesium | 551000 | 5000 | 15000 | 25000 | 5 | D | SW6010C | 0L06017 | 12/09/10 20:15 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-09-7 | Potassium | 218000 | 5000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06017 | 12/09/10 20:15 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-23-5 | Sodium | 5280000 | 5000 | 75000 | 125000 | 25 | X D | SW6010C | 0L06017 | 12/09/10 20:19 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 18:59 |
| 7440-66-6 | Zinc | | 25.0 | 50.0 | 100 | 5 | U | SW6010C | 0L06017 | 12/09/10 20:15 |

# ANALYSIS DATA SHEET

1011026-06

601-MW-08-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/07/10 11:15
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011261-06
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:21 |
| 7429-90-5 | Aluminum | 70.2 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-39-3 | Barium | 6.45 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-43-9 | Cadmium | 1.91 | 1.00 | 2.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-70-2 | Calcium | 110000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7439-89-6 | Iron | 50.1 | 30.0 | 60.0 | 100 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7439-95-4 | Magnesium | 8750 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-09-7 | Potassium | | 1000 | 3000 | 5000 | 1 | U | SW6010C | 0L06017 | 12/21/10 12:31 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-23-5 | Sodium | 16700 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/21/10 12:31 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:33 |

# ANALYSIS DATA SHEET

1011026-04

601-MW-12-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/06/10 12:32
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011261-04
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:02 |
| 7429-90-5 | Aluminum | 79.8 | 50.0 | 100 | 200 | 1 | X 1 | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-39-3 | Barium | 5.78 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-43-9 | Cadmium | 3.24 | 1.00 | 2.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-70-2 | Calcium | 110000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7439-95-4 | Magnesium | 21600 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-09-7 | Potassium | 5030 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/17/10 12:57 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-23-5 | Sodium | 80900 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/17/10 12:57 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:04 |
| 7440-66-6 | Zinc | 7.47 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:04 |

# ANALYSIS DATA SHEET

1011015-02

GKHMS-GW-09-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/04/10 12:25
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011264-02
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:25 |
| 7429-90-5 | Aluminum | 81.0 | 50.0 | 100 | 200 | 1 | X I | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-39-3 | Barium | 8.69 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-43-9 | Cadmium | 4.49 | 1.00 | 2.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-70-2 | Calcium | 119000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7439-89-6 | Iron | 32.2 | 30.0 | 60.0 | 100 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7439-95-4 | Magnesium | 138000 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-09-7 | Potassium | 37400 | 5000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06017 | 12/09/10 20:24 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-23-5 | Sodium | 847000 | 1000 | 15000 | 25000 | 5 | X D | SW6010C | 0L06017 | 12/09/10 20:24 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:48 |
| 7440-66-6 | Zinc | 8.95 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:48 |

# ANALYSIS DATA SHEET

1011015-03

GKHMS-GW-10-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/04/10 11:10
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011264-03
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:27 |
| 7429-90-5 | Aluminum | 87.4 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-39-3 | Barium | 5.45 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-43-9 | Cadmium | 1.84 | 1.00 | 2.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-70-2 | Calcium | 108000 | 1000 | 2000 | 5000 | 1 | Q | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7439-89-6 | Iron | 132 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7439-95-4 | Magnesium | 5650 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-09-7 | Potassium | 1170 | 1000 | 3000 | 5000 | 1 | I | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-23-5 | Sodium | 16600 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 20:11 |
| 7440-66-6 | Zinc | 5.70 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 20:11 |

# ANALYSIS DATA SHEET

1011026-07

GKHMS-GW-FD04-1010

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/07/10 00:00
% Solids: 0.00

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 1011261-07
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06008 | 12/08/10 13:23 |
| 7429-90-5 | Aluminum | 68.6 | 50.0 | 100 | 200 | 1 | X 1 | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | UN | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-39-3 | Barium | 6.28 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-43-9 | Cadmium | 1.83 | 1.00 | 2.00 | 5.00 | 1 | IN | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-70-2 | Calcium | 106000 | 1000 | 2000 | 5000 | 1 | Y Q | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7439-89-6 | Iron | 48.0 | 30.0 | 60.0 | 100 | 1 | I | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7439-95-4 | Magnesium | 8390 | 1000 | 3000 | 5000 | 1 | X | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-09-7 | Potassium | | 1000 | 3000 | 5000 | 1 | U | SW6010C | 0L06017 | 12/21/10 12:36 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-23-5 | Sodium | 16300 | 200 | 3000 | 5000 | 1 | | SW6010C | 0L06017 | 12/21/10 12:36 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06017 | 12/07/10 19:38 |

# APPENDIX C

## SUPPORT DOCUMENTATION

## Sample Delivery Group Case Narrative

### Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

All samples for SW7470A were received in the laboratory out of the EPA recommending holding time. Sample volume was not received for SW8081 for samples 1011015-01, -02 and -03. Samples 1011026-01, -02, -03, -04, -05, -06 and -07 were received in the laboratory for SW6010C analyses with a pH of 7. These samples were preserved upon receipt to the laboratory.

### Changes to the Revision

This is an original submittal of the final report package.

### Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

### Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

### SW6010C/SW7470A:

Samples 1011261-01, -02, -03, -04, -05, -06, -07, 1011264-01, -02 and -03 were received after the EPA recommended holding time for SW7470A.

Samples 1011261-01, -02, -03, -05 and 1011264-01 are qualified with an M for Lead to indicate that the DL was raised due to interference and sample 1011261-01 is qualified with an M for Copper to indicate that the DL was raised due to interference.

The batch spike associated to batch 0L06017 exceeded criteria with a negative bias for Calcium.

The continuing calibration verifications exceeded criteria in 0L34305-CCV5 with a positive bias for Aluminum, Magnesium, Potassium and Sodium and with a negative bias for Calcium, in 0L34705-CCV7 with a positive bias for Potassium and Sodium.

The continuing calibration blanks 0L34305-CCB5 has positive results for Sodium. The digestion blank 0L06017-BLK1 has a positive result for Cadmium.

The matrix spikes associated to sample 1011261-05 exceeded criteria with a positive bias for Antimony, Arsenic and Cadmium. Calcium also exceeded criteria but the concentration in the parent sample is greater then 4 times the amount spiked. The post digestion spike associated to sample 1011261-05 exceeded criteria for Arsenic, Cadmium, Calcium, Magnesium, Thallium and Sodium.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The batch spikes associated to batch 0L06021 exceeded criteria with a positive bias for all compounds. Most samples did not have positive results above the LOQ samples that did have positive results above the LOQ were not able to be re-extracted due to sample extracts being received from another laboratory and holding time expiration.

The continuing calibration verifications exceeded criteria in 0L35009-CCV6 with a positive bias on column 2 for Delta-BHC and in 0L35009-CCV8 with a positive bias on column 2 for Toxaphene.

Due to matrix interference, samples 1011261-02, -03, -04, -06 and -07 had detection and/or reporting limits raised for some of their analytes.

The matrix spikes associated to sample 1011261-05 exceeded criteria on columns 1 and 2 with a positive bias for 4,4'-DDE, 4,4'-DDT, Aldrin, Alpha-BHC, Alpha-Chlordane, B-BHC, Delta-BHC, Dieldrin, Endosulfan I, Endosulfan II, Endrin Ketone, Gamma-BHC, Gamma-Chlordane, Heptachlor, Heptachlor Epoxide and Methoxychlor and on column 1 with a positive bias for 4,4'-DDD.

The surrogated Decachlorobiphenyl exceeded criteria with a positive bias on column 2 in sample 1011261-01.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The surrogate Decachlorobiphenyl exceeded criteria with a positive bias on column 2 in sample 1011261-01 and in 1011261-05MSD with a negative bias on both columns.

The matrix spike duplicate associated to sample 1011261-05 exceeded criteria with a negative bias for Aroclor-1242 on column 1 and 2 and the relative percent difference criteria was exceeded as well.

No additional anomalies or deviations are noted.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

**Analytical Report Terms and Qualifiers**

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

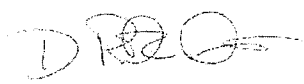
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011026**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011026-01** | **Water** | **Sampled:11/06/10 10:31** | 1011261-01 |
| 8081A Pesticides | | 11/13/10 10:31 | |
| 8082 PCBs | | 11/13/10 10:31 | |
| Mercury, Total 7470A | | 12/04/10 10:31 | |
| 6020A Full | | 05/05/11 10:31 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-02** | **Water** | **Sampled:11/06/10 10:01** | -02 |
| 6020A Full | | 05/05/11 10:01 | |
| 8081A Pesticides | | 11/13/10 10:01 | |
| 8082 PCBs | | 11/13/10 10:01 | |
| Mercury, Total 7470A | | 12/04/10 10:01 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-03** | **Water** | **Sampled:11/06/10 11:38** | -03 |
| 6020A Full | | 05/05/11 11:38 | |
| 8081A Pesticides | | 11/13/10 11:38 | |
| 8082 PCBs | | 11/13/10 11:38 | |
| Mercury, Total 7470A | | 12/04/10 11:38 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-04** | **Water** | **Sampled:11/06/10 12:32** | -04 |
| 8082 PCBs | | 11/13/10 12:32 | |
| 8081A Pesticides | | 11/13/10 12:32 | |
| Mercury, Total 7470A | | 12/04/10 12:32 | |
| 6020A Full | | 05/05/11 12:32 | |
| *Containers Supplied:* | | | 4.5°C |

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | | |
| Released By | Date | Received By | Date |
| | | | 11/30/10 08:25 |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011026**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011026-05** | **Water** | **Sampled:11/07/10 09:35** | 1011261-05 |
| 6020A Full | | 05/06/11 09:35 | |
| 8081A Pesticides | | 11/14/10 09:35 | |
| 8082 PCBs | | 11/14/10 09:35 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-06** | **Water** | **Sampled:11/07/10 11:15** | -06 |
| 6020A Full | | 05/06/11 11:15 | |
| 8081A Pesticides | | 11/14/10 11:15 | |
| 8082 PCBs | | 11/14/10 11:15 | |
| Mercury, Total 7470A | | 12/05/10 11:15 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-07** | **Water** | **Sampled:11/07/10 00:00** | -07 |
| Mercury, Total 7470A | | 12/05/10 00:00 | |
| 6020A Full | | 05/06/11 00:00 | |
| 8081A Pesticides | | 11/14/10 00:00 | |
| 8082 PCBs | | 11/14/10 00:00 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/23/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

KVanwyck@centaurilabs.com
VZusman@centaurilabs.com

4.5°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW 11/29 | | | |
| Released By | Date | Received By | Date |
| | | | 11/30/10 08:25 |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011015**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011015-01** | **Water** | **Sampled:11/04/10 13:45** | 1011264-01 |
| Mercury, Total 7470A | | 12/02/10 13:45 | |
| 8081B Pesticides | | 11/11/10 13:45 | |
| 6020A QSM TAL | | 05/03/11 13:45 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011015-02** | **Water** | **Sampled:11/04/10 12:25** | -02 |
| Mercury, Total 7470A | | 12/02/10 12:25 | |
| 8081B Pesticides | | 11/11/10 12:25 | |
| 6020A QSM TAL | | 05/03/11 12:25 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011015-03** | **Water** | **Sampled:11/04/10 11:10** | -03 |
| Mercury, Total 7470A | | 12/02/10 11:10 | |
| 8081B Pesticides | | 11/11/10 11:10 | |
| 6020A QSM TAL | | 05/03/11 11:10 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/19/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

1.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |

HOLD TIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | 1011026-06 | 1011261-06 | NM | 11/07/2010 | 12/06/2010 | 12/08/2010 | 29 | 2 | 31 |
| HG | UG/L | 1011026-07 | 1011261-07 | NM | 11/07/2010 | 12/06/2010 | 12/08/2010 | 29 | 2 | 31 |
| HG | UG/L | 1011026-05 | 1011261-05 | NM | 11/07/2010 | 12/06/2010 | 12/08/2010 | 29 | 2 | 31 |
| HG | UG/L | 1011026-04 | 1011261-04 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011026-03 | 1011261-03 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011026-02 | 1011261-02 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011026-01 | 1011261-01 | NM | 11/06/2010 | 12/06/2010 | 12/08/2010 | 30 | 2 | 32 |
| HG | UG/L | 1011015-03 | 1011264-03 | NM | 11/04/2010 | 12/06/2010 | 12/08/2010 | 32 | 2 | 34 |
| HG | UG/L | 1011015-02 | 1011264-02 | NM | 11/04/2010 | 12/06/2010 | 12/08/2010 | 32 | 2 | 34 |
| HG | UG/L | 1011015-01 | 1011264-01 | NM | 11/04/2010 | 12/06/2010 | 12/08/2010 | 32 | 2 | 34 |
| M | UG/L | 1011015-03 | 1011264-03 | NM | 11/04/2010 | 12/06/2010 | 12/07/2010 | 32 | 1 | 33 |
| M | UG/L | 1011026-02 | 1011261-02RE2 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-05 | 1011261-05RE1 | NM | 11/07/2010 | 12/06/2010 | 12/17/2010 | 29 | 11 | 40 |
| M | UG/L | 1011026-05 | 1011261-05 | NM | 11/07/2010 | 12/06/2010 | 12/07/2010 | 29 | 1 | 30 |
| M | UG/L | 1011026-04 | 1011261-04RE1 | NM | 11/06/2010 | 12/06/2010 | 12/17/2010 | 30 | 11 | 41 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1011026-04 | 1011261-04 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-03 | 1011261-03RE2 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-03 | 1011261-03RE1 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-03 | 1011261-03 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-02 | 1011261-02RE1 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-02 | 1011261-02 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-01 | 1011261-01RE2 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-06 | 1011261-06RE1 | NM | 11/07/2010 | 12/06/2010 | 12/21/2010 | 29 | 15 | 44 |
| M | UG/L | 1011026-01 | 1011261-01 | NM | 11/06/2010 | 12/06/2010 | 12/07/2010 | 30 | 1 | 31 |
| M | UG/L | 1011026-07 | 1011261-07 | NM | 11/07/2010 | 12/06/2010 | 12/07/2010 | 29 | 1 | 30 |
| M | UG/L | 1011015-02 | 1011264-02RE1 | NM | 11/04/2010 | 12/06/2010 | 12/09/2010 | 32 | 3 | 35 |
| M | UG/L | 1011015-02 | 1011264-02 | NM | 11/04/2010 | 12/06/2010 | 12/07/2010 | 32 | 1 | 33 |
| M | UG/L | 1011015-01 | 1011264-01RE1 | NM | 11/04/2010 | 12/06/2010 | 12/17/2010 | 32 | 11 | 43 |
| M | UG/L | 1011015-01 | 1011264-01 | NM | 11/04/2010 | 12/06/2010 | 12/07/2010 | 32 | 1 | 33 |
| M | UG/L | 1011026-01 | 1011261-01RE1 | NM | 11/06/2010 | 12/06/2010 | 12/09/2010 | 30 | 3 | 33 |
| M | UG/L | 1011026-07 | 1011261-07RE1 | NM | 11/07/2010 | 12/06/2010 | 12/21/2010 | 29 | 15 | 44 |
| M | UG/L | 1011026-06 | 1011261-06 | NM | 11/07/2010 | 12/06/2010 | 12/07/2010 | 29 | 1 | 30 |
| PCB | UG/L | 1011026-07 | 1011261-07 | NM | 11/07/2010 | 11/12/2010 | 12/10/2010 | 5 | 28 | 33 |

# NAS KEY WEST
# WATER DATA
# CTOJM16KW_005

| FRACTION | CHEMICAL | G01-MW-08-1010 | UNITS | GKHMS-GW-FD04-1010 | RPD | D |
|---|---|---|---|---|---|---|
| M | ALUMINUM | 70.2 XI | UG/L | 68.6 XI | 2.31 | 1.60 |
| M | BARIUM | 6.45 I | UG/L | 6.28 I | 2.67 | 0.17 |
| M | CADMIUM | 1.91 IN | UG/L | 1.83 IN | 4.28 | 0.08 |
| M | CALCIUM | 110000 YQ | UG/L | 106000 YQ | 3.70 | 4000.00 |
| M | IRON | 50.1 I | UG/L | 48 I | 4.28 | 2.10 |
| M | MAGNESIUM | 8750 X | UG/L | 8390 X | 4.20 | 360.00 |
| M | SODIUM | 16700 | UG/L | 16300 | 2.42 | 400.00 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-ICV1 | Aluminum | 10000 | 9592 | 95.9 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 977.2 | 97.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 982.8 | 98.3 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1090 | 109 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 963.7 | 96.4 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47900 | 95.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 958.0 | 95.8 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 966.4 | 96.6 | ug/L | +/- 10.00% |
| | Copper | 1000 | 958.6 | 95.9 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9772 | 97.7 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.8 | 97.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 52330 | 105 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 957.9 | 95.8 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 960.6 | 96.1 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9476 | 94.8 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 986.2 | 98.6 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 468.8 | 93.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50550 | 101 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 939.5 | 93.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 953.1 | 95.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 972.5 | 97.2 | ug/L | +/- 10.00% |
| 0L34305-CCV1 | Aluminum | 10000 | 9799 | 98.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 987.0 | 98.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1012 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1046 | 105 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1037 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50720 | 101 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 999.4 | 99.9 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 960.8 | 96.1 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1018 | 102 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10380 | 104 | ug/L | +/- 10.00% |
| | Lead | 1000 | 957.7 | 95.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54130 | 108 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.0 | 98.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10060 | 101 | ug/L | +/- 10.00% |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34305 | Instrument: | ME-ICP |
| Calibration: | 0350004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34305-CAL1 | 120710A-001 | 12/07/10 10:19 |
| Cal Standard | 0L34305-CAL2 | 120710A-002 | 12/07/10 10:24 |
| Cal Standard | 0L34305-CAL3 | 120710A-003 | 12/07/10 10:28 |
| Cal Standard | 0L34305-CAL4 | 120710A-004 | 12/07/10 10:32 |
| Cal Standard | 0L34305-CAL5 | 120710A-005 | 12/07/10 10:37 |
| Cal Standard | 0L34305-CAL6 | 120710A-006 | 12/07/10 10:41 |
| Cal Standard | 0L34305-CAL7 | 120710A-007 | 12/07/10 10:46 |
| Cal Standard | 0L34305-CAL8 | 120710A-008 | 12/07/10 10:51 |
| Initial Cal Check | 0L34305-ICV1 | 120710B-001 | 12/07/10 11:44 |
| Initial Cal Blank | 0L34305-ICB1 | 120710B-002 | 12/07/10 11:51 |
| Instrument RL Check | 0L34305-CRL1 | 120710B-004 | 12/07/10 12:01 |
| Instrument RL Check | 0L34305-CRL2 | 120710B-006 | 12/07/10 12:13 |
| Interference Check A | 0L34305-IFA1 | 120710B-007 | 12/07/10 12:18 |
| Interference Check B | 0L34305-IFB1 | 120710B-008 | 12/07/10 12:25 |
| Interference Check B | 0L34305-IFB2 | 120710B-009 | 12/07/10 12:32 |
| Calibration Check | 0L34305-CCV1 | 120710B-011 | 12/07/10 12:52 |
| Calibration Blank | 0L34305-CCB1 | 120710B-012 | 12/07/10 13:04 |
| Calibration Check | 0L34305-CCV5 ✓ | 120710B-071 | 12/07/10 18:26 |
| Calibration Blank | 0L34305-CCB5 ✓ | 120710B-072 | 12/07/10 18:33 |
| Blank | 0L06017-BLK1 | 120710B-073 | 12/07/10 18:38 |
| LCS | 0L06017-BS1 | 120710B-074 | 12/07/10 18:42 |
| 1011026-01 | 1011261-01 | 120710B-075 | 12/07/10 18:49 |
| 1011026-02 | 1011261-02 | 120710B-076 | 12/07/10 18:54 |
| 1011026-03 | 1011261-03 | 120710B-077 | 12/07/10 18:59 |
| 1011026-04 | 1011261-04 | 120710B-078 | 12/07/10 19:04 |
| 1011026-05 | 1011261-05 | 120710B-079 | 12/07/10 19:09 |
| 1011026-05 | 0L06017-MS1 | 120710B-080 | 12/07/10 19:14 |
| 1011026-05 | 0L06017-MSD1 | 120710B-081 | 12/07/10 19:18 |
| 1011026-05 | 0L06017-PS1 | 120710B-082 | 12/07/10 19:23 |
| 1011026-05 | 0L06017-DUP1 | 120710B-083 | 12/07/10 19:29 |
| 1011026-06 | 1011261-06 | 120710B-084 | 12/07/10 19:33 |
| 1011026-07 | 1011261-07 | 120710B-085 | 12/07/10 19:38 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34305 | Instrument: | ME-ICP |
| Calibration: | 0350004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| 1011015-01 | 1011264-01 | 120710B-086 | 12/07/10 19:43 |
| 1011015-02 | 1011264-02 | 120710B-087 | 12/07/10 19:48 |
| Calibration Check | 0L34305-CCV6 | 120710B-089 | 12/07/10 19:59 |
| Calibration Blank | 0L34305-CCB6 | 120710B-090 | 12/07/10 20:07 |
| 1011015-03 | 1011264-03 | 120710B-091 | 12/07/10 20:11 |
| Calibration Check | 0L34305-CCV7 | 120710B-100 | 12/07/10 20:55 |
| Calibration Blank | 0L34305-CCB7 | 120710B-101 | 12/07/10 21:02 |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34403 | Instrument: | ME-FIMS |
| Calibration: | 0344004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34403-CAL1 | COPY120810W-002 | 12/08/10 10:42 |
| Cal Standard | 0L34403-CAL2 | COPY120810W-003 | 12/08/10 10:43 |
| Cal Standard | 0L34403-CAL3 | COPY120810W-004 | 12/08/10 10:45 |
| Cal Standard | 0L34403-CAL4 | COPY120810W-005 | 12/08/10 10:47 |
| Cal Standard | 0L34403-CAL5 | COPY120810W-006 | 12/08/10 10:49 |
| Cal Standard | 0L34403-CAL6 | COPY120810W-007 | 12/08/10 10:51 |
| Cal Standard | 0L34403-CAL7 | COPY120810W-008 | 12/08/10 10:53 |
| Initial Cal Check | 0L34403-ICV1 | COPY120810W-009 | 12/08/10 10:59 |
| Initial Cal Blank | 0L34403-ICB1 | COPY120810W-010 | 12/08/10 11:00 |
| Instrument RL Check | 0L34403-CRL1 | COPY120810W-011 | 12/08/10 11:02 |
| Calibration Check | 0L34403-CCV1 | COPY120810W-021 | 12/08/10 11:28 |
| Calibration Blank | 0L34403-CCB1 | COPY120810W-022 | 12/08/10 11:29 |
| Calibration Check | 0L34403-CCV5 | COPY120810W-068 | 12/08/10 12:49 |
| Calibration Blank | 0L34403-CCB5 | COPY120810W-069 | 12/08/10 12:51 |
| LCS | 0L06008-BS1 | COPY120810W-070 | 12/08/10 12:53 |
| Blank | 0L06008-BLK1 | COPY120810W-071 | 12/08/10 12:54 |
| 1011026-01 | 1011261-01 | COPY120810W-074 | 12/08/10 12:58 |
| 1011026-02 | 1011261-02 | COPY120810W-075 | 12/08/10 13:00 |
| 1011026-03 | 1011261-03 | COPY120810W-076 | 12/08/10 13:02 |
| 1011026-04 | 1011261-04 | COPY120810W-077 | 12/08/10 13:02 |
| 1011026-05 | 1011261-05 | COPY120810W-078 | 12/08/10 13:04 |
| 1011026-05 | 0L06008-MS1 | COPY120810W-079 | 12/08/10 13:06 |
| Calibration Check | 0L34403-CCV6 | COPY120810W-080 | 12/08/10 13:16 |
| Calibration Blank | 0L34403-CCB6 | COPY120810W-081 | 12/08/10 13:17 |
| 1011026-05 | 0L06008-MSD1 | COPY120810W-082 | 12/08/10 13:20 |
| 1011026-06 | 1011261-06 | COPY120810W-083 | 12/08/10 13:21 |
| 1011026-07 | 1011261-07 | COPY120810W-084 | 12/08/10 13:23 |
| 1011015-01 | 1011264-01 | COPY120810W-085 | 12/08/10 13:25 |
| 1011015-02 | 1011264-02 | COPY120810W-086 | 12/08/10 13:25 |
| 1011015-03 | 1011264-03 | COPY120810W-087 | 12/08/10 13:27 |
| Calibration Check | 0L34403-CCV7 | COPY120810W-092 | 12/08/10 13:35 |
| Calibration Blank | 0L34403-CCB7 | COPY120810W-093 | 12/08/10 13:37 |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34403 | Instrument: | ME-FIMS |
| Calibration: | 0344004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Instrument RL Check | 0L34403-CRL2 | COPY120810W-097 | 12/08/10 13:42 |
| Calibration Check | 0L34403-CCV8 | COPY120810W-098 | 12/08/10 13:44 |
| Calibration Blank | 0L34403-CCB8 | COPY120810W-099 | 12/08/10 13:46 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34705
Instrument: ME-ICP
Calibration: 0352001

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34705-CAL1 | 120910A-001 | 12/09/10 11:18 |
| Cal Standard | 0L34705-CAL2 | 120910A-002 | 12/09/10 11:22 |
| Cal Standard | 0L34705-CAL3 | 120910A-003 | 12/09/10 11:27 |
| Cal Standard | 0L34705-CAL5 | 120910A-005 | 12/09/10 11:36 |
| Cal Standard | 0L34705-CAL6 | 120910A-006 | 12/09/10 11:41 |
| Cal Standard | 0L34705-CAL7 | 120910A-007 | 12/09/10 11:46 |
| Cal Standard | 0L34705-CAL8 | 120910A-008 | 12/09/10 11:51 |
| Initial Cal Check | 0L34705-ICV1 | 120910B-001 | 12/09/10 12:22 |
| Initial Cal Blank | 0L34705-ICB1 | 120910B-002 | 12/09/10 12:30 |
| Instrument RL Check | 0L34705-CRL1 | 120910B-003 | 12/09/10 12:34 |
| Interference Check A | 0L34705-IFA1 | 120910B-005 | 12/09/10 12:43 |
| Interference Check B | 0L34705-IFB1 | 120910B-006 | 12/09/10 12:57 |
| Calibration Check | 0L34705-CCV1 | 120910C-002 | 12/09/10 13:11 |
| Calibration Blank | 0L34705-CCB1 | 120910C-003 | 12/09/10 13:18 |
| Calibration Check | 0L34705-CCV6 | 120910C-073 | 12/09/10 19:18 |
| Calibration Blank | 0L34705-CCB6 | 120910C-074 | 12/09/10 19:26 |
| LCS | 0L06017-BS2 | 120910C-075 | 12/09/10 19:30 |
| 1011026-01 | 1011261-01RE1 | 120910C-080 | 12/09/10 19:56 |
| 1011026-01 | 1011261-01RE2 | 120910C-081 | 12/09/10 20:00 |
| 1011026-02 | 1011261-02RE1 | 120910C-082 | 12/09/10 20:05 |
| 1011026-02 | 1011261-02RE2 | 120910C-083 | 12/09/10 20:10 |
| 1011026-03 | 1011261-03RE1 | 120910C-084 | 12/09/10 20:15 |
| 1011026-03 | 1011261-03RE2 | 120910C-085 | 12/09/10 20:19 |
| 1011015-02 | 1011264-02RE1 | 120910C-086 | 12/09/10 20:24 |
| Calibration Check | 0L34705-CCV7 | 120910C-087 | 12/09/10 20:30 |
| Calibration Blank | 0L34705-CCB7 | 120910C-088 | 12/09/10 20:37 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35301 | Instrument: | ME-ICP |
| Calibration: | 0354001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35301-CAL1 | 121710A-001 | 12/17/10 09:50 |
| Cal Standard | 0L35301-CAL2 | 121710A-002 | 12/17/10 09:54 |
| Cal Standard | 0L35301-CAL3 | 121710A-003 | 12/17/10 09:59 |
| Cal Standard | 0L35301-CAL7 | 121710A-007 | 12/17/10 10:23 |
| Cal Standard | 0L35301-CAL8 | 121710A-008 | 12/17/10 10:28 |
| Initial Cal Check | 0L35301-ICV1 | 121710C-001 | 12/17/10 11:19 |
| Initial Cal Blank | 0L35301-ICB1 | 121710C-002 | 12/17/10 11:27 |
| Instrument RL Check | 0L35301-CRL1 | 121710C-003 | 12/17/10 11:31 |
| Interference Check A | 0L35301-IFA1 | 121710C-006 | 12/17/10 11:47 |
| Interference Check B | 0L35301-IFB1 | 121710C-007 | 12/17/10 11:55 |
| Calibration Check | 0L35301-CCV1 | 121710C-009 | 12/17/10 12:15 |
| Calibration Blank | 0L35301-CCB1 | 121710C-010 | 12/17/10 12:23 |
| Blank | 0L06017-BLK2 | 121710C-011 | 12/17/10 12:27 |
| 1011026-04 | 1011261-04RE1 | 121710C-017 | 12/17/10 12:57 |
| 1011026-05 | 1011261-05RE1 | 121710C-018 | 12/17/10 13:02 |
| 1011026-05 | 0L06017-MS2 | 121710C-019 | 12/17/10 13:07 |
| 1011026-05 | 0L06017-MSD2 | 121710C-020 | 12/17/10 13:12 |
| 1011026-05 | 0L06017-PS2 | 121710C-021 | 12/17/10 13:16 |
| 1011026-05 | 0L06017-DUP2 | 121710C-022 | 12/17/10 13:22 |
| 1011015-01 | 1011264-01RE1 | 121710C-023 | 12/17/10 13:27 |
| Calibration Check | 0L35301-CCV2 | 121710C-026 | 12/17/10 13:47 |
| Calibration Blank | 0L35301-CCB2 | 121710C-027 | 12/17/10 13:54 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35507 | Instrument: | ME-ICP |
| Calibration: | 0350004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L35507-CAL1 | 122110A-001 | 12/21/10 10:00 |
| Cal Standard | 0L35507-CAL2 | 122110A-002 | 12/21/10 10:04 |
| Cal Standard | 0L35507-CAL3 | 122110A-003 | 12/21/10 10:09 |
| Cal Standard | 0L35507-CAL7 | 122110A-007 | 12/21/10 10:28 |
| Cal Standard | 0L35507-CAL8 | 122110A-008 | 12/21/10 10:33 |
| Initial Cal Check | 0L35507-ICV1 | 122110B-001 | 12/21/10 11:03 |
| Initial Cal Blank | 0L35507-ICB1 | 122110B-002 | 12/21/10 11:11 |
| Instrument RL Check | 0L35507-CRL1 | 122110B-003 | 12/21/10 11:15 |
| Interference Check A | 0L35507-IFA1 | 122110B-006 | 12/21/10 11:30 |
| Interference Check B | 0L35507-IFB1 | 122110B-007 | 12/21/10 11:36 |
| Calibration Check | 0L35507-CCV1 | 122110B-009 | 12/21/10 11:49 |
| Calibration Blank | 0L35507-CCB1 | 122110B-010 | 12/21/10 11:56 |
| 1011026-06 | 1011261-06RE1 | 122110B-017 | 12/21/10 12:31 |
| 1011026-07 | 1011261-07RE1 | 122110B-018 | 12/21/10 12:36 |
| Calibration Check | 0L35507-CCV2 | 122110B-020 | 12/21/10 12:49 |
| Calibration Blank | 0L35507-CCB2 | 122110B-021 | 12/21/10 12:56 |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV1 | Selenium | 1000 | 972.7 | 97.3 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 501.7 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 54310 | 109 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.7 | 99.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 968.6 | 96.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| **0L34305-CCV5** | **Aluminum** | **10000** | **11160** | **112** | **ug/L** | +/- 10.00% |
| | Antimony | 1000 | 1047 | 105 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1045 | 104 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 989.9 | 99.0 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1034 | 103 | ug/L | +/- 10.00% |
| | **Calcium** | **50000** | **42920** | **85.8** | **ug/L** | +/- 10.00% |
| | Chromium | 1000 | 935.7 | 93.6 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 957.6 | 95.8 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1066 | 107 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9704 | 97.0 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.9 | 97.8 | ug/L | +/- 10.00% |
| | **Magnesium** | **50000** | **57790** | **116** | **ug/L** | +/- 10.00% |
| | Manganese | 1000 | 959.1 | 95.9 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 979.6 | 98.0 | ug/L | +/- 10.00% |
| | **Potassium** | **10000** | **13380** | **134** | **ug/L** | +/- 10.00% |
| | Selenium | 1000 | 1022 | 102 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 477.9 | 95.6 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **67120** | **134** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 1021 | 102 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 909.7 | 91.0 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 943.6 | 94.4 | ug/L | +/- 10.00% |
| 0L34305-CCV6 | Aluminum | 10000 | 9899 | 99.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1022 | 102 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1015 | 102 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1066 | 107 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1066 | 107 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 46890 | 93.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 952.9 | 95.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 984.4 | 98.4 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1008 | 101 | ug/L | +/- 10.00% |

120 Samples Affected

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV6 | Iron | 10000 | 9619 | 96.2 | ug/L | +/- 10.00% |
| | Lead | 1000 | 996.5 | 99.6 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 53280 | 107 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 962.3 | 96.2 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 987.7 | 98.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10490 | 105 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 1036 | 104 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 456.8 | 91.4 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 52800 | 106 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 996.2 | 99.6 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 967.2 | 96.7 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 968.9 | 96.9 | ug/L | +/- 10.00% |
| 0L34305-CCV7 | Aluminum | 10000 | 9846 | 98.5 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1017 | 102 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1045 | 104 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1009 | 101 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1050 | 105 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47670 | 95.3 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 964.8 | 96.5 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 973.0 | 97.3 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1012 | 101 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9850 | 98.5 | ug/L | +/- 10.00% |
| | Lead | 1000 | 981.6 | 98.2 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 53100 | 106 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 991.8 | 99.2 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 987.6 | 98.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10370 | 104 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 1009 | 101 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 474.3 | 94.9 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 53260 | 107 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 993.3 | 99.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 954.6 | 95.5 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 987.3 | 98.7 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0344004
Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34403-ICV1 | Mercury | 4.000 | 4.047 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV1 | Mercury | 4.000 | 4.030 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV5 | Mercury | 4.000 | 4.052 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV6 | Mercury | 4.000 | 3.647 | 91.2 | ug/L | +/- 15.00% |
| 0L34403-CCV7 | Mercury | 2.000 | 1.860 | 93.0 | ug/L | +/- 15.00% |
| 0L34403-CCV8 | Mercury | 2.000 | 1.903 | 95.2 | ug/L | +/- 15.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0352001
Sequence: 0L34705

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34705-ICV1 | Aluminum | 10000 | 10170 | 102 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1090 | 109 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 996.3 | 99.6 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1026 | 103 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48700 | 97.4 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 1017 | 102 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9435 | 94.3 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49660 | 99.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1048 | 105 | ug/L | +/- 10.00% |
| 0L34705-CCV1 | Aluminum | 10000 | 9892 | 98.9 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1068 | 107 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 1005 | 100 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1022 | 102 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 48840 | 97.7 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 1005 | 100 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9686 | 96.9 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49940 | 99.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1051 | 105 | ug/L | +/- 10.00% |
| 0L34705-CCV6 | Aluminum | 10000 | 9962 | 99.6 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1076 | 108 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 941.5 | 94.1 | ug/L | +/- 10.00% |
| | Lead | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 47520 | 95.0 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 1032 | 103 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10000 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49370 | 98.7 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 978.7 | 97.9 | ug/L | +/- 10.00% |
| 0L34705-CCV7 | Aluminum | 10000 | 10470 | 105 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1064 | 106 | ug/L | +/- 10.00% |
| | **Chromium** | **1000** | **897.3** | **89.7** | **ug/L** | +/- 10.00% |
| | Lead | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 45660 | 91.3 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 1023 | 102 | ug/L | +/- 10.00% |
| | **Potassium** | **10000** | **11190** | **112** | **ug/L** | +/- 10.00% |
| | **Sodium** | **50000** | **55960** | **112** | **ug/L** | +/- 10.00% |
| | Zinc | 1000 | 962.9 | 96.3 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0354001
Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35301-ICV1 | Potassium | 10000 | 10080 | 101 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49880 | 99.8 | ug/L | +/- 10.00% |
| 0L35301-CCV1 | Potassium | 10000 | 9854 | 98.5 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 49580 | 99.2 | ug/L | +/- 10.00% |
| 0L35301-CCV2 | Potassium | 10000 | 10360 | 104 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 52400 | 105 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L35507

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L35507-ICV1 | Potassium | 10000 | 9493 | 94.9 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50170 | 100 | ug/L | +/- 10.00% |
| 0L35507-CCV1 | Potassium | 10000 | 9869 | 98.7 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50520 | 101 | ug/L | +/- 10.00% |
| 0L35507-CCV2 | Potassium | 10000 | 9885 | 98.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50600 | 101 | ug/L | +/- 10.00% |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34305-CRL1 | Aluminum | 100.0 | 99.73 | 99.7 | ug/L | 80 - 120 |
| | Antimony | 8.000 | 6.500 | 81.2 | ug/L | 80 - 120 |
| | Barium | 10.00 | 10.07 | 101 | ug/L | 80 - 120 |
| | Beryllium | 2.000 | 2.054 | 103 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 1.846 | 92.3 | ug/L | 80 - 120 |
| | Calcium | 2000 | 1966 | 98.3 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.982 | 99.6 | ug/L | 80 - 120 |
| | Cobalt | 10.00 | 9.079 | 90.8 | ug/L | 80 - 120 |
| | Copper | 8.000 | 7.542 | 94.3 | ug/L | 80 - 120 |
| | Iron | 60.00 | 64.06 | 107 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.566 | 85.5 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 3113 | 104 | ug/L | 80 - 120 |
| | Manganese | 6.000 | 6.735 | 112 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.898 | 98.3 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3020 | 101 | ug/L | 80 - 120 |
| | Silver | 2.000 | 1.893 | 94.7 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3298 | 110 | ug/L | 80 - 120 |
| | Thallium | 4.000 | 4.272 | 107 | ug/L | 80 - 120 |
| | Vanadium | 10.00 | 9.529 | 95.3 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.414 | 94.1 | ug/L | 80 - 120 |
| 0L34305-CRL2 | Arsenic | 5.000 | 4.042 | 80.8 | ug/L | 80 - 120 |
| | Selenium | 5.000 | 4.812 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW7470A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-FIMS

Calibration: 0344004

Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34403-CRL1 | Mercury | 0.2000 | 0.1985 | 99.3 | ug/L | 70 - 130 |
| 0L34403-CRL2 | Mercury | 0.2000 | 0.2066 | 103 | ug/L | 70 - 130 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0352001

Sequence: 0L34705

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34705-CRL1 | Aluminum | 100.0 | 105.5 | 105 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 2.243 | 112 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.975 | 99.4 | ug/L | 80 - 120 |
| | Lead | 3.000 | 3.371 | 112 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 2852 | 95.1 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.536 | 92.3 | ug/L | 80 - 120 |
| | Potassium | 3000 | 2868 | 95.6 | ug/L | 80 - 120 |
| | Sodium | 3000 | 2916 | 97.2 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.618 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0354001

Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35301-CRL1 | Potassium | 3000 | 3002 | 100 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3076 | 103 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L35507

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L35507-CRL1 | Potassium | 3000 | 2943 | 98.1 | ug/L | 80 - 120 |
| | Sodium | 3000 | 2985 | 99.5 | ug/L | 80 - 120 |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Sequence: 0L34305

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-ICB1 | Aluminum | 1.815 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.0008800 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.4936 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.04896 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.1662 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.09110 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 10.71 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.06206 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.2396 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.006120 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.525 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.2232 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -0.1900 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.1529 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.3307 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 4.330 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.4155 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.1294 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 11.82 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.3133 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.09286 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.06542 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB1 | Aluminum | 4.29 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.141 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.226 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00225 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | -0.000740 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.0220 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.134 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.110 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.235 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.54 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Sequence: 0L34305

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB1 | Lead | -0.0467 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -1.90 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.120 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.488 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.671 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0628 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 8.23 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.0416 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.176 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 2.27 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB5 | Aluminum | 2.71 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.106 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.221 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.116 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0964 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.901 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 7.16 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.129 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.287 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.350 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.0675 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -1.41 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.66 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.139 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.0344 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 30.7 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.211 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.203 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 216 | 200 | 5000 | ug/L | I | SW6010C |
| | Thallium | 0.752 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.0128 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0866 | 5.00 | 20.0 | ug/L | U | SW6010C |

NO Samples Affected

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Sequence: 0L34305

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L06017-BLK1 | Aluminum | 5.65 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.0228 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.417 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | -0.00534 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0198 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 1.36 | 1.00 | 5.00 | ug/L | I | SW6010C |
| | Calcium | 18.0 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.149 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.109 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.607 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | -0.543 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.133 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 8.67 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0665 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.155 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Selenium | 0.0484 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.298 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Thallium | 0.438 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.0244 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.0260 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB6 | Aluminum | 1.40 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.151 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.169 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0614 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0435 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.590 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 6.99 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.0921 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.143 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.427 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | -0.592 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.277 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -6.17 | 1000 | 5000 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Sequence: 0L34305

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB6 | Manganese | 0.0613 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | -0.411 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 23.1 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.638 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.162 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 138 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.839 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.00919 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | -0.00950 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB7 | Aluminum | 1.98 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.192 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.504 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.0846 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0559 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.269 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 4.18 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.166 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.152 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0617 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 1.10 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.181 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -8.07 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0827 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.106 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 10.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.427 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.130 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 60.3 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.0797 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.0708 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.172 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Sequence: 0L34403

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Calibration: 0344004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34403-ICB1 | Mercury | 0.02156 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB1 | Mercury | 0.0158 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB5 | Mercury | 0.0368 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L06008-BLK1 | Mercury | 0.0286 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB6 | Mercury | 0.0205 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB7 | Mercury | 0.0330 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB8 | Mercury | 0.0301 | 0.0800 | 0.200 | ug/L | U | SW7470A |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34705
Calibration: 0352001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34705-ICB1 | Aluminum | -0.2253 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.1480 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | -0.07347 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.4911 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 7.110 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | -0.07583 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 3.670 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | -14.41 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.09001 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34705-CCB1 | Aluminum | 0.224 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.215 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | 0.180 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | 0.378 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 11.4 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | 0.103 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 7.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 5.94 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0157 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34705-CCB6 | Aluminum | 0.479 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.729 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | -0.0854 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.746 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 6.46 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | -0.285 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 17.6 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 52.6 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.0407 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34705-CCB7 | Aluminum | 2.86 | 50.0 | 200 | ug/L | U | SW6010C |
| | Cadmium | 0.618 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Chromium | -0.237 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Lead | -0.840 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | 6.45 | 1000 | 5000 | ug/L | U | SW6010C |
| | Nickel | -0.368 | 3.00 | 10.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34705
Calibration: 0352001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34705-CCB7 | Potassium | 11.1 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 42.8 | 200 | 5000 | ug/L | U | SW6010C |
| | Zinc | -0.105 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35301
Calibration: 0354001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35301-ICB1 | Potassium | -3.010 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 16.59 | 200 | 5000 | ug/L | U | SW6010C |
| 0L35301-CCB1 | Potassium | 8.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 17.2 | 200 | 5000 | ug/L | U | SW6010C |
| 0L06017-BLK2 | Potassium | 5.87 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 94.6 | 200 | 5000 | ug/L | U | SW6010C |
| 0L35301-CCB2 | Potassium | 15.3 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 60.3 | 200 | 5000 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L35507
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L35507-ICB1 | Potassium | 2.140 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 10.97 | 200 | 5000 | ug/L | U | SW6010C |
| 0L35507-CCB1 | Potassium | 5.44 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 16.2 | 200 | 5000 | ug/L | U | SW6010C |
| 0L35507-CCB2 | Potassium | -0.200 | 1000 | 5000 | ug/L | U | SW6010C |
| | Sodium | 9.88 | 200 | 5000 | ug/L | U | SW6010C |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW7470A**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06008

% Solids:

Source Sample Name: **1011261-05**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Mercury | 2.000 | ND | 2.110 | 105 | | 80 - 120 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Mercury | 2.000 | 2.092 | 105 | 0.824 | | 20 | 80 - 120 |

# ICP INTERFERENCE CHECK SAMPLE

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Instrument ID: ME-ICP
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| 0L34305-IFA1 | Aluminum | 500000 | 538,860.00 | 108 | ug/L |
| | Antimony | | 0.56 | | ug/L |
| | Arsenic | | -4.07 | | ug/L |
| | Barium | | 0.60 | | ug/L |
| | Beryllium | | 0.02 | | ug/L |
| | Cadmium | | 0.37 | | ug/L |
| | Calcium | 500000 | 514,060.00 | 103 | ug/L |
| | Chromium | | -1.62 | | ug/L |
| | Cobalt | | 1.52 | | ug/L |
| | Copper | | -4.38 | | ug/L |
| | Iron | 200000 | 208,250.00 | 104 | ug/L |
| | Lead | | 5.09 | | ug/L |
| | Magnesium | 500000 | 510,910.00 | 102 | ug/L |
| | Manganese | | 1.91 | | ug/L |
| | Nickel | | 0.52 | | ug/L |
| | Potassium | | -50.62 | | ug/L |
| | Selenium | | -2.57 | | ug/L |
| | Silver | | -0.31 | | ug/L |
| | Sodium | | 22.50 | | ug/L |
| | Thallium | | 1.06 | | ug/L |
| | Vanadium | | 0.35 | | ug/L |
| | Zinc | | 10.59 | | ug/L |
| 0L34305-IFB1 | Aluminum | 500000 | 482,500.00 | 96.5 | ug/L |
| | Antimony | 600.0 | 651.60 | 109 | ug/L |
| | Arsenic | 100.0 | 109.48 | 109 | ug/L |
| | Barium | 500.0 | 548.22 | 110 | ug/L |
| | Beryllium | 500.0 | 446.84 | 89.4 | ug/L |
| | Calcium | 500000 | 459,530.00 | 91.9 | ug/L |
| | Chromium | 500.0 | 413.79 | 82.8 | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| 0L34305-IFB1 | Cobalt | 500.0 | 451.01 | 90.2 | ug/L |
| | Copper | 500.0 | 493.73 | 98.7 | ug/L |
| | Iron | 200000 | 184,610.00 | 92.3 | ug/L |
| | Lead | 50.00 | 48.66 | 97.3 | ug/L |
| | Magnesium | 500000 | 454,200.00 | 90.8 | ug/L |
| | Manganese | 500.0 | 429.68 | 85.9 | ug/L |
| | Nickel | 1000 | 889.81 | 89.0 | ug/L |
| | Potassium | | -4.99 | | ug/L |
| | Selenium | 50.00 | 53.34 | 107 | ug/L |
| | Silver | 200.0 | 206.33 | 103 | ug/L |
| | Sodium | | 45.92 | | ug/L |
| | Thallium | 100.0 | 80.34 | 80.3 | ug/L |
| | Vanadium | 500.0 | 408.40 | 81.7 | ug/L |
| | Zinc | 1000 | 979.10 | 97.9 | ug/L |
| 0L34305-IFB2 | Cadmium | 1000 | 1,173.40 | 117 | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

## SW6010C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Instrument ID: ME-ICP

Sequence: 0L34705

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Calibration: 0352001

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| 0L34705-IFA1 | Aluminum | 500000 | 519,910.00 | 104 | ug/L |
| | Cadmium | | -1.34 | | ug/L |
| | Chromium | | -1.44 | | ug/L |
| | Lead | | 11.38 | | ug/L |
| | Magnesium | 500000 | 501,590.00 | 100 | ug/L |
| | Nickel | | -2.02 | | ug/L |
| | Potassium | | -53.82 | | ug/L |
| | Sodium | | 14.69 | | ug/L |
| | Zinc | | 7.03 | | ug/L |
| 0L34705-IFB1 | Aluminum | 500000 | 482,350.00 | 96.5 | ug/L |
| | Cadmium | 1000 | 1,122.20 | 112 | ug/L |
| | Chromium | 500.0 | 425.29 | 85.1 | ug/L |
| | Lead | 50.00 | 49.40 | 98.8 | ug/L |
| | Magnesium | 500000 | 456,960.00 | 91.4 | ug/L |
| | Nickel | 1000 | 879.07 | 87.9 | ug/L |
| | Potassium | | 3.92 | | ug/L |
| | Sodium | | 99.18 | | ug/L |
| | Zinc | 1000 | 945.20 | 94.5 | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0354001

Sequence: 0L35301

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| 0L35301-IFA1 | Potassium | | -42.54 | | ug/L |
| | Sodium | | 17.83 | | ug/L |
| 0L35301-IFB1 | Potassium | | 53.90 | | ug/L |
| | Sodium | | 38.27 | | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L35507

| Lab Sample ID | Analyte | True | Found | %R | Units |
|---|---|---|---|---|---|
| 0L35507-IFA1 | Potassium | | -49.20 | | ug/L |
| | Sodium | | 33.08 | | ug/L |
| 0L35507-IFB1 | Potassium | | 10.24 | | ug/L |
| | Sodium | | 64.84 | | ug/L |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW6010C**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06017

% Solids:

Source Sample Name: **1011261-05**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Aluminum | 2000 | 80.91 | 2178 | 105 | | 80 - 120 |
| Antimony | 250.0 | ND | 301.0 | 120 | | 80 - 120 |
| Arsenic | 250.0 | ND | 298.5 | 119 | | 80 - 120 |
| Barium | 2000 | 6.442 | 2273 | 113 | | 80 - 120 |
| Beryllium | 50.00 | ND | 50.88 | 102 | | 80 - 120 |
| Cadmium | 125.0 | 4.089 | 156.2 | 122 | N | 80 - 120 |
| Calcium | 5000 | 98200 | 109000 | 215 | | 80 - 120 |
| Chromium | 200.0 | ND | 186.9 | 93.4 | | 80 - 120 |
| Cobalt | 500.0 | ND | 510.9 | 102 | | 80 - 120 |
| Copper | 250.0 | ND | 268.7 | 107 | | 80 - 120 |
| Iron | 1000 | ND | 986.1 | 98.6 | | 80 - 120 |
| Lead | 250.0 | ND | 261.2 | 104 | | 80 - 120 |
| Magnesium | 5000 | 58710 | 63400 | 93.9 | | 80 - 120 |
| Manganese | 500.0 | ND | 480.3 | 96.1 | | 80 - 120 |
| Nickel | 500.0 | ND | 514.1 | 103 | | 80 - 120 |
| Selenium | 250.0 | ND | 295.7 | 118 | | 80 - 120 |
| Silver | 250.0 | ND | 248.6 | 99.4 | | 80 - 120 |
| Thallium | 250.0 | ND | 237.3 | 94.9 | | 80 - 120 |
| Vanadium | 500.0 | ND | 484.8 | 97.0 | | 80 - 120 |
| Zinc | 500.0 | ND | 516.1 | 103 | | 80 - 120 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW6010C**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L06017

% Solids:

Source Sample Name: **1011261-05**

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Aluminum | 2000 | 2202 | 106 | 1.10 | | 20 | 80 - 120 |
| Antimony | 250.0 | 303.3 | 121 | 0.768 | N | 20 | 80 - 120 |
| Arsenic | 250.0 | 301.7 | 121 | 1.06 | N | 20 | 80 - 120 |
| Barium | 2000 | 2311 | 115 | 1.68 | | 20 | 80 - 120 |
| Beryllium | 50.00 | 50.83 | 102 | 0.102 | | 20 | 80 - 120 |
| Cadmium | 125.0 | 157.8 | 123 | 1.01 | N | 20 | 80 - 120 |
| Calcium | 5000 | 106900 | 174 | 1.88 | | 20 | 80 - 120 |
| Chromium | 200.0 | 193.8 | 96.9 | 3.64 | | 20 | 80 - 120 |
| Cobalt | 500.0 | 514.9 | 103 | 0.780 | | 20 | 80 - 120 |
| Copper | 250.0 | 273.2 | 109 | 1.66 | | 20 | 80 - 120 |
| Iron | 1000 | 1002 | 100 | 1.55 | | 20 | 80 - 120 |
| Lead | 250.0 | 265.0 | 106 | 1.46 | | 20 | 80 - 120 |
| Magnesium | 5000 | 62890 | 83.6 | 0.817 | | 20 | 80 - 120 |
| Manganese | 500.0 | 485.8 | 97.2 | 1.13 | | 20 | 80 - 120 |
| Nickel | 500.0 | 516.6 | 103 | 0.487 | | 20 | 80 - 120 |
| Selenium | 250.0 | 300.6 | 120 | 1.65 | | 20 | 80 - 120 |
| Silver | 250.0 | 254.9 | 102 | 2.51 | | 20 | 80 - 120 |
| Thallium | 250.0 | 239.6 | 95.8 | 0.990 | | 20 | 80 - 120 |
| Vanadium | 500.0 | 487.3 | 97.5 | 0.504 | | 20 | 80 - 120 |
| Zinc | 500.0 | 515.1 | 103 | 0.208 | | 20 | 80 - 120 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW6010C**

**1011026-05**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06017

% Solids:

Source Sample Name: **1011261-05RE1**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Potassium | 5000 | 12540 | 17750 | 104 | | 80 - 120 |
| Sodium | 5000 | 333400 | 340500 | 142 | | 80 - 120 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Potassium | 5000 | 17760 | 104 | 0.0507 | | 20 | 80 - 120 |
| Sodium | 5000 | 332400 | -18.8 | 2.39 | | 20 | 80 - 120 |

# POST DIGEST SPIKE SAMPLE RECOVERY

**SW6010C**

1011026-05

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Laboratory ID: 0L06017-PS1
Batch: 0L06017
Lab Source ID: 1011261-05
Preparation: MET_3005A
Initial/Final: 20 mL / 20 mL

| Analyte | Spike Sample Result (SSR) (ug/L) | Sample Result (SR) (ug/L) | Spike Added (SA) (ug/L) | %R | Control Limit %R |
|---|---|---|---|---|---|
| Aluminum | 2155 | 80.91 | 2000 | 104 | 80 - 120 |
| Antimony | 295.3 | ND | 250.0 | 119 | 80 - 120 |
| **Arsenic** | **303.0** | **ND** | **250.0** | **122** | **80 - 120** |
| Barium | 2303 | 6.442 | 2000 | 115 | 80 - 120 |
| Beryllium | 50.89 | ND | 50.00 | 102 | 80 - 120 |
| **Cadmium** | **157.6** | **4.089** | **125.0** | **123** | **80 - 120** |
| **Calcium** | **108000** | **98200** | **5000** | **196** | **80 - 120** |
| Chromium | 191.4 | ND | 200.0 | 95.3 | 80 - 120 |
| Cobalt | 513.2 | ND | 500.0 | 103 | 80 - 120 |
| Copper | 269.2 | ND | 250.0 | 107 | 80 - 120 |
| Iron | 1004 | ND | 1000 | 99.7 | 80 - 120 |
| Lead | 237.2 | ND | 250.0 | 95.6 | 80 - 120 |
| **Magnesium** | **61230** | **58710** | **5000** | **50.4** | **80 - 120** |
| Manganese | 485.2 | ND | 500.0 | 96.7 | 80 - 120 |
| Nickel | 515.8 | ND | 500.0 | 103 | 80 - 120 |
| Selenium | 301.0 | ND | 250.0 | 120 | 80 - 120 |
| Silver | 253.4 | ND | 250.0 | 101 | 80 - 120 |
| **Thallium** | **191.3** | **ND** | **250.0** | **76.4** | **80 - 120** |
| Vanadium | 488.9 | ND | 500.0 | 97.7 | 80 - 120 |
| Zinc | 522.9 | ND | 500.0 | 104 | 80 - 120 |

# POST DIGEST SPIKE SAMPLE RECOVERY

**SW6010C**

1011026-05

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L06017

Preparation: MET_3005A

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Laboratory ID: 0L06017-PS2

Lab Source ID: 1011261-05RE1

Initial/Final: 20 mL / 20 mL

| Analyte | Spike Sample Result (SSR) (ug/L) | Sample Result (SR) (ug/L) | Spike Added (SA) (ug/L) | %R | Control Limit %R |
|---|---|---|---|---|---|
| Potassium | 17680 | 12540 | 5000 | 103 | 80 - 120 |
| **Sodium** | **333500** | **333400** | **5000** | **2.80** | **80 - 120** |

# LCS / LCS DUPLICATE RECOVERY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06008 | Laboratory ID: | 0L06008-BS1 |
| Preparation: | pMercury-W EPA 245.1/7470A | Initial/Final: | 30 mL / 30 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 2.000 | 2.128 | 106 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06017 | Laboratory ID: | 0L06017-BS1 |
| Preparation: | MET_3005A | Initial/Final: | 50 mL / 50 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 2000 | 2176 | 109 | 80 - 120 |
| Antimony | 250.0 | 245.5 | 98.2 | 80 - 120 |
| Arsenic | 250.0 | 242.4 | 97.0 | 80 - 120 |
| Barium | 2000 | 1999 | 100 | 80 - 120 |
| Beryllium | 50.00 | 52.30 | 105 | 80 - 120 |
| Cadmium | 125.0 | 122.3 | 97.8 | 80 - 120 |
| **Calcium** | **5000** | **3838** | **76.8** | **80 - 120** |
| Chromium | 200.0 | 183.8 | 91.9 | 80 - 120 |
| Cobalt | 500.0 | 472.7 | 94.5 | 80 - 120 |
| Copper | 250.0 | 258.7 | 103 | 80 - 120 |
| Iron | 1000 | 971.5 | 97.1 | 80 - 120 |
| Lead | 250.0 | 247.2 | 98.9 | 80 - 120 |
| Magnesium | 5000 | 5597 | 112 | 80 - 120 |
| Manganese | 500.0 | 481.4 | 96.3 | 80 - 120 |
| Nickel | 500.0 | 483.8 | 96.8 | 80 - 120 |
| Selenium | 250.0 | 238.0 | 95.2 | 80 - 120 |
| Silver | 250.0 | 218.3 | 87.3 | 80 - 120 |
| Thallium | 250.0 | 247.1 | 98.8 | 80 - 120 |
| Vanadium | 500.0 | 458.8 | 91.8 | 80 - 120 |
| Zinc | 500.0 | 445.3 | 89.1 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_005 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06017 | Laboratory ID: | 0L06017-BS2 |
| Preparation: | MET_3005A | Initial/Final: | 50 mL / 50 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Potassium | 5000 | 5133 | 103 | 80 - 120 |
| Sodium | 5000 | 5185 | 104 | 80 - 120 |

# SERIAL DILUTION

## SW6010C

1011026-05

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sequence: 0L34305
Preparation: MET_3005A

SDG: CTOJM16KW_005
Project: CTOJM16 Key West 2010
Laboratory ID: 0L06017-DUP1
Lab Source ID: 1011261-05
Initial/Final: 50 / 50

| Analyte | Initial Sample Result (I) ug/L | Serial Dilution Result (S) ug/L | % Difference | Q | Method | QC Limits % Difference |
|---|---|---|---|---|---|---|
| Aluminum | 80.908 | ND | | | SW6010C | 10.00 |
| Antimony | ND | ND | | | SW6010C | 10.00 |
| Arsenic | ND | ND | | | SW6010C | 10.00 |
| Barium | 6.4425 | ND | | | SW6010C | 10.00 |
| Beryllium | ND | ND | | | SW6010C | 10.00 |
| Cadmium | 4.0888 | 7.3155 | 78.9 dL | | SW6010C | 10.00 |
| Calcium | 98200 | 102840 | 4.72 | | SW6010C | 10.00 |
| Chromium | ND | ND | | | SW6010C | 10.00 |
| Cobalt | ND | ND | | | SW6010C | 10.00 |
| Copper | ND | ND | | | SW6010C | 10.00 |
| Iron | ND | ND | | | SW6010C | 10.00 |
| Lead | ND | ND | | | SW6010C | 10.00 |
| Magnesium | 58710 | 56150 | -4.36 | | SW6010C | 10.00 |
| Manganese | ND | ND | | | SW6010C | 10.00 |
| Nickel | ND | ND | | | SW6010C | 10.00 |
| Selenium | ND | ND | | | SW6010C | 10.00 |
| Silver | ND | ND | | | SW6010C | 10.00 |
| Thallium | ND | ND | | | SW6010C | 10.00 |
| Vanadium | ND | ND | | | SW6010C | 10.00 |
| Zinc | ND | ND | | | SW6010C | 10.00 |

# SERIAL DILUTION

## SW6010C

1011026-05

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Sequence: 0L35301

Preparation: MET_3005A

SDG: CTOJM16KW_005

Project: CTOJM16 Key West 2010

Laboratory ID: 0L06017-DUP2

Lab Source ID: 1011261-05RE1

Initial/Final: 50 / 50

| Analyte | Initial Sample Result (I) ug/L | Serial Dilution Result (S) ug/L | % Difference | Q | Method | QC Limits % Difference |
|---|---|---|---|---|---|---|
| Potassium | 12544 | 12045 | -3.98 | | SW6010C | 10.00 |
| Sodium | 333360 | 332960 | -0.121 | | SW6010C | 10.00 |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_005

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-FIMS

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Mercury | 0.0800 | 0.200 | ug/L | SW7470A |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_005

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-ICP

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aluminum | 50.0 | 200 | ug/L | SW6010C |
| Antimony | 5.00 | 10.0 | ug/L | SW6010C |
| Arsenic | 3.00 | 10.0 | ug/L | SW6010C |
| Barium | 5.00 | 40.0 | ug/L | SW6010C |
| Beryllium | 1.00 | 5.00 | ug/L | SW6010C |
| Cadmium | 1.00 | 5.00 | ug/L | SW6010C |
| Calcium | 1000 | 5000 | ug/L | SW6010C |
| Chromium | 2.00 | 10.0 | ug/L | SW6010C |
| Cobalt | 5.00 | 12.5 | ug/L | SW6010C |
| Copper | 4.00 | 10.0 | ug/L | SW6010C |
| Iron | 30.0 | 100 | ug/L | SW6010C |
| Lead | 1.50 | 3.00 | ug/L | SW6010C |
| Magnesium | 1000 | 5000 | ug/L | SW6010C |
| Manganese | 3.00 | 15.0 | ug/L | SW6010C |
| Nickel | 3.00 | 10.0 | ug/L | SW6010C |
| Potassium | 1000 | 5000 | ug/L | SW6010C |
| Selenium | 3.00 | 10.0 | ug/L | SW6010C |
| Silver | 1.00 | 10.0 | ug/L | SW6010C |
| Sodium | 200 | 5000 | ug/L | SW6010C |
| Thallium | 3.00 | 8.00 | ug/L | SW6010C |
| Vanadium | 5.00 | 12.5 | ug/L | SW6010C |
| Zinc | 5.00 | 20.0 | ug/L | SW6010C |

# PREPARATION BATCH SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Batch: 0L06008 Batch Matrix: Water
Preparation: pMercury-W EPA 245.1/7470A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06008-BLK1 | 12/06/10 07:49 | 30.00 | 30.00 |
| LCS | 0L06008-BS1 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-05 | 0L06008-MS1 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-05 | 0L06008-MSD1 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-01 | 1011261-01 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-02 | 1011261-02 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-03 | 1011261-03 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-04 | 1011261-04 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-05 | 1011261-05 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-06 | 1011261-06 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011026-07 | 1011261-07 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011015-01 | 1011264-01 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011015-02 | 1011264-02 | 12/06/10 07:49 | 30.00 | 30.00 |
| 1011015-03 | 1011264-03 | 12/06/10 07:49 | 30.00 | 30.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06017 Batch Matrix: Water Preparation: MET_3005A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06017-BLK1 | 12/06/10 11:09 | 50.00 | 50.00 |
| Blank | 0L06017-BLK2 | 12/06/10 11:09 | 50.00 | 50.00 |
| LCS | 0L06017-BS1 | 12/06/10 11:09 | 50.00 | 50.00 |
| LCS | 0L06017-BS2 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 0L06017-DUP1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 0L06017-DUP2 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 0L06017-MS1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 0L06017-MS2 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 0L06017-MSD1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 0L06017-MSD2 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 0L06017-PS1 | 12/06/10 11:09 | 20.00 | 20.00 |
| 1011026-05 | 0L06017-PS2 | 12/06/10 11:09 | 20.00 | 20.00 |
| 1011026-01 | 1011261-01 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-01 | 1011261-01RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-01 | 1011261-01RE2 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-02 | 1011261-02 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-02 | 1011261-02RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-02 | 1011261-02RE2 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-03 | 1011261-03 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-03 | 1011261-03RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-03 | 1011261-03RE2 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-04 | 1011261-04 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-04 | 1011261-04RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 1011261-05 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-05 | 1011261-05RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-06 | 1011261-06 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-06 | 1011261-06RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-07 | 1011261-07 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011026-07 | 1011261-07RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011015-01 | 1011264-01 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011015-01 | 1011264-01RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011015-02 | 1011264-02 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011015-02 | 1011264-02RE1 | 12/06/10 11:09 | 50.00 | 50.00 |
| 1011015-03 | 1011264-03 | 12/06/10 11:09 | 50.00 | 50.00 |

Sample Name: 1011264-02 Acquired: 12/7/2010 19:48:19 Type: Unk
Method: DuoEnviroMethodNEW(v1889) Mode: CONC Corr. Factor: 1.000000
User: rburr Custom ID1: Custom ID2: Custom ID3:
Comment: TETRA

Sample 1011051a-02 (GKHMS-6W-09-1010)
rep result Cd 4.49 ug/L

| Elem | Ag3280 | Al3961 | As1890 | B_2496 | Ba2335 | Be3130 | Ca3179 |
|---|---|---|---|---|---|---|---|
| Units | ppb | ppb | ppb | ppb | ppb | ppb | ppm |
| Avg | **-.17969** | **80.970** | **-.40827** | **1044.0** | **8.6863** | **.01493** | **119.20** |
| Stddev | .09556 | 3.987 | 3.0886 | 6.0 | .0315 | .00857 | .37 |
| %RSD | 53.182 | 4.9247 | 756.53 | .57062 | .36218 | 57.357 | .31122 |
| #1 | -.06998 | 77.346 | 3.0274 | 1050.8 | 8.6768 | .01076 | 119.23 |
| #2 | -.24475 | 80.322 | -2.9550 | 1041.9 | 8.6607 | .00926 | 118.81 |
| #3 | -.22435 | 85.241 | -1.2972 | 1039.4 | 8.7215 | .02479 | 119.55 |

| Elem | Cd2144 | Cd2288 | Co2286 | Cr2677 | Cu2199 | Cu3247 | Fe2611 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppb | ppb | ppb | ppm | ppb | ppb |
| Avg | **-.01212** | **4.4877** | **.37539** | **-.58149** | **.1804** | **.36990** | **32.167** |
| Stddev | .16598 | .0977 | .13284 | .01018 | .4388 | .08632 | .843 |
| %RSD | 1369.2 | 2.1764 | 35.388 | 1.7502 | 243.3 | 23.337 | 2.6202 |
| #1 | -.06449 | 4.3892 | .29129 | -.59015 | .3784 | .32298 | 31.295 |
| #2 | -.14560 | 4.5845 | .52854 | -.58404 | -.3225 | .46952 | 32.978 |
| #3 | .17373 | 4.4893 | .30634 | -.57028 | .4853 | .31719 | 32.229 |

| Elem | K_7664 | Mg2790 | Mn2576 | Mo2020 | Na5895 | Ni2316 | Pb2203 |
|---|---|---|---|---|---|---|---|
| Units | ppm | ppm | ppb | ppb | ppm | ppb | ppb |
| Avg | **35.805** | **138.00** | **1.5172** | **2.8776** | F **709.15** | **-1.7422** | **-1.3599** |
| Stddev | .179 | .23 | .0123 | .0979 | 5.83 | .0936 | .2370 |
| %RSD | .49919 | .16758 | .81245 | 3.4025 | .82249 | 5.3749 | 17.426 |
| #1 | 35.723 | 138.04 | 1.5030 | 2.7647 | 708.97 | -1.8012 | -1.0880 |
| #2 | 36.010 | 138.22 | 1.5255 | 2.9299 | 703.42 | -1.7912 | -1.5223 |
| #3 | 35.682 | 137.76 | 1.5230 | 2.9383 | 715.08 | -1.6342 | -1.4694 |

| Elem | Sb2068 | Se1960 | Sn1899 | Sr4215 | Ti3349 | Tl1908 | V_2924 |
|---|---|---|---|---|---|---|---|
| Units | ppb | ppb | ppb | ppb | ppb | ppb | ppb |
| Avg | **-.61245** | **2.1309** | **-2.2059** | **2729.** | **.42836** | **-.41320** | **.75074** |
| Stddev | 1.3785 | 1.4257 | .9269 | 9. | .12494 | 1.2139 | .13930 |
| %RSD | 225.07 | 66.904 | 42.020 | .3264 | 29.168 | 293.77 | 18.554 |
| #1 | .96106 | 3.7406 | -1.1847 | 2727. | .38493 | .12908 | .62907 |
| #2 | -1.1914 | 1.6252 | -2.4387 | 2739. | .56922 | .43498 | .72046 |
| #3 | -1.6070 | 1.0271 | -2.9942 | 2722. | .33093 | -1.8037 | .90268 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – SVOC**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_006**

**SAMPLES:** 12 / Aqueous / SVOC

| | | |
|---|---|---|
| GKHMS-GW-002-1010 | GKHMS-GW-003-1010 | GKHMS-GW-004-1010 |
| GKHMS-GW-005-1010 | GKHMS-GW-006-1010 | GKHMS-GW-007-1010 |
| GKHMS-GW-008-1010 | GKHMS-GW-009-1010 | GKHMS-GW-010-1010 |
| GKHMS-GW-011-1010 | GKHMS-GW-012-1010 | GKHMS-GW-013-1010 |

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_006 consisted of twelve (12) aqueous environmental samples. The samples were analyzed for semi-volatile organics (SVOC) as indicated above. No field duplicate pair samples were included in the Sample Delivery Group (SDG).

The samples were collected by Tetra Tech NUS on October 28 and 29, 2010 and analyzed by Empirical Laboratories LLC upon transfer from Centauri Labs who performed the initial sample method extraction. The analyses were conducted in accordance with SW-846 Methods 8270C Full Scan analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

- Data Completeness
- * Holding Times/Sample Preservation
- * GC/MS Instrument Tuning and System Performance
- Initial/Continuing Calibrations
- * Laboratory Method Blank Results
- Blank Spike/Blank Spike Duplicate Results
- Internal Standard Recoveries
- Surrogate Recoveries
- * Compound Quantitation
- * Compound Identification
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

SVOC

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for benzaldehyde, 2,2'-oxybis-1-chloropropane, 3,3'-dichlorobenzidine,hexachlorocyclopentadiene, and 2-nitroaniline for instrument MS-BNA3 on 12/13/10 @ 14:13 affecting all the SDG samples. The non-

detected results for 2,2'-oxybis-1-chloropropane, 3,3'-dichlorobenzidine,and hexachlorocyclopentadiene were qualified estimated, (UJ), for the all SDG samples. The benzaldehyde and 2-nitroaniline non-detected results for all samples were not qualified for these non-compliances as the non-detected results were rejected for LCS/LCSD %R non-compliances as listed below.

The SVOC laboratory control sample (LCS) and the LCS duplicate (LCSD) percent recoveries (%Rs) were less than the quality control limits at 0% for benzaldehyde, 4-chloroaniline, 2,4-dimethylphenol, 2,4-dinitrophenol, and 2-nintroaniline, and for batch 0L14019 affecting all the SDG samples. The samples were not re-analyzed. The non-detected results for the aforementioned analytes for all SDG samples were qualified rejected, (UR).

The SVOC laboratory control sample (LCS) and the LCS duplicate (LCSD) percent recoveries (%Rs) were less than the quality control limits and >10% for 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2-methylphenol, 4-methylphenol, 2-nitrophenol, N-nitrosodiphenylamine, 2,4,6-trichlorophenol, and 2,4,5-trichlorophenol for batch 0L14019 affecting all the SDG samples. The samples were not re-analyzed. The non-detected N-nitrosodiphenylamine results for all SDG samples were qualified estimated, (UJ). The non-detected 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2-methylphenol, 4-methylphenol, 2-nitrophenol, 2,4,6-trichlorophenol, and 2,4,5-trichlorophenol results for samples GKHMS-GW-011-1010 and GKHMS-GW-012-1010 were qualified estimated, (UJ). The non-detected acid fraction (phenol) results for the remainder of the samples were qualified rejected for the surrogate issue as listed below.

SVOC surrogate %Rs were less than the quality control limit at 0% for a number of samples as listed below. The sample acid fraction SVOC non-detected analytes for the samples were qualified rejected, (UR).

| Sample | Surrogate %R @ 0% |
|---|---|
| GKHMS-GW-002-1010 | phenol-d6 |
| GKHMS-GW-003-1010 | phenol-d6 |
| GKHMS-GW-004-1010 | phenol-d6 |
| GKHMS-GW-005-1010 | phenol-d6 |
| GKHMS-GW-006-1010 | 2-fluorophenol, phenol-d6, 2,4,6-tribromophenol |
| GKHMS-GW-007-1010 | phenol-d6 |
| GKHMS-GW-008-1010 | phenol-d6 |
| GKHMS-GW-009-1010 | 2-fluorophenol, phenol-d6, 2,4,6-tribromophenol |
| GKHMS-GW-010-1010 | 2-fluorophenol, phenol-d6, 2,4,6-tribromophenol |
| GKHMS-GW-013-1010 | phenol-d6, 2,4,6-tribromophenol |

Additional Comments

The samples were initially sent to Centauri Labs for analysis but the laboratory closed prior to sample analysis completion. The laboratory extracted the samples for SVOCs prior to closure. The extracts were sent to Empirical Laboratories for the completion of the analyses. The samples were logged in to Empirical Laboratories using the Centauri Labs identifications instead of the sample identifications. The Form I results for this SDG have been manually edited to indicate the actually sample names.

SVOC laboratory control sample (LCS) and the LCS duplicate (LCSD) percent recoveries (%Rs) exceeded the quality control limits for some of the SVOC analytes. This is usually noted for completeness as the sample SVOC results are not validated for this issue in the limited review. In this case it was also noted that the %Rs for benzaldehyde, 4-chloraniline, 2,4-dimethylphenol, 2,4-dinitrophenol, and 2-nintroaniline, were 0% for these analytes in both the LCS and the LCSD.

The method blank 0L14019-BLK1 had an internal standard recovery for perylene-d12 greater than the quality control limit. No action was taken for this issue.

**Executive Summary**

**Laboratory Performance:** SVOC continuing calibration verification %Ds which exceeded the quality control limits resulted in the qualification of non-detected SVOC sample results. Sample non-detected analyte results were rejected due to LCS/LCSD and surrogate %Rs less than the quality control limits.

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site specific Sample Analysis Plan, and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# Appendix A

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_006 | LAB_ID | 1012004-01 | | | 1012004-02 | | | 1012004-03 | | | 1012004-04 | | |
| FRACTION: OS | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UR | R | 0.5 | UR | R | 0.5 | UR | R | 0.5 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UR | R | 0.73 | UR | R | 0.73 | UR | R | 0.73 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.44 | UR | R | 0.44 | UR | R | 0.44 | UR | R | 0.44 | UR | R |
| 2,4-DIMETHYLPHENOL | | 5 | UR | ER | 5 | UR | ER | 5 | UR | ER | 5 | UR | ER |
| 2,4-DINITROPHENOL | | 12.5 | UR | ER | 12.5 | UR | ER | 12.5 | UR | ER | 12.5 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.49 | U | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | | 0.65 | U | | 0.65 | U | | 0.65 | U | | 0.65 | U | |
| 2-CHLORONAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2-CHLOROPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 2-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| 3-NITROANILINE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UR | R | 5 | UR | R | 5 | UR | R | 5 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-METHYLPHENOL | | 0.77 | UR | R | 0.77 | UR | R | 0.77 | UR | R | 0.77 | UR | R |
| 4-NITROANILINE | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| 4-NITROPHENOL | | 5 | UR | R | 5 | UR | R | 5 | UR | R | 5 | UR | R |
| ACETOPHENONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| ATRAZINE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| BUTYL BENZYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_006 | LAB_ID | 1012004-05 | | | 1012004-06 | | | 1012004-07 | | | 1012004-08 | | |
| FRACTION: OS | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UR | R | 0.5 | UR | R | 0.5 | UR | R | 0.5 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UR | R | 0.73 | UR | R | 0.73 | UR | R | 0.73 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.44 | UR | R | 0.44 | UR | R | 0.44 | UR | R | 0.44 | UR | R |
| 2,4-DIMETHYLPHENOL | | 5 | UR | ER | 5 | UR | ER | 5 | UR | ER | 5 | UR | ER |
| 2,4-DINITROPHENOL | | 12.5 | UR | ER | 12.5 | UR | ER | 12.5 | UR | ER | 12.5 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.49 | U | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | | 0.65 | U | | 0.65 | U | | 0.65 | U | | 0.65 | U | |
| 2-CHLORONAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2-CHLOROPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 2-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| 3-NITROANILINE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UR | R | 5 | UR | R | 5 | UR | R | 5 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-METHYLPHENOL | | 0.77 | UR | R | 0.77 | UR | R | 0.77 | UR | R | 0.77 | UR | R |
| 4-NITROANILINE | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| 4-NITROPHENOL | | 5 | UR | R | 5 | UR | R | 5 | UR | R | 5 | UR | R |
| ACETOPHENONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| ATRAZINE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | U | | 1.25 | U | | 3.9 | J | P | 3.41 | J | P |
| BUTYL BENZYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_006 | LAB_ID | 1012004-09 | | | 1012004-10 | | | 1012004-11 | | | 1012004-12 | | |
| FRACTION: OS | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UR | R | 1.25 | U | | 1.25 | U | | 1.25 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UR | R | 0.5 | UJ | E | 0.5 | UJ | E | 0.5 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UR | R | 0.73 | UJ | E | 0.73 | UJ | E | 0.73 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.44 | UR | R | 0.44 | UJ | E | 0.44 | UJ | E | 0.44 | UR | R |
| 2,4-DIMETHYLPHENOL | | 5 | UR | ER | 5 | UR | E | 5 | UR | E | 5 | UR | ER |
| 2,4-DINITROPHENOL | | 12.5 | UR | ER | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.49 | U | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | | 0.65 | U | | 0.65 | U | | 0.65 | U | | 0.65 | U | |
| 2-CHLORONAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2-CHLOROPHENOL | | 1.25 | UR | R | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UR | R |
| 2-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UR | R |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | UR | R | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| 3-NITROANILINE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UR | R | 5 | U | | 5 | U | | 5 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UR | R |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-METHYLPHENOL | | 0.77 | UR | R | 0.77 | UJ | E | 0.77 | UJ | E | 0.77 | UR | R |
| 4-NITROANILINE | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| 4-NITROPHENOL | | 5 | UR | R | 5 | U | | 5 | U | | 5 | UR | R |
| ACETOPHENONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| ATRAZINE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.51 | J | P | 1.63 | J | P | 1.31 | J | P | 1.58 | J | P |
| BUTYL BENZYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_006 | LAB_ID | 1012004-01 | | | 1012004-02 | | | 1012004-03 | | | 1012004-04 | | |
| FRACTION: OS | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-OCTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | U | | 0.47 | U | | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | U | | 0.93 | U | | 0.93 | U | | 0.93 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| HEXACHLOROETHANE | | 0.46 | U | | 0.46 | U | | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NITROBENZENE | | 0.62 | U | | 0.62 | U | | 0.62 | U | | 0.62 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.9 | U | |
| N-NITROSODIPHENYLAMINE | | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UJ | E |
| PENTACHLOROPHENOL | | 1 | UR | R | 1 | UR | R | 1 | UR | R | 1 | UR | R |
| PHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |

| PROJ_NO: 02607<br>SDG: CTOJM16KW_006<br>FRACTION: OS<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1012004-05 | | | 1012004-06 | | | 1012004-07 | | | 1012004-08 | | |
| | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-OCTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | U | | 0.47 | U | | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | U | | 0.93 | U | | 0.93 | U | | 0.93 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| HEXACHLOROETHANE | | 0.46 | U | | 0.46 | U | | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NITROBENZENE | | 0.62 | U | | 0.62 | U | | 0.62 | U | | 0.62 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.9 | U | |
| N-NITROSODIPHENYLAMINE | | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UJ | E |
| PENTACHLOROPHENOL | | 1 | UR | R | 1 | UR | R | 1 | UR | R | 1 | UR | R |
| PHENOL | | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R | 1.25 | UR | R |

| PROJ_NO: 02607<br>SDG: CTOJM16KW_006<br>FRACTION: OS<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-010-1010 | | | GKHMS-GW-011-1010 | | | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1012004-09 | | | 1012004-10 | | | 1012004-11 | | | 1012004-12 | | |
| | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | | 10/29/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-OCTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | U | | 0.47 | U | | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | U | | 0.93 | U | | 0.93 | U | | 0.93 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| HEXACHLOROETHANE | | 0.46 | U | | 0.46 | U | | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NITROBENZENE | | 0.62 | U | | 0.62 | U | | 0.62 | U | | 0.62 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.9 | U | |
| N-NITROSODIPHENYLAMINE | | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UJ | E | 1.25 | UJ | E |
| PENTACHLOROPHENOL | | 1 | UR | R | 1 | U | | 1 | U | | 1 | UR | R |
| PHENOL | | 1.25 | UR | R | 1.25 | U | | 1.25 | U | | 1.25 | UR | R |

## Appendix B

Results as Reported by the Laboratory

# ANALYSIS DATA SHEET

1010098-01

GKHMS-GW-002-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-01 File ID: 1200401.D *1/12/11

Sampled: 10/28/10 09:50 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 16:46

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-01

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-01 File ID: 1200401.D

Sampled: 10/28/10 09:50 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 16:46

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.423 | 71.1 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 1.196 | 29.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.479 | 73.9 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.081 | 104 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 3.051 | 76.3 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-02

GKHMS-GW-003-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-02 File ID: 1200402.D

Sampled: 10/28/10 09:20 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 17:15 JK 1/12/11

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-02

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-02 File ID: 1200402.D

Sampled: 10/28/10 09:20 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 17:15

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.551 | 77.6 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 1.003 | 25.1 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.667 | 83.4 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.169 | 108 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 3.300 | 82.5 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-03

GKHMS-GW-004-1018

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-03 File ID: 1200403.D

Sampled: 10/28/10 11:20 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 17:45

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-03

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-03 File ID: 1200403.D

Sampled: 10/28/10 11:20 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 17:45

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.586 | 79.3 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 1.300 | 32.5 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.796 | 89.8 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 1.898 | 94.9 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 3.568 | 89.2 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-04

GKHMS-GW-005-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-04 File ID: 1200404.D

Sampled: 10/28/10 12:00 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 18:15

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

1/12/11 *

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-04

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-04 File ID: 1200404.D

Sampled: 10/28/10 12:00 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 18:15

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.545 | 77.2 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 1.479 | 37.0 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.758 | 87.9 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.527 | 126 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 2.713 | 67.8 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-05

GKHMS-GW-006-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-05 File ID: 1200405.D

Sampled: 10/28/10 14:30 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 18:44

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-05

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-05 File ID: 1200405.D

Sampled: 10/28/10 14:30 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 18:44

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.419 | 70.9 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 0.000 | | 20 - 110 | * |
| Nitrobenzene-d5 | 2.000 | 1.650 | 82.5 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 1.904 | 95.2 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | * |

# ANALYSIS DATA SHEET

1010098-06

GKHMS-GW-007-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-06 File ID: 1200406.D JK 1/12/11

Sampled: 10/28/10 15:40 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 19:14

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-06

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-06 File ID: 1200406.D

Sampled: 10/28/10 15:40 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 19:14

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.737 | 86.9 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 1.296 | 32.4 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.768 | 88.4 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.462 | 123 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 3.037 | 75.9 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-08

GKHMS-GW-008-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-07 File ID: 1200407.D

Sampled: 10/29/10 08:40 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 19:43

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 3.90 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-08

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-07 File ID: 1200407.D

Sampled: 10/29/10 08:40 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 19:43

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.622 | 81.1 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 1.313 | 32.8 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.748 | 87.4 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.389 | 119 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 3.039 | 76.0 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-09

GKHMS-GW-009-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-08 File ID: 1200408.D * 1/12/11

Sampled: 10/29/10 09:20 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 20:13

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 3.41 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

**1010098-09**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-08 File ID: 1200408.D

Sampled: 10/29/10 09:20 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 20:13

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.649 | 82.4 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 0.000 | | 20 - 110 | * |
| Nitrobenzene-d5 | 2.000 | 1.608 | 80.4 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.318 | 116 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | * |

# ANALYSIS DATA SHEET

1010098-10

GKHMS-GW-010-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-09 File ID: 1200409.D

Sampled: 10/29/10 11:30 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 20:42

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 1.51 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-10

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-09 File ID: 1200409.D

Sampled: 10/29/10 11:30 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 20:42

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.596 | 79.8 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 0.000 | | 20 - 110 | * |
| Nitrobenzene-d5 | 2.000 | 1.745 | 87.2 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.181 | 109 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | * |

# ANALYSIS DATA SHEET

1010098-11

GKHMS-GW-011-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-10 File ID: 1200410.D

Sampled: 10/29/10 10:40 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 21:11

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 1.63 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

**1010098-11**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-10 File ID: 1200410.D

Sampled: 10/29/10 10:40 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 21:11

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.531 | 76.6 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.034 | 50.8 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.862 | 93.1 | 40 - 110 | |
| Phenol-d6 | 4.000 | 1.671 | 41.8 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.016 | 101 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 1.830 | 45.8 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-12

GKHMS-GW-012-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-11 File ID: 1200411.D

Sampled: 10/29/10 10:00 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 21:40

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 1.31 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-12

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-11 File ID: 1200411.D

Sampled: 10/29/10 10:00 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 21:40

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.483 | 74.1 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.123 | 53.1 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.629 | 81.5 | 40 - 110 | |
| Phenol-d6 | 4.000 | 1.486 | 37.2 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.991 | 99.5 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 2.042 | 51.0 | 40 - 125 | |

# ANALYSIS DATA SHEET

1010098-13

GKHMS-GW-03-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-12 File ID: 1200412.D

Sampled: 10/29/10 13:50 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 22:10

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 1.58 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1010098-13

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012004-12 File ID: 1200412.D

Sampled: 10/29/10 13:50 Prepared: 11/03/10 09:15 Analyzed: 12/13/10 22:10

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.556 | 77.8 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 1.156 | 28.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.749 | 87.4 | 40 - 110 | |
| Phenol-d6 | 4.000 | 0.000 | | 10 - 110 | * |
| Terphenyl-d14 | 2.000 | 2.103 | 105 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | * |

**Appendix C**

Support Documentation

HOLDTIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | UG/L | GKHMS-GW-008-1010 | 1012004-07 | NM | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-002-1010 | 1012004-01 | SUR | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-003-1010 | 1012004-02 | NM | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-003-1010 | 1012004-02 | SUR | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-004-1010 | 1012004-03 | NM | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-004-1010 | 1012004-03 | SUR | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-005-1010 | 1012004-04 | NM | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-005-1010 | 1012004-04 | SUR | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-006-1010 | 1012004-05 | NM | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-006-1010 | 1012004-05 | SUR | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-002-1010 | 1012004-01 | NM | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-007-1010 | 1012004-06 | SUR | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |
| OS | UG/L | GKHMS-GW-013-1010 | 1012004-12 | SUR | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-008-1010 | 1012004-07 | SUR | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-009-1010 | 1012004-08 | NM | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | UG/L | GKHMS-GW-009-1010 | 1012004-08 | SUR | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-010-1010 | 1012004-09 | NM | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-010-1010 | 1012004-09 | SUR | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-011-1010 | 1012004-10 | NM | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-011-1010 | 1012004-10 | SUR | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-012-1010 | 1012004-11 | NM | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-012-1010 | 1012004-11 | SUR | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-013-1010 | 1012004-12 | NM | 10/29/2010 | 11/03/2010 | 12/13/2010 | 5 | 40 | 45 |
| OS | UG/L | GKHMS-GW-007-1010 | 1012004-06 | NM | 10/28/2010 | 11/03/2010 | 12/13/2010 | 6 | 40 | 46 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-1

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/2010 | GKHMS-GW-002-1010 | 09:50 | **SW846 6020A** | GKHMS-GW002 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/2010 | GKHMS-GW-002-1010 | 09:50 | **SW846 8260B** | GKHMS-GW002 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/2010 | GKHMS-GW-002-1010 | 09:50 | **SW846 8720D/8270DSIM** | GKHMS-GW002 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-GW-003-1010 | 09:20 | **SW846 6020A** | GKHMS-GW003 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/2010 | GKHMS-GW-003-1010 | 09:20 | **SW846 8720D/8270DSIM** | GKHMS-GW003 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-GW-003-1010 | 09:20 | **SW846 8260B** | GKHMS-GW003 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/2010 | GKHMS-GW-004-1010 | 11:20 | **SW846 8260B** | GKHMS-GW004 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/2010 | GKHMS-GW-004-1010 | 11:20 | **SW846 6020A** | GKHMS-GW004 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/2010 | GKHMS-GW-004-1010 | 11:20 | **SW846 8720D/8270DSIM** | GKHMS-GW004 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-GW-005-1010 | 12:00 | **SW846 8720D/8270DSIM** | GKHMS-GW005 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-GW-005-1010 | 12:00 | **SW846 6020A** | GKHMS-GW005 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/2010 | GKHMS-GW-005-1010 | 12:00 | **SW846 8260B** | GKHMS-GW005 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/2010 | GKHMS-GW-005-1010 | 12:00 | **SW846 8082A** | GKHMS-GW005 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-GW-005-1010 | 12:00 | **SW846 8081B** | GKHMS-GW005 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-GW-006-1010 | 14:30 | **SW846 8260B** | GKHMS-GW006 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/2010 | GKHMS-GW-006-1010 | 14:30 | **SW846 6020A** | GKHMS-GW006 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/2010 | GKHMS-GW-006-1010 | 14:30 | **SW846 8720D/8270DSIM** | GKHMS-GW006 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-GW-007-1010 | 15:40 | **SW846 8260B** | GKHMS-GW007 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/28/2010 | GKHMS-GW-007-1010 | 15:40 | **SW846 6020A** | GKHMS-GW007 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/28/2010 | GKHMS-GW-007-1010 | 15:40 | **SW846 8720D/8270DSIM** | GKHMS-GW007 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/28/2010 | GKHMS-TB-01 | 08:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 10/29/2010 | GKHMS-GW-008-1010 | 08:40 | **SW846 8260B** | GKHMS-GW008 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/29/2010 | GKHMS-GW-008-1010 | 08:40 | **SW846 6020A** | GKHMS-GW008 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/2010 | GKHMS-GW-008-1010 | 08:40 | **SW846 8720D/8270DSIM** | GKHMS-GW008 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-009-1010 | 09:20 | **SW846 8720D/8270DSIM** | GKHMS-GW009 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-009-1010 | 09:20 | **SW846 8260B** | GKHMS-GW009 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/2010 | GKHMS-GW-009-1010 | 09:20 | **SW846 6020A** | GKHMS-GW009 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/2010 | GKHMS-GW-010-1010 | 11:30 | **SW846 8260B** | GKHMS-GW010 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/2010 | GKHMS-GW-010-1010 | 11:30 | **SW846 6020A** | GKHMS-GW010 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/2010 | GKHMS-GW-010-1010 | 11:30 | **SW846 8720D/8270DSIM** | GKHMS-GW010 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-010-1010 | 11:30 | **SW846 8082A** | GKHMS-GW010 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-010-1010 | 11:30 | **SW846 8081B** | GKHMS-GW010 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-011-1010 | 10:40 | **SW846 8260B** | GKHMS-GW011 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/2010 | GKHMS-GW-011-1010 | 10:40 | **SW846 6020A** | GKHMS-GW011 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/2010 | GKHMS-GW-011-1010 | 10:40 | **SW846 8720D/8270DSIM** | GKHMS-GW011 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-011-1010 | 10:40 | **SW846 8082A** | GKHMS-GW011 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-011-1010 | 10:40 | **SW846 8081B** | GKHMS-GW011 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-012-1010 | 10:00 | **SW846 6020A** | GKHMS-GW012 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/2010 | GKHMS-GW-012-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW012 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-012-1010 | 10:00 | **SW846 8260B** | GKHMS-GW012 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/2010 | GKHMS-GW-013-1010 | 13:50 | **SW846 8260B** | GKHMS-GW013 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/29/2010 | GKHMS-GW-013-1010 | 13:50 | **SW846 8720D/8270DSIM** | GKHMS-GW013 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/29/2010 | GKHMS-GW-013-1010 | 13:50 | **SW846 6020A** | GKHMS-GW013 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/29/2010 | GKHMS-GW-013-1010 | 13:50 | **B-Tec Field Screening** | GKHMS-GW013 | GW | B-Tec (BTEX) | 4°C | 2 | Glass - Clear | 40ml vials | |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By:<br>**Derrick Haltiwanger** | Date:<br>10/29/2010 | Time:<br>16:10 | Received By:<br>**Federal Express** | Date:<br>10/29/2010 | Time:<br>17:10 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: 10/30/10<br>11/1/10 | Time: 10:55<br>13:46 |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

Comments:

CENTAURI LABS™

WORK ORDER

**1010098**

**Approved**

Printed: 11/2/2010 3:02:11PM

*Due Date: 11/13/10 00:00 (14 day TAT)*

*Date Received: 10/30/10 10:55*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!!

| Analysis | Expires | Comments |
|---|---|---|
| **1010098-01 GKHMS-GW-002-1010 [Water]** | **Sampled 10/28/10 09:50 Eastern** | |
| 8260B LL VOA | 11/11/10 09:50 | |
| 8270D LL SVOC TCL | 11/04/10 09:50 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 09:50 | |
| 6020A QSM TAL | 04/26/11 09:50 | |
| **1010098-02 GKHMS-GW-003-1010 [Water]** | **Sampled 10/28/10 09:20 Eastern** | |
| 6020A QSM TAL | 04/26/11 09:20 | |
| 8260B LL VOA | 11/11/10 09:20 | |
| 8270D LL SVOC TCL | 11/04/10 09:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 09:20 | |
| **1010098-03 GKHMS-GW-004-1010 [Water]** | **Sampled 10/28/10 11:20 Eastern** | |
| 6020A QSM TAL | 04/26/11 11:20 | |
| 8260B LL VOA | 11/11/10 11:20 | |
| 8270D LL SVOC TCL | 11/04/10 11:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 11:20 | |
| **1010098-04 GKHMS-GW-005-1010 [Water]** | **Sampled 10/28/10 12:00 Eastern** | |
| 6020A QSM TAL | 04/26/11 12:00 | |
| Mercury, Total 7470A | 11/25/10 12:00 | |
| 8270D LL SVOC TCL | 11/04/10 12:00 | PLUS SIM PAHs |
| 8260B LL VOA | 11/11/10 12:00 | |
| 8081B Pesticides | 11/04/10 12:00 | |
| 8082 PCBs | 11/04/10 12:00 | |
| **1010098-05 GKHMS-GW-006-1010 [Water]** | **Sampled 10/28/10 14:30 Eastern** | |
| 6020A QSM TAL | 04/26/11 14:30 | |
| 8260B LL VOA | 11/11/10 14:30 | |
| 8270D LL SVOC TCL | 11/04/10 14:30 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 14:30 | |

CENTAURI LABS™

WORK ORDER

1010098

Approved

Printed: 11/2/2010 3:02:11PM

*Due Date: 11/13/10 00:00 (14 day TAT)*

*Date Received: 10/30/10 10:55*

| Analysis | Expires | Comments |
|---|---|---|
| 1010098-06 GKHMS-GW-007-1010 [Water] | Sampled 10/28/10 15:40 Eastern | |
| 6020A QSM TAL | 04/26/11 15:40 | |
| 8260B LL VOA | 11/11/10 15:40 | |
| 8270D LL SVOC TCL | 11/04/10 15:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 15:40 | |
| 1010098-07 GKHMS-TB-01 [Water] | Sampled 10/28/10 08:00 Eastern | |
| 8260B LL VOA | 11/11/10 08:00 | |
| 1010098-08 GKHMS-GW-008-1010 [Water] | Sampled 10/29/10 08:40 Eastern | |
| 6020A QSM TAL | 04/27/11 08:40 | |
| 8270D LL SVOC TCL | 11/05/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 08:40 | |
| 8260B LL VOA | 11/12/10 08:40 | |
| 1010098-09 GKHMS-GW-009-1010 [Water] | Sampled 10/29/10 09:20 Eastern | |
| Mercury, Total 7470A | 11/26/10 09:20 | |
| 6020A QSM TAL | 04/27/11 09:20 | |
| 8260B LL VOA | 11/12/10 09:20 | |
| 8270D LL SVOC TCL | 11/05/10 09:20 | PLUS SIM PAHs |
| 1010098-10 GKHMS-GW-010-1010 [Water] | Sampled 10/29/10 11:30 Eastern | |
| 8270D LL SVOC TCL | 11/05/10 11:30 | PLUS SIM PAHs |
| 8260B LL VOA | 11/12/10 11:30 | |
| 8082 PCBs | 11/05/10 11:30 | |
| 6020A QSM TAL | 04/27/11 11:30 | |
| Mercury, Total 7470A | 11/26/10 11:30 | |
| 8081B Pesticides | 11/05/10 11:30 | |
| 1010098-11 GKHMS-GW-011-1010 [Water] | Sampled 10/29/10 10:40 Eastern | |
| 8260B LL VOA | 11/12/10 10:40 | |
| 8270D LL SVOC TCL | 11/05/10 10:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 10:40 | |
| 8082 PCBs | 11/05/10 10:40 | |
| 6020A QSM TAL | 04/27/11 10:40 | |
| 8081B Pesticides | 11/05/10 10:40 | |

CENTAURI LABS™

WORK ORDER

1010098

Approved

Printed: 11/2/2010 3:02:11PM

*Due Date: 11/13/10 00:00 (14 day TAT)*

*Date Received: 10/30/10 10:55*

| Analysis | Expires | Comments |
|---|---|---|
| 1010098-12 GKHMS-GW-012-1010 [Water] | | Sampled 10/29/10 10:00 Eastern |
| Mercury, Total 7470A | 11/26/10 10:00 | |
| 8270D LL SVOC TCL | 11/05/10 10:00 | PLUS SIM PAHs |
| 6020A QSM TAL | 04/27/11 10:00 | |
| 8260B LL VOA | 11/12/10 10:00 | |
| 1010098-13 GKHMS-GW-013-1010 [Water] | | Sampled 10/29/10 13:50 Eastern |
| 6020A QSM TAL | 04/27/11 13:50 | |
| 8260B LL VOA | 11/12/10 13:50 | |
| 8270D LL SVOC TCL | 11/05/10 13:50 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 13:50 | |

Container Locations

| | |
|---|---|
| 32oz Am | WH-2 |
| 32oz HDPE w/ HNO3 | WH-2 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11-2-10

Date

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

| **SENDING LABORATORY:** | **RECEIVING LABORATORY:** |
|---|---|
| Centauri Labs, LLC<br>7210 Corporate Court<br>Frederick, MD 21703<br>Phone: 301.694.5310<br>Fax: 301.620.0731<br>Project Manager: Chino Ortiz | EMPERICAL LABS<br>621 MAINSTREAM DR SUITE 270<br>NASHVILLE, TN 37228<br>Phone :(615) 345-1115<br>Fax: (000) 000-0000 |

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-01** | **Water** | **Sampled:10/28/10 09:50** | 1011256-01 |
| 6020A QSM TAL | | 04/26/11 09:50 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-02** | **Water** | **Sampled:10/28/10 09:20** | -02 |
| 6020A QSM TAL | | 04/26/11 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-03** | **Water** | **Sampled:10/28/10 11:20** | -03 |
| 6020A QSM TAL | | 04/26/11 11:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-04** | **Water** | **Sampled:10/28/10 12:00** | -04 |
| 6020A QSM TAL | | 04/26/11 12:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-05** | **Water** | **Sampled:10/28/10 14:30** | -05 |
| 6020A QSM TAL | | 04/26/11 14:30 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-06** | **Water** | **Sampled:10/28/10 15:40** | -06 |
| 6020A QSM TAL | | 04/26/11 15:40 | |
| *Containers Supplied:* | | | |

2.4°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-08** | **Water** | **Sampled:10/29/10 08:40** | 1011256-07 |
| 6020A QSM TAL | | 04/27/11 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-09** | **Water** | **Sampled:10/29/10 09:20** | -08 |
| 6020A QSM TAL | | 04/27/11 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-10** | **Water** | **Sampled:10/29/10 11:30** | -09 |
| 6020A QSM TAL | | 04/27/11 11:30 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-11** | **Water** | **Sampled:10/29/10 10:40** | -10 |
| 6020A QSM TAL | | 04/27/11 10:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-12** | **Water** | **Sampled:10/29/10 10:00** | -11 |
| 6020A QSM TAL | | 04/27/11 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-13** | **Water** | **Sampled:10/29/10 13:50** | -12 |
| 6020A QSM TAL | | 04/27/11 13:50 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/13/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2.4°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 10/1256 Number of Coolers: 1 of 2

Client: Centeri Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: —

If applicable, enter airbill number here: 0594

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No (N/A)

4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A

5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A

6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A

7. Was project identifiable from custody papers? ..... (Yes) No N/A

8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.7 °C Correction Factor: -0.3 °C Final Value: 2.4 °C

Dates samples were logged-in: 11/30/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schrad (Initial): WS

10. Were all bottle lids intact and sealed tightly? ..... (Yes) No N/A

11. Did all bottles arrive unbroken? ..... (Yes) No N/A

12. Was all required bottle label information complete? ..... (Yes) No N/A

13. Did all bottle labels agree with custody papers? ..... (Yes) No N/A

14. Were correct containers used for the analyses indicated? ..... (Yes) No N/A

15. Were preservative levels correct in all applicable sample containers? ..... (Yes) No N/A

16. Was residual chlorine present in any applicable sample containers? ..... Yes No (N/A)

17. Was sufficient amount of sample sent for the analyses required? ..... (Yes) No N/A

18. Was headspace present in any included VOA vials? ..... Yes No (N/A)

If Non-Conformance issues were present, list by sample ID: —

All Hg's recd out of hold

plt c2 for all metals

5

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011256 Number of Coolers: 2 of 2

Client: Centaur 2465 Project: _____

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Pond (signature): _____

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0609

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: _____ Seal date: _____ Seal Initials: _____

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No (N/A)
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A
7. Was project identifiable from custody papers? ..... (Yes) No N/A
8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 1.5 °C Correction Factor: -0.3 °C Final Value: 1.2 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

See 1 of 2

8270 only on these!

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments | LAB ID: |
|---|---|---|---|---|
| **Sample ID: 1010098-01** | **Water** | **Sampled:10/28/10 09:50** | | 10/2004-01 |
| 8270D LL SVOC TCL | | 11/04/10 09:50 | PLUS SIM PAHs | |
| 6020A QSM TAL | | 04/26/11 09:50 | | |
| *Containers Supplied:* | | | | |
| **Sample ID: 1010098-02** | **Water** | **Sampled:10/28/10 09:20** | | -02 |
| 6020A QSM TAL | | 04/26/11 09:20 | | |
| 8270D LL SVOC TCL | | 11/04/10 09:20 | PLUS SIM PAHs | |
| *Containers Supplied:* | | | | |
| **Sample ID: 1010098-03** | **Water** | **Sampled:10/28/10 11:20** | | -03 |
| 6020A QSM TAL | | 04/26/11 11:20 | | |
| 8270D LL SVOC TCL | | 11/04/10 11:20 | PLUS SIM PAHs | |
| *Containers Supplied:* | | | | |
| **Sample ID: 1010098-04** | **Water** | **Sampled:10/28/10 12:00** | | -04 |
| 6020A QSM TAL | | 04/26/11 12:00 | | |
| 8270D LL SVOC TCL | | 11/04/10 12:00 | PLUS SIM PAHs | |
| *Containers Supplied:* | | | | |
| **Sample ID: 1010098-05** | **Water** | **Sampled:10/28/10 14:30** | | -05 |
| 6020A QSM TAL | | 04/26/11 14:30 | | |
| 8270D LL SVOC TCL | | 11/04/10 14:30 | PLUS SIM PAHs | |
| *Containers Supplied:* | | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30/10 | | 12/1/10 08:11 |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-06** | **Water** | **Sampled:10/28/10 15:40** | 1012004-06 |
| 8270D LL SVOC TCL | | 11/04/10 15:40 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/26/11 15:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-08** | **Water** | **Sampled:10/29/10 08:40** | -07 |
| 8270D LL SVOC TCL | | 11/05/10 08:40 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/27/11 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-09** | **Water** | **Sampled:10/29/10 09:20** | -08 |
| 6020A QSM TAL | | 04/27/11 09:20 | |
| 8270D LL SVOC TCL | | 11/05/10 09:20 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-10** | **Water** | **Sampled:10/29/10 11:30** | -09 |
| 6020A QSM TAL | | 04/27/11 11:30 | |
| 8270D LL SVOC TCL | | 11/05/10 11:30 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-11** | **Water** | **Sampled:10/29/10 10:40** | -10 |
| 6020A QSM TAL | | 04/27/11 10:40 | |
| 8270D LL SVOC TCL | | 11/05/10 10:40 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-12** | **Water** | **Sampled:10/29/10 10:00** | -11 |
| 6020A QSM TAL | | 04/27/11 10:00 | |
| 8270D LL SVOC TCL | | 11/05/10 10:00 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30/10 | | 12/1/10 08:11 |
| | | | |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-13** | **Water** | **Sampled:10/29/10 13:50** | 1012004-12 |
| 8270D LL SVOC TCL | | 11/05/10 13:50 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/27/11 13:50 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/13/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| | | | |

8270 only on these!

# SUBCONTRACT ORDER

Centauri Labs, LLC

1010098

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-01** | **Water** | **Sampled:10/28/10 09:50** | 10/2004-01 |
| 8270D LL SVOC TCL | | 11/04/10 09:50 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/26/11 09:50 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-02** | **Water** | **Sampled:10/28/10 09:20** | -02 |
| 6020A QSM TAL | | 04/26/11 09:20 | |
| 8270D LL SVOC TCL | | 11/04/10 09:20 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-03** | **Water** | **Sampled:10/28/10 11:20** | -03 |
| 6020A QSM TAL | | 04/26/11 11:20 | |
| 8270D LL SVOC TCL | | 11/04/10 11:20 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-04** | **Water** | **Sampled:10/28/10 12:00** | -04 |
| 6020A QSM TAL | | 04/26/11 12:00 | |
| 8270D LL SVOC TCL | | 11/04/10 12:00 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-05** | **Water** | **Sampled:10/28/10 14:30** | -05 |
| 6020A QSM TAL | | 04/26/11 14:30 | |
| 8270D LL SVOC TCL | | 11/04/10 14:30 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30/10 | | 12/1/10 08:11 |
| | | | |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-06** | **Water** | **Sampled:10/28/10 15:40** | 1012004-06 |
| 8270D LL SVOC TCL | | 11/04/10 15:40 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/26/11 15:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-08** | **Water** | **Sampled:10/29/10 08:40** | -07 |
| 8270D LL SVOC TCL | | 11/05/10 08:40 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/27/11 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-09** | **Water** | **Sampled:10/29/10 09:20** | -08 |
| 6020A QSM TAL | | 04/27/11 09:20 | |
| 8270D LL SVOC TCL | | 11/05/10 09:20 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-10** | **Water** | **Sampled:10/29/10 11:30** | -09 |
| 6020A QSM TAL | | 04/27/11 11:30 | |
| 8270D LL SVOC TCL | | 11/05/10 11:30 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-11** | **Water** | **Sampled:10/29/10 10:40** | -10 |
| 6020A QSM TAL | | 04/27/11 10:40 | |
| 8270D LL SVOC TCL | | 11/05/10 10:40 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1010098-12** | **Water** | **Sampled:10/29/10 10:00** | -11 |
| 6020A QSM TAL | | 04/27/11 10:00 | |
| 8270D LL SVOC TCL | | 11/05/10 10:00 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30/10 | | 12/1/10 08:11 |
| | | | |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1010098**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1010098-13** | **Water** | **Sampled:10/29/10 13:50** | 10/2004-12 |
| 8270D LL SVOC TCL | | 11/05/10 13:50 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/27/11 13:50 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/13/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2-3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| | | | |
| Released By | Date | Received By | Date |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1012004 Number of Coolers: 1 of 1

Client: Centauri Labs Project: —

Date/Time Received: 12/1/10 08:11 Date cooler(s) opened:

Opened By (print): Will Schwab (signature):

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9680

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | Yes | (No) | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in: 12/1/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | No | (N/A) |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | (Yes) | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

No metals volume rec'd!

Rec'd 1010048-BLK, BKS, + BKSD. Not on COC. Tagged as -13 → 15

WORK ORDER

**1012004**

Printed: 12/22/2010 1:19:02PM

# Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/22/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 12/01/2010 08:11
Date Logged In 12/01/2010 10:40

Samples Received at: 2.3°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012004-01 1010098-01 [Water] Sampled 10/28/2010 09:50 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 08:50 | client list | see client list |
| **1012004-02 1010098-02 [Water] Sampled 10/28/2010 09:20 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 08:20 | client list | see client list |
| **1012004-03 1010098-03 [Water] Sampled 10/28/2010 11:20 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 10:20 | client list | see client list |
| **1012004-04 1010098-04 [Water] Sampled 10/28/2010 12:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 11:00 | client list | see client list |



CTOJM16KW_006 Summ Package

WORK ORDER

**1012004**

Printed: 12/22/2010 1:19:02PM

## Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010

Project Manager: Kim Kostzer
Project Number: CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012004-05 1010098-05 [Water] Sampled 10/28/2010 14:30 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 13:30 | client list | see client list |
| **1012004-06 1010098-06 [Water] Sampled 10/28/2010 15:40 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 14:40 | client list | see client list |
| **1012004-07 1010098-08 [Water] Sampled 10/29/2010 08:40 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/05/2010 07:40 | client list | see client list |
| **1012004-08 1010098-09 [Water] Sampled 10/29/2010 09:20 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/05/2010 08:20 | client list | see client list |
| **1012004-09 1010098-10 [Water] Sampled 10/29/2010 11:30 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/05/2010 10:30 | client list | see client list |
| **1012004-10 1010098-11 [Water] Sampled 10/29/2010 10:40 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/05/2010 09:40 | client list | see client list |
| **1012004-11 1010098-12 [Water] Sampled 10/29/2010 10:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/05/2010 09:00 | client list | see client list |
| **1012004-12 1010098-13 [Water] Sampled 10/29/2010 13:50 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/05/2010 12:50 | client list | see client list |
| **1012004-13 1010098-BLK [Water] Sampled 10/29/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 23:00 | client list | see client list |
| **1012004-14 1010098-BKS [Water] Sampled 10/29/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 23:00 | client list | see client list |



CTOJM16KW_006 Summ Package

WORK ORDER

**1012004**

Printed: 12/22/2010 1:19:02PM

## Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010

Project Manager: Kim Kostzer
Project Number: CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012004-15 1010098-BKSD [Water] Sampled 10/29/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/04/2010 23:00 | client list | see client list |

15

CTOJM16KW_006 Summ Package

# Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: CTOJM16 Key West 2010
SDG #: CTOJM16KW_006
MATRIX: Water

QC LEVEL: EDD/IVQSM
Report Due: 12/22/2010
Client Sample Count: 15

| Sample Type | Sampled | Received | Lab ID | Client ID | SW8270C |
|---|---|---|---|---|---|
| Client Sample | 10/28/2010 | 12/1/2010 | 1012004-01 | 1010098-01 | Sample is an extract!! |
| Client Sample | 10/28/2010 | 12/1/2010 | 1012004-02 | 1010098-02 | Sample is an extract!! |
| Client Sample | 10/28/2010 | 12/1/2010 | 1012004-03 | 1010098-03 | Sample is an extract!! |
| Client Sample | 10/28/2010 | 12/1/2010 | 1012004-04 | 1010098-04 | Sample is an extract!! |
| Client Sample | 10/28/2010 | 12/1/2010 | 1012004-05 | 1010098-05 | Sample is an extract!! |
| Client Sample | 10/28/2010 | 12/1/2010 | 1012004-06 | 1010098-06 | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-07 | 1010098-08 | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-08 | 1010098-09 | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-09 | 1010098-10 | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-10 | 1010098-11 | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-11 | 1010098-12 | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-12 | 1010098-13 | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-13 | 1010098-BLK | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-14 | 1010098-BKS | Sample is an extract!! |
| Client Sample | 10/29/2010 | 12/1/2010 | 1012004-15 | 1010098-BKSD | Sample is an extract!! |

## Sample Delivery Group Case Narrative

### Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

No sample volume was received for SW6020 or SW7470A.

### Changes to the Revision

This is an original submittal of the final report package.

### Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

### Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

### SW8270C:

The surrogate Phenol-d6 did not recover in samples 1012004-01, -02, -03, -04, -05, -06, -07, -08, -09 and -12. The surrogate 2-Fluorophenol did not recover in samples 1012004-05, -08 and -09. The surrogate 2,4,6-Tribromophenol did not recover in samples 1012004-05, -08, -09 and -12. Samples were not able to be re-extracted since the extracts were received from another laboratory.

The internal standard Perylene-d12 exceeded criteria in 0L14019-BLK1. Compounds associated to this internal standard are qualified with an "S".

The continuing calibration verification 0L34710-CCV1 exceeded criteria with a negative bias for Benzaldehyde, 2,2'-Oxybis-1-chloropropane, and 3,3'-Dichlorobenzidine and with a positive bias for Hexachlorocyclopentadiene and 2-Nitroaniline.

The batch spikes associated to batch 0L14019 exceeded criteria with a negative bias for 4-Chloro-3-methylphenol, 2-Chlorophenol, 2,4-Dichlorophenol, 2-Methylphenol, 4-Methylphenol, 2-Nitrophenol, N-nitrosodiphenylamine, 2,4,5-Trichlorophenol and 2,4,6-Trichlorophenol and did not recover at all for Benzaldehyde, 4-Chloroaniline, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 2-Nitroaniline, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol. Samples were not able to be re-extracted since the extracts were received from another laboratory.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J**: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N**: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

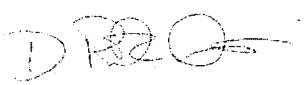
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

# Data for SW8270C Forms

# HOLDING TIME SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1010098-01 | 10/28/10 09:50 | 12/01/10 08:11 | 11/03/10 09:15 | 6.02 | 7.00 | 12/13/10 16:46 | 40.31 | 40.00 | |
| 1010098-02 | 10/28/10 09:20 | 12/01/10 08:11 | 11/03/10 09:15 | 6.04 | 7.00 | 12/13/10 17:15 | 40.33 | 40.00 | |
| 1010098-03 | 10/28/10 11:20 | 12/01/10 08:11 | 11/03/10 09:15 | 5.95 | 7.00 | 12/13/10 17:45 | 40.35 | 40.00 | |
| 1010098-04 | 10/28/10 12:00 | 12/01/10 08:11 | 11/03/10 09:15 | 5.93 | 7.00 | 12/13/10 18:15 | 40.38 | 40.00 | |
| 1010098-05 | 10/28/10 14:30 | 12/01/10 08:11 | 11/03/10 09:15 | 5.82 | 7.00 | 12/13/10 18:44 | 40.40 | 40.00 | |
| 1010098-06 | 10/28/10 15:40 | 12/01/10 08:11 | 11/03/10 09:15 | 5.77 | 7.00 | 12/13/10 19:14 | 40.42 | 40.00 | |
| 1010098-08 | 10/29/10 08:40 | 12/01/10 08:11 | 11/03/10 09:15 | 5.07 | 7.00 | 12/13/10 19:43 | 40.44 | 40.00 | |
| 1010098-09 | 10/29/10 09:20 | 12/01/10 08:11 | 11/03/10 09:15 | 5.04 | 7.00 | 12/13/10 20:13 | 40.46 | 40.00 | |
| 1010098-10 | 10/29/10 11:30 | 12/01/10 08:11 | 11/03/10 09:15 | 4.95 | 7.00 | 12/13/10 20:42 | 40.48 | 40.00 | |
| 1010098-11 | 10/29/10 10:40 | 12/01/10 08:11 | 11/03/10 09:15 | 4.98 | 7.00 | 12/13/10 21:11 | 40.50 | 40.00 | |
| 1010098-12 | 10/29/10 10:00 | 12/01/10 08:11 | 11/03/10 09:15 | 5.01 | 7.00 | 12/13/10 21:40 | 40.52 | 40.00 | |
| 1010098-13 | 10/29/10 13:50 | 12/01/10 08:11 | 11/03/10 09:15 | 4.85 | 7.00 | 12/13/10 22:10 | 40.54 | 40.00 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35109 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35109-TUN1 | SEQ-TUN1.D | 12/07/10 17:31 |
| Cal Standard | 0L35109-CAL1 | SEQ-CAL1.D | 12/07/10 17:58 |
| Cal Standard | 0L35109-CAL2 | SEQ-CAL2.D | 12/07/10 18:29 |
| Cal Standard | 0L35109-CAL3 | SEQ-CAL3.D | 12/07/10 18:59 |
| Cal Standard | 0L35109-CAL4 | SEQ-CAL4.D | 12/07/10 19:29 |
| Cal Standard | 0L35109-CAL5 | SEQ-CAL5.D | 12/07/10 19:59 |
| Cal Standard | 0L35109-CAL6 | SEQ-CAL6.D | 12/07/10 20:29 |
| Cal Standard | 0L35109-CAL7 | SEQ-CAL7.D | 12/07/10 20:59 |
| Cal Standard | 0L35109-CAL9 | SEQ-CAL9.D | 12/07/10 21:58 |
| Cal Standard | 0L35109-CALA | SEQ-CALA.D | 12/07/10 22:28 |
| Cal Standard | 0L35109-CALB | SEQ-CALB.D | 12/07/10 22:57 |
| Cal Standard | 0L35109-CALC | SEQ-CALC.D | 12/07/10 23:27 |
| Cal Standard | 0L35109-CALD | SEQ-CALD.D | 12/07/10 23:56 |
| Cal Standard | 0L35109-CALE | SEQ-CALE.D | 12/08/10 00:25 |
| Cal Standard | 0L35109-CALF | SEQ-CALF.D | 12/08/10 00:54 |
| Cal Standard | 0L35109-CALG | SEQ-CALG.D | 12/08/10 01:23 |
| Cal Standard | 0L35109-CALH | SEQ-CALH.D | 12/08/10 01:52 |
| Cal Standard | 0L35109-CALJ | SEQ-CALJ.D | 12/08/10 02:51 |
| Cal Standard | 0L35109-CALK | SEQ-CALK.D | 12/08/10 03:20 |
| MS Tune | 0L35109-TUN2 | SEQ-TUN2.D | 12/08/10 03:49 |
| Initial Cal Check | 0L35109-ICV3 | SEQ-ICV3.D | 12/08/10 10:01 |
| Initial Cal Check | 0L35109-ICV4 | SEQ-ICV4.D | 12/08/10 10:31 |
| Initial Cal Check | 0L35109-ICV5 | SEQ-ICV5.D | 12/08/10 11:04 |
| Initial Cal Check | 0L35109-ICV7 | SEQ-ICV7.D | 12/08/10 12:04 |
| Initial Cal Check | 0L35109-ICVA | SEQ-ICVA.D | 12/08/10 14:09 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/07/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 17:31 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 44.4 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 47.6 | PASS |
| 70 | Less than 2% of 69 | 0.454 | PASS |
| 127 | 40 - 60% of 198 | 57.6 | PASS |
| 197 | Less than 1% of 198 | 0.468 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.79 | PASS |
| 275 | 10 - 30% of 198 | 25.5 | PASS |
| 365 | 1 - 200% of 198 | 3.23 | PASS |
| 441 | 0.001 - 100% of 443 | 77 | PASS |
| 442 | 40 - 200% of 198 | 77 | PASS |
| 443 | 17 - 23% of 442 | 20.1 | PASS |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN2.D | Injection Date: | 12/08/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 03:49 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN2 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 46.1 | PASS |
| 68 | Less than 2% of 69 | 0.759 | PASS |
| 69 | Less than 200% of 198 | 46.1 | PASS |
| 70 | Less than 2% of 69 | 0.512 | PASS |
| 127 | 40 - 60% of 198 | 57.3 | PASS |
| 197 | Less than 1% of 198 | 0.26 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 7.25 | PASS |
| 275 | 10 - 30% of 198 | 24.8 | PASS |
| 365 | 1 - 200% of 198 | 3.45 | PASS |
| 441 | 0.001 - 100% of 443 | 73.2 | PASS |
| 442 | 40 - 200% of 198 | 81 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_006

Project: ~~CTOJM16~~ Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.269597 | 4.903152 | 10.465 | 4.763744E-02 | | | CCC (30) | |
| Acenaphthylene | 1.959083 | 4.154041 | 10.24944 | 4.133794E-02 | | | 15 | |
| Acetophenone | 1.714419 | 4.130585 | 7.227222 | 3.094706E-02 | | | 15 | |
| Aniline | 1.900007 | 3.284542 | 6.390556 | 8.799762E-02 | | | 15 | |
| Anthracene | 1.161307 | 4.582293 | 12.34144 | 4.433106E-02 | | | 15 | |
| Atrazine | 0.2293025 | 11.08458 | 11.88522 | 5.410601E-02 | | | 15 | |
| Benzaldehyde | 1.057258 | 4.80575 | 6.264667 | 2.697619E-02 | | | 15 | |
| Benzidine | 0.6369679 | 13.40551 | 13.89371 | 2.662737E-02 | | | 15 | |
| Benzo(a)anthracene | 1.193431 | 4.385626 | 15.53889 | 2.902238E-02 | | | 15 | |
| Benzo(a)pyrene | 1.061849 | 12.15633 | 17.34322 | 4.821226E-02 | | | CCC (30) | |
| Benzo(b)fluoranthene | 1.192834 | 9.469779 | 16.90622 | 0.0364467 | | | 15 | |
| Benzo(g,h,i)perylene | 0.8673976 | 9.832135 | 19.57289 | 8.613339E-02 | | | 15 | |
| Benzoic acid | 0.1667293 | 34.36929 | 7.9865 | 0.5465472 | 0.9972413 | | 0.995 | |
| Benzo(k)fluoranthene | 1.234244 | 5.160575 | 16.9405 | 4.784776E-02 | | | 15 | |
| Benzyl alcohol | 0.7918529 | 8.384648 | 6.922 | 7.858658E-02 | | | 15 | |
| 1,1-Biphenyl | 1.647464 | 6.941428 | 9.711111 | 3.672288E-02 | | | 15 | |
| 4-Bromophenyl-phenylether | 0.2396007 | 4.615409 | 11.69178 | 3.160712E-02 | | | 15 | |
| Butylbenzylphthalate | 0.6659619 | 10.75201 | 14.81629 | 1.927271E-02 | | | 15 | |
| Caprolactam | 0.0983814 | 13.1947 | 8.739 | 0.1800642 | | | 15 | |
| Carbazole | 1.033588 | 5.537093 | 12.53067 | 4.187015E-02 | | | 15 | |
| 4-Chloro-3-methylphenol | 0.2791833 | 13.73393 | 8.943625 | 3.777953E-02 | | | CCC (30) | |
| 4-Chloroaniline | 0.4236872 | 4.041706 | 8.357222 | 5.579471E-02 | | | 15 | |
| Bis(2-chloroethoxy)methane | 0.4015206 | 5.043312 | 7.969778 | 4.750625E-02 | | | 15 | |
| Bis(2-chloroethyl)ether | 1.242957 | 3.412662 | 6.456667 | 9.612344E-02 | | | 15 | |
| 2,2'-Oxybis-1-chloropropane | 1.791162 | 4.894321 | 7.083555 | 4.525434E-02 | | | 15 | |
| 2-Chloronaphthalene | 1.223416 | 4.351312 | 9.738445 | 4.355056E-02 | | | 15 | |
| 2-Chlorophenol | 1.320483 | 5.059863 | 6.533111 | 6.571699E-02 | | | 15 | |
| 4-Chlorophenyl phenyl ether | 0.6482639 | 4.698305 | 11.09078 | 0.034051 | | | 15 | |
| Chrysene | 1.223868 | 3.849079 | 15.58856 | 3.824456E-02 | | | 15 | |
| Dibenz(a,h)anthracene | 0.843577 | 13.39613 | 19.10544 | 0.064455 | | | 15 | |
| Dibenzofuran | 1.702459 | 5.478968 | 10.67456 | 4.805089E-02 | | | 15 | |
| Di-n-butylphthalate | 1.274102 | 10.33933 | 12.96089 | 3.198878E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 1.590354 | 5.068212 | 6.791 | 3.285709E-02 | | | CCC (30) | |
| 1,3-Dichlorobenzene | 1.556634 | 4.82334 | 6.712111 | 3.840334E-02 | | | 15 | |
| 1,2-Dichlorobenzene | 1.498241 | 3.960279 | 6.972778 | 3.854247E-02 | | | 15 | |
| 3,3'-Dichlorobenzidine | 0.3901063 | 11.47408 | 15.49443 | 2.260094E-02 | | | 15 | |
| 2,6-Dichlorophenol | 0.2593817 | 8.91257 | 8.374111 | 1.822758E-02 | | | 15 | |
| 2,4-Dichlorophenol | 0.2708646 | 11.75671 | 8.104445 | 7.489039E-02 | | | CCC (30) | |
| Diethylphthalate | 1.375716 | 4.066081 | 10.94922 | 7.018966E-02 | | | 15 | |
| 2,4-Dimethylphenol | 0.3567735 | 5.191635 | 7.862444 | 7.425377E-02 | | | 15 | |
| Dimethyl phthalate | 1.360327 | 2.760394 | 10.08487 | 0.1018539 | | | 15 | |
| 4,6-Dinitro-2-methylphenol | 0.1141426 | 30.80017 | 11.15414 | 8.948876E-02 | 0.9987724 | | 0.995 | |
| 2,4-Dinitrophenol | 0.1317034 | 34.87347 | 10.48617 | 6.439793E-02 | 0.9970944 | | SPCC (0.05) | |
| 2,4-Dinitrotoluene | 0.3873439 | 14.36567 | 10.647 | 8.872293E-02 | | | 15 | |
| 2,6-Dinitrotoluene | 0.3161974 | 6.525335 | 10.15025 | 8.086076E-02 | | | 15 | |
| Di-n-octylphthalate | 1.581621 | 12.56055 | 16.37467 | 1.584676E-02 | | | CCC (30) | |
| 1,4-Dioxane | 0.5824199 | 4.647384 | 3.461222 | 6.378529E-02 | | | 15 | |
| 1,2-Diphenylhydrazine | 0.8266591 | 5.85195 | 11.28589 | 4.479164E-02 | | | 15 | |
| Bis(2-ethylhexyl)phthalate | 0.8698317 | 14.06275 | 15.55788 | 2.160886E-02 | | | 15 | |
| Fluoranthene | 1.133942 | 6.426527 | 13.74544 | 3.010434E-02 | | | CCC (30) | |
| Fluorene | 1.377626 | 2.611998 | 11.09611 | 4.668763E-02 | | | 15 | |
| 2-Fluorobiphenyl | 1.429188 | 5.299247 | 9.590445 | 4.316615E-02 | | | 15 | |
| 2-Fluorophenol | 1.163095 | 4.537913 | 5.309444 | 4.883207E-02 | | | 15 | |
| Hexachlorobenzene | 0.2675089 | 4.583392 | 11.79278 | 3.935515E-02 | | | 15 | |
| Hexachlorobutadiene | 0.1897728 | 3.248719 | 8.468444 | 2.541857E-02 | | | CCC (30) | |
| Hexachlorocyclopentadiene | 0.2719697 | 13.77204 | 9.354667 | 0.0244126 | | | SPCC (0.05) | |
| Hexachloroethane | 0.5839827 | 5.21415 | 7.374556 | 2.041353E-02 | | | 15 | |
| Indeno(1,2,3-cd)pyrene | 1.046936 | 11.15244 | 19.08733 | 6.484222E-02 | | | 15 | |
| Isophorone | 0.6532573 | 4.164348 | 7.718667 | 0.1211494 | | | 15 | |
| 1-Methylnaphthalene | 0.6166441 | 3.550294 | 9.265111 | 3.593918E-02 | | | 15 | |
| 2-Methylnaphthalene | 0.5927061 | 2.758044 | 9.143334 | 3.771168E-02 | | | 15 | |
| 2-Methylphenol | 1.129245 | 5.890276 | 7.051444 | 5.962201E-02 | | | 15 | |
| 3-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |
| 4-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | 1.098195 | 7.090559 | 8.304222 | 3.938283E-02 | | | 15 | |
| 4-Nitroaniline | 0.2492193 | 10.6119 | 11.10488 | 0.1012271 | | | 15 | |
| 3-Nitroaniline | 0.3039612 | 12.46666 | 10.355 | 8.761057E-02 | | | 15 | |
| 2-Nitroaniline | 0.3312246 | 12.35964 | 9.851625 | 5.605301E-02 | | | 15 | |
| Nitrobenzene | 0.3690184 | 3.243848 | 7.433 | 8.670105E-02 | | | 15 | |
| Nitrobenzene-d5 | 0.3614526 | 4.787386 | 7.410333 | 7.322044E-02 | | | 15 | |
| 4-Nitrophenol | 0.1965166 | 21.52661 | 10.55771 | 9.363783E-02 | 0.9988059 | | SPCC (0.05) | |
| 2-Nitrophenol | 0.1835837 | 10.09707 | 7.816143 | 0.0460575 | | | CCC (30) | |
| N-Nitrosodimethylamine | 0.7067011 | 3.972251 | 3.796889 | 0.112963 | | | 15 | |
| N-Nitrosodiphenylamine | 0.7463088 | 5.779425 | 11.23333 | 6.231948E-02 | | | CCC (30) | |
| N-Nitroso-di-n-propylamine | 0.8544344 | 3.82209 | 7.235111 | 0.132911 | | | SPCC (0.05) | |
| Pentachlorophenol | 0.1195033 | 31.15399 | 12.02443 | 2.565489E-02 | 0.9986727 | | CCC (30) | * |
| Phenanthrene | 1.206234 | 6.535522 | 12.27844 | 3.596534E-02 | | | 15 | |
| Phenol | 1.491659 | 4.640746 | 6.357889 | 0.1599589 | | | CCC (30) | |
| Phenol-d6 | 1.434991 | 4.1192 | 6.341889 | 0.1499449 | | | 15 | |
| Pyrene | 1.380107 | 4.996263 | 14.02522 | 3.880092E-02 | | | 15 | |
| Pyridine | 1.377958 | 4.121152 | 3.838111 | 8.916254E-02 | | | 15 | |
| Terphenyl-d14 | 0.8848596 | 4.382233 | 14.21 | 0.0194432 | | | 15 | |
| 1,2,4,5-Tetrachlorobenzene | 0.3170295 | 5.342813 | 9.355222 | 3.483054E-02 | | | 15 | |
| 2,3,4,6-Tetrachlorophenol | 0.2870772 | 13.54627 | 10.82871 | 2.564344E-02 | | | 15 | |
| 2,4,6-Tribromophenol | 0.1159566 | 8.307173 | 11.39514 | 4.977028E-02 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.3581999 | 4.302402 | 8.212111 | 0.0416875 | | | 15 | |
| 2,4,6-Trichlorophenol | 0.3425101 | 14.8708 | 9.487875 | 3.202461E-02 | | | CCC (30) | |
| 2,4,5-Trichlorophenol | 0.3356329 | 18.90298 | 9.529444 | 3.382823E-02 | 0.9992251 | | 0.995 | |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 1 | 1.374103 | 2 | 1.315472 | 5 | 1.294825 | 10 | 1.297991 | 20 | 1.275653 | 40 | 1.264744 |
| Acenaphthylene | 1 | 1.977639 | 2 | 1.856101 | 5 | 2.054718 | 10 | 2.034701 | 20 | 2.004486 | 40 | 2.016175 |
| Acetophenone | | | | | | | | | | | | |
| Aniline | 1 | 1.893837 | 2 | 1.776582 | 5 | 1.860449 | 10 | 1.905373 | 20 | 1.96982 | 40 | 1.974599 |
| Anthracene | 1 | 1.152616 | 2 | 1.06955 | 5 | 1.199769 | 10 | 1.197299 | 20 | 1.226635 | 40 | 1.202224 |
| Atrazine | | | | | | | | | | | | |
| Benzaldehyde | | | | | | | | | | | | |
| Benzidine | | | | | | | | | | | | |
| Benzo(a)anthracene | 1 | 1.176974 | 2 | 1.111061 | 5 | 1.144412 | 10 | 1.151915 | 20 | 1.206273 | 40 | 1.273851 |
| Benzo(a)pyrene | 1 | 0.8141702 | 2 | 0.8979174 | 5 | 1.012763 | 10 | 1.07342 | 20 | 1.117703 | 40 | 1.177321 |
| Benzo(b)fluoranthene | 1 | 1.125665 | 2 | 0.9776505 | 5 | 1.090132 | 10 | 1.171102 | 20 | 1.29305 | 40 | 1.2449 |
| Benzo(g,h,i)perylene | 1 | 0.8361077 | 2 | 0.7984972 | 5 | 0.8140256 | 10 | 0.9111468 | 20 | 0.7364742 | 40 | 0.9464765 |
| Benzoic acid | 1 | | 2 | | 5 | ~~4.781063E-02~~ | 10 | 0.0826069 | 20 | 0.1115828 | 40 | 0.1730795 |
| Benzo(k)fluoranthene | 1 | 1.14576 | 2 | 1.154252 | 5 | 1.251529 | 10 | 1.234315 | 20 | 1.330375 | 40 | 1.295232 |
| Benzyl alcohol | 1 | 0.6727378 | 2 | 0.6959354 | 5 | 0.772278 | 10 | 0.795494 | 20 | 0.8202954 | 40 | 0.8572062 |
| 1,1-Biphenyl | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | 1 | 0.2518511 | 2 | 0.2324228 | 5 | 0.2437731 | 10 | 0.256832 | 20 | 0.2460901 | 40 | 0.2374707 |
| Butylbenzylphthalate | 1 | ~~0.4212315~~ | 2 | ~~0.4213914~~ | 5 | 0.5348313 | 10 | 0.6014097 | 20 | 0.6750239 | 40 | 0.7266313 |
| Caprolactam | | | | | | | | | | | | |
| Carbazole | 1 | 1.01038 | 2 | 0.9970601 | 5 | 1.12402 | 10 | 1.080297 | 20 | 1.103171 | 40 | 1.03857 |
| 4-Chloro-3-methylphenol | 1 | ~~0.2181994~~ | 2 | 0.1973558 | 5 | 0.2555061 | 10 | 0.2703475 | 20 | 0.2869397 | 40 | 0.3103583 |
| 4-Chloroaniline | 1 | 0.4024068 | 2 | 0.3901094 | 5 | 0.4361041 | 10 | 0.428376 | 20 | 0.4378298 | 40 | 0.4407009 |
| Bis(2-chloroethoxy)methane | 1 | 0.4428005 | 2 | 0.3937843 | 5 | 0.4134067 | 10 | 0.4132365 | 20 | 0.4016128 | 40 | 0.4006352 |
| Bis(2-chloroethyl)ether | 1 | 1.305395 | 2 | 1.271392 | 5 | 1.279374 | 10 | 1.244134 | 20 | 1.24794 | 40 | 1.248168 |
| 2,2'-Oxybis-1-chloropropane | 1 | 1.965289 | 2 | 1.793817 | 5 | 1.845471 | 10 | 1.811628 | 20 | 1.795887 | 40 | 1.79747 |
| 2-Chloronaphthalene | 1 | 1.301941 | 2 | 1.234577 | 5 | 1.261078 | 10 | 1.265583 | 20 | 1.232031 | 40 | 1.224941 |
| 2-Chlorophenol | 1 | 1.214973 | 2 | 1.209461 | 5 | 1.305111 | 10 | 1.33217 | 20 | 1.378026 | 40 | 1.389739 |
| 4-Chlorophenyl phenyl ether | 1 | 0.7071653 | 2 | 0.6593299 | 5 | 0.6773879 | 10 | 0.6525344 | 20 | 0.636283 | 40 | 0.641452 |
| Chrysene | 1 | 1.306708 | 2 | 1.164201 | 5 | 1.238881 | 10 | 1.248779 | 20 | 1.219789 | 40 | 1.261333 |
| Dibenz(a,h)anthracene | 1 | 0.7512715 | 2 | 0.654872 | 5 | 0.7969043 | 10 | 0.8919851 | 20 | 0.7541061 | 40 | 0.941626 |
| Dibenzofuran | 1 | 1.871373 | 2 | 1.740989 | 5 | 1.77835 | 10 | 1.705143 | 20 | 1.70834 | 40 | 1.703961 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_006

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 1 | 1.082426 | 2 | 1.046644 | 5 | 1.297638 | 10 | 1.304534 | 20 | 1.412773 | 40 | 1.396991 |
| 1,4-Dichlorobenzene | 1 | 1.763261 | 2 | 1.615997 | 5 | 1.634718 | 10 | 1.593686 | 20 | 1.585729 | 40 | 1.569702 |
| 1,3-Dichlorobenzene | 1 | 1.712108 | 2 | 1.509974 | 5 | 1.605202 | 10 | 1.591847 | 20 | 1.585144 | 40 | 1.527454 |
| 1,2-Dichlorobenzene | 1 | 1.614674 | 2 | 1.490364 | 5 | 1.546689 | 10 | 1.516537 | 20 | 1.510281 | 40 | 1.482237 |
| 3,3'-Dichlorobenzidine | | | | | | | | | | | | |
| 2,6-Dichlorophenol | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 1 | 0.2193633 | 2 | 0.2189929 | 5 | 0.2564872 | 10 | 0.2777847 | 20 | 0.2877571 | 40 | 0.2934208 |
| Diethylphthalate | 1 | 1.305598 | 2 | 1.272227 | 5 | 1.418943 | 10 | 1.386613 | 20 | 1.419902 | 40 | 1.434097 |
| 2,4-Dimethylphenol | 1 | 0.3408463 | 2 | 0.315261 | 5 | 0.3594693 | 10 | 0.3685544 | 20 | 0.370695 | 40 | 0.3730775 |
| Dimethyl phthalate | 1 | | 2 | 1.3603 | 5 | 1.387939 | 10 | 1.399916 | 20 | 1.384977 | 40 | 1.382422 |
| 4,6-Dinitro-2-methylphenol | 1 | | 2 | | 5 | 5.314518E-02 | 10 | 8.603549E-02 | 20 | 0.1020477 | 40 | 0.1278111 |
| 2,4-Dinitrophenol | 1 | | 2 | | 5 | ~~4.447398E-02~~ | 10 | 6.358993E-02 | 20 | 8.773021E-02 | 40 | 0.1367475 |
| 2,4-Dinitrotoluene | 1 | | 2 | 0.2696124 | 5 | 0.3483922 | 10 | 0.3796104 | 20 | 0.3959347 | 40 | 0.432168 |
| 2,6-Dinitrotoluene | 1 | | 2 | 0.2748954 | 5 | 0.2969673 | 10 | 0.3157389 | 20 | 0.320917 | 40 | 0.3377335 |
| Di-n-octylphthalate | 1 | ~~0.777665~~ | 2 | ~~0.7972759~~ | 5 | ~~1.157303~~ | 10 | 1.226168 | 20 | 1.667762 | 40 | 1.640777 |
| 1,4-Dioxane | | | | | | | | | | | | |
| 1,2-Diphenylhydrazine | 1 | 0.8633715 | 2 | 0.7922832 | 5 | 0.851889 | 10 | 0.902869 | 20 | 0.8523618 | 40 | 0.8367419 |
| Bis(2-ethylhexyl)phthalate | 1 | ~~0.5629525~~ | 2 | 0.623236 | 5 | 0.7692422 | 10 | 0.8261352 | 20 | 0.9295948 | 40 | 0.9699243 |
| Fluoranthene | 1 | 1.010262 | 2 | 1.050371 | 5 | 1.174781 | 10 | 1.087186 | 20 | 1.202634 | 40 | 1.216382 |
| Fluorene | 1 | 1.417605 | 2 | 1.334531 | 5 | 1.437789 | 10 | 1.382289 | 20 | 1.384069 | 40 | 1.391212 |
| 2-Fluorobiphenyl | 1 | 1.529612 | 2 | 1.450802 | 5 | 1.515443 | 10 | 1.491745 | 20 | 1.421812 | 40 | 1.419088 |
| 2-Fluorophenol | 2 | 1.169393 | 4 | 1.036011 | 10 | 1.183087 | 20 | 1.188432 | 40 | 1.218105 | 80 | 1.194993 |
| Hexachlorobenzene | 1 | 0.2870931 | 2 | 0.2718521 | 5 | 0.2738817 | 10 | 0.2758146 | 20 | 0.2709715 | 40 | 0.2670496 |
| Hexachlorobutadiene | 1 | 0.1996622 | 2 | 0.1865372 | 5 | 0.1967719 | 10 | 0.1932208 | 20 | 0.1899233 | 40 | 0.1887931 |
| Hexachlorocyclopentadiene | 1 | ~~0.166607~~ | 2 | ~~0.1547457~~ | 5 | ~~0.2130315~~ | 10 | 0.2250949 | 20 | 0.2330708 | 40 | 0.2880169 |
| Hexachloroethane | 1 | 0.6451315 | 2 | 0.5286661 | 5 | 0.5787438 | 10 | 0.5669407 | 20 | 0.5836949 | 40 | 0.5978446 |
| Indeno(1,2,3-cd)pyrene | 1 | 0.9439524 | 2 | 0.8985737 | 5 | 0.9919689 | 10 | 1.096168 | 20 | 0.9191515 | 40 | 1.154267 |
| Isophorone | 1 | 0.6213175 | 2 | 0.5968757 | 5 | 0.655194 | 10 | 0.6761772 | 20 | 0.6705981 | 40 | 0.6772569 |
| 1-Methylnaphthalene | 1 | 0.6465797 | 2 | 0.6184212 | 5 | 0.6369707 | 10 | 0.6319121 | 20 | 0.6193783 | 40 | 0.6184568 |
| 2-Methylnaphthalene | 1 | 0.6007326 | 2 | 0.5838361 | 5 | 0.6129738 | 10 | 0.6049021 | 20 | 0.6013921 | 40 | 0.6039252 |
| 2-Methylphenol | 1 | 1.026084 | 2 | 1.011589 | 5 | 1.14484 | 10 | 1.136228 | 20 | 1.174352 | 40 | 1.20347 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_006

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| 4-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| Naphthalene | 1 | 1.247118 | 2 | 1.106848 | 5 | 1.148925 | 10 | 1.133299 | 20 | 1.11088 | 40 | 1.079891 |
| 4-Nitroaniline | 1 | ~~0.1637529~~ | 2 | 0.2187884 | 5 | 0.2653623 | 10 | 0.2143523 | 20 | 0.2396615 | 40 | 0.2459712 |
| 3-Nitroaniline | 1 | 0.2521217 | 2 | 0.2314275 | 5 | 0.3066698 | 10 | 0.2972167 | 20 | 0.3176403 | 40 | 0.3340046 |
| 2-Nitroaniline | 1 | ~~0.2346445~~ | 2 | 0.2444902 | 5 | 0.300972 | 10 | 0.329205 | 20 | 0.3393918 | 40 | 0.3674347 |
| Nitrobenzene | 1 | 0.3854216 | 2 | 0.3471099 | 5 | 0.3691849 | 10 | 0.3758157 | 20 | 0.3757619 | 40 | 0.3756076 |
| Nitrobenzene-d5 | 1 | 0.352723 | 2 | 0.3219239 | 5 | 0.3538833 | 10 | 0.3730289 | 20 | 0.3752849 | 40 | 0.3765852 |
| 4-Nitrophenol | 1 | | 2 | | 5 | 0.1331172 | 10 | 0.1539397 | 20 | 0.1740912 | 40 | 0.215041 |
| 2-Nitrophenol | 1 | ~~0.129178~~ | 2 | ~~0.1163139~~ | 5 | 0.1485732 | 10 | 0.17082 | 20 | 0.1803181 | 40 | 0.1943955 |
| N-Nitrosodimethylamine | 1 | 0.7647097 | 2 | 0.661789 | 5 | 0.6967903 | 10 | 0.688223 | 20 | 0.7105897 | 40 | 0.7218412 |
| N-Nitrosodiphenylamine | 1 | 0.7364883 | 2 | 0.7242688 | 5 | 0.7675569 | 10 | 0.8277756 | 20 | 0.7829048 | 40 | 0.7552249 |
| N-Nitroso-di-n-propylamine | 1 | 0.8476763 | 2 | 0.7771541 | 5 | 0.853617 | 10 | 0.8701614 | 20 | 0.8776069 | 40 | 0.8946144 |
| Pentachlorophenol | 1 | | 2 | | 5 | 5.778394E-02 | 10 | 8.270825E-02 | 20 | 0.1099003 | 40 | 0.1367365 |
| Phenanthrene | 1 | 1.342498 | 2 | 1.263175 | 5 | 1.243815 | 10 | 1.236225 | 20 | 1.217743 | 40 | 1.191144 |
| Phenol | 1 | 1.490667 | 2 | 1.31629 | 5 | 1.525052 | 10 | 1.523419 | 20 | 1.537998 | 40 | 1.5435 |
| Phenol-d6 | 2 | 1.404785 | 4 | 1.320014 | 10 | 1.47159 | 20 | 1.488608 | 40 | 1.497926 | 80 | 1.486483 |
| Pyrene | 1 | 1.333765 | 2 | 1.276026 | 5 | 1.300614 | 10 | 1.457668 | 20 | 1.450879 | 40 | 1.446398 |
| Pyridine | 1 | 1.454129 | 2 | 1.255486 | 5 | 1.344622 | 10 | 1.386362 | 20 | 1.421998 | 40 | 1.414011 |
| Terphenyl-d14 | 1 | 0.8692116 | 2 | 0.8169587 | 5 | 0.8477459 | 10 | 0.9168767 | 20 | 0.9257567 | 40 | 0.924241 |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | | | | | | |
| 2,3,4,6-Tetrachlorophenol | 1 | | 2 | | 5 | 0.225384 | 10 | 0.248152 | 20 | 0.2704891 | 40 | 0.311669 |
| 2,4,6-Tribromophenol | 2 | | 4 | ~~7.386201E-02~~ | 10 | 0.0957204 | 20 | 0.1146915 | 40 | 0.1142205 | 80 | 0.1204485 |
| 1,2,4-Trichlorobenzene | 1 | 0.3839343 | 2 | 0.374162 | 5 | 0.3658839 | 10 | 0.3641081 | 20 | 0.3579797 | 40 | 0.3484484 |
| 2,4,6-Trichlorophenol | 1 | ~~0.2252043~~ | 2 | 0.2345706 | 5 | 0.3036388 | 10 | 0.3406874 | 20 | 0.3510972 | 40 | 0.380565 |
| 2,4,5-Trichlorophenol | 1 | 0.2421286 | 2 | 0.2367774 | 5 | 0.2965186 | 10 | 0.340473 | 20 | 0.3434994 | 40 | 0.3869717 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 50 | 1.238488 | 80 | 1.19577 | 100 | 1.16933 | | | | | | |
| Acenaphthylene | 50 | 1.97121 | 80 | 1.884909 | 100 | 1.831805 | | | | | | |
| Acetophenone | | | | | | | 1 | 1.733387 | 2 | 1.611126 | 5 | 1.755035 |
| Aniline | 50 | 1.948951 | 80 | 1.907822 | 100 | 1.862631 | | | | | | |
| Anthracene | 50 | 1.178258 | 80 | 1.127398 | 100 | 1.098018 | | | | | | |
| Atrazine | | | | | | | 1 | 0.1680055 | 2 | 0.213903 | 5 | 0.2370567 |
| Benzaldehyde | | | | | | | 1 | 1.068138 | 2 | 1.056947 | 5 | 1.110207 |
| Benzidine | | | | | | | 1 | | 2 | ~~0.3685161~~ | 5 | 0.5108731 |
| Benzo(a)anthracene | 50 | 1.249589 | 80 | 1.222044 | 100 | 1.204762 | | | | | | |
| Benzo(a)pyrene | 50 | 1.167092 | 80 | 1.14047 | 100 | 1.155787 | | | | | | |
| Benzo(b)fluoranthene | 50 | 1.275165 | 80 | 1.224665 | 100 | 1.333177 | | | | | | |
| Benzo(g,h,i)perylene | 50 | 0.9771522 | 80 | 0.9672074 | 100 | 0.8194906 | | | | | | |
| Benzoic acid | 50 | 0.1965843 | 80 | 0.2128701 | 100 | 0.2236522 | | | | | | |
| Benzo(k)fluoranthene | 50 | 1.252373 | 80 | 1.210115 | 100 | ~~1.293734~~ | | | | | | |
| Benzyl alcohol | 50 | 0.8433992 | 80 | 0.8408955 | 100 | 0.828434 | | | | | | |
| 1,1-Biphenyl | | | | | | | 1 | 1.729905 | 2 | 1.761782 | 5 | 1.778887 |
| 4-Bromophenyl-phenylether | 50 | 0.236109 | 80 | 0.2297848 | 100 | 0.222073 | | | | | | |
| Butylbenzylphthalate | 50 | 0.7153074 | 80 | 0.6926723 | 100 | 0.7158573 | | | | | | |
| Caprolactam | | | | | | | 1 | ~~6.332556E-02~~ | 2 | ~~6.355997E-02~~ | 5 | 8.324675E-02 |
| Carbazole | 50 | 1.01202 | 80 | 0.9766254 | 100 | 0.9601454 | | | | | | |
| 4-Chloro-3-methylphenol | 50 | 0.3070247 | 80 | 0.3059882 | 100 | 0.2999465 | | | | | | |
| 4-Chloroaniline | 50 | 0.4323715 | 80 | 0.4259841 | 100 | 0.4193021 | | | | | | |
| Bis(2-chloroethoxy)methane | 50 | 0.3916945 | 80 | 0.3836585 | 100 | 0.3728562 | | | | | | |
| Bis(2-chloroethyl)ether | 50 | 1.226619 | 80 | 1.198521 | 100 | 1.165071 | | | | | | |
| 2,2'-Oxybis-1-chloropropane | 50 | 1.757395 | 80 | 1.690954 | 100 | 1.662549 | | | | | | |
| 2-Chloronaphthalene | 50 | 1.199244 | 80 | 1.160444 | 100 | 1.130907 | | | | | | |
| 2-Chlorophenol | 50 | 1.373857 | 80 | 1.348389 | 100 | 1.332618 | | | | | | |
| 4-Chlorophenyl phenyl ether | 50 | 0.6356375 | 80 | 0.6158727 | 100 | 0.608712 | | | | | | |
| Chrysene | 50 | 1.226559 | 80 | 1.182619 | 100 | 1.165941 | | | | | | |
| Dibenz(a,h)anthracene | 50 | 0.969048 | 80 | 0.9854922 | 100 | 0.8468877 | | | | | | |
| Dibenzofuran | 50 | 1.658712 | 80 | 1.596439 | 100 | 1.558825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 50 | 1.391006 | 80 | 1.287289 | 100 | 1.247621 | | | | | | |
| 1,4-Dichlorobenzene | 50 | 1.556736 | 80 | 1.509165 | 100 | 1.484188 | | | | | | |
| 1,3-Dichlorobenzene | 50 | 1.520602 | 80 | 1.482944 | 100 | 1.474431 | | | | | | |
| 1,2-Dichlorobenzene | 50 | 1.473125 | 80 | 1.433567 | 100 | 1.416697 | | | | | | |
| 3,3'-Dichlorobenzidine | | | | | | | 1 | ~~0.2115697~~ | 2 | ~~0.2588051~~ | 5 | 0.3243157 |
| 2,6-Dichlorophenol | | | | | | | 1 | 0.2370254 | 2 | 0.2189698 | 5 | 0.2517737 |
| 2,4-Dichlorophenol | 50 | 0.2969539 | 80 | 0.2962102 | 100 | 0.2908114 | | | | | | |
| Diethylphthalate | 50 | 1.416848 | 80 | 1.369631 | 100 | 1.357585 | | | | | | |
| 2,4-Dimethylphenol | 50 | 0.3684433 | 80 | 0.3608579 | 100 | 0.3537564 | | | | | | |
| Dimethyl phthalate | 50 | 1.359098 | 80 | 1.310816 | 100 | 1.297145 | | | | | | |
| 4,6-Dinitro-2-methylphenol | 50 | 0.1401067 | 80 | 0.1437955 | 100 | 0.1460562 | | | | | | |
| 2,4-Dinitrophenol | 50 | 0.159813 | 80 | 0.1664924 | 100 | 0.1758471 | | | | | | |
| 2,4-Dinitrotoluene | 50 | 0.4298704 | 80 | 0.422104 | 100 | 0.421059 | | | | | | |
| 2,6-Dinitrotoluene | 50 | 0.330395 | 80 | 0.3281434 | 100 | 0.3247883 | | | | | | |
| Di-n-octylphthalate | 50 | 1.621448 | 80 | 1.518511 | 100 | 1.815061 | | | | | | |
| 1,4-Dioxane | | | | | | | 1 | 0.5750144 | 2 | 0.6155307 | 5 | 0.5975798 |
| 1,2-Diphenylhydrazine | 50 | 0.8174537 | 80 | 0.7756974 | 100 | 0.7472643 | | | | | | |
| Bis(2-ethylhexyl)phthalate | 50 | 0.9644317 | 80 | 0.9327127 | 100 | 0.9433765 | | | | | | |
| Fluoranthene | 50 | 1.200663 | 80 | 1.145228 | 100 | 1.117971 | | | | | | |
| Fluorene | 50 | 1.371696 | 80 | 1.3477 | 100 | 1.331747 | | | | | | |
| 2-Fluorobiphenyl | 50 | 1.380741 | 80 | 1.342227 | 100 | 1.31122 | | | | | | |
| 2-Fluorophenol | 100 | 1.184307 | 160 | 1.150476 | 200 | 1.143049 | | | | | | |
| Hexachlorobenzene | 50 | 0.2611324 | 80 | 0.2528165 | 100 | 0.2469684 | | | | | | |
| Hexachlorobutadiene | 50 | 0.1898094 | 80 | 0.1823152 | 100 | 0.1809221 | | | | | | |
| Hexachlorocyclopentadiene | 50 | 0.3205142 | 80 | 0.2672985 | 100 | 0.2978232 | | | | | | |
| Hexachloroethane | 50 | 0.5928387 | 80 | 0.5834398 | 100 | 0.5785441 | | | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 1.184644 | 80 | 1.201734 | 100 | 1.031961 | | | | | | |
| Isophorone | 50 | 0.6693467 | 80 | 0.6606669 | 100 | 0.651883 | | | | | | |
| 1-Methylnaphthalene | 50 | 0.6110108 | 80 | 0.5887133 | 100 | 0.578354 | | | | | | |
| 2-Methylnaphthalene | 50 | 0.5899842 | 80 | 0.5725228 | 100 | 0.5640864 | | | | | | |
| 2-Methylphenol | 50 | 1.174288 | 80 | 1.161528 | 100 | 1.130825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_006

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| 4-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| Naphthalene | 50 | 1.062289 | 80 | 1.009165 | 100 | 0.9853361 | | | | | | |
| 4-Nitroaniline | 50 | 0.245583 | 80 | 0.2713623 | 100 | 0.2926737 | | | | | | |
| 3-Nitroaniline | 50 | 0.3328151 | 80 | 0.3335098 | 100 | 0.3302451 | | | | | | |
| 2-Nitroaniline | 50 | 0.3604391 | 80 | 0.3575911 | 100 | 0.3502726 | | | | | | |
| Nitrobenzene | 50 | 0.3742193 | 80 | 0.3632219 | 100 | 0.3548228 | | | | | | |
| Nitrobenzene-d5 | 50 | 0.3716804 | 80 | 0.3677033 | 100 | 0.3602605 | | | | | | |
| 4-Nitrophenol | 50 | 0.2302537 | 80 | 0.2312482 | 100 | 0.237925 | | | | | | |
| 2-Nitrophenol | 50 | 0.1987571 | 80 | 0.1969275 | 100 | 0.1952942 | | | | | | |
| N-Nitrosodimethylamine | 50 | 0.7179275 | 80 | 0.699562 | 100 | 0.6988776 | | | | | | |
| N-Nitrosodiphenylamine | 50 | 0.734013 | 80 | 0.7049383 | 100 | 0.6836085 | | | | | | |
| N-Nitroso-di-n-propylamine | 50 | 0.8590022 | 80 | 0.8618547 | 100 | 0.8482223 | | | | | | |
| Pentachlorophenol | 50 | 0.1477524 | 80 | 0.152323 | 100 | 0.1493187 | | | | | | |
| Phenanthrene | 50 | 1.165403 | 80 | 1.107075 | 100 | 1.089032 | | | | | | |
| Phenol | 50 | 1.515388 | 80 | 1.487162 | 100 | 1.485453 | | | | | | |
| Phenol-d6 | 100 | 1.444334 | 160 | 1.417009 | 200 | 1.38417 | | | | | | |
| Pyrene | 50 | 1.376348 | 80 | 1.350116 | 100 | 1.429147 | | | | | | |
| Pyridine | 50 | 1.386096 | 80 | 1.382983 | 100 | 1.355936 | | | | | | |
| Terphenyl-d14 | 50 | 0.8866 | 80 | 0.8605814 | 100 | 0.9157647 | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | 1 | 0.3530087 | 2 | 0.3195873 | 5 | 0.3252684 |
| 2,3,4,6-Tetrachlorophenol | 50 | 0.3149583 | 80 | 0.3195705 | 100 | 0.3193177 | | | | | | |
| 2,4,6-Tribromophenol | 100 | 0.1236089 | 160 | 0.1225882 | 200 | 0.120418 | | | | | | |
| 1,2,4-Trichlorobenzene | 50 | 0.3509992 | 80 | 0.3419386 | 100 | 0.3363453 | | | | | | |
| 2,4,6-Trichlorophenol | 50 | 0.3746937 | 80 | 0.3778514 | 100 | 0.3769771 | | | | | | |
| 2,4,5-Trichlorophenol | 50 | 0.3892628 | 80 | 0.399019 | 100 | 0.3860452 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | |
| Acetophenone | 10 | 1.704303 | 20 | 1.801178 | 40 | 1.795701 | 50 | 1.710426 | 80 | 1.718945 | 100 | 1.59967 |
| Aniline | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | |
| Atrazine | 10 | 0.2348484 | 20 | 0.2490883 | 40 | 0.2501657 | 50 | 0.2413828 | 80 | 0.2398009 | 100 | 0.2294713 |
| Benzaldehyde | 10 | 1.071349 | 20 | 1.114882 | 40 | 1.084654 | 50 | 1.035449 | 80 | 1.026022 | 100 | 0.9476697 |
| Benzidine | 10 | 0.5256135 | 20 | 0.6359201 | 40 | 0.7009071 | 50 | 0.7077408 | 80 | 0.7108148 | 100 | 0.6669063 |
| Benzo(a)anthracene | | | | | | | | | | | | |
| Benzo(a)pyrene | | | | | | | | | | | | |
| Benzo(b)fluoranthene | | | | | | | | | | | | |
| Benzo(g,h,i)perylene | | | | | | | | | | | | |
| Benzoic acid | | | | | | | | | | | | |
| Benzo(k)fluoranthene | | | | | | | | | | | | |
| Benzyl alcohol | | | | | | | | | | | | |
| 1,1-Biphenyl | 10 | 1.698813 | 20 | 1.690111 | 40 | 1.617949 | 50 | 1.584418 | 80 | 1.52658 | 100 | 1.43873 |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | |
| Caprolactam | 10 | 7.727893E-02 | 20 | 9.873525E-02 | 40 | 0.1074636 | 50 | 0.1070435 | 80 | 0.1101464 | 100 | 0.1047554 |
| Carbazole | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | | | | | | | | | | |
| 4-Chloroaniline | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | | | | | | | | | | | | |
| 2,2'-Oxybis-1-chloropropane | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | | | | | | | | | | | | |
| Dibenzofuran | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 10 | 0.3330745 | 20 | 0.3900825 | 40 | 0.4220677 | 50 | 0.4388195 | 80 | 0.42004 | 100 | 0.4023442 |
| 2,6-Dichlorophenol | 10 | 0.2406157 | 20 | 0.2739896 | 40 | 0.2837769 | 50 | 0.2807297 | 80 | 0.2789585 | 100 | 0.2685961 |
| 2,4-Dichlorophenol | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | |
| Dimethyl phthalate | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | | | | | | | | | | |
| 2,4-Dinitrophenol | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | |
| Di-n-octylphthalate | | | | | | | | | | | | |
| 1,4-Dioxane | 10 | 0.6181946 | 20 | 0.5750216 | 40 | 0.597864 | 50 | 0.5649718 | 80 | 0.5618798 | 100 | 0.5357223 |
| 1,2-Diphenylhydrazine | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | |
| 2-Fluorobiphenyl | | | | | | | | | | | | |
| 2-Fluorophenol | | | | | | | | | | | | |
| Hexachlorobenzene | | | | | | | | | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | | | | | | | | | | | | |
| Hexachloroethane | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | | | | | | | | | | | | |
| Isophorone | | | | | | | | | | | | |
| 1-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | | | | | | | | | | | | |
| 4-Methylphenol | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | |
| 4-Nitroaniline | | | | | | | | | | | | |
| 3-Nitroaniline | | | | | | | | | | | | |
| 2-Nitroaniline | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | |
| Nitrobenzene-d5 | | | | | | | | | | | | |
| 4-Nitrophenol | | | | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | |
| N-Nitrosodimethylamine | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | |
| N-Nitroso-di-n-propylamine | | | | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | |
| Phenol | | | | | | | | | | | | |
| Phenol-d6 | | | | | | | | | | | | |
| Pyrene | | | | | | | | | | | | |
| Pyridine | | | | | | | | | | | | |
| Terphenyl-d14 | | | | | | | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | 10 | 0.3142966 | 20 | 0.3196447 | 40 | 0.3170485 | 50 | 0.3100616 | 80 | 0.3033013 | 100 | 0.2910487 |
| 2,3,4,6-Tetrachlorophenol | | | | | | | | | | | | |
| 2,4,6-Tribromophenol | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV3.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV3 | Injection Time: | 10:01 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Benzaldehyde | A | 50.00 | 47.93 | 1.057258 | 1.013398 | | -4.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV4.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV4 | Injection Time: | 10:31 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 3,3'-Dichlorobenzidine | A | 50.00 | 47.61 | 0.3901063 | 0.3714708 | | -4.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV5.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV5 | Injection Time: | 11:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Acetophenone | A | 50.00 | 48.49 | 1.714419 | 1.662733 | | -3.0 | 20 |
| Atrazine | A | 50.00 | 49.51 | 0.2293025 | 0.2270669 | | -1.0 | 20 |
| 1,1-Biphenyl | A | 50.00 | 46.63 | 1.647464 | 1.536423 | | -6.7 | 20 |
| Caprolactam | A | 50.00 | 52.93 | 0.0983814 | 0.1041517 | | 5.9 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 46.99 | 0.3170295 | 0.2979379 | | -6.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV7.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV7 | Injection Time: | 12:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| N-Nitrosodiphenylamine | A | 50.00 | 51.34 | 0.7463088 | 0.7662808 | | 2.7 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 43.50 | 0.2870772 | 0.249777 | | -13.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Bromophenyl-phenylether | A | 50.00 | 51.04 | 0.2396007 | 0.2446022 | | 2.1 | 20 |
| Butylbenzylphthalate | A | 50.00 | 54.90 | 0.6659619 | 0.731176 | | 9.8 | 20 |
| Carbazole | A | 50.00 | 44.33 | 1.033588 | 0.9164384 | | -11.3 | 20 |
| 4-Chloro-3-methylphenol | A | 50.00 | 51.74 | 0.2791833 | 0.2888752 | | 3.5 | 20 |
| 4-Chloroaniline | A | 50.00 | 50.74 | 0.4236872 | 0.4299877 | | 1.5 | 20 |
| Bis(2-chloroethoxy)methane | A | 50.00 | 49.55 | 0.4015206 | 0.397907 | | -0.9 | 20 |
| Bis(2-chloroethyl)ether | A | 50.00 | 49.26 | 1.242957 | 1.224652 | | -1.5 | 20 |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 49.35 | 1.791162 | 1.767772 | | -1.3 | 20 |
| 2-Chloronaphthalene | A | 50.00 | 49.94 | 1.223416 | 1.222017 | | -0.1 | 20 |
| 2-Chlorophenol | A | 50.00 | 50.72 | 1.320483 | 1.339391 | | 1.4 | 20 |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 48.94 | 0.6482639 | 0.6345678 | | -2.1 | 20 |
| Dibenzofuran | A | 50.00 | 52.29 | 1.702459 | 1.780513 | | 4.6 | 20 |
| Di-n-butylphthalate | A | 50.00 | 53.56 | 1.274102 | 1.364881 | | 7.1 | 20 |
| 2,4-Dichlorophenol | A | 50.00 | 53.23 | 0.2708646 | 0.2883479 | | 6.5 | 20 |
| Diethylphthalate | A | 50.00 | 50.07 | 1.375716 | 1.37777 | | 0.1 | 20 |
| 2,4-Dimethylphenol | A | 50.00 | 45.98 | 0.3567735 | 0.3280623 | | -8.0 | 20 |
| Dimethyl phthalate | A | 50.00 | 50.41 | 1.360327 | 1.371495 | | 0.8 | 20 |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 43.80 | 0.1141426 | 0.118963 | | -12.4 | 20 |
| 2,4-Dinitrophenol | L | 50.00 | 41.03 | 0.1317034 | 0.1214933 | 0.05 | -17.9 | 20 |
| 2,4-Dinitrotoluene | A | 50.00 | 54.89 | 0.3873439 | 0.4252053 | | 9.8 | 20 |
| 2,6-Dinitrotoluene | A | 50.00 | 50.97 | 0.3161974 | 0.3223188 | | 1.9 | 20 |
| Di-n-octylphthalate | A | 50.00 | 52.54 | 1.581621 | 1.662112 | | 5.1 | 20 |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 54.27 | 0.8698317 | 0.944141 | | 8.5 | 20 |
| Hexachlorobenzene | A | 50.00 | 48.64 | 0.2675089 | 0.2602515 | | -2.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 50.27 | 0.1897728 | 0.1907933 | | 0.5 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 47.27 | 0.2719697 | 0.2571016 | 0.05 | -5.5 | 20 |
| Hexachloroethane | A | 50.00 | 51.17 | 0.5839827 | 0.5976224 | | 2.3 | 20 |
| Isophorone | A | 50.00 | 49.58 | 0.6532573 | 0.6477211 | | -0.8 | 20 |
| 2-Methylphenol | A | 50.00 | 50.79 | 1.129245 | 1.147068 | | 1.6 | 20 |

# INITIAL CALIBRATION CHECK

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Instrument ID: MS-BNA3

Lab File ID: SEQ-ICVA.D

Sequence: 0L35109

Lab Sample ID: 0L35109-ICVA

SDG: CTOJM16KW_006

Project: CTOJM16 Key West 2010

Calibration: 0351002

Calibration Date: 12/07/10 17:31

Injection Date: 12/08/10

Injection Time: 14:09

| COMPOUND | TYPE | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Methylphenol | A | 50.00 | 46.61 | 1.146708 | 1.068856 | | -6.8 | 20 |
| Naphthalene | A | 50.00 | 47.81 | 1.098195 | 1.050188 | | -4.4 | 20 |
| 4-Nitroaniline | A | 50.00 | 48.63 | 0.2492193 | 0.2423702 | | -2.7 | 20 |
| 3-Nitroaniline | A | 50.00 | 54.97 | 0.3039612 | 0.3341951 | | 9.9 | 20 |
| 2-Nitroaniline | A | 50.00 | 58.93 | 0.3312246 | 0.3904014 | | 17.9 | 20 |
| Nitrobenzene | A | 50.00 | 50.66 | 0.3690184 | 0.3738603 | | 1.3 | 20 |
| 4-Nitrophenol | L | 50.00 | 45.62 | 0.1965166 | 0.2046322 | 0.05 | -8.8 | 20 |
| 2-Nitrophenol | A | 50.00 | 50.69 | 0.1835837 | 0.1861302 | | 1.4 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 51.06 | 0.8544344 | 0.872589 | 0.05 | 2.1 | 20 |
| Pentachlorophenol | L | 50.00 | 47.55 | 0.1195033 | 0.1362715 | | -4.9 | 20 |
| Phenol | A | 50.00 | 49.32 | 1.491659 | 1.471449 | | -1.4 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 52.15 | 0.3425101 | 0.3572326 | | 4.3 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 48.75 | 0.3356329 | 0.3771646 | | -2.5 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 48.29 | 1.429188 | 1.380386 | | -3.4 | 20 |
| 2-Fluorophenol | A | 100.0 | 101.4 | 1.163095 | 1.179091 | | 1.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 50.95 | 0.3614526 | 0.3682965 | | 1.9 | 20 |
| Phenol-d6 | A | 100.0 | 97.70 | 1.434991 | 1.402014 | | -2.3 | 20 |
| Terphenyl-d14 | A | 50.00 | 52.29 | 0.8848596 | 0.925348 | | 4.6 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 97.03 | 0.1159566 | 0.1125125 | | -3.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34710 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L34710-TUN1 | SEQ-TUN1.D | 12/13/10 13:46 |
| Calibration Check | 0L34710-CCV1 | SEQ-CCV1.D | 12/13/10 14:13 |
| LCS | 0L14019-BS1 | 1200414.D | 12/13/10 15:16 |
| LCS Dup | 0L14019-BSD1 | 1200415.D | 12/13/10 15:46 |
| Blank | 0L14019-BLK1 | 1200413.D | 12/13/10 16:16 |
| 1010098-01 | 1012004-01 | 1200401.D | 12/13/10 16:46 |
| 1010098-02 | 1012004-02 | 1200402.D | 12/13/10 17:15 |
| 1010098-03 | 1012004-03 | 1200403.D | 12/13/10 17:45 |
| 1010098-04 | 1012004-04 | 1200404.D | 12/13/10 18:15 |
| 1010098-05 | 1012004-05 | 1200405.D | 12/13/10 18:44 |
| 1010098-06 | 1012004-06 | 1200406.D | 12/13/10 19:14 |
| 1010098-08 | 1012004-07 | 1200407.D | 12/13/10 19:43 |
| 1010098-09 | 1012004-08 | 1200408.D | 12/13/10 20:13 |
| 1010098-10 | 1012004-09 | 1200409.D | 12/13/10 20:42 |
| 1010098-11 | 1012004-10 | 1200410.D | 12/13/10 21:11 |
| 1010098-12 | 1012004-11 | 1200411.D | 12/13/10 21:40 |
| 1010098-13 | 1012004-12 | 1200412.D | 12/13/10 22:10 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/13/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 13:46 |
| Sequence: | 0L34710 | Lab Sample ID: | 0L34710-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 39.8 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 42.8 | PASS |
| 70 | Less than 2% of 69 | 0.547 | PASS |
| 127 | 40 - 60% of 198 | 56.1 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.54 | PASS |
| 275 | 10 - 30% of 198 | 27.1 | PASS |
| 365 | 1 - 200% of 198 | 4.02 | PASS |
| 441 | 0.001 - 100% of 443 | 77.1 | PASS |
| 442 | 40 - 200% of 198 | 87.3 | PASS |
| 443 | 17 - 23% of 442 | 18.5 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L34710 | Injection Date: | 12/13/10 |
| Lab Sample ID: | 0L34710-CCV1 | Injection Time: | 14:13 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Acetophenone | A | 50.00 | 50.90 | 1.714419 | 1.745432 | | 1.8 | 20 | |
| Atrazine | A | 50.00 | 48.98 | 0.2293025 | 0.2246282 | | -2.0 | 20 | |
| Benzaldehyde | A | 50.00 | 30.72 | 1.057258 | 0.6495914 | | -38.6 | 20 | * |
| 1,1-Biphenyl | A | 50.00 | 48.37 | 1.647464 | 1.593885 | | -3.3 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 49.87 | 0.2396007 | 0.2389785 | | -0.3 | 20 | |
| Butylbenzylphthalate | A | 50.00 | 51.18 | 0.6659619 | 0.6816254 | | 2.4 | 20 | |
| Caprolactam | A | 50.00 | 52.61 | 0.0983814 | 0.1035198 | | 5.2 | 20 | |
| Carbazole | A | 50.00 | 46.04 | 1.033588 | 0.9516917 | | -7.9 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 57.11 | 0.2791833 | 0.3188668 | | 14.2 | 20 | |
| 4-Chloroaniline | A | 50.00 | 45.74 | 0.4236872 | 0.3875688 | | -8.5 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 43.78 | 0.4015206 | 0.3515448 | | -12.4 | 20 | |
| Bis(2-chloroethyl)ether | A | 50.00 | 41.98 | 1.242957 | 1.043628 | | -16.0 | 20 | |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 37.07 | 1.791162 | 1.328027 | | -25.9 | 20 | * |
| 2-Chloronaphthalene | A | 50.00 | 47.62 | 1.223416 | 1.165137 | | -4.8 | 20 | |
| 2-Chlorophenol | A | 50.00 | 47.82 | 1.320483 | 1.263037 | | -4.4 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 52.64 | 0.6482639 | 0.6825252 | | 5.3 | 20 | |
| Dibenzofuran | A | 50.00 | 48.73 | 1.702459 | 1.659332 | | -2.5 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 54.56 | 1.274102 | 1.390393 | | 9.1 | 20 | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 36.17 | 0.3901063 | 0.2821787 | | -27.7 | 20 | * |
| 2,4-Dichlorophenol | A | 50.00 | 55.61 | 0.2708646 | 0.3012444 | | 11.2 | 20 | |
| Diethylphthalate | A | 50.00 | 54.61 | 1.375716 | 1.502548 | | 9.2 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 53.14 | 0.3567735 | 0.3791873 | | 6.3 | 20 | |
| Dimethyl phthalate | A | 50.00 | 51.21 | 1.360327 | 1.393187 | | 2.4 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 52.59 | 0.1141426 | 0.1458769 | | 5.2 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 53.69 | 0.1317034 | 0.1699836 | 0.05 | 7.4 | 20 | |
| 2,4-Dinitrotoluene | A | 50.00 | 57.59 | 0.3873439 | 0.4461315 | | 15.2 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 51.01 | 0.3161974 | 0.3225998 | | 2.0 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 59.89 | 1.581621 | 1.89435 | | 19.8 | 20 | |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 51.60 | 0.8698317 | 0.8977252 | | 3.2 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L34710 | Injection Date: | 12/13/10 |
| Lab Sample ID: | 0L34710-CCV1 | Injection Time: | 14:13 |

| COMPOUND | TYPE | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Hexachlorobenzene | A | 50.00 | 51.87 | 0.2675089 | 0.2775399 | | 3.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 57.01 | 0.1897728 | 0.2163702 | | 14.0 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 61.21 | 0.2719697 | 0.3329619 | 0.05 | 22.4 | 20 * |
| Hexachloroethane | A | 50.00 | 51.06 | 0.5839827 | 0.596359 | | 2.1 | 20 |
| Isophorone | A | 50.00 | 49.35 | 0.6532573 | 0.6448134 | | -1.3 | 20 |
| 2-Methylphenol | A | 50.00 | 45.68 | 1.129245 | 1.031713 | | -8.6 | 20 |
| 4-Methylphenol | A | 50.00 | 48.83 | 1.146708 | 1.119984 | | -2.3 | 20 |
| Naphthalene | A | 50.00 | 47.40 | 1.098195 | 1.041062 | | -5.2 | 20 |
| 4-Nitroaniline | A | 50.00 | 56.20 | 0.2492193 | 0.2801354 | | 12.4 | 20 |
| 3-Nitroaniline | A | 50.00 | 49.76 | 0.3039612 | 0.3025166 | | -0.5 | 20 |
| 2-Nitroaniline | A | 50.00 | 68.78 | 0.3312246 | 0.455608 | | 37.6 | 20 * |
| Nitrobenzene | A | 50.00 | 51.36 | 0.3690184 | 0.3790986 | | 2.7 | 20 |
| 4-Nitrophenol | L | 50.00 | 53.74 | 0.1965166 | 0.2445698 | 0.05 | 7.5 | 20 |
| 2-Nitrophenol | A | 50.00 | 52.11 | 0.1835837 | 0.1913455 | | 4.2 | 20 |
| N-Nitrosodiphenylamine | A | 50.00 | 47.62 | 0.7463088 | 0.7107562 | | -4.8 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 48.57 | 0.8544344 | 0.830052 | 0.05 | -2.9 | 20 |
| Pentachlorophenol | L | 50.00 | 55.69 | 0.1195033 | 0.1620852 | | 11.4 | 20 |
| Phenol | A | 50.00 | 46.10 | 1.491659 | 1.375478 | | -7.8 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 54.14 | 0.3170295 | 0.3432845 | | 8.3 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 57.93 | 0.2870772 | 0.3326118 | | 15.9 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 56.45 | 0.3425101 | 0.3866924 | | 12.9 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 51.36 | 0.3356329 | 0.3978437 | | 2.7 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 48.46 | 1.429188 | 1.385202 | | -3.1 | 20 |
| 2-Fluorophenol | A | 100.0 | 94.60 | 1.163095 | 1.100265 | | -5.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 52.74 | 0.3614526 | 0.3812328 | | 5.5 | 20 |
| Phenol-d6 | A | 100.0 | 91.11 | 1.434991 | 1.307366 | | -8.9 | 20 |
| Terphenyl-d14 | A | 50.00 | 50.01 | 0.8848596 | 0.8850744 | | 0.02 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 117.4 | 0.1159566 | 0.1360921 | | 17.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L14019 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14019-BLK1 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| LCS | 0L14019-BS1 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| LCS Dup | 0L14019-BSD1 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-01 | 1012004-01 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-02 | 1012004-02 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-03 | 1012004-03 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-04 | 1012004-04 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-05 | 1012004-05 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-06 | 1012004-06 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-08 | 1012004-07 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-09 | 1012004-08 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-10 | 1012004-09 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-11 | 1012004-10 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-12 | 1012004-11 | 11/03/10 09:15 | 1,000.00 | 1.00 |
| 1010098-13 | 1012004-12 | 11/03/10 09:15 | 1,000.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14019-BLK1 File ID: 1200413.D

Sampled: Prepared: Analyzed: 12/13/10 16:16

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | Q U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | Q U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | S U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | Q U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | Q U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14019-BLK1 File ID: 1200413.D

Sampled: Prepared: Analyzed: 12/13/10 16:16

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14019 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | Q U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.306 | 65.3 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.408 | 60.2 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.389 | 69.5 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.444 | 61.1 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.519 | 75.9 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 1.815 | 45.4 | 40 - 125 | |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14019 | Laboratory ID: | 0L14019-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Acetophenone | 5.000 | 3.957 | 79.1 | 50 - 110 |
| Atrazine | 5.000 | 3.853 | 77.1 | 70 - 115 |
| **Benzaldehyde** | **5.000** | **5.00 U** | **0** | **10 - 180** |
| 1,1-Biphenyl | 5.000 | 3.702 | 74.0 | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | 4.225 | 84.5 | 50 - 115 |
| Butylbenzylphthalate | 5.000 | 3.734 | 74.7 | 45 - 115 |
| Caprolactam | 5.000 | 3.735 | 74.7 | 20 - 110 |
| Carbazole | 5.000 | 3.955 | 79.1 | 50 - 115 |
| **4-Chloro-3-methylphenol** | **15.00** | **4.247** | **28.3** | **45 - 110** |
| **4-Chloroaniline** | **5.000** | **5.00 U** | **0** | **15 - 110** |
| Bis(2-chloroethoxy)methane | 5.000 | 3.511 | 70.2 | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | 3.158 | 63.2 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 2.890 | 57.8 | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | 3.874 | 77.5 | 50 - 105 |
| **2-Chlorophenol** | **15.00** | **3.809** | **25.4** | **35 - 105** |
| 4-Chlorophenyl phenyl ether | 5.000 | 4.026 | 80.5 | 50 - 110 |
| Dibenzofuran | 5.000 | 3.894 | 77.9 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 4.295 | 85.9 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 3.332 | 66.6 | 20 - 110 |
| **2,4-Dichlorophenol** | **15.00** | **4.179** | **27.9** | **40 - 110** |
| Diethylphthalate | 5.000 | 4.237 | 84.7 | 40 - 120 |
| **2,4-Dimethylphenol** | **15.00** | **20.0 U** | **0** | **30 - 110** |
| Dimethyl phthalate | 5.000 | 4.147 | 82.9 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 7.694 | 51.3 | 40 - 130 |
| **2,4-Dinitrophenol** | **15.00** | **50.0 U** | **0** | **15 - 140** |
| 2,4-Dinitrotoluene | 5.000 | 4.666 | 93.3 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 4.171 | 83.4 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 3.681 | 73.6 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 3.993 | 79.9 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 3.954 | 79.1 | 50 - 110 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L14019
Laboratory ID: 0L14019-BS1
Preparation: EXT_3510
Initial/Final: 1000 mL / 1 mL

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobutadiene | 5.000 | 5.014 | 100 | 25 - 105 |
| Hexachlorocyclopentadiene | 5.000 | 4.081 | 81.6 | 10 - 110 |
| Hexachloroethane | 5.000 | 3.773 | 75.5 | 30 - 95 |
| Isophorone | 5.000 | 4.138 | 82.8 | 50 - 110 |
| **2-Methylphenol** | **15.00** | **3.568** | **23.8** | **40 - 110** |
| **4-Methylphenol** | **30.00** | **7.365** | **24.5** | **30 - 110** |
| Naphthalene | 5.000 | 3.727 | 74.5 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 4.217 | 84.3 | 35 - 120 |
| 3-Nitroaniline | 5.000 | 2.958 | 59.2 | 20 - 125 |
| **2-Nitroaniline** | **5.000** | **20.0 U** | **0** | **50 - 115** |
| Nitrobenzene | 5.000 | 4.269 | 85.4 | 30 - 110 |
| 4-Nitrophenol | 15.00 | 7.472 | 49.8 | 0 - 125 |
| **2-Nitrophenol** | **15.00** | **3.804** | **25.4** | **40 - 115** |
| **N-Nitrosodiphenylamine** | **5.000** | **1.368** | **27.4** | **50 - 110** |
| N-Nitroso-di-n-propylamine | 5.000 | 3.817 | 76.3 | 35 - 130 |
| Pentachlorophenol | 15.00 | 7.153 | 47.7 | 40 - 115 |
| Phenol | 15.00 | 3.460 | 23.1 | 0 - 115 |
| **2,4,6-Trichlorophenol** | **15.00** | **4.011** | **26.7** | **50 - 115** |
| **2,4,5-Trichlorophenol** | **15.00** | **4.896** | **32.6** | **50 - 110** |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Acetophenone | 5.000 | 4.003 | 80.1 | 1.14 | 30 | 50 - 110 |
| Atrazine | 5.000 | 3.731 | 74.6 | 3.22 | 30 | 70 - 115 |
| **Benzaldehyde** | **5.000** | **5.00 U** | **0 *** | | **30** | **10 - 180** |
| 1,1-Biphenyl | 5.000 | 3.685 | 73.7 | 0.483 | 30 | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | 4.315 | 86.3 | 2.10 | 30 | 50 - 115 |
| Butylbenzylphthalate | 5.000 | 3.495 | 69.9 | 6.61 | 30 | 45 - 115 |
| Caprolactam | 5.000 | 3.799 | 76.0 | 1.70 | 30 | 20 - 110 |
| Carbazole | 5.000 | 4.010 | 80.2 | 1.38 | 30 | 50 - 115 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14019 | Laboratory ID: | 0L14019-BSD1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| **4-Chloro-3-methylphenol** | **15.00** | **4.379** | **29.2 *** | **3.05** | **30** | **45 - 110** |
| **4-Chloroaniline** | **5.000** | **5.00 U** | **0 *** | | **30** | **15 - 110** |
| Bis(2-chloroethoxy)methane | 5.000 | 3.445 | 68.9 | 1.89 | 30 | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | 3.183 | 63.7 | 0.783 | 30 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 2.985 | 59.7 | 3.24 | 30 | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | 3.888 | 77.8 | 0.357 | 30 | 50 - 105 |
| **2-Chlorophenol** | **15.00** | **3.722** | **24.8 *** | **2.31** | **30** | **35 - 105** |
| 4-Chlorophenyl phenyl ether | 5.000 | 4.187 | 83.7 | 3.93 | 30 | 50 - 110 |
| Dibenzofuran | 5.000 | 3.951 | 79.0 | 1.46 | 30 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 4.206 | 84.1 | 2.09 | 30 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 3.313 | 66.3 | 0.596 | 30 | 20 - 110 |
| **2,4-Dichlorophenol** | **15.00** | **4.214** | **28.1 *** | **0.844** | **30** | **40 - 110** |
| Diethylphthalate | 5.000 | 4.259 | 85.2 | 0.521 | 30 | 40 - 120 |
| **2,4-Dimethylphenol** | **15.00** | **20.0 U** | **0 *** | | **30** | **30 - 110** |
| Dimethyl phthalate | 5.000 | 4.211 | 84.2 | 1.54 | 30 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 7.489 | 49.9 | 2.71 | 30 | 40 - 130 |
| **2,4-Dinitrophenol** | **15.00** | **50.0 U** | **0 *** | | **30** | **15 - 140** |
| 2,4-Dinitrotoluene | 5.000 | 4.409 | 88.2 | 5.66 | 30 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 4.059 | 81.2 | 2.73 | 30 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 3.444 | 68.9 | 6.66 | 30 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 3.793 | 75.9 | 5.13 | 30 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 4.272 | 85.4 | 7.73 | 30 | 50 - 110 |
| Hexachlorobutadiene | 5.000 | 5.062 | 101 | 0.944 | 30 | 25 - 105 |
| Hexachlorocyclopentadiene | 5.000 | 4.115 | 82.3 | 0.848 | 30 | 10 - 110 |
| Hexachloroethane | 5.000 | 4.002 | 80.0 | 5.89 | 30 | 30 - 95 |
| Isophorone | 5.000 | 4.146 | 82.9 | 0.189 | 30 | 50 - 110 |
| **2-Methylphenol** | **15.00** | **3.727** | **24.8 *** | **4.36** | **30** | **40 - 110** |
| **4-Methylphenol** | **30.00** | **7.451** | **24.8 *** | **1.17** | **30** | **30 - 110** |
| Naphthalene | 5.000 | 3.837 | 76.7 | 2.92 | 30 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 4.518 | 90.4 | 6.87 | 30 | 35 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_006 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14019 | Laboratory ID: | 0L14019-BSD1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 3-Nitroaniline | 5.000 | 2.966 | 59.3 | 0.273 | 30 | 20 - 125 |
| **2-Nitroaniline** | **5.000** | **20.0 U** | **0 *** | | **30** | **50 - 115** |
| Nitrobenzene | 5.000 | 4.445 | 88.9 | 4.03 | 30 | 30 - 110 |
| 4-Nitrophenol | 15.00 | 7.285 | 48.6 | 2.54 | 30 | 0 - 125 |
| **2-Nitrophenol** | **15.00** | **3.801** | **25.3 *** | **0.0807** | **30** | **40 - 115** |
| **N-Nitrosodiphenylamine** | **5.000** | **1.371** | **27.4 *** | **0.202** | **30** | **50 - 110** |
| N-Nitroso-di-n-propylamine | 5.000 | 3.759 | 75.2 | 1.53 | 30 | 35 - 130 |
| Pentachlorophenol | 15.00 | 7.232 | 48.2 | 1.09 | 30 | 40 - 115 |
| Phenol | 15.00 | 3.576 | 23.8 | 3.30 | 30 | 0 - 115 |
| **2,4,6-Trichlorophenol** | **15.00** | **4.137** | **27.6 *** | **3.10** | **30** | **50 - 115** |
| **2,4,5-Trichlorophenol** | **15.00** | **4.849** | **32.3 *** | **0.960** | **30** | **50 - 110** |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L34710

SDG: CTOJM16KW_006
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L34710-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1.D | | Analyzed: 12/13/10 14:13 | | |
| 2-Fluorobiphenyl | 50.00 | 96.9 | 80 - 120 | 9.53 | 9.53 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 94.6 | 80 - 120 | 5.25 | 5.25 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 105 | 80 - 120 | 7.351 | 7.351 | 0.0000 | +/-0.500 | |
| Phenol-d6 | 100.0 | 91.1 | 80 - 120 | 6.293 | 6.293 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 100 | 80 - 120 | 14.146 | 14.146 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 117 | 80 - 120 | 11.333 | 11.333 | 0.0000 | +/-0.500 | |
| **LCS (0L14019-BS1 ) ug/L** | | | | Lab File ID: 1200414.D | | Analyzed: 12/13/10 15:16 | | |
| 2-Fluorobiphenyl | 2.000 | 78.4 | 50 - 110 | 9.527 | 9.53 | -0.0030 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 73.9 | 20 - 110 | 5.256 | 5.25 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 86.1 | 40 - 110 | 7.343 | 7.351 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 4.000 | 75.2 | 10 - 110 | 6.281 | 6.293 | -0.0120 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 91.0 | 50 - 135 | 14.138 | 14.146 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 86.3 | 40 - 125 | 11.325 | 11.333 | -0.0080 | +/-0.500 | |
| **LCS Dup (0L14019-BSD1 ) ug/L** | | | | Lab File ID: 1200415.D | | Analyzed: 12/13/10 15:46 | | |
| 2-Fluorobiphenyl | 2.000 | 77.2 | 50 - 110 | 9.523 | 9.53 | -0.0070 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 73.5 | 20 - 110 | 5.257 | 5.25 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 86.6 | 40 - 110 | 7.344 | 7.351 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | 77.9 | 10 - 110 | 6.281 | 6.293 | -0.0120 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 93.2 | 50 - 135 | 14.139 | 14.146 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 78.9 | 40 - 125 | 11.326 | 11.333 | -0.0070 | +/-0.500 | |
| **Blank (0L14019-BLK1 ) ug/L** | | | | Lab File ID: 1200413.D | | Analyzed: 12/13/10 16:16 | | |
| 2-Fluorobiphenyl | 2.000 | 65.3 | 50 - 110 | 9.526 | 9.53 | -0.0040 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 60.2 | 20 - 110 | 5.26 | 5.25 | 0.0100 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 69.5 | 40 - 110 | 7.342 | 7.351 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 61.1 | 10 - 110 | 6.28 | 6.293 | -0.0130 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 75.9 | 50 - 135 | 14.137 | 14.146 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 45.4 | 40 - 125 | 11.324 | 11.333 | -0.0090 | +/-0.500 | |
| **1010098-01 (1012004-01 ) ug/L** | | | | Lab File ID: 1200401.D | | Analyzed: 12/13/10 16:46 | | |
| 2-Fluorobiphenyl | 2.000 | 71.1 | 50 - 110 | 9.521 | 9.53 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 29.9 | 20 - 110 | 5.256 | 5.25 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 73.9 | 40 - 110 | 7.343 | 7.351 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 104 | 50 - 135 | 14.137 | 14.146 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 76.3 | 40 - 125 | 11.32 | 11.333 | -0.0130 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34710
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1010098-02 (1012004-02 ) ug/L** | | | | Lab File ID: 1200402.D | | Analyzed: 12/13/10 17:15 | | |
| 2-Fluorobiphenyl | 2.000 | 77.6 | 50 - 110 | 9.526 | 9.53 | -0.0040 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 25.1 | 20 - 110 | 5.255 | 5.25 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 83.4 | 40 - 110 | 7.342 | 7.351 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 108 | 50 - 135 | 14.137 | 14.146 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 82.5 | 40 - 125 | 11.324 | 11.333 | -0.0090 | +/-0.500 | |
| **1010098-03 (1012004-03 ) ug/L** | | | | Lab File ID: 1200403.D | | Analyzed: 12/13/10 17:45 | | |
| 2-Fluorobiphenyl | 2.000 | 79.3 | 50 - 110 | 9.526 | 9.53 | -0.0040 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 32.5 | 20 - 110 | 5.256 | 5.25 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 89.8 | 40 - 110 | 7.343 | 7.351 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 94.9 | 50 - 135 | 14.138 | 14.146 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 89.2 | 40 - 125 | 11.32 | 11.333 | -0.0130 | +/-0.500 | |
| **1010098-04 (1012004-04 ) ug/L** | | | | Lab File ID: 1200404.D | | Analyzed: 12/13/10 18:15 | | |
| 2-Fluorobiphenyl | 2.000 | 77.2 | 50 - 110 | 9.525 | 9.53 | -0.0050 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 37.0 | 20 - 110 | 5.255 | 5.25 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 87.9 | 40 - 110 | 7.342 | 7.351 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 126 | 50 - 135 | 14.137 | 14.146 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 67.8 | 40 - 125 | 11.324 | 11.333 | -0.0090 | +/-0.500 | |
| **1010098-05 (1012004-05 ) ug/L** | | | | Lab File ID: 1200405.D | | Analyzed: 12/13/10 18:44 | | |
| 2-Fluorobiphenyl | 2.000 | 70.9 | 50 - 110 | 9.525 | 9.53 | -0.0050 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | | 20 - 110 | | 5.25 | -5.2500 | +/-0.500 | * |
| Nitrobenzene-d5 | 2.000 | 82.5 | 40 - 110 | 7.341 | 7.351 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 95.2 | 50 - 135 | 14.136 | 14.146 | -0.0100 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.333 | -11.3330 | +/-0.500 | * |
| **1010098-06 (1012004-06 ) ug/L** | | | | Lab File ID: 1200406.D | | Analyzed: 12/13/10 19:14 | | |
| 2-Fluorobiphenyl | 2.000 | 86.9 | 50 - 110 | 9.522 | 9.53 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 32.4 | 20 - 110 | 5.256 | 5.25 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 88.4 | 40 - 110 | 7.344 | 7.351 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 123 | 50 - 135 | 14.138 | 14.146 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 75.9 | 40 - 125 | 11.32 | 11.333 | -0.0130 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34710
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1010098-08 (1012004-07 ) ug/L** | | | | Lab File ID: 1200407.D | | Analyzed: 12/13/10 19:43 | | |
| 2-Fluorobiphenyl | 2.000 | 81.1 | 50 - 110 | 9.525 | 9.53 | -0.0050 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 32.8 | 20 - 110 | 5.254 | 5.25 | 0.0040 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 87.4 | 40 - 110 | 7.341 | 7.351 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 119 | 50 - 135 | 14.141 | 14.146 | -0.0050 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 76.0 | 40 - 125 | 11.323 | 11.333 | -0.0100 | +/-0.500 | |
| **1010098-09 (1012004-08 ) ug/L** | | | | Lab File ID: 1200408.D | | Analyzed: 12/13/10 20:13 | | |
| 2-Fluorobiphenyl | 2.000 | 82.4 | 50 - 110 | 9.523 | 9.53 | -0.0070 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | | 20 - 110 | | 5.25 | -5.2500 | +/-0.500 | * |
| Nitrobenzene-d5 | 2.000 | 80.4 | 40 - 110 | 7.345 | 7.351 | -0.0060 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 116 | 50 - 135 | 14.14 | 14.146 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.333 | -11.3330 | +/-0.500 | * |
| **1010098-10 (1012004-09 ) ug/L** | | | | Lab File ID: 1200409.D | | Analyzed: 12/13/10 20:42 | | |
| 2-Fluorobiphenyl | 2.000 | 79.8 | 50 - 110 | 9.523 | 9.53 | -0.0070 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | | 20 - 110 | | 5.25 | -5.2500 | +/-0.500 | * |
| Nitrobenzene-d5 | 2.000 | 87.2 | 40 - 110 | 7.34 | 7.351 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 109 | 50 - 135 | 14.139 | 14.146 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.333 | -11.3330 | +/-0.500 | * |
| **1010098-11 (1012004-10 ) ug/L** | | | | Lab File ID: 1200410.D | | Analyzed: 12/13/10 21:11 | | |
| 2-Fluorobiphenyl | 2.000 | 76.6 | 50 - 110 | 9.524 | 9.53 | -0.0060 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 50.8 | 20 - 110 | 5.254 | 5.25 | 0.0040 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 93.1 | 40 - 110 | 7.341 | 7.351 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 4.000 | 41.8 | 10 - 110 | 6.278 | 6.293 | -0.0150 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 101 | 50 - 135 | 14.141 | 14.146 | -0.0050 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 45.8 | 40 - 125 | 11.323 | 11.333 | -0.0100 | +/-0.500 | |
| **1010098-12 (1012004-11 ) ug/L** | | | | Lab File ID: 1200411.D | | Analyzed: 12/13/10 21:40 | | |
| 2-Fluorobiphenyl | 2.000 | 74.1 | 50 - 110 | 9.522 | 9.53 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 53.1 | 20 - 110 | 5.257 | 5.25 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 81.5 | 40 - 110 | 7.344 | 7.351 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | 37.2 | 10 - 110 | 6.281 | 6.293 | -0.0120 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 99.5 | 50 - 135 | 14.139 | 14.146 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 51.0 | 40 - 125 | 11.325 | 11.333 | -0.0080 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L34710

SDG: CTOJM16KW_006
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1010098-13 (1012004-12 ) ug/L** | | | | Lab File ID: 1200412.D | | Analyzed: 12/13/10 22:10 | | |
| 2-Fluorobiphenyl | 2.000 | 77.8 | 50 - 110 | 9.523 | 9.53 | -0.0070 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 28.9 | 20 - 110 | 5.253 | 5.25 | 0.0030 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 87.4 | 40 - 110 | 7.34 | 7.351 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 4.000 | | 10 - 110 | | 6.293 | -6.2930 | +/-0.500 | * |
| Terphenyl-d14 | 2.000 | 105 | 50 - 135 | 14.14 | 14.146 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.333 | -11.3330 | +/-0.500 | * |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L34710

SDG: CTOJM16KW_006
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L34710-CCV1 )** | | | Lab File ID: SEQ-CCV1.D | | | Analyzed: 12/13/10 14:13 | | | |
| 1,4-Dichlorobenzene-d4 | 469053 | 6.712 | 520490 | 6.774 | 90 | 50 - 200 | -0.0620 | +/-0.50 | |
| Naphthalene-d8 | 1577770 | 8.217 | 1864250 | 8.284 | 85 | 50 - 200 | -0.0670 | +/-0.50 | |
| Acenaphthene-d10 | 863688 | 10.361 | 1011290 | 10.429 | 85 | 50 - 200 | -0.0680 | +/-0.50 | |
| Phenanthrene-d10 | 1430428 | 12.189 | 1690574 | 12.256 | 85 | 50 - 200 | -0.0670 | +/-0.50 | |
| Chrysene-d12 | 1198602 | 15.488 | 1331643 | 15.56 | 90 | 50 - 200 | -0.0720 | +/-0.50 | |
| Perylene-d12 | 853727 | 17.334 | 1068595 | 17.426 | 80 | 50 - 200 | -0.0920 | +/-0.50 | |
| **LCS (0L14019-BS1 )** | | | Lab File ID: 1200414.D | | | Analyzed: 12/13/10 15:16 | | | |
| 1,4-Dichlorobenzene-d4 | 521758 | 6.709 | 469053 | 6.712 | 111 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1832242 | 8.214 | 1577770 | 8.217 | 116 | 50 - 200 | -0.0030 | +/-0.50 | |
| Acenaphthene-d10 | 1036520 | 10.359 | 863688 | 10.361 | 120 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 1690858 | 12.181 | 1430428 | 12.189 | 118 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1563943 | 15.48 | 1198602 | 15.488 | 130 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 1356375 | 17.336 | 853727 | 17.334 | 159 | 50 - 200 | 0.0020 | +/-0.50 | |
| **LCS Dup (0L14019-BSD1 )** | | | Lab File ID: 1200415.D | | | Analyzed: 12/13/10 15:46 | | | |
| 1,4-Dichlorobenzene-d4 | 481297 | 6.709 | 469053 | 6.712 | 103 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1672370 | 8.215 | 1577770 | 8.217 | 106 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 952466 | 10.359 | 863688 | 10.361 | 110 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 1551851 | 12.182 | 1430428 | 12.189 | 108 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1364446 | 15.476 | 1198602 | 15.488 | 114 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 1166294 | 17.332 | 853727 | 17.334 | 137 | 50 - 200 | -0.0020 | +/-0.50 | |
| **Blank (0L14019-BLK1 )** | | | Lab File ID: 1200413.D | | | Analyzed: 12/13/10 16:16 | | | |
| 1,4-Dichlorobenzene-d4 | 765753 | 6.712 | 469053 | 6.712 | 163 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 2657750 | 8.213 | 1577770 | 8.217 | 168 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 1481843 | 10.357 | 863688 | 10.361 | 172 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 2355652 | 12.185 | 1430428 | 12.189 | 165 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 2037174 | 15.479 | 1198602 | 15.488 | 170 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 1747024 | 17.335 | 853727 | 17.334 | 205 | 50 - 200 | 0.0010 | +/-0.50 | * |
| **1010098-01 (1012004-01 )** | | | Lab File ID: 1200401.D | | | Analyzed: 12/13/10 16:46 | | | |
| 1,4-Dichlorobenzene-d4 | 550626 | 6.708 | 469053 | 6.712 | 117 | 50 - 200 | -0.0040 | +/-0.50 | |
| Naphthalene-d8 | 1833810 | 8.213 | 1577770 | 8.217 | 116 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 979488 | 10.358 | 863688 | 10.361 | 113 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1470427 | 12.185 | 1430428 | 12.189 | 103 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 1002871 | 15.479 | 1198602 | 15.488 | 84 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 803655 | 17.331 | 853727 | 17.334 | 94 | 50 - 200 | -0.0030 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34710
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1010098-02 (1012004-02 )** | | | Lab File ID: 1200402.D | | | Analyzed: 12/13/10 17:15 | | | |
| 1,4-Dichlorobenzene-d4 | 578286 | 6.713 | 469053 | 6.712 | 123 | 50 - 200 | 0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1943173 | 8.213 | 1577770 | 8.217 | 123 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 1029641 | 10.358 | 863688 | 10.361 | 119 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1583035 | 12.185 | 1430428 | 12.189 | 111 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 1113667 | 15.479 | 1198602 | 15.488 | 93 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 898686 | 17.33 | 853727 | 17.334 | 105 | 50 - 200 | -0.0040 | +/-0.50 | |
| **1010098-03 (1012004-03 )** | | | Lab File ID: 1200403.D | | | Analyzed: 12/13/10 17:45 | | | |
| 1,4-Dichlorobenzene-d4 | 521911 | 6.708 | 469053 | 6.712 | 111 | 50 - 200 | -0.0040 | +/-0.50 | |
| Naphthalene-d8 | 1794668 | 8.213 | 1577770 | 8.217 | 114 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 1007043 | 10.358 | 863688 | 10.361 | 117 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1628845 | 12.185 | 1430428 | 12.189 | 114 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 1347910 | 15.479 | 1198602 | 15.488 | 112 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 1112402 | 17.331 | 853727 | 17.334 | 130 | 50 - 200 | -0.0030 | +/-0.50 | |
| **1010098-04 (1012004-04 )** | | | Lab File ID: 1200404.D | | | Analyzed: 12/13/10 18:15 | | | |
| 1,4-Dichlorobenzene-d4 | 522047 | 6.707 | 469053 | 6.712 | 111 | 50 - 200 | -0.0050 | +/-0.50 | |
| Naphthalene-d8 | 1761450 | 8.213 | 1577770 | 8.217 | 112 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 946837 | 10.357 | 863688 | 10.361 | 110 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1441203 | 12.185 | 1430428 | 12.189 | 101 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 985360 | 15.479 | 1198602 | 15.488 | 82 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 722603 | 17.33 | 853727 | 17.334 | 85 | 50 - 200 | -0.0040 | +/-0.50 | |
| **1010098-05 (1012004-05 )** | | | Lab File ID: 1200405.D | | | Analyzed: 12/13/10 18:44 | | | |
| 1,4-Dichlorobenzene-d4 | 551432 | 6.711 | 469053 | 6.712 | 118 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1863189 | 8.212 | 1577770 | 8.217 | 118 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 1022823 | 10.356 | 863688 | 10.361 | 118 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1591009 | 12.184 | 1430428 | 12.189 | 111 | 50 - 200 | -0.0050 | +/-0.50 | |
| Chrysene-d12 | 1225834 | 15.478 | 1198602 | 15.488 | 102 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 962284 | 17.334 | 853727 | 17.334 | 113 | 50 - 200 | 0.0000 | +/-0.50 | |
| **1010098-06 (1012004-06 )** | | | Lab File ID: 1200406.D | | | Analyzed: 12/13/10 19:14 | | | |
| 1,4-Dichlorobenzene-d4 | 529551 | 6.709 | 469053 | 6.712 | 113 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1789567 | 8.214 | 1577770 | 8.217 | 113 | 50 - 200 | -0.0030 | +/-0.50 | |
| Acenaphthene-d10 | 955759 | 10.359 | 863688 | 10.361 | 111 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 1448711 | 12.181 | 1430428 | 12.189 | 101 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1023150 | 15.475 | 1198602 | 15.488 | 85 | 50 - 200 | -0.0130 | +/-0.50 | |
| Perylene-d12 | 772579 | 17.331 | 853727 | 17.334 | 90 | 50 - 200 | -0.0030 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34710
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1010098-08 (1012004-07 )** | | | Lab File ID: 1200407.D | | | Analyzed: 12/13/10 19:43 | | | |
| 1,4-Dichlorobenzene-d4 | 519409 | 6.711 | 469053 | 6.712 | 111 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1754946 | 8.212 | 1577770 | 8.217 | 111 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 950440 | 10.356 | 863688 | 10.361 | 110 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1424457 | 12.184 | 1430428 | 12.189 | 100 | 50 - 200 | -0.0050 | +/-0.50 | |
| Chrysene-d12 | 973510 | 15.478 | 1198602 | 15.488 | 81 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 754285 | 17.329 | 853727 | 17.334 | 88 | 50 - 200 | -0.0050 | +/-0.50 | |
| **1010098-09 (1012004-08 )** | | | Lab File ID: 1200408.D | | | Analyzed: 12/13/10 20:13 | | | |
| 1,4-Dichlorobenzene-d4 | 473501 | 6.71 | 469053 | 6.712 | 101 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1592684 | 8.21 | 1577770 | 8.217 | 101 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 866362 | 10.355 | 863688 | 10.361 | 100 | 50 - 200 | -0.0060 | +/-0.50 | |
| Phenanthrene-d10 | 1293992 | 12.183 | 1430428 | 12.189 | 90 | 50 - 200 | -0.0060 | +/-0.50 | |
| Chrysene-d12 | 862256 | 15.477 | 1198602 | 15.488 | 72 | 50 - 200 | -0.0110 | +/-0.50 | |
| Perylene-d12 | 636685 | 17.328 | 853727 | 17.334 | 75 | 50 - 200 | -0.0060 | +/-0.50 | |
| **1010098-10 (1012004-09 )** | | | Lab File ID: 1200409.D | | | Analyzed: 12/13/10 20:42 | | | |
| 1,4-Dichlorobenzene-d4 | 514710 | 6.71 | 469053 | 6.712 | 110 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1745731 | 8.215 | 1577770 | 8.217 | 111 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 944014 | 10.36 | 863688 | 10.361 | 109 | 50 - 200 | -0.0010 | +/-0.50 | |
| Phenanthrene-d10 | 1446092 | 12.182 | 1430428 | 12.189 | 101 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1041077 | 15.476 | 1198602 | 15.488 | 87 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 838966 | 17.332 | 853727 | 17.334 | 98 | 50 - 200 | -0.0020 | +/-0.50 | |
| **1010098-11 (1012004-10 )** | | | Lab File ID: 1200410.D | | | Analyzed: 12/13/10 21:11 | | | |
| 1,4-Dichlorobenzene-d4 | 447008 | 6.706 | 469053 | 6.712 | 95 | 50 - 200 | -0.0060 | +/-0.50 | |
| Naphthalene-d8 | 1517908 | 8.212 | 1577770 | 8.217 | 96 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 834295 | 10.356 | 863688 | 10.361 | 97 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1327249 | 12.184 | 1430428 | 12.189 | 93 | 50 - 200 | -0.0050 | +/-0.50 | |
| Chrysene-d12 | 945584 | 15.478 | 1198602 | 15.488 | 79 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 654375 | 17.329 | 853727 | 17.334 | 77 | 50 - 200 | -0.0050 | +/-0.50 | |
| **1010098-12 (1012004-11 )** | | | Lab File ID: 1200411.D | | | Analyzed: 12/13/10 21:40 | | | |
| 1,4-Dichlorobenzene-d4 | 485134 | 6.709 | 469053 | 6.712 | 103 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1654393 | 8.214 | 1577770 | 8.217 | 105 | 50 - 200 | -0.0030 | +/-0.50 | |
| Acenaphthene-d10 | 909400 | 10.359 | 863688 | 10.361 | 105 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 1419731 | 12.181 | 1430428 | 12.189 | 99 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1050072 | 15.48 | 1198602 | 15.488 | 88 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 753734 | 17.332 | 853727 | 17.334 | 88 | 50 - 200 | -0.0020 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34710
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1010098-13 (1012004-12 )** | | | Lab File ID: 1200412.D | | | Analyzed: 12/13/10 22:10 | | | |
| 1,4-Dichlorobenzene-d4 | 563956 | 6.71 | 469053 | 6.712 | 120 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1972625 | 8.215 | 1577770 | 8.217 | 125 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 1103578 | 10.36 | 863688 | 10.361 | 128 | 50 - 200 | -0.0010 | +/-0.50 | |
| Phenanthrene-d10 | 1752851 | 12.182 | 1430428 | 12.189 | 123 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1307534 | 15.476 | 1198602 | 15.488 | 109 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 1038306 | 17.333 | 853727 | 17.334 | 122 | 50 - 200 | -0.0010 | +/-0.50 | |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – SVOC**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_007**

**SAMPLES:** 16 / Aqueous / SVOC

| | | |
|---|---|---|
| GKHMS-GW-014-1010 | GKHMS-GW-015-1010 | GKHMS-GW-016-1010 |
| GKHMS-GW-020-1010 | GKHMS-GW-021-1010 | GKHMS-GW-024-1010 |
| GKHMS-GW-025-1010 | GKHMS-GW-026-1010 | GKHMS-GW-027-1010 |
| GKHMS-GW-028-1010 | GKHMS-GW-029-1010 | GKHMS-GW-030-1010 |
| GKHMS-GW-031-1010 | GKHMS-GW-032D-1010 | GKHMS-GW-033D-1010 |
| GKHMS-GW-034D-1010 | | |

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_007 consisted of sixteen (16) aqueous environmental samples. The samples were analyzed for semi-volatile organics (SVOC) as indicated above. No field duplicate pair samples were included in the Sample Delivery Group (SDG).

The samples were collected by Tetra Tech NUS on October 30, 31 and November 1, 2010 and analyzed by Empirical Laboratories LLC upon transfer from Centauri Labs who performed the initial sample method extraction. The analyses were conducted in accordance with SW-846 Method 8270C Full Scan analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

- Data Completeness
- Holding Times/Sample Preservation
- * GC/MS Instrument Tuning and System Performance
- Initial/Continuing Calibrations
- * Laboratory Method Blank Results
- Blank Spike/Blank Spike Duplicate Results
- Internal Standard Recoveries
- Surrogate Recoveries
- * Compound Quantitation
- * Compound Identification
- * Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

SVOC

All of the samples were extracted out of the sample to extraction hold time of 7 days (<2X) for the aqueous samples. All positive and non-detected results were qualified estimated, (J) and (UJ), respectively, due to the sample to extraction hold time exceedance except for non-detected results which were rejected due to the LCS/LCSD or surrogate percent recovery (%R) quality control limit non-compliances described below.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for benzaldehyde, 2,2'-oxybis-1-chloropropane, 3,3'-dichlorobenzidine, hexachlorocyclopentadiene, and 2-nitroaniline for instrument MS-BNA3 on 12/13/10 @ 14:13 affecting samples GKHMS-GW-014-1010 and GKHMS-GW-015-1010. The non-detected results for the 2,2'-oxybis-1-chloropropane, 3,3'-dichlorobenzidine, and hexachlorocyclopentadiene were qualified estimated, (UJ), for the samples GKHMS-GW-014-1010 and GKHMS-GW-015-1010. The non-detected results for benzaldehyde and 2-nitroaniline for the aforementioned samples were rejected for the LCS/LCSD %Rs as discussed below.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for benzaldehyde, 2,2'-oxybis-1-chloropropane, hexachlorocyclopentadiene, and 2-nitroaniline for instrument MS-BNA3 on 12/14/10 @ 12:13 affecting samples GKHMS-GW-016-1010, GKHMS-GW-020-1010, GKHMS-GW-021-1010, GKHMS-GW-024-1010, GKHMS-GW-025-1010, GKHMS-GW-026-1010, GKHMS-GW-027-1010, GKHMS-GW-028-1010, GKHMS-GW-029-1010, GKHMS-GW-030-1010, GKHMS-GW-031-1010, GKHMS-GW-032D-1010, GKHMS-GW-033D-1010, and GKHMS-GW-034D-1010. The non-detected results for 2,2'-oxybis-1-chloropropane, and hexachlorocyclopentadiene were qualified estimated, (UJ), for the aforementioned samples. The non-detected results for benzaldehyde and 2-nitroaniline for the aforementioned samples were rejected for the LCS/LCSD %Rs as discussed below.

The SVOC laboratory control sample (LCS) and the LCS duplicate (LCSD) percent recoveries (%Rs) were less than the quality control limits for benzaldehyde, 4-chloroaniline, 2,4-dinitrophenol, 2-nintroaniline, and N-nitrosodiphenylamine for batch 0L14025 affecting all the SDG samples. The samples were not re-analyzed. The non-detected results for the aforementioned analytes for all SDG samples were qualified rejected, (UR).

The SVOC surrogate 2,4,6-tribromophenol %R was less than the quality control limit for samples GKHMS-GW-014-1010 (0%), GKHMS-GW-015-1010, GKHMS-GW-034D-1010, GKHMS-GW-026-1010, GKHMS-GW-030-1010 (0%), GKHMS-GW-033D-1010 (0%), GKHMS-GW-020-1010 (0%), and GKHMS-GW-031-1010. The samples with surrogate 2,4,6-tribromophenol %Rs greater than 10% were not qualified as it was a single surrogate %R non-compliance. The samples GKHMS-GW-014-1010, GKHMS-GW-030-1010, GKHMS-GW-033D-1010, and GKHMS-GW-020-1010 had surrogate %Rs at 0%. The acid fraction SVOC non-detected analytes for the samples GKHMS-GW-014-1010, GKHMS-GW-030-1010, GKHMS-GW-033D-1010, and GKHMS-GW-020-1010 were qualified rejected, (UR)

The internal standard perylene-d12 %R was less than the quality control limit for sample GKHMS-GW-021-1010. The associated non-detected analyte, di-n-octylphahalate, was qualified estimated, (UJ), for the sample.

Additional Comments

The samples were initially sent to Centauri Labs for analysis but the laboratory closed prior to sample analysis completion. The laboratory extracted the samples for SVOCs prior to closure. The extracts were sent to Empirical Laboratories for the completion of the analyses. The samples were logged in to Empirical Laboratories using the Centauri Labs identifications instead of the sample identifications. The Form I results for this SDG have been manually edited to indicate the actually sample names.

The relative percent difference (RPD) for the LCS/LCSD was greater than the 30% quality control limit for pentachlorophenol. No action was taken as the LCS and LCSD %Rs were within the quality control limits.

**Executive Summary**

**Laboratory Performance:** All positive and non-detected sample results were qualified due to sample to extraction hold time quality control limit exceedances. SVOC continuing calibration verification %Ds which exceeded the quality control limits resulted in the qualification of non-detected SVOC sample results. Sample non-detected analyte results were rejected due to LCS/LCSD and surrogate %Rs less than the quality control limits. The sample GKHMS-GW-021-1010 non-detected di-n-octylphahalate result was qualified due to a %R for the internal standard perylene-d12 less than quality control limit .

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site specific Sampling and Analysis Plan, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

**Appendix A**

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | | GKHMS-GW-020-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_007 | LAB_ID | 1012005-01 | | | 1012005-02 | | | 1012005-03 | | | 1012005-13 | | |
| FRACTION: OS | SAMP_DATE | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | UJ | H |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UR | R | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UR | R | 0.5 | UJ | H | 0.5 | UJ | H | 0.5 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UR | R | 0.73 | UJ | H | 0.73 | UJ | H | 0.73 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.44 | UR | R | 0.44 | UJ | H | 0.44 | UJ | H | 0.44 | UR | R |
| 2,4-DIMETHYLPHENOL | | 5 | UR | R | 5 | UJ | H | 5 | UJ | H | 5 | UR | R |
| 2,4-DINITROPHENOL | | 12.5 | UR | ER | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H |
| 2,6-DINITROTOLUENE | | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H |
| 2-CHLORONAPHTHALENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2-CHLOROPHENOL | | 1.25 | UR | R | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 2-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | UR | R | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | H | 0.89 | UJ | H |
| 3-NITROANILINE | | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UR | R | 5 | UJ | H | 5 | UJ | H | 5 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UR | R | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-METHYLPHENOL | | 0.77 | UR | R | 0.77 | UJ | H | 0.77 | UJ | H | 0.77 | UR | R |
| 4-NITROANILINE | | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H |
| 4-NITROPHENOL | | 5 | UR | R | 5 | UJ | H | 5 | UJ | H | 5 | UR | R |
| ACETOPHENONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| ATRAZINE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BUTYL BENZYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CAPROLACTAM | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CARBAZOLE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | | GKHMS-GW-026-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_007 | LAB_ID | 1012005-14 | | | 1012005-04 | | | 1012005-05 | | | 1012005-07 | | |
| FRACTION: OS | SAMP_DATE | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | U | H |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UJ | H | 0.5 | UJ | H | 0.5 | UJ | H | 0.5 | UJ | H |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UJ | H | 0.73 | UJ | H | 0.73 | UJ | H | 0.73 | UJ | H |
| 2,4-DICHLOROPHENOL | | 0.44 | UJ | H | 0.44 | UJ | H | 0.44 | UJ | H | 0.44 | UJ | H |
| 2,4-DIMETHYLPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H |
| 2,4-DINITROPHENOL | | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E |
| 2,4-DINITROTOLUENE | | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H |
| 2,6-DINITROTOLUENE | | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H |
| 2-CHLORONAPHTHALENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2-CHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | H | 0.89 | UJ | H | 0.89 | UJ | H | 0.89 | UJ | H |
| 3-NITROANILINE | | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-METHYLPHENOL | | 0.77 | UJ | H | 0.77 | UJ | H | 0.77 | UJ | H | 0.77 | UJ | H |
| 4-NITROANILINE | | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H |
| 4-NITROPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H |
| ACETOPHENONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| ATRAZINE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BUTYL BENZYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CAPROLACTAM | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CARBAZOLE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | | GKHMS-GW-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_007 | LAB_ID | 1012005-08 | | | 1012005-09 | | | 1012005-10 | | | 1012005-11 | | |
| FRACTION: OS | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | UJ | H |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UJ | H | 0.5 | UJ | H | 0.5 | UJ | H | 0.5 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UJ | H | 0.73 | UJ | H | 0.73 | UJ | H | 0.73 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.44 | UJ | H | 0.44 | UJ | H | 0.44 | UJ | H | 0.44 | UR | R |
| 2,4-DIMETHYLPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H | 5 | UR | R |
| 2,4-DINITROPHENOL | | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H |
| 2,6-DINITROTOLUENE | | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H |
| 2-CHLORONAPHTHALENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2-CHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 2-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | H | 0.89 | UJ | H | 0.89 | UJ | H | 0.89 | UJ | H |
| 3-NITROANILINE | | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H | 5 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-METHYLPHENOL | | 0.77 | UJ | H | 0.77 | UJ | H | 0.77 | UJ | H | 0.77 | UR | R |
| 4-NITROANILINE | | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H |
| 4-NITROPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UJ | H | 5 | UR | R |
| ACETOPHENONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| ATRAZINE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BUTYL BENZYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CAPROLACTAM | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CARBAZOLE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | | GKHMS-GW-034D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_007 | LAB_ID | 1012005-15 | | | 1012005-16 | | | 1012005-12 | | | 1012005-06 | | |
| FRACTION: OS | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | | 10/30/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | UJ | H |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH | 0.85 | UJ | CH |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R | 1.25 | UJ | H |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UJ | H | 0.5 | UJ | H | 0.5 | UR | R | 0.5 | UJ | H |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UJ | H | 0.73 | UJ | H | 0.73 | UR | R | 0.73 | UJ | H |
| 2,4-DICHLOROPHENOL | | 0.44 | UJ | H | 0.44 | UJ | H | 0.44 | UR | R | 0.44 | UJ | H |
| 2,4-DIMETHYLPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UR | R | 5 | UJ | H |
| 2,4-DINITROPHENOL | | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | ER | 12.5 | UR | E |
| 2,4-DINITROTOLUENE | | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | UJ | H |
| 2,6-DINITROTOLUENE | | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H | 0.65 | UJ | H |
| 2-CHLORONAPHTHALENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 2-CHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R | 1.25 | UJ | H |
| 2-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R | 1.25 | UJ | H |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R | 1.25 | UJ | H |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | H | 0.89 | UJ | H | 0.89 | UJ | H | 0.89 | UJ | H |
| 3-NITROANILINE | | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UR | R | 5 | UJ | H |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R | 1.25 | UJ | H |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| 4-METHYLPHENOL | | 0.77 | UJ | H | 0.77 | UJ | H | 0.77 | UR | R | 0.77 | UJ | H |
| 4-NITROANILINE | | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H | 2 | UJ | H |
| 4-NITROPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | UR | R | 5 | UJ | H |
| ACETOPHENONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| ATRAZINE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H | 0.45 | UJ | H |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| BUTYL BENZYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CAPROLACTAM | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| CARBAZOLE | | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H | 0.69 | UJ | H |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | | GKHMS-GW-020-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_007 | LAB_ID | 1012005-01 | | | 1012005-02 | | | 1012005-03 | | | 1012005-13 | | |
| FRACTION: OS | SAMP_DATE | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 11/1/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIMETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-BUTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-OCTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| HEXACHLOROBENZENE | | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H |
| HEXACHLOROBUTADIENE | | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH |
| HEXACHLOROETHANE | | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H |
| ISOPHORONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NAPHTHALENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NITROBENZENE | | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | UR | R | 1 | UJ | H | 1 | UJ | H | 1 | UR | R |
| PHENOL | | 1.25 | UR | R | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | | GKHMS-GW-026-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_007 | LAB_ID | 1012005-14 | | | 1012005-04 | | | 1012005-05 | | | 1012005-07 | | |
| FRACTION: OS | SAMP_DATE | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 7.17 | J | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIMETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-BUTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-OCTYL PHTHALATE | | 1.25 | UJ | HN | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| HEXACHLOROBENZENE | | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H |
| HEXACHLOROBUTADIENE | | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH |
| HEXACHLOROETHANE | | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H |
| ISOPHORONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NAPHTHALENE | | 4.78 | J | HP | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NITROBENZENE | | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H |
| PHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | | GKHMS-GW-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_007 | LAB_ID | 1012005-08 | | | 1012005-09 | | | 1012005-10 | | | 1012005-11 | | |
| FRACTION: OS | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIMETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-BUTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-OCTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| HEXACHLOROBENZENE | | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H |
| HEXACHLOROBUTADIENE | | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH |
| HEXACHLOROETHANE | | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H |
| ISOPHORONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NAPHTHALENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NITROBENZENE | | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | UJ | H | 1 | UJ | H | 1 | UJ | H | 1 | UR | R |
| PHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R |

| PROJ_NO: 02607<br>SDG: CTOJM16KW_007<br>FRACTION: OS<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | | GKHMS-GW-034D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1012005-15 | | | 1012005-16 | | | 1012005-12 | | | 1012005-06 | | |
| | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | | 10/30/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DIMETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-BUTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| DI-N-OCTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| HEXACHLOROBENZENE | | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | UJ | H |
| HEXACHLOROBUTADIENE | | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H | 0.93 | UJ | H |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | CH |
| HEXACHLOROETHANE | | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | UJ | H |
| ISOPHORONE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NAPHTHALENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UJ | H |
| NITROBENZENE | | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H | 0.62 | UJ | H |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H | 0.9 | UJ | H |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | UJ | H | 1 | UJ | H | 1 | UR | R | 1 | UJ | H |
| PHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | UR | R | 1.25 | UJ | H |

## Appendix B

Results as Reported by the Laboratory

# ANALYSIS DATA SHEET

1011002-01

GKMS-GW-014-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-01 File ID: 1200501.D

Sampled: 10/30/10 09:30 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 00:06

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2, Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-01

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-01 File ID: 1200501.D

Sampled: 10/30/10 09:30 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 00:06

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X, H2 U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.314 | 65.7 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.655 | 66.4 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.440 | 72.0 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.439 | 61.0 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.738 | 86.9 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-02

GKHMS-GW-015-1010

JK 1/12/11

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-02 File ID: 1200502.D

Sampled: 10/30/10 10:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 00:35

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2, Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-02

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-02 File ID: 1200502.D

Sampled: 10/30/10 10:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 00:35

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.414 | 70.7 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.847 | 71.2 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.569 | 78.4 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.564 | 64.1 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.033 | 102 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 1.066 | 26.7 | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-03

GKNMS-EW-06-1DUP

JK 1/12/11

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-03 File ID: 1200503.D

Sampled: 10/30/10 10:30 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 12:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-03

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-03 File ID: 1200503.D

Sampled: 10/30/10 10:30 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 12:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.351 | 67.5 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.639 | 66.0 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.536 | 76.8 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.668 | 66.7 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.838 | 91.9 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 2.071 | 51.8 | 40 - 125 | H2 |

# ANALYSIS DATA SHEET

1011002-04

GKHMS-GW-024-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-04 File ID: 1200504.D

Sampled: 10/30/10 13:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 13:19

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-04

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-04 File ID: 1200504.D

Sampled: 10/30/10 13:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 13:19

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.417 | 70.8 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.863 | 71.6 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.689 | 84.4 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.629 | 65.7 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.030 | 102 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 2.588 | 64.7 | 40 - 125 | H2 |

# ANALYSIS DATA SHEET

1011002-05

BKHMS-GW-025-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-05 File ID: 1200505.D JK 1/12/11

Sampled: 10/30/10 11:40 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 13:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-05

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-05 File ID: 1200505.D

Sampled: 10/30/10 11:40 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 13:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.351 | 67.5 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.494 | 62.3 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.550 | 77.5 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.629 | 65.7 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.957 | 97.8 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 2.023 | 50.6 | 40 - 125 | H2 |

# ANALYSIS DATA SHEET

1011002-06

GKHMS-GW-026-1010

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Laboratory ID: 1012005-06
File ID: 1200506.D
Sampled: 10/30/10 08:40
Prepared: 11/12/10 12:35
Analyzed: 12/14/10 14:20
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 0L14025
Sequence: 0L35113
Calibration: 0351002
Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-06

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-06 File ID: 1200506.D

Sampled: 10/30/10 08:40 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 14:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.355 | 67.8 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.700 | 67.5 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.557 | 77.8 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.711 | 67.8 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.901 | 95.1 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 1.232 | 30.8 | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-07

GKHMS-GW-026-1010

Laboratory: Empirical Laboratories, LLC | SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) | Project: CTOJM16 Key West 2010

JK 1/12/11

Matrix: Water | Laboratory ID: 1012005-07 | File ID: 1200507.D

Sampled: 10/31/10 10:40 | Prepared: 11/12/10 12:35 | Analyzed: 12/14/10 14:50

Solids: | Preparation: EXT_3510 | Dilution: 1

Batch: 0L14025 | Sequence: 0L35113 | Calibration: 0351002 | Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-07

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-07 File ID: 1200507.D

Sampled: 10/31/10 10:40 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 14:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.376 | 68.8 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.700 | 67.5 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.542 | 77.1 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.644 | 66.1 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.092 | 105 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 1.422 | 35.5 | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-08

GKNMS-GW-027-1010

1/12/11 JF

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-08 File ID: 1200508.D

Sampled: 10/31/10 12:20 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 15:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X, H2 U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-08

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-08 File ID: 1200508.D

Sampled: 10/31/10 12:20 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 15:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.444 | 72.2 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.863 | 71.6 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.578 | 78.9 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.658 | 66.5 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.925 | 96.2 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 2.072 | 51.8 | 40 - 125 | H2 |

# ANALYSIS DATA SHEET

1011002-09

GKHMS-GW-028-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-09 File ID: 1200509.D

Sampled: 10/31/10 15:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 15:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

**1011002-09**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-09 File ID: 1200509.D

Sampled: 10/31/10 15:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 15:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.426 | 71.3 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.608 | 65.2 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.569 | 78.4 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.674 | 66.9 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.875 | 93.8 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 1.960 | 49.0 | 40 - 125 | H2 |

# ANALYSIS DATA SHEET

1011002-10

GKHMS-GW-029-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010 JK 1/12/10

Matrix: Water Laboratory ID: 1012005-10 File ID: 1200510.D

Sampled: 10/31/10 13:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 16:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

**1011002-10**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-10 File ID: 1200510.D

Sampled: 10/31/10 13:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 16:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.486 | 74.3 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.721 | 68.0 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.543 | 77.1 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.698 | 67.5 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.093 | 105 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 2.220 | 55.5 | 40 - 125 | H2 |

# ANALYSIS DATA SHEET

1011002-11

GKHMS-GW-030-1010
JK 1/12/11

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | Laboratory ID: | 1012005-11 | File ID: | 1200511.D |
| Sampled: | 10/31/10 11:40 | Prepared: | 11/12/10 12:35 | Analyzed: | 12/14/10 16:50 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L14025 | Sequence: | 0L35113 | Calibration: | 0351002 |
| Instrument: | MS-BNA3 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

**1011002-11**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | Laboratory ID: | 1012005-11 | File ID: | 1200511.D |
| Sampled: | 10/31/10 11:40 | Prepared: | 11/12/10 12:35 | Analyzed: | 12/14/10 16:50 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L14025 | Sequence: | 0L35113 | Calibration: | 0351002 |
| Instrument: | MS-BNA3 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.471 | 73.6 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.824 | 70.6 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.573 | 78.7 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.792 | 69.8 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.096 | 105 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-12

GKHMS-GW-0330-10108

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-12 File ID: 1200512.D JK 1/12/11

Sampled: 10/31/10 10:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 17:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-12

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-12 File ID: 1200512.D

Sampled: 10/31/10 10:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 17:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.367 | 68.3 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.594 | 64.9 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.482 | 74.1 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.588 | 64.7 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.817 | 90.8 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-13

GKHMS-GW-028-1013

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | Laboratory ID: | 1012005-13 | File ID: | 1200513.D |
| Sampled: | 11/01/10 10:00 | Prepared: | 11/12/10 12:35 | Analyzed: | 12/14/10 17:50 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L14025 | Sequence: | 0L35113 | Calibration: | 0351002 |

Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-13

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-13 File ID: 1200513.D

Sampled: 11/01/10 10:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 17:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.336 | 66.8 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.517 | 62.9 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.407 | 70.3 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.518 | 62.9 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 1.799 | 89.9 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-14

GKNMS-GW-021-1010

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | Laboratory ID: | 1012005-14 | File ID: | 1200514.D |
| Sampled: | 11/01/10 11:00 | Prepared: | 11/12/10 12:35 | Analyzed: | 12/14/10 18:20 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L14025 | Sequence: | 0L35113 | Calibration: | 0351002 |
| Instrument: | MS-BNA3 | | | | |

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | 7.17 | 1.25 | 2.50 | 5.00 | H2 |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2, S U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | 4.78 | 1.25 | 2.50 | 5.00 | H2 I |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-14

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-14 File ID: 1200514.D

Sampled: 11/01/10 11:00 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 18:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.332 | 66.6 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.772 | 69.3 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 2.079 | 104 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.641 | 66.0 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.197 | 110 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 3.754 | 93.9 | 40 - 125 | H2 |

# ANALYSIS DATA SHEET

1011002-15

GKHMS-GW-031-10103

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | | | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | | | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | Laboratory ID: | 1012005-15 | File ID: | 1200515.D |
| Sampled: | 11/01/10 09:20 | Prepared: | 11/12/10 12:35 | Analyzed: | 12/14/10 18:50 |
| Solids: | | Preparation: | EXT_3510 | Dilution: | 1 |
| Batch: | 0L14025 | Sequence: | 0L35113 | Calibration: | 0351002 |
| Instrument: | MS-BNA3 | | | | |

JK 1/12/11

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H2, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-15

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-15 File ID: 1200515.D

Sampled: 11/01/10 09:20 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 18:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.442 | 72.1 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.706 | 67.6 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.558 | 77.9 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.680 | 67.0 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.000 | 100 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 1.280 | 32.0 | 40 - 125 | *H2 |

# ANALYSIS DATA SHEET

1011002-16

GKHMS-GW-0320-1018

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-16 File ID: 1200516.D

Sampled: 11/01/10 08:40 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 19:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H2 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H2 U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H2, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H2 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H2 U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H2 U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H2 U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H2 U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H2, Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H2 U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H2 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H2 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H2 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q, H2 U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H2 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | H2 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H2 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H2 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H2, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H2, X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H2 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H2 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H2 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H2 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H2 U |

# ANALYSIS DATA SHEET

1011002-16

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012005-16 File ID: 1200516.D

Sampled: 11/01/10 08:40 Prepared: 11/12/10 12:35 Analyzed: 12/14/10 19:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14025 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H2, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H2 U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H2 U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H2 U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H2, Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H2 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H2, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | H2 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | H2 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.425 | 71.3 | 50 - 110 | H2 |
| 2-Fluorophenol | 4.000 | 2.775 | 69.4 | 20 - 110 | H2 |
| Nitrobenzene-d5 | 2.000 | 1.542 | 77.1 | 40 - 110 | H2 |
| Phenol-d6 | 4.000 | 2.524 | 63.1 | 10 - 110 | H2 |
| Terphenyl-d14 | 2.000 | 2.030 | 102 | 50 - 135 | H2 |
| 2,4,6-Tribromophenol | 4.000 | 1.804 | 45.1 | 40 - 125 | H2 |

**Appendix C**

Support Documentation

# Data for SW8270C Forms

HOLDTIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | UG/L | GKHMS-GW-020-1010 | 1012005-13 | SUR | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |
| OS | UG/L | GKHMS-GW-014-1010 | 1012005-01 | NM | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-025-1010 | 1012005-05 | SUR | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-025-1010 | 1012005-05 | NM | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-024-1010 | 1012005-04 | SUR | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-024-1010 | 1012005-04 | NM | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-026-1010 | 1012005-07 | SUR | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-021-1010 | 1012005-14 | NM | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |
| OS | UG/L | GKHMS-GW-027-1010 | 1012005-08 | NM | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-020-1010 | 1012005-13 | NM | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |
| OS | UG/L | GKHMS-GW-016-1010 | 1012005-03 | SUR | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-016-1010 | 1012005-03 | NM | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-015-1010 | 1012005-02 | SUR | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-015-1010 | 1012005-02 | NM | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-014-1010 | 1012005-01 | SUR | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | UG/L | GKHMS-GW-021-1010 | 1012005-14 | SUR | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |
| OS | UG/L | GKHMS-GW-030-1010 | 1012005-11 | SUR | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-034D-1010 | 1012005-06 | NM | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-033D-1010 | 1012005-12 | SUR | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-033D-1010 | 1012005-12 | NM | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-032D-1010 | 1012005-16 | SUR | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |
| OS | UG/L | GKHMS-GW-032D-1010 | 1012005-16 | NM | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |
| OS | UG/L | GKHMS-GW-026-1010 | 1012005-07 | NM | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-031-1010 | 1012005-15 | NM | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |
| OS | UG/L | GKHMS-GW-034D-1010 | 1012005-06 | SUR | 10/30/2010 | 11/12/2010 | 12/14/2010 | 13 | 32 | 45 |
| OS | UG/L | GKHMS-GW-030-1010 | 1012005-11 | NM | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-029-1010 | 1012005-10 | SUR | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-029-1010 | 1012005-10 | NM | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-028-1010 | 1012005-09 | SUR | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-028-1010 | 1012005-09 | NM | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-027-1010 | 1012005-08 | SUR | 10/31/2010 | 11/12/2010 | 12/14/2010 | 12 | 32 | 44 |
| OS | UG/L | GKHMS-GW-031-1010 | 1012005-15 | SUR | 11/01/2010 | 11/12/2010 | 12/14/2010 | 11 | 32 | 43 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-3

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs** **7210 Corporate Court** **Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz** **301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/30/2010 | GKHMS-GW-014-1010 | 09:30 | **SW846 8260B** | GKHMS-GW014 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-014-1010 | 09:30 | **SW846 8720D/8270DSIM** | GKHMS-GW014 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-014-1010 | 09:30 | **SW846 6020A** | GKHMS-GW014 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-015-1010 | 10:00 | **SW846 8260B** | GKHMS-GW015 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-015-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW015 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-015-1010 | 10:00 | **SW846 6020A** | GKHMS-GW015 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-016-1010 | 10:30 | **SW846 8260B** | GKHMS-GW016 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-016-1010 | 10:30 | **SW846 8720D/8270DSIM** | GKHMS-GW016 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-016-1010 | 10:30 | **SW846 6020A** | GKHMS-GW016 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-024-1010 | 13:00 | **SW846 8260B** | GKHMS-GW024 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-024-1010 | 13:00 | **SW846 8720D/8270DSIM** | GKHMS-GW024 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-024-1010 | 13:00 | **SW846 6020A** | GKHMS-GW024 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-025-1010 | 11:40 | **SW846 8260B** | GKHMS-GW025 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-025-1010 | 11:40 | **SW846 8720D/8270DSIM** | GKHMS-GW025 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-025-1010 | 11:40 | **SW846 6020A** | GKHMS-GW025 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-GW-034D-1010 | 08:40 | **SW846 8260B** | GKHMS-GW034D | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/30/2010 | GKHMS-GW-034D-1010 | 08:40 | **SW846 8720D/8270DSIM** | GKHMS-GW034D | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/30/2010 | GKHMS-GW-034D-1010 | 08:40 | **SW846 6020A** | GKHMS-GW034D | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/30/2010 | GKHMS-TB-02 | 08:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 10/31/2010 | GKHMS-GW-026-1010 | 10:40 | **SW846 8260B** | GKHMS-GW026 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-026-1010 | 10:40 | **SW846 8720D/8270DSIM** | GKHMS-GW026 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-026-1010 | 10:40 | **SW846 6020A** | GKHMS-GW026 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |

1011002

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/31/2010 | GKHMS-GW-027-1010 | 12:20 | **SW846 8260B** | GKHMS-GW027 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-027-1010 | 12:20 | **SW846 8720D/8270DSIM** | GKHMS-GW027 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-027-1010 | 12:20 | **SW846 6020A** | GKHMS-GW027 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-028-1010 | 15:00 | **SW846 8260B** | GKHMS-GW028 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-028-1010 | 15:00 | **SW846 8720D/8270DSIM** | GKHMS-GW028 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-028-1010 | 15:00 | **SW846 6020A** | GKHMS-GW028 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-029-1010 | 13:00 | **SW846 8260B** | GKHMS-GW029 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-029-1010 | 13:00 | **SW846 8720D/8270DSIM** | GKHMS-GW029 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-029-1010 | 13:00 | **SW846 6020A** | GKHMS-GW029 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-030-1010 | 11:40 | **SW846 8260B** | GKHMS-GW030 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-030-1010 | 11:40 | **SW846 8720D/8270DSIM** | GKHMS-GW030 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-030-1010 | 11:40 | **SW846 6020A** | GKHMS-GW030 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 10/31/2010 | GKHMS-GW-033D-1010 | 10:00 | **SW846 8260B** | GKHMS-GW033D | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 10/31/2010 | GKHMS-GW-033D-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW033D | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 10/31/2010 | GKHMS-GW-033D-1010 | 10:00 | **SW846 6020A** | GKHMS-GW033D | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-020-1010 | 10:00 | **SW846 8260B** | GKHMS-GW020 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-020-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW020 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-020-1010 | 10:00 | **SW846 6020A** | GKHMS-GW020 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8260B** | GKHMS-GW021 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8720D/8270DSIM** | GKHMS-GW021 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 6020A** | GKHMS-GW021 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8082A** | GKHMS-GW021 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | **SW846 8081B** | GKHMS-GW021 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8260B** | GKHMS-GW031 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8720D/8270DSIM** | GKHMS-GW031 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 6020A** | GKHMS-GW031 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8082A** | GKHMS-GW031 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | **SW846 8081B** | GKHMS-GW031 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-032D-1010 | 08:40 | **SW846 8260B** | GKHMS-GW032D | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/01/2010 | GKHMS-GW-032D-1010 | 08:40 | **SW846 8720D/8270DSIM** | GKHMS-GW032D | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/01/2010 | GKHMS-GW-032D-1010 | 08:40 | **SW846 6020A** | GKHMS-GW032D | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/01/2010 | 16:30 | **Federal Express** | 11/01/2010 | 17:00 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Fed Ex | 11-2-10 | | | 11/2/10 | 10:00 |

| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| Comments: | | | | | |

CENTAURI LABS™

WORK ORDER

**1011002**

**Approved**

Printed: 11/2/2010 3:12:41PM

*Due Date: 11/16/10 00:00 (14 day TAT)*

*Date Received: 11/02/10 10:00*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

Organic Extractions holding times are 7 days for water AND SOIL!!!

| Analysis | Expires | Comments |
|---|---|---|
| **1011002-01 GKHMS-GW-014-1010 [Water]** | **Sampled 10/30/10 09:30 Eastern** | |
| 8260B LL VOA | 11/13/10 09:30 | |
| 8270D LL SVOC TCL | 11/06/10 09:30 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 09:30 | |
| 6020A QSM TAL | 04/28/11 09:30 | |
| **1011002-02 GKHMS-GW-015-1010 [Water]** | **Sampled 10/30/10 10:00 Eastern** | |
| 6020A QSM TAL | 04/28/11 10:00 | |
| 8260B LL VOA | 11/13/10 10:00 | |
| 8270D LL SVOC TCL | 11/06/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 10:00 | |
| **1011002-03 GKHMS-GW-016-1010 [Water]** | **Sampled 10/30/10 10:30 Eastern** | |
| 6020A QSM TAL | 04/28/11 10:30 | |
| Mercury, Total 7470A | 11/27/10 10:30 | |
| 8260B LL VOA | 11/13/10 10:30 | |
| 8270D LL SVOC TCL | 11/06/10 10:30 | PLUS SIM PAHs |
| **1011002-04 GKHMS-GW-024-1010 [Water]** | **Sampled 10/30/10 13:00 Eastern** | |
| 6020A QSM TAL | 04/28/11 13:00 | |
| 8260B LL VOA | 11/13/10 13:00 | |
| 8270D LL SVOC TCL | 11/06/10 13:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 13:00 | |
| **1011002-05 GKHMS-GW-025-1010 [Water]** | **Sampled 10/30/10 11:40 Eastern** | |
| 6020A QSM TAL | 04/28/11 11:40 | |
| Mercury, Total 7470A | 11/27/10 11:40 | |
| 8270D LL SVOC TCL | 11/06/10 11:40 | PLUS SIM PAHs |
| 8260B LL VOA | 11/13/10 11:40 | |

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WORK ORDER

**1011002**

**Approved**

Printed: 11/2/2010 3:12:41PM

*Due Date: 11/16/10 00:00 (14 day TAT)*

*Date Received: 11/02/10 10:00*

| Analysis | Expires | Comments |
|---|---|---|
| **1011002-06 GKHMS-GW-034D-1010 [Water]** | | **Sampled 10/30/10 08:40 Eastern** |
| 6020A QSM TAL | 04/28/11 08:40 | |
| 8260B LL VOA | 11/13/10 08:40 | |
| 8270D LL SVOC TCL | 11/06/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/27/10 08:40 | |
| **1011002-07 GKHMS-GW-026-1010 [Water]** | | **Sampled 10/31/10 10:40 Eastern** |
| 8260B LL VOA | 11/14/10 10:40 | |
| 8270D LL SVOC TCL | 11/07/10 10:40 | PLUS SIM PAHs |
| 6020A QSM TAL | 04/29/11 10:40 | |
| Mercury, Total 7470A | 11/28/10 10:40 | |
| **1011002-08 GKHMS-GW-027-1010 [Water]** | | **Sampled 10/31/10 12:20 Eastern** |
| 6020A QSM TAL | 04/29/11 12:20 | |
| 8260B LL VOA | 11/14/10 12:20 | |
| 8270D LL SVOC TCL | 11/07/10 12:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/28/10 12:20 | |
| **1011002-09 GKHMS-GW-028-1010 [Water]** | | **Sampled 10/31/10 15:00 Eastern** |
| Mercury, Total 7470A | 11/28/10 15:00 | |
| 6020A QSM TAL | 04/29/11 15:00 | |
| 8260B LL VOA | 11/14/10 15:00 | |
| 8270D LL SVOC TCL | 11/07/10 15:00 | PLUS SIM PAHs |
| **1011002-10 GKHMS-GW-029-1010 [Water]** | | **Sampled 10/31/10 13:00 Eastern** |
| 8260B LL VOA | 11/14/10 13:00 | |
| 8270D LL SVOC TCL | 11/07/10 13:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/28/10 13:00 | |
| 6020A QSM TAL | 04/29/11 13:00 | |
| **1011002-11 GKHMS-GW-030-1010 [Water]** | | **Sampled 10/31/10 11:40 Eastern** |
| Mercury, Total 7470A | 11/28/10 11:40 | |
| 6020A QSM TAL | 04/29/11 11:40 | |
| 8260B LL VOA | 11/14/10 11:40 | |
| 8270D LL SVOC TCL | 11/07/10 11:40 | PLUS SIM PAHs |
| **1011002-12 GKHMS-GW-033D-1010 [Water]** | | **Sampled 10/31/10 10:00 Eastern** |
| 8260B LL VOA | 11/14/10 10:00 | |
| 8270D LL SVOC TCL | 11/07/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/28/10 10:00 | |
| 6020A QSM TAL | 04/29/11 10:00 | |

CENTAURI LABS™

WORK ORDER

**1011002**

**Approved**

Printed: 11/2/2010 3:12:41PM

*Due Date: 11/16/10 00:00 (14 day TAT)*

*Date Received: 11/02/10 10:00*

| Analysis | Expires | Comments |
|---|---|---|
| **1011002-13 GKHMS-GW-020-1010 [Water]** | **Sampled 11/01/10 10:00 Eastern** | |
| Mercury, Total 7470A | 11/29/10 10:00 | |
| 8260B LL VOA | 11/15/10 10:00 | |
| 6020A QSM TAL | 04/30/11 10:00 | |
| 8270D LL SVOC TCL | 11/08/10 10:00 | PLUS SIM PAHs |
| **1011002-14 GKHMS-GW-021-1010 [Water]** | **Sampled 11/01/10 11:00 Eastern** | |
| 6020A QSM TAL | 04/30/11 11:00 | |
| 8260B LL VOA | 11/15/10 11:00 | |
| 8270D LL SVOC TCL | 11/08/10 11:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/29/10 11:00 | |
| 8081B Pesticides | 11/08/10 11:00 | |
| 8082 PCBs | 11/08/10 11:00 | |
| **1011002-15 GKHMS-GW-031-1010 [Water]** | **Sampled 11/01/10 09:20 Eastern** | |
| 6020A QSM TAL | 04/30/11 09:20 | |
| 8270D LL SVOC TCL | 11/08/10 09:20 | PLUS SIM PAHs |
| 8081B Pesticides | 11/08/10 09:20 | |
| Mercury, Total 7470A | 11/29/10 09:20 | |
| 8260B LL VOA | 11/15/10 09:20 | |
| 8082 PCBs | 11/08/10 09:20 | |
| **1011002-16 GKHMS-GW-032D-1010 [Water]** | **Sampled 11/01/10 08:40 Eastern** | |
| Mercury, Total 7470A | 11/29/10 08:40 | |
| 8081B Pesticides | 11/08/10 08:40 | |
| 8082 PCBs | 11/08/10 08:40 | |
| 8260B LL VOA | 11/15/10 08:40 | |
| 8270D LL SVOC TCL | 11/08/10 08:40 | PLUS SIM PAHs |
| 6020A QSM TAL | 04/30/11 08:40 | |
| **1011002-17 GKHMS-TB-02 [Water]** | **Sampled 10/30/10 08:00 Eastern** | |
| 8260B LL VOA | 11/13/10 08:00 | |

Container Locations

| | |
|---|---|
| 32oz Am | WB-1 |
| 32oz HDPE w/ HNO3 | WB-1 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11-2-10
Date

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011002**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011002-01** | **Water** | **Sampled:10/30/10 09:30** | |
| 8270D LL SVOC TCL | | 11/06/10 09:30 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/27/10 09:30 | |
| 6020A QSM TAL | | 04/28/11 09:30 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-02** | **Water** | **Sampled:10/30/10 10:00** | |
| 6020A QSM TAL | | 04/28/11 10:00 | |
| 8270D LL SVOC TCL | | 11/06/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/27/10 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-03** | **Water** | **Sampled:10/30/10 10:30** | |
| 6020A QSM TAL | | 04/28/11 10:30 | |
| 8270D LL SVOC TCL | | 11/06/10 10:30 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/27/10 10:30 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-04** | **Water** | **Sampled:10/30/10 13:00** | |
| Mercury, Total 7470A | | 11/27/10 13:00 | |
| 6020A QSM TAL | | 04/28/11 13:00 | |
| 8270D LL SVOC TCL | | 11/06/10 13:00 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |

1012005

-01

-02

-03

-04

2-3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| | 11/30 | | 12/1/10 08:11 |
| Released By | Date | Received By | Date |
| | | | |

**SUBCONTRACT ORDER**

8270 only

**Centauri Labs, LLC**

**1011002**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011002-05** | **Water** | **Sampled:10/30/10 11:40** | 1012005-05 |
| Mercury, Total 7470A | | 11/27/10 11:40 | |
| 6020A QSM TAL | | 04/28/11 11:40 | |
| 8270D LL SVOC TCL | | 11/06/10 11:40 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-06** | **Water** | **Sampled:10/30/10 08:40** | -06 |
| 6020A QSM TAL | | 04/28/11 08:40 | |
| 8270D LL SVOC TCL | | 11/06/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/27/10 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-07** | **Water** | **Sampled:10/31/10 10:40** | -07 |
| 6020A QSM TAL | | 04/29/11 10:40 | |
| 8270D LL SVOC TCL | | 11/07/10 10:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/28/10 10:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-08** | **Water** | **Sampled:10/31/10 12:20** | -08 |
| 8270D LL SVOC TCL | | 11/07/10 12:20 | PLUS SIM PAHs |
| 6020A QSM TAL | | 04/29/11 12:20 | |
| Mercury, Total 7470A | | 11/28/10 12:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-09** | **Water** | **Sampled:10/31/10 15:00** | -09 |
| 8270D LL SVOC TCL | | 11/07/10 15:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/28/10 15:00 | |
| 6020A QSM TAL | | 04/29/11 15:00 | |
| *Containers Supplied:* | | | |

2.30C

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 11/30 | [signature] | 12/1/10 08:11 |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011002**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011002-10** | **Water** | **Sampled:10/31/10 13:00** | 1012005 -10 |
| 6020A QSM TAL | | 04/29/11 13:00 | |
| 8270D LL SVOC TCL | | 11/07/10 13:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/28/10 13:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-11** | **Water** | **Sampled:10/31/10 11:40** | -11 |
| 6020A QSM TAL | | 04/29/11 11:40 | |
| 8270D LL SVOC TCL | | 11/07/10 11:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/28/10 11:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-12** | **Water** | **Sampled:10/31/10 10:00** | -12 |
| Mercury, Total 7470A | | 11/28/10 10:00 | |
| 6020A QSM TAL | | 04/29/11 10:00 | |
| 8270D LL SVOC TCL | | 11/07/10 10:00 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-13** | **Water** | **Sampled:11/01/10 10:00** | -13 |
| Mercury, Total 7470A | | 11/29/10 10:00 | |
| 6020A QSM TAL | | 04/30/11 10:00 | |
| 8270D LL SVOC TCL | | 11/08/10 10:00 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-14** | **Water** | **Sampled:11/01/10 11:00** | -14 |
| 6020A QSM TAL | | 04/30/11 11:00 | |
| 8270D LL SVOC TCL | | 11/08/10 11:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/29/10 11:00 | |
| *Containers Supplied:* | | | |

2-3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | [signature] | 12/1/10 08:11 |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011002**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011002-15** | **Water** | **Sampled:11/01/10 09:20** | 1012005-15 |
| 6020A QSM TAL | | 04/30/11 09:20 | |
| 8270D LL SVOC TCL | | 11/08/10 09:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/29/10 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011002-16** | **Water** | **Sampled:11/01/10 08:40** | -16 |
| Mercury, Total 7470A | | 11/29/10 08:40 | |
| 6020A QSM TAL | | 04/30/11 08:40 | |
| 8270D LL SVOC TCL | | 11/08/10 08:40 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/16/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| | | | |
| Released By | Date | Received By | Date |

## Sample Delivery Group Case Narrative

### Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

No sample volume was received for SW6020 or SW7470A.

### Changes to the Revision

This is an original submittal of the final report package.

### Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

### Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

### SW8270C:

All samples were extracted by Centauri Labs out of the EPA recommended holding time for SW3510.

The surrogate 2,4,6-Tribromophenol did not recover in 0L14025-BLK1 and samples 1012005-01, -11, -12 and-13 and the recovery is low in samples 1012005-02, -06, -07 and -15. Samples were not able to be re-extracted since the extracts were received from another laboratory.

The internal standard Perylene-d12 exceeded criteria in 0L14025-BSD1 and sample 1012005-14. Compounds associated to this internal standard are qualified with an "S".

The continuing calibration verifications exceeded criteria in 0L34710-CCV1 with a negative bias for Benzaldehyde, 2,2'-Oxybis-1-chloropropane, and 3,3'-Dichlorobenzidine and with a positive bias for Hexachlorocyclopentadiene and 2-Nitroaniline and in 0L35113-CCV1 with a negative bias for Benzaldehyde and 2,2'-Oxybis-1-chloropropane and with a positive bias for Hexachlorocyclopentadiene and 2-Nitroaniline.

The batch spikes associated to batch 0L14025 exceeded criteria with a positive bias for Hexachlorobutadiene and exceeded the relative percent difference criteria for Pentachlorophenol and did not recovery for Benzaldehyde, 4-Chloroaniline, 2,4-Dinitrophenol, N-nitrosodiphenylamine, 2-Nitroaniline, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol. Samples were not able to be re-extracted since the extracts were received from another laboratory.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

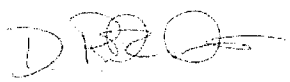
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

# HOLDING TIME SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011002-01 GKHMS-GW-01-100 | 10/30/10 09:30 | 12/01/10 08:11 | 11/12/10 12:35 | 13.17 | 7.00 | 12/14/10 00:06 | 31.48 | 40.00 | * |
| 1011002-02 -015- | 10/30/10 10:00 | 12/01/10 08:11 | 11/12/10 12:35 | 13.15 | 7.00 | 12/14/10 00:35 | 31.50 | 40.00 | * |
| 1011002-03 -016- | 10/30/10 10:30 | 12/01/10 08:11 | 11/12/10 12:35 | 13.13 | 7.00 | 12/14/10 12:49 | 32.01 | 40.00 | * |
| 1011002-04 -024- | 10/30/10 13:00 | 12/01/10 08:11 | 11/12/10 12:35 | 13.02 | 7.00 | 12/14/10 13:19 | 32.03 | 40.00 | * |
| 1011002-05 -025- | 10/30/10 11:40 | 12/01/10 08:11 | 11/12/10 12:35 | 13.08 | 7.00 | 12/14/10 13:49 | 32.05 | 40.00 | * |
| 1011002-06 -034D- | 10/30/10 08:40 | 12/01/10 08:11 | 11/12/10 12:35 | 13.20 | 7.00 | 12/14/10 14:20 | 32.07 | 40.00 | * |
| 1011002-07 -026- | 10/31/10 10:40 | 12/01/10 08:11 | 11/12/10 12:35 | 12.12 | 7.00 | 12/14/10 14:50 | 32.09 | 40.00 | * |
| 1011002-08 -027- | 10/31/10 12:20 | 12/01/10 08:11 | 11/12/10 12:35 | 12.05 | 7.00 | 12/14/10 15:20 | 32.11 | 40.00 | * |
| 1011002-09 -028- | 10/31/10 15:00 | 12/01/10 08:11 | 11/12/10 12:35 | 11.94 | 7.00 | 12/14/10 15:50 | 32.14 | 40.00 | * |
| 1011002-10 -029- | 10/31/10 13:00 | 12/01/10 08:11 | 11/12/10 12:35 | 12.02 | 7.00 | 12/14/10 16:20 | 32.16 | 40.00 | * |
| 1011002-11 -030- | 10/31/10 11:40 | 12/01/10 08:11 | 11/12/10 12:35 | 12.08 | 7.00 | 12/14/10 16:50 | 32.18 | 40.00 | * |
| 1011002-12 -033D- | 10/31/10 10:00 | 12/01/10 08:11 | 11/12/10 12:35 | 12.15 | 7.00 | 12/14/10 17:20 | 32.20 | 40.00 | * |
| 1011002-13 -020- | 11/01/10 10:00 | 12/01/10 08:11 | 11/12/10 12:35 | 11.15 | 7.00 | 12/14/10 17:50 | 32.22 | 40.00 | * |
| 1011002-14 -021- | 11/01/10 11:00 | 12/01/10 08:11 | 11/12/10 12:35 | 11.11 | 7.00 | 12/14/10 18:20 | 32.24 | 40.00 | * |
| 1011002-15 -031- | 11/01/10 09:20 | 12/01/10 08:11 | 11/12/10 12:35 | 11.18 | 7.00 | 12/14/10 18:50 | 32.26 | 40.00 | * |
| 1011002-16 -032D- | 11/01/10 08:40 | 12/01/10 08:11 | 11/12/10 12:35 | 11.20 | 7.00 | 12/14/10 19:20 | 32.28 | 40.00 | * |

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35109 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35109-TUN1 | SEQ-TUN1.D | 12/07/10 17:31 |
| Cal Standard | 0L35109-CAL1 | SEQ-CAL1.D | 12/07/10 17:58 |
| Cal Standard | 0L35109-CAL2 | SEQ-CAL2.D | 12/07/10 18:29 |
| Cal Standard | 0L35109-CAL3 | SEQ-CAL3.D | 12/07/10 18:59 |
| Cal Standard | 0L35109-CAL4 | SEQ-CAL4.D | 12/07/10 19:29 |
| Cal Standard | 0L35109-CAL5 | SEQ-CAL5.D | 12/07/10 19:59 |
| Cal Standard | 0L35109-CAL6 | SEQ-CAL6.D | 12/07/10 20:29 |
| Cal Standard | 0L35109-CAL7 | SEQ-CAL7.D | 12/07/10 20:59 |
| Cal Standard | 0L35109-CAL9 | SEQ-CAL9.D | 12/07/10 21:58 |
| Cal Standard | 0L35109-CALA | SEQ-CALA.D | 12/07/10 22:28 |
| Cal Standard | 0L35109-CALB | SEQ-CALB.D | 12/07/10 22:57 |
| Cal Standard | 0L35109-CALC | SEQ-CALC.D | 12/07/10 23:27 |
| Cal Standard | 0L35109-CALD | SEQ-CALD.D | 12/07/10 23:56 |
| Cal Standard | 0L35109-CALE | SEQ-CALE.D | 12/08/10 00:25 |
| Cal Standard | 0L35109-CALF | SEQ-CALF.D | 12/08/10 00:54 |
| Cal Standard | 0L35109-CALG | SEQ-CALG.D | 12/08/10 01:23 |
| Cal Standard | 0L35109-CALH | SEQ-CALH.D | 12/08/10 01:52 |
| Cal Standard | 0L35109-CALJ | SEQ-CALJ.D | 12/08/10 02:51 |
| Cal Standard | 0L35109-CALK | SEQ-CALK.D | 12/08/10 03:20 |
| MS Tune | 0L35109-TUN2 | SEQ-TUN2.D | 12/08/10 03:49 |
| Initial Cal Check | 0L35109-ICV3 | SEQ-ICV3.D | 12/08/10 10:01 |
| Initial Cal Check | 0L35109-ICV4 | SEQ-ICV4.D | 12/08/10 10:31 |
| Initial Cal Check | 0L35109-ICV5 | SEQ-ICV5.D | 12/08/10 11:04 |
| Initial Cal Check | 0L35109-ICV7 | SEQ-ICV7.D | 12/08/10 12:04 |
| Initial Cal Check | 0L35109-ICVA | SEQ-ICVA.D | 12/08/10 14:09 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/07/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 17:31 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 44.4 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 47.6 | PASS |
| 70 | Less than 2% of 69 | 0.454 | PASS |
| 127 | 40 - 60% of 198 | 57.6 | PASS |
| 197 | Less than 1% of 198 | 0.468 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.79 | PASS |
| 275 | 10 - 30% of 198 | 25.5 | PASS |
| 365 | 1 - 200% of 198 | 3.23 | PASS |
| 441 | 0.001 - 100% of 443 | 77 | PASS |
| 442 | 40 - 200% of 198 | 77 | PASS |
| 443 | 17 - 23% of 442 | 20.1 | PASS |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN2.D | Injection Date: | 12/08/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 03:49 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN2 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 46.1 | PASS |
| 68 | Less than 2% of 69 | 0.759 | PASS |
| 69 | Less than 200% of 198 | 46.1 | PASS |
| 70 | Less than 2% of 69 | 0.512 | PASS |
| 127 | 40 - 60% of 198 | 57.3 | PASS |
| 197 | Less than 1% of 198 | 0.26 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 7.25 | PASS |
| 275 | 10 - 30% of 198 | 24.8 | PASS |
| 365 | 1 - 200% of 198 | 3.45 | PASS |
| 441 | 0.001 - 100% of 443 | 73.2 | PASS |
| 442 | 40 - 200% of 198 | 81 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.269597 | 4.903152 | 10.465 | 4.763744E-02 | | | CCC (30) | |
| Acenaphthylene | 1.959083 | 4.154041 | 10.24944 | 4.133794E-02 | | | 15 | |
| Acetophenone | 1.714419 | 4.130585 | 7.227222 | 3.094706E-02 | | | 15 | |
| Aniline | 1.900007 | 3.284542 | 6.390556 | 8.799762E-02 | | | 15 | |
| Anthracene | 1.161307 | 4.582293 | 12.34144 | 4.433106E-02 | | | 15 | |
| Atrazine | 0.2293025 | 11.08458 | 11.88522 | 5.410601E-02 | | | 15 | |
| Benzaldehyde | 1.057258 | 4.80575 | 6.264667 | 2.697619E-02 | | | 15 | |
| Benzidine | 0.6369679 | 13.40551 | 13.89371 | 2.662737E-02 | | | 15 | |
| Benzo(a)anthracene | 1.193431 | 4.385626 | 15.53889 | 2.902238E-02 | | | 15 | |
| Benzo(a)pyrene | 1.061849 | 12.15633 | 17.34322 | 4.821226E-02 | | | CCC (30) | |
| Benzo(b)fluoranthene | 1.192834 | 9.469779 | 16.90622 | 0.0364467 | | | 15 | |
| Benzo(g,h,i)perylene | 0.8673976 | 9.832135 | 19.57289 | 8.613339E-02 | | | 15 | |
| Benzoic acid | 0.1667293 | 34.36929 | 7.9865 | 0.5465472 | 0.9972413 | | 0.995 | |
| Benzo(k)fluoranthene | 1.234244 | 5.160575 | 16.9405 | 4.784776E-02 | | | 15 | |
| Benzyl alcohol | 0.7918529 | 8.384648 | 6.922 | 7.858658E-02 | | | 15 | |
| 1,1-Biphenyl | 1.647464 | 6.941428 | 9.711111 | 3.672288E-02 | | | 15 | |
| 4-Bromophenyl-phenylether | 0.2396007 | 4.615409 | 11.69178 | 3.160712E-02 | | | 15 | |
| Butylbenzylphthalate | 0.6659619 | 10.75201 | 14.81629 | 1.927271E-02 | | | 15 | |
| Caprolactam | 0.0983814 | 13.1947 | 8.739 | 0.1800642 | | | 15 | |
| Carbazole | 1.033588 | 5.537093 | 12.53067 | 4.187015E-02 | | | 15 | |
| 4-Chloro-3-methylphenol | 0.2791833 | 13.73393 | 8.943625 | 3.777953E-02 | | | CCC (30) | |
| 4-Chloroaniline | 0.4236872 | 4.041706 | 8.357222 | 5.579471E-02 | | | 15 | |
| Bis(2-chloroethoxy)methane | 0.4015206 | 5.043312 | 7.969778 | 4.750625E-02 | | | 15 | |
| Bis(2-chloroethyl)ether | 1.242957 | 3.412662 | 6.456667 | 9.612344E-02 | | | 15 | |
| 2,2'-Oxybis-1-chloropropane | 1.791162 | 4.894321 | 7.083555 | 4.525434E-02 | | | 15 | |
| 2-Chloronaphthalene | 1.223416 | 4.351312 | 9.738445 | 4.355056E-02 | | | 15 | |
| 2-Chlorophenol | 1.320483 | 5.059863 | 6.533111 | 6.571699E-02 | | | 15 | |
| 4-Chlorophenyl phenyl ether | 0.6482639 | 4.698305 | 11.09078 | 0.034051 | | | 15 | |
| Chrysene | 1.223868 | 3.849079 | 15.58856 | 3.824456E-02 | | | 15 | |
| Dibenz(a,h)anthracene | 0.843577 | 13.39613 | 19.10544 | 0.064455 | | | 15 | |
| Dibenzofuran | 1.702459 | 5.478968 | 10.67456 | 4.805089E-02 | | | 15 | |
| Di-n-butylphthalate | 1.274102 | 10.33933 | 12.96089 | 3.198878E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 1.590354 | 5.068212 | 6.791 | 3.285709E-02 | | | CCC (30) | |
| 1,3-Dichlorobenzene | 1.556634 | 4.82334 | 6.712111 | 3.840334E-02 | | | 15 | |
| 1,2-Dichlorobenzene | 1.498241 | 3.960279 | 6.972778 | 3.854247E-02 | | | 15 | |
| 3,3'-Dichlorobenzidine | 0.3901063 | 11.47408 | 15.49443 | 2.260094E-02 | | | 15 | |
| 2,6-Dichlorophenol | 0.2593817 | 8.91257 | 8.374111 | 1.822758E-02 | | | 15 | |
| 2,4-Dichlorophenol | 0.2708646 | 11.75671 | 8.104445 | 7.489039E-02 | | | CCC (30) | |
| Diethylphthalate | 1.375716 | 4.066081 | 10.94922 | 7.018966E-02 | | | 15 | |
| 2,4-Dimethylphenol | 0.3567735 | 5.191635 | 7.862444 | 7.425377E-02 | | | 15 | |
| Dimethyl phthalate | 1.360327 | 2.760394 | 10.08487 | 0.1018539 | | | 15 | |
| 4,6-Dinitro-2-methylphenol | 0.1141426 | 30.80017 | 11.15414 | 8.948876E-02 | 0.9987724 | | 0.995 | |
| 2,4-Dinitrophenol | 0.1317034 | 34.87347 | 10.48617 | 6.439793E-02 | 0.9970944 | | SPCC (0.05) | |
| 2,4-Dinitrotoluene | 0.3873439 | 14.36567 | 10.647 | 8.872293E-02 | | | 15 | |
| 2,6-Dinitrotoluene | 0.3161974 | 6.525335 | 10.15025 | 8.086076E-02 | | | 15 | |
| Di-n-octylphthalate | 1.581621 | 12.56055 | 16.37467 | 1.584676E-02 | | | CCC (30) | |
| 1,4-Dioxane | 0.5824199 | 4.647384 | 3.461222 | 6.378529E-02 | | | 15 | |
| 1,2-Diphenylhydrazine | 0.8266591 | 5.85195 | 11.28589 | 4.479164E-02 | | | 15 | |
| Bis(2-ethylhexyl)phthalate | 0.8698317 | 14.06275 | 15.55788 | 2.160886E-02 | | | 15 | |
| Fluoranthene | 1.133942 | 6.426527 | 13.74544 | 3.010434E-02 | | | CCC (30) | |
| Fluorene | 1.377626 | 2.611998 | 11.09611 | 4.668763E-02 | | | 15 | |
| 2-Fluorobiphenyl | 1.429188 | 5.299247 | 9.590445 | 4.316615E-02 | | | 15 | |
| 2-Fluorophenol | 1.163095 | 4.537913 | 5.309444 | 4.883207E-02 | | | 15 | |
| Hexachlorobenzene | 0.2675089 | 4.583392 | 11.79278 | 3.935515E-02 | | | 15 | |
| Hexachlorobutadiene | 0.1897728 | 3.248719 | 8.468444 | 2.541857E-02 | | | CCC (30) | |
| Hexachlorocyclopentadiene | 0.2719697 | 13.77204 | 9.354667 | 0.0244126 | | | SPCC (0.05) | |
| Hexachloroethane | 0.5839827 | 5.21415 | 7.374556 | 2.041353E-02 | | | 15 | |
| Indeno(1,2,3-cd)pyrene | 1.046936 | 11.15244 | 19.08733 | 6.484222E-02 | | | 15 | |
| Isophorone | 0.6532573 | 4.164348 | 7.718667 | 0.1211494 | | | 15 | |
| 1-Methylnaphthalene | 0.6166441 | 3.550294 | 9.265111 | 3.593918E-02 | | | 15 | |
| 2-Methylnaphthalene | 0.5927061 | 2.758044 | 9.143334 | 3.771168E-02 | | | 15 | |
| 2-Methylphenol | 1.129245 | 5.890276 | 7.051444 | 5.962201E-02 | | | 15 | |
| 3-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |
| 4-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0351002 | Instrument: | MS-BNA3 |
| Matrix: | Water | Calibration Date: | 12/7/2010 5:31:41PM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | 1.098195 | 7.090559 | 8.304222 | 3.938283E-02 | | | 15 | |
| 4-Nitroaniline | 0.2492193 | 10.6119 | 11.10488 | 0.1012271 | | | 15 | |
| 3-Nitroaniline | 0.3039612 | 12.46666 | 10.355 | 8.761057E-02 | | | 15 | |
| 2-Nitroaniline | 0.3312246 | 12.35964 | 9.851625 | 5.605301E-02 | | | 15 | |
| Nitrobenzene | 0.3690184 | 3.243848 | 7.433 | 8.670105E-02 | | | 15 | |
| Nitrobenzene-d5 | 0.3614526 | 4.787386 | 7.410333 | 7.322044E-02 | | | 15 | |
| 4-Nitrophenol | 0.1965166 | 21.52661 | 10.55771 | 9.363783E-02 | 0.9988059 | | SPCC (0.05) | |
| 2-Nitrophenol | 0.1835837 | 10.09707 | 7.816143 | 0.0460575 | | | CCC (30) | |
| N-Nitrosodimethylamine | 0.7067011 | 3.972251 | 3.796889 | 0.112963 | | | 15 | |
| N-Nitrosodiphenylamine | 0.7463088 | 5.779425 | 11.23333 | 6.231948E-02 | | | CCC (30) | |
| N-Nitroso-di-n-propylamine | 0.8544344 | 3.82209 | 7.235111 | 0.132911 | | | SPCC (0.05) | |
| Pentachlorophenol | 0.1195033 | 31.15399 | 12.02443 | 2.565489E-02 | 0.9986727 | | CCC (30) | * |
| Phenanthrene | 1.206234 | 6.535522 | 12.27844 | 3.596534E-02 | | | 15 | |
| Phenol | 1.491659 | 4.640746 | 6.357889 | 0.1599589 | | | CCC (30) | |
| Phenol-d6 | 1.434991 | 4.1192 | 6.341889 | 0.1499449 | | | 15 | |
| Pyrene | 1.380107 | 4.996263 | 14.02522 | 3.880092E-02 | | | 15 | |
| Pyridine | 1.377958 | 4.121152 | 3.838111 | 8.916254E-02 | | | 15 | |
| Terphenyl-d14 | 0.8848596 | 4.382233 | 14.21 | 0.0194432 | | | 15 | |
| 1,2,4,5-Tetrachlorobenzene | 0.3170295 | 5.342813 | 9.355222 | 3.483054E-02 | | | 15 | |
| 2,3,4,6-Tetrachlorophenol | 0.2870772 | 13.54627 | 10.82871 | 2.564344E-02 | | | 15 | |
| 2,4,6-Tribromophenol | 0.1159566 | 8.307173 | 11.39514 | 4.977028E-02 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.3581999 | 4.302402 | 8.212111 | 0.0416875 | | | 15 | |
| 2,4,6-Trichlorophenol | 0.3425101 | 14.8708 | 9.487875 | 3.202461E-02 | | | CCC (30) | |
| 2,4,5-Trichlorophenol | 0.3356329 | 18.90298 | 9.529444 | 3.382823E-02 | 0.9992251 | | 0.995 | |

# INITIAL CALIBRATION DATA

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0351002 | Instrument: | MS-BNA3 |
| Matrix: | Water | Calibration Date: | 12/7/2010 5:31:41PM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 1 | 1.374103 | 2 | 1.315472 | 5 | 1.294825 | 10 | 1.297991 | 20 | 1.275653 | 40 | 1.264744 |
| Acenaphthylene | 1 | 1.977639 | 2 | 1.856101 | 5 | 2.054718 | 10 | 2.034701 | 20 | 2.004486 | 40 | 2.016175 |
| Acetophenone | | | | | | | | | | | | |
| Aniline | 1 | 1.893837 | 2 | 1.776582 | 5 | 1.860449 | 10 | 1.905373 | 20 | 1.96982 | 40 | 1.974599 |
| Anthracene | 1 | 1.152616 | 2 | 1.06955 | 5 | 1.199769 | 10 | 1.197299 | 20 | 1.226635 | 40 | 1.202224 |
| Atrazine | | | | | | | | | | | | |
| Benzaldehyde | | | | | | | | | | | | |
| Benzidine | | | | | | | | | | | | |
| Benzo(a)anthracene | 1 | 1.176974 | 2 | 1.111061 | 5 | 1.144412 | 10 | 1.151915 | 20 | 1.206273 | 40 | 1.273851 |
| Benzo(a)pyrene | 1 | 0.8141702 | 2 | 0.8979174 | 5 | 1.012763 | 10 | 1.07342 | 20 | 1.117703 | 40 | 1.177321 |
| Benzo(b)fluoranthene | 1 | 1.125665 | 2 | 0.9776505 | 5 | 1.090132 | 10 | 1.171102 | 20 | 1.29305 | 40 | 1.2449 |
| Benzo(g,h,i)perylene | 1 | 0.8361077 | 2 | 0.7984972 | 5 | 0.8140256 | 10 | 0.9111468 | 20 | 0.7364742 | 40 | 0.9464765 |
| Benzoic acid | 1 | | 2 | | 5 | ~~4.781063E-02~~ | 10 | 0.0826069 | 20 | 0.1115828 | 40 | 0.1730795 |
| Benzo(k)fluoranthene | 1 | 1.14576 | 2 | 1.154252 | 5 | 1.251529 | 10 | 1.234315 | 20 | 1.330375 | 40 | 1.295232 |
| Benzyl alcohol | 1 | 0.6727378 | 2 | 0.6959354 | 5 | 0.772278 | 10 | 0.795494 | 20 | 0.8202954 | 40 | 0.8572062 |
| 1,1-Biphenyl | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | 1 | 0.2518511 | 2 | 0.2324228 | 5 | 0.2437731 | 10 | 0.256832 | 20 | 0.2460901 | 40 | 0.2374707 |
| Butylbenzylphthalate | 1 | ~~0.4212315~~ | 2 | ~~0.4213914~~ | 5 | 0.5348313 | 10 | 0.6014097 | 20 | 0.6750239 | 40 | 0.7266313 |
| Caprolactam | | | | | | | | | | | | |
| Carbazole | 1 | 1.01038 | 2 | 0.9970601 | 5 | 1.12402 | 10 | 1.080297 | 20 | 1.103171 | 40 | 1.03857 |
| 4-Chloro-3-methylphenol | 1 | ~~0.2181994~~ | 2 | 0.1973558 | 5 | 0.2555061 | 10 | 0.2703475 | 20 | 0.2869397 | 40 | 0.3103583 |
| 4-Chloroaniline | 1 | 0.4024068 | 2 | 0.3901094 | 5 | 0.4361041 | 10 | 0.428376 | 20 | 0.4378298 | 40 | 0.4407009 |
| Bis(2-chloroethoxy)methane | 1 | 0.4428005 | 2 | 0.3937843 | 5 | 0.4134067 | 10 | 0.4132365 | 20 | 0.4016128 | 40 | 0.4006352 |
| Bis(2-chloroethyl)ether | 1 | 1.305395 | 2 | 1.271392 | 5 | 1.279374 | 10 | 1.244134 | 20 | 1.24794 | 40 | 1.248168 |
| 2,2'-Oxybis-1-chloropropane | 1 | 1.965289 | 2 | 1.793817 | 5 | 1.845471 | 10 | 1.811628 | 20 | 1.795887 | 40 | 1.79747 |
| 2-Chloronaphthalene | 1 | 1.301941 | 2 | 1.234577 | 5 | 1.261078 | 10 | 1.265583 | 20 | 1.232031 | 40 | 1.224941 |
| 2-Chlorophenol | 1 | 1.214973 | 2 | 1.209461 | 5 | 1.305111 | 10 | 1.33217 | 20 | 1.378026 | 40 | 1.389739 |
| 4-Chlorophenyl phenyl ether | 1 | 0.7071653 | 2 | 0.6593299 | 5 | 0.6773879 | 10 | 0.6525344 | 20 | 0.636283 | 40 | 0.641452 |
| Chrysene | 1 | 1.306708 | 2 | 1.164201 | 5 | 1.238881 | 10 | 1.248779 | 20 | 1.219789 | 40 | 1.261333 |
| Dibenz(a,h)anthracene | 1 | 0.7512715 | 2 | 0.654872 | 5 | 0.7969043 | 10 | 0.8919851 | 20 | 0.7541061 | 40 | 0.941626 |
| Dibenzofuran | 1 | 1.871373 | 2 | 1.740989 | 5 | 1.77835 | 10 | 1.705143 | 20 | 1.70834 | 40 | 1.703961 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 1 | 1.082426 | 2 | 1.046644 | 5 | 1.297638 | 10 | 1.304534 | 20 | 1.412773 | 40 | 1.396991 |
| 1,4-Dichlorobenzene | 1 | 1.763261 | 2 | 1.615997 | 5 | 1.634718 | 10 | 1.593686 | 20 | 1.585729 | 40 | 1.569702 |
| 1,3-Dichlorobenzene | 1 | 1.712108 | 2 | 1.509974 | 5 | 1.605202 | 10 | 1.591847 | 20 | 1.585144 | 40 | 1.527454 |
| 1,2-Dichlorobenzene | 1 | 1.614674 | 2 | 1.490364 | 5 | 1.546689 | 10 | 1.516537 | 20 | 1.510281 | 40 | 1.482237 |
| 3,3'-Dichlorobenzidine | | | | | | | | | | | | |
| 2,6-Dichlorophenol | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 1 | 0.2193633 | 2 | 0.2189929 | 5 | 0.2564872 | 10 | 0.2777847 | 20 | 0.2877571 | 40 | 0.2934208 |
| Diethylphthalate | 1 | 1.305598 | 2 | 1.272227 | 5 | 1.418943 | 10 | 1.386613 | 20 | 1.419902 | 40 | 1.434097 |
| 2,4-Dimethylphenol | 1 | 0.3408463 | 2 | 0.315261 | 5 | 0.3594693 | 10 | 0.3685544 | 20 | 0.370695 | 40 | 0.3730775 |
| Dimethyl phthalate | 1 | | 2 | 1.3603 | 5 | 1.387939 | 10 | 1.399916 | 20 | 1.384977 | 40 | 1.382422 |
| 4,6-Dinitro-2-methylphenol | 1 | | 2 | | 5 | 5.314518E-02 | 10 | 8.603549E-02 | 20 | 0.1020477 | 40 | 0.1278111 |
| 2,4-Dinitrophenol | 1 | | 2 | | 5 | ~~4.447398E-02~~ | 10 | 6.358993E-02 | 20 | 8.773021E-02 | 40 | 0.1367475 |
| 2,4-Dinitrotoluene | 1 | | 2 | 0.2696124 | 5 | 0.3483922 | 10 | 0.3796104 | 20 | 0.3959347 | 40 | 0.432168 |
| 2,6-Dinitrotoluene | 1 | | 2 | 0.2748954 | 5 | 0.2969673 | 10 | 0.3157389 | 20 | 0.320917 | 40 | 0.3377335 |
| Di-n-octylphthalate | 1 | ~~0.777665~~ | 2 | ~~0.7972759~~ | 5 | ~~1.157303~~ | 10 | 1.226168 | 20 | 1.667762 | 40 | 1.640777 |
| 1,4-Dioxane | | | | | | | | | | | | |
| 1,2-Diphenylhydrazine | 1 | 0.8633715 | 2 | 0.7922832 | 5 | 0.851889 | 10 | 0.902869 | 20 | 0.8523618 | 40 | 0.8367419 |
| Bis(2-ethylhexyl)phthalate | 1 | ~~0.5629525~~ | 2 | 0.623236 | 5 | 0.7692422 | 10 | 0.8261352 | 20 | 0.9295948 | 40 | 0.9699243 |
| Fluoranthene | 1 | 1.010262 | 2 | 1.050371 | 5 | 1.174781 | 10 | 1.087186 | 20 | 1.202634 | 40 | 1.216382 |
| Fluorene | 1 | 1.417605 | 2 | 1.334531 | 5 | 1.437789 | 10 | 1.382289 | 20 | 1.384069 | 40 | 1.391212 |
| 2-Fluorobiphenyl | 1 | 1.529612 | 2 | 1.450802 | 5 | 1.515443 | 10 | 1.491745 | 20 | 1.421812 | 40 | 1.419088 |
| 2-Fluorophenol | 2 | 1.169393 | 4 | 1.036011 | 10 | 1.183087 | 20 | 1.188432 | 40 | 1.218105 | 80 | 1.194993 |
| Hexachlorobenzene | 1 | 0.2870931 | 2 | 0.2718521 | 5 | 0.2738817 | 10 | 0.2758146 | 20 | 0.2709715 | 40 | 0.2670496 |
| Hexachlorobutadiene | 1 | 0.1996622 | 2 | 0.1865372 | 5 | 0.1967719 | 10 | 0.1932208 | 20 | 0.1899233 | 40 | 0.1887931 |
| Hexachlorocyclopentadiene | 1 | ~~0.166607~~ | 2 | ~~0.1547457~~ | 5 | ~~0.2130315~~ | 10 | 0.2250949 | 20 | 0.2330708 | 40 | 0.2880169 |
| Hexachloroethane | 1 | 0.6451315 | 2 | 0.5286661 | 5 | 0.5787438 | 10 | 0.5669407 | 20 | 0.5836949 | 40 | 0.5978446 |
| Indeno(1,2,3-cd)pyrene | 1 | 0.9439524 | 2 | 0.8985737 | 5 | 0.9919689 | 10 | 1.096168 | 20 | 0.9191515 | 40 | 1.154267 |
| Isophorone | 1 | 0.6213175 | 2 | 0.5968757 | 5 | 0.655194 | 10 | 0.6761772 | 20 | 0.6705981 | 40 | 0.6772569 |
| 1-Methylnaphthalene | 1 | 0.6465797 | 2 | 0.6184212 | 5 | 0.6369707 | 10 | 0.6319121 | 20 | 0.6193783 | 40 | 0.6184568 |
| 2-Methylnaphthalene | 1 | 0.6007326 | 2 | 0.5838361 | 5 | 0.6129738 | 10 | 0.6049021 | 20 | 0.6013921 | 40 | 0.6039252 |
| 2-Methylphenol | 1 | 1.026084 | 2 | 1.011589 | 5 | 1.14484 | 10 | 1.136228 | 20 | 1.174352 | 40 | 1.20347 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_007

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| 4-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| Naphthalene | 1 | 1.247118 | 2 | 1.106848 | 5 | 1.148925 | 10 | 1.133299 | 20 | 1.11088 | 40 | 1.079891 |
| 4-Nitroaniline | 1 | ~~0.1637579~~ | 2 | 0.2187884 | 5 | 0.2653623 | 10 | 0.2143523 | 20 | 0.2396615 | 40 | 0.2459712 |
| 3-Nitroaniline | 1 | 0.2521217 | 2 | 0.2314275 | 5 | 0.3066698 | 10 | 0.2972167 | 20 | 0.3176403 | 40 | 0.3340046 |
| 2-Nitroaniline | 1 | ~~0.2346445~~ | 2 | 0.2444902 | 5 | 0.300972 | 10 | 0.329205 | 20 | 0.3393918 | 40 | 0.3674347 |
| Nitrobenzene | 1 | 0.3854216 | 2 | 0.3471099 | 5 | 0.3691849 | 10 | 0.3758157 | 20 | 0.3757619 | 40 | 0.3756076 |
| Nitrobenzene-d5 | 1 | 0.352723 | 2 | 0.3219239 | 5 | 0.3538833 | 10 | 0.3730289 | 20 | 0.3752849 | 40 | 0.3765852 |
| 4-Nitrophenol | 1 | | 2 | | 5 | 0.1331172 | 10 | 0.1539397 | 20 | 0.1740912 | 40 | 0.215041 |
| 2-Nitrophenol | 1 | ~~0.129178~~ | 2 | ~~0.1163139~~ | 5 | 0.1485732 | 10 | 0.17082 | 20 | 0.1803181 | 40 | 0.1943955 |
| N-Nitrosodimethylamine | 1 | 0.7647097 | 2 | 0.661789 | 5 | 0.6967903 | 10 | 0.688223 | 20 | 0.7105897 | 40 | 0.7218412 |
| N-Nitrosodiphenylamine | 1 | 0.7364883 | 2 | 0.7242688 | 5 | 0.7675569 | 10 | 0.8277756 | 20 | 0.7829048 | 40 | 0.7552249 |
| N-Nitroso-di-n-propylamine | 1 | 0.8476763 | 2 | 0.7771541 | 5 | 0.853617 | 10 | 0.8701614 | 20 | 0.8776069 | 40 | 0.8946144 |
| Pentachlorophenol | 1 | | 2 | | 5 | 5.778394E-02 | 10 | 8.270825E-02 | 20 | 0.1099003 | 40 | 0.1367365 |
| Phenanthrene | 1 | 1.342498 | 2 | 1.263175 | 5 | 1.243815 | 10 | 1.236225 | 20 | 1.217743 | 40 | 1.191144 |
| Phenol | 1 | 1.490667 | 2 | 1.31629 | 5 | 1.525052 | 10 | 1.523419 | 20 | 1.537998 | 40 | 1.5435 |
| Phenol-d6 | 2 | 1.404785 | 4 | 1.320014 | 10 | 1.47159 | 20 | 1.488608 | 40 | 1.497926 | 80 | 1.486483 |
| Pyrene | 1 | 1.333765 | 2 | 1.276026 | 5 | 1.300614 | 10 | 1.457668 | 20 | 1.450879 | 40 | 1.446398 |
| Pyridine | 1 | 1.454129 | 2 | 1.255486 | 5 | 1.344622 | 10 | 1.386362 | 20 | 1.421998 | 40 | 1.414011 |
| Terphenyl-d14 | 1 | 0.8692116 | 2 | 0.8169587 | 5 | 0.8477459 | 10 | 0.9168767 | 20 | 0.9257567 | 40 | 0.924241 |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | | | | | | |
| 2,3,4,6-Tetrachlorophenol | 1 | | 2 | | 5 | 0.225384 | 10 | 0.248152 | 20 | 0.2704891 | 40 | 0.311669 |
| 2,4,6-Tribromophenol | 2 | | 4 | ~~7.386201E-03~~ | 10 | 0.0957204 | 20 | 0.1146915 | 40 | 0.1142205 | 80 | 0.1204485 |
| 1,2,4-Trichlorobenzene | 1 | 0.3839343 | 2 | 0.374162 | 5 | 0.3658839 | 10 | 0.3641081 | 20 | 0.3579797 | 40 | 0.3484484 |
| 2,4,6-Trichlorophenol | 1 | ~~0.2252043~~ | 2 | 0.2345706 | 5 | 0.3036388 | 10 | 0.3406874 | 20 | 0.3510972 | 40 | 0.380565 |
| 2,4,5-Trichlorophenol | 1 | 0.2421286 | 2 | 0.2367774 | 5 | 0.2965186 | 10 | 0.340473 | 20 | 0.3434994 | 40 | 0.3869717 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_007

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 50 | 1.238488 | 80 | 1.19577 | 100 | 1.16933 | | | | | | |
| Acenaphthylene | 50 | 1.97121 | 80 | 1.884909 | 100 | 1.831805 | | | | | | |
| Acetophenone | | | | | | | 1 | 1.733387 | 2 | 1.611126 | 5 | 1.755035 |
| Aniline | 50 | 1.948951 | 80 | 1.907822 | 100 | 1.862631 | | | | | | |
| Anthracene | 50 | 1.178258 | 80 | 1.127398 | 100 | 1.098018 | | | | | | |
| Atrazine | | | | | | | 1 | 0.1680055 | 2 | 0.213903 | 5 | 0.2370567 |
| Benzaldehyde | | | | | | | 1 | 1.068138 | 2 | 1.056947 | 5 | 1.110207 |
| Benzidine | | | | | | | 1 | | 2 | ~~0.3685161~~ | 5 | 0.5108731 |
| Benzo(a)anthracene | 50 | 1.249589 | 80 | 1.222044 | 100 | 1.204762 | | | | | | |
| Benzo(a)pyrene | 50 | 1.167092 | 80 | 1.14047 | 100 | 1.155787 | | | | | | |
| Benzo(b)fluoranthene | 50 | 1.275165 | 80 | 1.224665 | 100 | 1.333177 | | | | | | |
| Benzo(g,h,i)perylene | 50 | 0.9771522 | 80 | 0.9672074 | 100 | 0.8194906 | | | | | | |
| Benzoic acid | 50 | 0.1965843 | 80 | 0.2128701 | 100 | 0.2236522 | | | | | | |
| Benzo(k)fluoranthene | 50 | 1.252373 | 80 | 1.210115 | 100 | ~~1.293734~~ | | | | | | |
| Benzyl alcohol | 50 | 0.8433992 | 80 | 0.8408955 | 100 | 0.828434 | | | | | | |
| 1,1-Biphenyl | | | | | | | 1 | 1.729905 | 2 | 1.761782 | 5 | 1.778887 |
| 4-Bromophenyl-phenylether | 50 | 0.236109 | 80 | 0.2297848 | 100 | 0.222073 | | | | | | |
| Butylbenzylphthalate | 50 | 0.7153074 | 80 | 0.6926723 | 100 | 0.7158573 | | | | | | |
| Caprolactam | | | | | | | 1 | ~~6.332556E-02~~ | 2 | ~~6.355997E-02~~ | 5 | 8.324675E-02 |
| Carbazole | 50 | 1.01202 | 80 | 0.9766254 | 100 | 0.9601454 | | | | | | |
| 4-Chloro-3-methylphenol | 50 | 0.3070247 | 80 | 0.3059882 | 100 | 0.2999465 | | | | | | |
| 4-Chloroaniline | 50 | 0.4323715 | 80 | 0.4259841 | 100 | 0.4193021 | | | | | | |
| Bis(2-chloroethoxy)methane | 50 | 0.3916945 | 80 | 0.3836585 | 100 | 0.3728562 | | | | | | |
| Bis(2-chloroethyl)ether | 50 | 1.226619 | 80 | 1.198521 | 100 | 1.165071 | | | | | | |
| 2,2'-Oxybis-1-chloropropane | 50 | 1.757395 | 80 | 1.690954 | 100 | 1.662549 | | | | | | |
| 2-Chloronaphthalene | 50 | 1.199244 | 80 | 1.160444 | 100 | 1.130907 | | | | | | |
| 2-Chlorophenol | 50 | 1.373857 | 80 | 1.348389 | 100 | 1.332618 | | | | | | |
| 4-Chlorophenyl phenyl ether | 50 | 0.6356375 | 80 | 0.6158727 | 100 | 0.608712 | | | | | | |
| Chrysene | 50 | 1.226559 | 80 | 1.182619 | 100 | 1.165941 | | | | | | |
| Dibenz(a,h)anthracene | 50 | 0.969048 | 80 | 0.9854922 | 100 | 0.8468877 | | | | | | |
| Dibenzofuran | 50 | 1.658712 | 80 | 1.596439 | 100 | 1.558825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 50 | 1.391006 | 80 | 1.287289 | 100 | 1.247621 | | | | | | |
| 1,4-Dichlorobenzene | 50 | 1.556736 | 80 | 1.509165 | 100 | 1.484188 | | | | | | |
| 1,3-Dichlorobenzene | 50 | 1.520602 | 80 | 1.482944 | 100 | 1.474431 | | | | | | |
| 1,2-Dichlorobenzene | 50 | 1.473125 | 80 | 1.433567 | 100 | 1.416697 | | | | | | |
| 3,3'-Dichlorobenzidine | | | | | | | 1 | ~~0.2115697~~ | 2 | ~~0.2588051~~ | 5 | 0.3243157 |
| 2,6-Dichlorophenol | | | | | | | 1 | 0.2370254 | 2 | 0.2189698 | 5 | 0.2517737 |
| 2,4-Dichlorophenol | 50 | 0.2969539 | 80 | 0.2962102 | 100 | 0.2908114 | | | | | | |
| Diethylphthalate | 50 | 1.416848 | 80 | 1.369631 | 100 | 1.357585 | | | | | | |
| 2,4-Dimethylphenol | 50 | 0.3684433 | 80 | 0.3608579 | 100 | 0.3537564 | | | | | | |
| Dimethyl phthalate | 50 | 1.359098 | 80 | 1.310816 | 100 | 1.297145 | | | | | | |
| 4,6-Dinitro-2-methylphenol | 50 | 0.1401067 | 80 | 0.1437955 | 100 | 0.1460562 | | | | | | |
| 2,4-Dinitrophenol | 50 | 0.159813 | 80 | 0.1664924 | 100 | 0.1758471 | | | | | | |
| 2,4-Dinitrotoluene | 50 | 0.4298704 | 80 | 0.422104 | 100 | 0.421059 | | | | | | |
| 2,6-Dinitrotoluene | 50 | 0.330395 | 80 | 0.3281434 | 100 | 0.3247883 | | | | | | |
| Di-n-octylphthalate | 50 | 1.621448 | 80 | 1.518511 | 100 | 1.815061 | | | | | | |
| 1,4-Dioxane | | | | | | | 1 | 0.5750144 | 2 | 0.6155307 | 5 | 0.5975798 |
| 1,2-Diphenylhydrazine | 50 | 0.8174537 | 80 | 0.7756974 | 100 | 0.7472643 | | | | | | |
| Bis(2-ethylhexyl)phthalate | 50 | 0.9644317 | 80 | 0.9327127 | 100 | 0.9433765 | | | | | | |
| Fluoranthene | 50 | 1.200663 | 80 | 1.145228 | 100 | 1.117971 | | | | | | |
| Fluorene | 50 | 1.371696 | 80 | 1.3477 | 100 | 1.331747 | | | | | | |
| 2-Fluorobiphenyl | 50 | 1.380741 | 80 | 1.342227 | 100 | 1.31122 | | | | | | |
| 2-Fluorophenol | 100 | 1.184307 | 160 | 1.150476 | 200 | 1.143049 | | | | | | |
| Hexachlorobenzene | 50 | 0.2611324 | 80 | 0.2528165 | 100 | 0.2469684 | | | | | | |
| Hexachlorobutadiene | 50 | 0.1898094 | 80 | 0.1823152 | 100 | 0.1809221 | | | | | | |
| Hexachlorocyclopentadiene | 50 | 0.3205142 | 80 | 0.2672985 | 100 | 0.2978232 | | | | | | |
| Hexachloroethane | 50 | 0.5928387 | 80 | 0.5834398 | 100 | 0.5785441 | | | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 1.184644 | 80 | 1.201734 | 100 | 1.031961 | | | | | | |
| Isophorone | 50 | 0.6693467 | 80 | 0.6606669 | 100 | 0.651883 | | | | | | |
| 1-Methylnaphthalene | 50 | 0.6110108 | 80 | 0.5887133 | 100 | 0.578354 | | | | | | |
| 2-Methylnaphthalene | 50 | 0.5899842 | 80 | 0.5725228 | 100 | 0.5640864 | | | | | | |
| 2-Methylphenol | 50 | 1.174288 | 80 | 1.161528 | 100 | 1.130825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| 4-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| Naphthalene | 50 | 1.062289 | 80 | 1.009165 | 100 | 0.9853361 | | | | | | |
| 4-Nitroaniline | 50 | 0.245583 | 80 | 0.2713623 | 100 | 0.2926737 | | | | | | |
| 3-Nitroaniline | 50 | 0.3328151 | 80 | 0.3335098 | 100 | 0.3302451 | | | | | | |
| 2-Nitroaniline | 50 | 0.3604391 | 80 | 0.3575911 | 100 | 0.3502726 | | | | | | |
| Nitrobenzene | 50 | 0.3742193 | 80 | 0.3632219 | 100 | 0.3548228 | | | | | | |
| Nitrobenzene-d5 | 50 | 0.3716804 | 80 | 0.3677033 | 100 | 0.3602605 | | | | | | |
| 4-Nitrophenol | 50 | 0.2302537 | 80 | 0.2312482 | 100 | 0.237925 | | | | | | |
| 2-Nitrophenol | 50 | 0.1987571 | 80 | 0.1969275 | 100 | 0.1952942 | | | | | | |
| N-Nitrosodimethylamine | 50 | 0.7179275 | 80 | 0.699562 | 100 | 0.6988776 | | | | | | |
| N-Nitrosodiphenylamine | 50 | 0.734013 | 80 | 0.7049383 | 100 | 0.6836085 | | | | | | |
| N-Nitroso-di-n-propylamine | 50 | 0.8590022 | 80 | 0.8618547 | 100 | 0.8482223 | | | | | | |
| Pentachlorophenol | 50 | 0.1477524 | 80 | 0.152323 | 100 | 0.1493187 | | | | | | |
| Phenanthrene | 50 | 1.165403 | 80 | 1.107075 | 100 | 1.089032 | | | | | | |
| Phenol | 50 | 1.515388 | 80 | 1.487162 | 100 | 1.485453 | | | | | | |
| Phenol-d6 | 100 | 1.444334 | 160 | 1.417009 | 200 | 1.38417 | | | | | | |
| Pyrene | 50 | 1.376348 | 80 | 1.350116 | 100 | 1.429147 | | | | | | |
| Pyridine | 50 | 1.386096 | 80 | 1.382983 | 100 | 1.355936 | | | | | | |
| Terphenyl-d14 | 50 | 0.8866 | 80 | 0.8605814 | 100 | 0.9157647 | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | 1 | 0.3530087 | 2 | 0.3195873 | 5 | 0.3252684 |
| 2,3,4,6-Tetrachlorophenol | 50 | 0.3149583 | 80 | 0.3195705 | 100 | 0.3193177 | | | | | | |
| 2,4,6-Tribromophenol | 100 | 0.1236089 | 160 | 0.1225882 | 200 | 0.120418 | | | | | | |
| 1,2,4-Trichlorobenzene | 50 | 0.3509992 | 80 | 0.3419386 | 100 | 0.3363453 | | | | | | |
| 2,4,6-Trichlorophenol | 50 | 0.3746937 | 80 | 0.3778514 | 100 | 0.3769771 | | | | | | |
| 2,4,5-Trichlorophenol | 50 | 0.3892628 | 80 | 0.399019 | 100 | 0.3860452 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0351002 | Instrument: | MS-BNA3 |
| Matrix: | Water | Calibration Date: | 12/7/2010 5:31:41PM |

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | |
| Acetophenone | 10 | 1.704303 | 20 | 1.801178 | 40 | 1.795701 | 50 | 1.710426 | 80 | 1.718945 | 100 | 1.59967 |
| Aniline | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | |
| Atrazine | 10 | 0.2348484 | 20 | 0.2490883 | 40 | 0.2501657 | 50 | 0.2413828 | 80 | 0.2398009 | 100 | 0.2294713 |
| Benzaldehyde | 10 | 1.071349 | 20 | 1.114882 | 40 | 1.084654 | 50 | 1.035449 | 80 | 1.026022 | 100 | 0.9476697 |
| Benzidine | 10 | 0.5256135 | 20 | 0.6359201 | 40 | 0.7009071 | 50 | 0.7077408 | 80 | 0.7108148 | 100 | 0.6669063 |
| Benzo(a)anthracene | | | | | | | | | | | | |
| Benzo(a)pyrene | | | | | | | | | | | | |
| Benzo(b)fluoranthene | | | | | | | | | | | | |
| Benzo(g,h,i)perylene | | | | | | | | | | | | |
| Benzoic acid | | | | | | | | | | | | |
| Benzo(k)fluoranthene | | | | | | | | | | | | |
| Benzyl alcohol | | | | | | | | | | | | |
| 1,1-Biphenyl | 10 | 1.698813 | 20 | 1.690111 | 40 | 1.617949 | 50 | 1.584418 | 80 | 1.52658 | 100 | 1.43873 |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | |
| Caprolactam | 10 | 7.727893E-02 | 20 | 9.873525E-02 | 40 | 0.1074636 | 50 | 0.1070435 | 80 | 0.1101464 | 100 | 0.1047554 |
| Carbazole | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | | | | | | | | | | |
| 4-Chloroaniline | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | | | | | | | | | | | | |
| 2,2'-Oxybis-1-chloropropane | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | | | | | | | | | | | | |
| Dibenzofuran | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 10 | 0.3330745 | 20 | 0.3900825 | 40 | 0.4220677 | 50 | 0.4388195 | 80 | 0.42004 | 100 | 0.4023442 |
| 2,6-Dichlorophenol | 10 | 0.2406157 | 20 | 0.2739896 | 40 | 0.2837769 | 50 | 0.2807297 | 80 | 0.2789585 | 100 | 0.2685961 |
| 2,4-Dichlorophenol | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | |
| Dimethyl phthalate | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | | | | | | | | | | |
| 2,4-Dinitrophenol | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | |
| Di-n-octylphthalate | | | | | | | | | | | | |
| 1,4-Dioxane | 10 | 0.6181946 | 20 | 0.5750216 | 40 | 0.597864 | 50 | 0.5649718 | 80 | 0.5618798 | 100 | 0.5357223 |
| 1,2-Diphenylhydrazine | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | |
| 2-Fluorobiphenyl | | | | | | | | | | | | |
| 2-Fluorophenol | | | | | | | | | | | | |
| Hexachlorobenzene | | | | | | | | | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | | | | | | | | | | | | |
| Hexachloroethane | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | | | | | | | | | | | | |
| Isophorone | | | | | | | | | | | | |
| 1-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | | | | | | | | | | | | |
| 4-Methylphenol | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | |
| 4-Nitroaniline | | | | | | | | | | | | |
| 3-Nitroaniline | | | | | | | | | | | | |
| 2-Nitroaniline | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | |
| Nitrobenzene-d5 | | | | | | | | | | | | |
| 4-Nitrophenol | | | | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | |
| N-Nitrosodimethylamine | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | |
| N-Nitroso-di-n-propylamine | | | | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | |
| Phenol | | | | | | | | | | | | |
| Phenol-d6 | | | | | | | | | | | | |
| Pyrene | | | | | | | | | | | | |
| Pyridine | | | | | | | | | | | | |
| Terphenyl-d14 | | | | | | | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | 10 | 0.3142966 | 20 | 0.3196447 | 40 | 0.3170485 | 50 | 0.3100616 | 80 | 0.3033013 | 100 | 0.2910487 |
| 2,3,4,6-Tetrachlorophenol | | | | | | | | | | | | |
| 2,4,6-Tribromophenol | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV3.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV3 | Injection Time: | 10:01 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Benzaldehyde | A | 50.00 | 47.93 | 1.057258 | 1.013398 | | -4.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV4.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV4 | Injection Time: | 10:31 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 3,3'-Dichlorobenzidine | A | 50.00 | 47.61 | 0.3901063 | 0.3714708 | | -4.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV5.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV5 | Injection Time: | 11:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Acetophenone | A | 50.00 | 48.49 | 1.714419 | 1.662733 | | -3.0 | 20 |
| Atrazine | A | 50.00 | 49.51 | 0.2293025 | 0.2270669 | | -1.0 | 20 |
| Benzaldehyde | A | 50.00 | 0.000 | 1.057258 | | | | 20 |
| Caprolactam | A | 50.00 | 52.93 | 0.0983814 | 0.1041517 | | 5.9 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 46.99 | 0.3170295 | 0.2979379 | | -6.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV7.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV7 | Injection Time: | 12:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| N-Nitrosodiphenylamine | A | 50.00 | 51.34 | 0.7463088 | 0.7662808 | | 2.7 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 43.50 | 0.2870772 | 0.249777 | | -13.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| COMPOUND | TYPE | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Bromophenyl-phenylether | A | 50.00 | 51.04 | 0.2396007 | 0.2446022 | | 2.1 | 20 |
| Butylbenzylphthalate | A | 50.00 | 54.90 | 0.6659619 | 0.731176 | | 9.8 | 20 |
| Carbazole | A | 50.00 | 44.33 | 1.033588 | 0.9164384 | | -11.3 | 20 |
| 4-Chloro-3-methylphenol | A | 50.00 | 51.74 | 0.2791833 | 0.2888752 | | 3.5 | 20 |
| 4-Chloroaniline | A | 50.00 | 50.74 | 0.4236872 | 0.4299877 | | 1.5 | 20 |
| Bis(2-chloroethoxy)methane | A | 50.00 | 49.55 | 0.4015206 | 0.397907 | | -0.9 | 20 |
| Bis(2-chloroethyl)ether | A | 50.00 | 49.26 | 1.242957 | 1.224652 | | -1.5 | 20 |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 49.35 | 1.791162 | 1.767772 | | -1.3 | 20 |
| 2-Chloronaphthalene | A | 50.00 | 49.94 | 1.223416 | 1.222017 | | -0.1 | 20 |
| 2-Chlorophenol | A | 50.00 | 50.72 | 1.320483 | 1.339391 | | 1.4 | 20 |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 48.94 | 0.6482639 | 0.6345678 | | -2.1 | 20 |
| Dibenzofuran | A | 50.00 | 52.29 | 1.702459 | 1.780513 | | 4.6 | 20 |
| Di-n-butylphthalate | A | 50.00 | 53.56 | 1.274102 | 1.364881 | | 7.1 | 20 |
| 2,4-Dichlorophenol | A | 50.00 | 53.23 | 0.2708646 | 0.2883479 | | 6.5 | 20 |
| Diethylphthalate | A | 50.00 | 50.07 | 1.375716 | 1.37777 | | 0.1 | 20 |
| 2,4-Dimethylphenol | A | 50.00 | 45.98 | 0.3567735 | 0.3280623 | | -8.0 | 20 |
| Dimethyl phthalate | A | 50.00 | 50.41 | 1.360327 | 1.371495 | | 0.8 | 20 |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 43.80 | 0.1141426 | 0.118963 | | -12.4 | 20 |
| 2,4-Dinitrophenol | L | 50.00 | 41.03 | 0.1317034 | 0.1214933 | 0.05 | -17.9 | 20 |
| 2,4-Dinitrotoluene | A | 50.00 | 54.89 | 0.3873439 | 0.4252053 | | 9.8 | 20 |
| 2,6-Dinitrotoluene | A | 50.00 | 50.97 | 0.3161974 | 0.3223188 | | 1.9 | 20 |
| Di-n-octylphthalate | A | 50.00 | 52.54 | 1.581621 | 1.662112 | | 5.1 | 20 |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 54.27 | 0.8698317 | 0.944141 | | 8.5 | 20 |
| Hexachlorobenzene | A | 50.00 | 48.64 | 0.2675089 | 0.2602515 | | -2.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 50.27 | 0.1897728 | 0.1907933 | | 0.5 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 47.27 | 0.2719697 | 0.2571016 | 0.05 | -5.5 | 20 |
| Hexachloroethane | A | 50.00 | 51.17 | 0.5839827 | 0.5976224 | | 2.3 | 20 |
| Isophorone | A | 50.00 | 49.58 | 0.6532573 | 0.6477211 | | -0.8 | 20 |
| 2-Methylphenol | A | 50.00 | 50.79 | 1.129245 | 1.147068 | | 1.6 | 20 |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Methylphenol | A | 50.00 | 46.61 | 1.146708 | 1.068856 | | -6.8 | 20 |
| Naphthalene | A | 50.00 | 47.81 | 1.098195 | 1.050188 | | -4.4 | 20 |
| 4-Nitroaniline | A | 50.00 | 48.63 | 0.2492193 | 0.2423702 | | -2.7 | 20 |
| 3-Nitroaniline | A | 50.00 | 54.97 | 0.3039612 | 0.3341951 | | 9.9 | 20 |
| 2-Nitroaniline | A | 50.00 | 58.93 | 0.3312246 | 0.3904014 | | 17.9 | 20 |
| Nitrobenzene | A | 50.00 | 50.66 | 0.3690184 | 0.3738603 | | 1.3 | 20 |
| 4-Nitrophenol | L | 50.00 | 45.62 | 0.1965166 | 0.2046322 | 0.05 | -8.8 | 20 |
| 2-Nitrophenol | A | 50.00 | 50.69 | 0.1835837 | 0.1861302 | | 1.4 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 51.06 | 0.8544344 | 0.872589 | 0.05 | 2.1 | 20 |
| Pentachlorophenol | L | 50.00 | 47.55 | 0.1195033 | 0.1362715 | | -4.9 | 20 |
| Phenol | A | 50.00 | 49.32 | 1.491659 | 1.471449 | | -1.4 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 52.15 | 0.3425101 | 0.3572326 | | 4.3 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 48.75 | 0.3356329 | 0.3771646 | | -2.5 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 48.29 | 1.429188 | 1.380386 | | -3.4 | 20 |
| 2-Fluorophenol | A | 100.0 | 101.4 | 1.163095 | 1.179091 | | 1.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 50.95 | 0.3614526 | 0.3682965 | | 1.9 | 20 |
| Phenol-d6 | A | 100.0 | 97.70 | 1.434991 | 1.402014 | | -2.3 | 20 |
| Terphenyl-d14 | A | 50.00 | 52.29 | 0.8848596 | 0.925348 | | 4.6 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 97.03 | 0.1159566 | 0.1125125 | | -3.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34710 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L34710-TUN1 | SEQ-TUN1.D | 12/13/10 13:46 |
| Calibration Check | 0L34710-CCV1 | SEQ-CCV1.D | 12/13/10 14:13 |
| LCS | 0L14025-BS1 | 1200518.D | 12/13/10 22:39 |
| LCS Dup | 0L14025-BSD1 | 1200519.D | 12/13/10 23:08 |
| Blank | 0L14025-BLK1 | 1200517.D | 12/13/10 23:37 |
| 1011002-01 GKHMS-GW-014-1010 | 1012005-01 | 1200501.D | 12/14/10 00:06 |
| 1011002-02 -015- | 1012005-02 | 1200502.D | 12/14/10 00:35 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/13/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 13:46 |
| Sequence: | 0L34710 | Lab Sample ID: | 0L34710-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 39.8 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 42.8 | PASS |
| 70 | Less than 2% of 69 | 0.547 | PASS |
| 127 | 40 - 60% of 198 | 56.1 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.54 | PASS |
| 275 | 10 - 30% of 198 | 27.1 | PASS |
| 365 | 1 - 200% of 198 | 4.02 | PASS |
| 441 | 0.001 - 100% of 443 | 77.1 | PASS |
| 442 | 40 - 200% of 198 | 87.3 | PASS |
| 443 | 17 - 23% of 442 | 18.5 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L34710 | Injection Date: | 12/13/10 |
| Lab Sample ID: | 0L34710-CCV1 | Injection Time: | 14:13 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Acetophenone | A | 50.00 | 50.90 | 1.714419 | 1.745432 | | 1.8 | 20 | |
| Atrazine | A | 50.00 | 48.98 | 0.2293025 | 0.2246282 | | -2.0 | 20 | |
| Benzaldehyde | A | 50.00 | 30.72 | 1.057258 | 0.6495914 | | -38.6 | 20 | * |
| 1,1-Biphenyl | A | 50.00 | 48.37 | 1.647464 | 1.593885 | | -3.3 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 49.87 | 0.2396007 | 0.2389785 | | -0.3 | 20 | |
| Butylbenzylphthalate | A | 50.00 | 51.18 | 0.6659619 | 0.6816254 | | 2.4 | 20 | |
| Caprolactam | A | 50.00 | 52.61 | 0.0983814 | 0.1035198 | | 5.2 | 20 | |
| Carbazole | A | 50.00 | 46.04 | 1.033588 | 0.9516917 | | -7.9 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 57.11 | 0.2791833 | 0.3188668 | | 14.2 | 20 | |
| 4-Chloroaniline | A | 50.00 | 45.74 | 0.4236872 | 0.3875688 | | -8.5 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 43.78 | 0.4015206 | 0.3515448 | | -12.4 | 20 | |
| Bis(2-chloroethyl)ether | A | 50.00 | 41.98 | 1.242957 | 1.043628 | | -16.0 | 20 | |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 37.07 | 1.791162 | 1.328027 | | -25.9 | 20 | * |
| 2-Chloronaphthalene | A | 50.00 | 47.62 | 1.223416 | 1.165137 | | -4.8 | 20 | |
| 2-Chlorophenol | A | 50.00 | 47.82 | 1.320483 | 1.263037 | | -4.4 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 52.64 | 0.6482639 | 0.6825252 | | 5.3 | 20 | |
| Dibenzofuran | A | 50.00 | 48.73 | 1.702459 | 1.659332 | | -2.5 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 54.56 | 1.274102 | 1.390393 | | 9.1 | 20 | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 36.17 | 0.3901063 | 0.2821787 | | -27.7 | 20 | * |
| 2,4-Dichlorophenol | A | 50.00 | 55.61 | 0.2708646 | 0.3012444 | | 11.2 | 20 | |
| Diethylphthalate | A | 50.00 | 54.61 | 1.375716 | 1.502548 | | 9.2 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 53.14 | 0.3567735 | 0.3791873 | | 6.3 | 20 | |
| Dimethyl phthalate | A | 50.00 | 51.21 | 1.360327 | 1.393187 | | 2.4 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 52.59 | 0.1141426 | 0.1458769 | | 5.2 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 53.69 | 0.1317034 | 0.1699836 | 0.05 | 7.4 | 20 | |
| 2,4-Dinitrotoluene | A | 50.00 | 57.59 | 0.3873439 | 0.4461315 | | 15.2 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 51.01 | 0.3161974 | 0.3225998 | | 2.0 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 59.89 | 1.581621 | 1.89435 | | 19.8 | 20 | |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 51.60 | 0.8698317 | 0.8977252 | | 3.2 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L34710 | Injection Date: | 12/13/10 |
| Lab Sample ID: | 0L34710-CCV1 | Injection Time: | 14:13 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Hexachlorobenzene | A | 50.00 | 51.87 | 0.2675089 | 0.2775399 | | 3.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 57.01 | 0.1897728 | 0.2163702 | | 14.0 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 61.21 | 0.2719697 | 0.3329619 | 0.05 | 22.4 | 20 * |
| Hexachloroethane | A | 50.00 | 51.06 | 0.5839827 | 0.596359 | | 2.1 | 20 |
| Isophorone | A | 50.00 | 49.35 | 0.6532573 | 0.6448134 | | -1.3 | 20 |
| 2-Methylphenol | A | 50.00 | 45.68 | 1.129245 | 1.031713 | | -8.6 | 20 |
| 4-Methylphenol | A | 50.00 | 48.83 | 1.146708 | 1.119984 | | -2.3 | 20 |
| Naphthalene | A | 50.00 | 47.40 | 1.098195 | 1.041062 | | -5.2 | 20 |
| 4-Nitroaniline | A | 50.00 | 56.20 | 0.2492193 | 0.2801354 | | 12.4 | 20 |
| 3-Nitroaniline | A | 50.00 | 49.76 | 0.3039612 | 0.3025166 | | -0.5 | 20 |
| 2-Nitroaniline | A | 50.00 | 68.78 | 0.3312246 | 0.455608 | | 37.6 | 20 * |
| Nitrobenzene | A | 50.00 | 51.36 | 0.3690184 | 0.3790986 | | 2.7 | 20 |
| 4-Nitrophenol | L | 50.00 | 53.74 | 0.1965166 | 0.2445698 | 0.05 | 7.5 | 20 |
| 2-Nitrophenol | A | 50.00 | 52.11 | 0.1835837 | 0.1913455 | | 4.2 | 20 |
| N-Nitrosodiphenylamine | A | 50.00 | 47.62 | 0.7463088 | 0.7107562 | | -4.8 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 48.57 | 0.8544344 | 0.830052 | 0.05 | -2.9 | 20 |
| Pentachlorophenol | L | 50.00 | 55.69 | 0.1195033 | 0.1620852 | | 11.4 | 20 |
| Phenol | A | 50.00 | 46.10 | 1.491659 | 1.375478 | | -7.8 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 54.14 | 0.3170295 | 0.3432845 | | 8.3 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 57.93 | 0.2870772 | 0.3326118 | | 15.9 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 56.45 | 0.3425101 | 0.3866924 | | 12.9 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 51.36 | 0.3356329 | 0.3978437 | | 2.7 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 48.46 | 1.429188 | 1.385202 | | -3.1 | 20 |
| 2-Fluorophenol | A | 100.0 | 94.60 | 1.163095 | 1.100265 | | -5.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 52.74 | 0.3614526 | 0.3812328 | | 5.5 | 20 |
| Phenol-d6 | A | 100.0 | 91.11 | 1.434991 | 1.307366 | | -8.9 | 20 |
| Terphenyl-d14 | A | 50.00 | 50.01 | 0.8848596 | 0.8850744 | | 0.02 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 117.4 | 0.1159566 | 0.1360921 | | 17.4 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35113 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35113-TUN1 | SEQ-TUN1.D | 12/14/10 11:46 |
| Calibration Check | 0L35113-CCV1 | SEQ-CCV1.D | 12/14/10 12:13 |
| 1011002-03 | 1012005-03 | 1200503.D | 12/14/10 12:49 |
| 1011002-04 | 1012005-04 | 1200504.D | 12/14/10 13:19 |
| 1011002-05 | 1012005-05 | 1200505.D | 12/14/10 13:49 |
| 1011002-06 | 1012005-06 | 1200506.D | 12/14/10 14:20 |
| 1011002-07 | 1012005-07 | 1200507.D | 12/14/10 14:50 |
| 1011002-08 | 1012005-08 | 1200508.D | 12/14/10 15:20 |
| 1011002-09 | 1012005-09 | 1200509.D | 12/14/10 15:50 |
| 1011002-10 | 1012005-10 | 1200510.D | 12/14/10 16:20 |
| 1011002-11 | 1012005-11 | 1200511.D | 12/14/10 16:50 |
| 1011002-12 | 1012005-12 | 1200512.D | 12/14/10 17:20 |
| 1011002-13 | 1012005-13 | 1200513.D | 12/14/10 17:50 |
| 1011002-14 | 1012005-14 | 1200514.D | 12/14/10 18:20 |
| 1011002-15 | 1012005-15 | 1200515.D | 12/14/10 18:50 |
| 1011002-16 | 1012005-16 | 1200516.D | 12/14/10 19:20 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/14/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 11:46 |
| Sequence: | 0L35113 | Lab Sample ID: | 0L35113-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 42 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 44.2 | PASS |
| 70 | Less than 2% of 69 | 0.732 | PASS |
| 127 | 40 - 60% of 198 | 55.7 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.15 | PASS |
| 275 | 10 - 30% of 198 | 28.6 | PASS |
| 365 | 1 - 200% of 198 | 3.8 | PASS |
| 441 | 0.001 - 100% of 443 | 76.3 | PASS |
| 442 | 40 - 200% of 198 | 94.5 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35113 | Injection Date: | 12/14/10 |
| Lab Sample ID: | 0L35113-CCV1 | Injection Time: | 12:13 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Acetophenone | A | 50.00 | 53.14 | 1.714419 | 1.822018 | | 6.3 | 20 | |
| Atrazine | A | 50.00 | 46.65 | 0.2293025 | 0.2139502 | | -6.7 | 20 | |
| Benzaldehyde | A | 50.00 | 32.44 | 1.057258 | 0.6859922 | | -35.1 | 20 | * |
| 1,1-Biphenyl | A | 50.00 | 47.27 | 1.647464 | 1.557432 | | -5.5 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 49.49 | 0.2396007 | 0.2371434 | | -1.0 | 20 | |
| Butylbenzylphthalate | A | 50.00 | 50.63 | 0.6659619 | 0.6743513 | | 1.3 | 20 | |
| Caprolactam | A | 50.00 | 54.19 | 0.0983814 | 0.1066196 | | 8.4 | 20 | |
| Carbazole | A | 50.00 | 46.87 | 1.033588 | 0.9689839 | | -6.3 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 59.05 | 0.2791833 | 0.3296942 | | 18.1 | 20 | |
| 4-Chloroaniline | A | 50.00 | 49.73 | 0.4236872 | 0.4214111 | | -0.5 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 44.75 | 0.4015206 | 0.3593649 | | -10.5 | 20 | |
| Bis(2-chloroethyl)ether | A | 50.00 | 43.33 | 1.242957 | 1.077259 | | -13.3 | 20 | |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 37.73 | 1.791162 | 1.351536 | | -24.5 | 20 | * |
| 2-Chloronaphthalene | A | 50.00 | 58.14 | 1.223416 | 1.422578 | | 16.3 | 20 | |
| 2-Chlorophenol | A | 50.00 | 48.55 | 1.320483 | 1.282151 | | -2.9 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 52.84 | 0.6482639 | 0.6850298 | | 5.7 | 20 | |
| Dibenzofuran | A | 50.00 | 48.58 | 1.702459 | 1.654037 | | -2.8 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 54.38 | 1.274102 | 1.385739 | | 8.8 | 20 | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 41.63 | 0.3901063 | 0.324795 | | -16.7 | 20 | |
| 2,4-Dichlorophenol | A | 50.00 | 56.56 | 0.2708646 | 0.3063902 | | 13.1 | 20 | |
| Diethylphthalate | A | 50.00 | 54.00 | 1.375716 | 1.485794 | | 8.0 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 54.87 | 0.3567735 | 0.3915274 | | 9.7 | 20 | |
| Dimethyl phthalate | A | 50.00 | 50.17 | 1.360327 | 1.364883 | | 0.3 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 51.49 | 0.1141426 | 0.1425049 | | 3.0 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 50.21 | 0.1317034 | 0.1566432 | 0.05 | 0.4 | 20 | |
| 2,4-Dinitrotoluene | A | 50.00 | 56.97 | 0.3873439 | 0.4413545 | | 13.9 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 50.90 | 0.3161974 | 0.3218858 | | 1.8 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 55.74 | 1.581621 | 1.763167 | | 11.5 | 20 | |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 53.34 | 0.8698317 | 0.9278777 | | 6.7 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35113 | Injection Date: | 12/14/10 |
| Lab Sample ID: | 0L35113-CCV1 | Injection Time: | 12:13 |

| COMPOUND | TYPE | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobenzene | A | 50.00 | 50.19 | 0.2675089 | 0.2685345 | | 0.4 | 20 | |
| Hexachlorobutadiene | A | 50.00 | 56.39 | 0.1897728 | 0.2140403 | | 12.8 | 20 | |
| Hexachlorocyclopentadiene | A | 50.00 | 63.47 | 0.2719697 | 0.345236 | 0.05 | 26.9 | 20 | * |
| Hexachloroethane | A | 50.00 | 51.61 | 0.5839827 | 0.6028103 | | 3.2 | 20 | |
| Isophorone | A | 50.00 | 49.67 | 0.6532573 | 0.648962 | | -0.7 | 20 | |
| 2-Methylphenol | A | 50.00 | 47.70 | 1.129245 | 1.077234 | | -4.6 | 20 | |
| 4-Methylphenol | A | 50.00 | 50.76 | 1.146708 | 1.164237 | | 1.5 | 20 | |
| Naphthalene | A | 50.00 | 47.91 | 1.098195 | 1.052203 | | -4.2 | 20 | |
| 4-Nitroaniline | A | 50.00 | 58.93 | 0.2492193 | 0.2937526 | | 17.9 | 20 | |
| 3-Nitroaniline | A | 50.00 | 50.30 | 0.3039612 | 0.3057815 | | 0.6 | 20 | |
| 2-Nitroaniline | A | 50.00 | 66.08 | 0.3312246 | 0.4377693 | | 32.2 | 20 | * |
| Nitrobenzene | A | 50.00 | 51.58 | 0.3690184 | 0.3807127 | | 3.2 | 20 | |
| 4-Nitrophenol | L | 50.00 | 51.58 | 0.1965166 | 0.2339281 | 0.05 | 3.2 | 20 | |
| 2-Nitrophenol | A | 50.00 | 53.58 | 0.1835837 | 0.1967238 | | 7.2 | 20 | |
| N-Nitrosodiphenylamine | A | 50.00 | 47.12 | 0.7463088 | 0.7032661 | | -5.8 | 20 | |
| N-Nitroso-di-n-propylamine | A | 50.00 | 50.66 | 0.8544344 | 0.8656725 | 0.05 | 1.3 | 20 | |
| Pentachlorophenol | L | 50.00 | 51.39 | 0.1195033 | 0.1484578 | | 2.8 | 20 | |
| Phenol | A | 50.00 | 50.02 | 1.491659 | 1.492229 | | 0.04 | 20 | |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 55.18 | 0.3170295 | 0.3498989 | | 10.4 | 20 | |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 56.69 | 0.2870772 | 0.3254866 | | 13.4 | 20 | |
| 2,4,6-Trichlorophenol | A | 50.00 | 54.24 | 0.3425101 | 0.3715868 | | 8.5 | 20 | |
| 2,4,5-Trichlorophenol | L | 50.00 | 50.62 | 0.3356329 | 0.3919241 | | 1.2 | 20 | |
| 2-Fluorobiphenyl | A | 50.00 | 47.42 | 1.429188 | 1.355371 | | -5.2 | 20 | |
| 2-Fluorophenol | A | 100.0 | 94.28 | 1.163095 | 1.096621 | | -5.7 | 20 | |
| Nitrobenzene-d5 | A | 50.00 | 52.23 | 0.3614526 | 0.3775685 | | 4.5 | 20 | |
| Phenol-d6 | A | 100.0 | 94.42 | 1.434991 | 1.354914 | | -5.6 | 20 | |
| Terphenyl-d14 | A | 50.00 | 49.00 | 0.8848596 | 0.8672051 | | -2.0 | 20 | |
| 2,4,6-Tribromophenol | A | 100.0 | 116.9 | 0.1159566 | 0.1355296 | | 16.9 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L14025 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14025-BLK1 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| LCS | 0L14025-BS1 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| LCS Dup | 0L14025-BSD1 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-01 | 1012005-01 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-02 | 1012005-02 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-03 | 1012005-03 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-04 | 1012005-04 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-05 | 1012005-05 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-06 | 1012005-06 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-07 | 1012005-07 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-08 | 1012005-08 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-09 | 1012005-09 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-10 | 1012005-10 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-11 | 1012005-11 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-12 | 1012005-12 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-13 | 1012005-13 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-14 | 1012005-14 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-15 | 1012005-15 | 11/12/10 12:35 | 1,000.00 | 1.00 |
| 1011002-16 | 1012005-16 | 11/12/10 12:35 | 1,000.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14025-BLK1 File ID: 1200517.D

Sampled: Prepared: Analyzed: 12/13/10 23:37

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14025 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14025-BLK1 File ID: 1200517.D

Sampled: Prepared: Analyzed: 12/13/10 23:37

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14025 Sequence: 0L34710 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | Q U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.451 | 72.5 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.985 | 74.6 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.662 | 83.1 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.946 | 73.7 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.832 | 91.6 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14025 | Laboratory ID: | 0L14025-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Acetophenone | 5.000 | 4.133 | 82.7 | 50 - 110 |
| Atrazine | 5.000 | 4.359 | 87.2 | 70 - 115 |
| **Benzaldehyde** | **5.000** | **5.00 U** | **0** | **10 - 180** |
| 1,1-Biphenyl | 5.000 | 3.866 | 77.3 | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | 4.683 | 93.7 | 50 - 115 |
| Butylbenzylphthalate | 5.000 | 4.614 | 92.3 | 45 - 115 |
| Caprolactam | 5.000 | 3.381 | 67.6 | 20 - 110 |
| Carbazole | 5.000 | 4.126 | 82.5 | 50 - 115 |
| 4-Chloro-3-methylphenol | 15.00 | 14.55 | 97.0 | 45 - 110 |
| **4-Chloroaniline** | **5.000** | **5.00 U** | **0** | **15 - 110** |
| Bis(2-chloroethoxy)methane | 5.000 | 3.847 | 76.9 | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | 3.541 | 70.8 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 3.595 | 71.9 | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | 4.305 | 86.1 | 50 - 105 |
| 2-Chlorophenol | 15.00 | 11.36 | 75.8 | 35 - 105 |
| 4-Chlorophenyl phenyl ether | 5.000 | 4.572 | 91.4 | 50 - 110 |
| Dibenzofuran | 5.000 | 4.339 | 86.8 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 4.777 | 95.5 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 3.142 | 62.8 | 20 - 110 |
| 2,4-Dichlorophenol | 15.00 | 14.23 | 94.9 | 40 - 110 |
| Diethylphthalate | 5.000 | 4.638 | 92.8 | 40 - 120 |
| 2,4-Dimethylphenol | 15.00 | 14.03 | 93.5 | 30 - 110 |
| Dimethyl phthalate | 5.000 | 4.588 | 91.8 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 12.16 | 81.1 | 40 - 130 |
| **2,4-Dinitrophenol** | **15.00** | **50.0 U** | **0** | **15 - 140** |
| 2,4-Dinitrotoluene | 5.000 | 4.221 | 84.4 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 3.966 | 79.3 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 5.061 | 101 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 4.704 | 94.1 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 4.633 | 92.7 | 50 - 110 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14025 | Laboratory ID: | 0L14025-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobutadiene | 5.000 | 5.126 | 103 | 25 - 105 |
| Hexachlorocyclopentadiene | 5.000 | 3.038 | 60.8 | 10 - 110 |
| Hexachloroethane | 5.000 | 4.147 | 82.9 | 30 - 95 |
| Isophorone | 5.000 | 3.878 | 77.6 | 50 - 110 |
| 2-Methylphenol | 15.00 | 11.75 | 78.3 | 40 - 110 |
| 4-Methylphenol | 30.00 | 15.66 | 52.2 | 30 - 110 |
| Naphthalene | 5.000 | 4.153 | 83.1 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 4.583 | 91.7 | 35 - 120 |
| 3-Nitroaniline | 5.000 | 3.225 | 64.5 | 20 - 125 |
| **2-Nitroaniline** | **5.000** | **20.0 U** | **0** | **50 - 115** |
| Nitrobenzene | 5.000 | 4.408 | 88.2 | 30 - 110 |
| 4-Nitrophenol | 15.00 | 11.94 | 79.6 | 0 - 125 |
| 2-Nitrophenol | 15.00 | 11.43 | 76.2 | 40 - 115 |
| **N-Nitrosodiphenylamine** | **5.000** | **5.00 U** | **0** | **50 - 110** |
| N-Nitroso-di-n-propylamine | 5.000 | 4.062 | 81.2 | 35 - 130 |
| Pentachlorophenol | 15.00 | 8.117 | 54.1 | 40 - 115 |
| Phenol | 15.00 | 11.18 | 74.5 | 0 - 115 |
| 2,4,6-Trichlorophenol | 15.00 | 9.190 | 61.3 | 50 - 115 |
| 2,4,5-Trichlorophenol | 15.00 | 12.34 | 82.2 | 50 - 110 |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Acetophenone | 5.000 | 4.531 | 90.6 | 9.17 | 30 | 50 - 110 |
| Atrazine | 5.000 | 4.273 | 85.5 | 2.00 | 30 | 70 - 115 |
| **Benzaldehyde** | **5.000** | **5.00 U** | **0** * | | **30** | **10 - 180** |
| 1,1-Biphenyl | 5.000 | 3.971 | 79.4 | 2.69 | 30 | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | 4.768 | 95.4 | 1.79 | 30 | 50 - 115 |
| Butylbenzylphthalate | 5.000 | 4.535 | 90.7 | 1.72 | 30 | 45 - 115 |
| Caprolactam | 5.000 | 4.017 | 80.3 | 17.2 | 30 | 20 - 110 |
| Carbazole | 5.000 | 4.358 | 87.2 | 5.46 | 30 | 50 - 115 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14025 | Laboratory ID: | 0L14025-BSD1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4-Chloro-3-methylphenol | 15.00 | 16.19 | 108 | 10.6 | 30 | 45 - 110 |
| **4-Chloroaniline** | **5.000** | **5.00 U** | **0** * | | **30** | **15 - 110** |
| Bis(2-chloroethoxy)methane | 5.000 | 3.948 | 79.0 | 2.60 | 30 | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | 3.514 | 70.3 | 0.764 | 30 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 3.842 | 76.8 | 6.65 | 30 | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | 4.434 | 88.7 | 2.95 | 30 | 50 - 105 |
| 2-Chlorophenol | 15.00 | 12.23 | 81.5 | 7.34 | 30 | 35 - 105 |
| 4-Chlorophenyl phenyl ether | 5.000 | 4.561 | 91.2 | 0.254 | 30 | 50 - 110 |
| Dibenzofuran | 5.000 | 4.526 | 90.5 | 4.21 | 30 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 4.917 | 98.3 | 2.88 | 30 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 3.225 | 64.5 | 2.61 | 30 | 20 - 110 |
| 2,4-Dichlorophenol | 15.00 | 15.03 | 100 | 5.46 | 30 | 40 - 110 |
| Diethylphthalate | 5.000 | 4.749 | 95.0 | 2.38 | 30 | 40 - 120 |
| 2,4-Dimethylphenol | 15.00 | 14.59 | 97.3 | 3.90 | 30 | 30 - 110 |
| Dimethyl phthalate | 5.000 | 4.794 | 95.9 | 4.39 | 30 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 14.79 | 98.6 | 19.6 | 30 | 40 - 130 |
| 2,4-Dinitrophenol | 15.00 | 12.73 | 84.9 | | 30 | 15 - 140 |
| 2,4-Dinitrotoluene | 5.000 | 4.906 | 98.1 | 15.0 | 30 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 4.323 | 86.5 | 8.61 | 30 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 4.962 | 99.2 | 1.97 | 30 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 4.912 | 98.2 | 4.31 | 30 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 4.654 | 93.1 | 0.449 | 30 | 50 - 110 |
| **Hexachlorobutadiene** | **5.000** | **5.406** | **108** * | **5.31** | **30** | **25 - 105** |
| Hexachlorocyclopentadiene | 5.000 | 3.356 | 67.1 | 9.96 | 30 | 10 - 110 |
| Hexachloroethane | 5.000 | 4.361 | 87.2 | 5.02 | 30 | 30 - 95 |
| Isophorone | 5.000 | 4.201 | 84.0 | 7.99 | 30 | 50 - 110 |
| 2-Methylphenol | 15.00 | 12.66 | 84.4 | 7.50 | 30 | 40 - 110 |
| 4-Methylphenol | 30.00 | 16.99 | 56.6 | 8.15 | 30 | 30 - 110 |
| Naphthalene | 5.000 | 4.356 | 87.1 | 4.77 | 30 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 5.028 | 101 | 9.26 | 30 | 35 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_007 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14025 | Laboratory ID: | 0L14025-BSD1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC. # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 3-Nitroaniline | 5.000 | 3.297 | 65.9 | 2.22 | 30 | 20 - 125 |
| **2-Nitroaniline** | **5.000** | **20.0 U** | **0** * | | **30** | **50 - 115** |
| Nitrobenzene | 5.000 | 4.593 | 91.9 | 4.11 | 30 | 30 - 110 |
| 4-Nitrophenol | 15.00 | 14.52 | 96.8 | 19.5 | 30 | 0 - 125 |
| 2-Nitrophenol | 15.00 | 12.45 | 83.0 | 8.55 | 30 | 40 - 115 |
| **N-Nitrosodiphenylamine** | **5.000** | **5.00 U** | **0** * | | **30** | **50 - 110** |
| N-Nitroso-di-n-propylamine | 5.000 | 4.559 | 91.2 | 11.5 | 30 | 35 - 130 |
| Pentachlorophenol | 15.00 | 12.15 | 81.0 | 39.8 * | 30 | 40 - 115 |
| Phenol | 15.00 | 12.13 | 80.9 | 8.19 | 30 | 0 - 115 |
| 2,4,6-Trichlorophenol | 15.00 | 11.47 | 76.4 | 22.0 | 30 | 50 - 115 |
| 2,4,5-Trichlorophenol | 15.00 | 12.99 | 86.6 | 5.14 | 30 | 50 - 110 |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34710
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L34710-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1.D | | Analyzed: 12/13/10 14:13 | | |
| 2-Fluorobiphenyl | 50.00 | 96.9 | 80 - 120 | 9.53 | 9.53 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 94.6 | 80 - 120 | 5.25 | 5.25 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 105 | 80 - 120 | 7.351 | 7.351 | 0.0000 | +/-0.500 | |
| Phenol-d6 | 100.0 | 91.1 | 80 - 120 | 6.293 | 6.293 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 100 | 80 - 120 | 14.146 | 14.146 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 117 | 80 - 120 | 11.333 | 11.333 | 0.0000 | +/-0.500 | |
| **LCS (0L14025-BS1 ) ug/L** | | | | Lab File ID: 1200518.D | | Analyzed: 12/13/10 22:39 | | |
| 2-Fluorobiphenyl | 2.000 | 79.3 | 50 - 110 | 9.525 | 9.53 | -0.0050 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 71.6 | 20 - 110 | 5.259 | 5.25 | 0.0090 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 89.9 | 40 - 110 | 7.342 | 7.351 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 74.1 | 10 - 110 | 6.284 | 6.293 | -0.0090 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 104 | 50 - 135 | 14.136 | 14.146 | -0.0100 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 43.5 | 40 - 125 | 11.323 | 11.333 | -0.0100 | +/-0.500 | |
| **LCS Dup (0L14025-BSD1 ) ug/L** | | | | Lab File ID: 1200519.D | | Analyzed: 12/13/10 23:08 | | |
| 2-Fluorobiphenyl | 2.000 | 76.0 | 50 - 110 | 9.525 | 9.53 | -0.0050 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 73.3 | 20 - 110 | 5.259 | 5.25 | 0.0090 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 88.5 | 40 - 110 | 7.342 | 7.351 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 77.6 | 10 - 110 | 6.284 | 6.293 | -0.0090 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 92.8 | 50 - 135 | 14.137 | 14.146 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 55.9 | 40 - 125 | 11.323 | 11.333 | -0.0100 | +/-0.500 | |
| **Blank (0L14025-BLK1 ) ug/L** | | | | Lab File ID: 1200517.D | | Analyzed: 12/13/10 23:37 | | |
| 2-Fluorobiphenyl | 2.000 | 72.5 | 50 - 110 | 9.521 | 9.53 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 74.6 | 20 - 110 | 5.26 | 5.25 | 0.0100 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 83.1 | 40 - 110 | 7.342 | 7.351 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 73.7 | 10 - 110 | 6.28 | 6.293 | -0.0130 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 91.6 | 50 - 135 | 14.137 | 14.146 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.333 | -11.3330 | +/-0.500 | * |
| **1011002-01 (1012005-01 ) ug/L** | | | | Lab File ID: 1200501.D | | Analyzed: 12/14/10 00:06 | | |
| 2-Fluorobiphenyl | 2.000 | 65.7 | 50 - 110 | 9.521 | 9.53 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 66.4 | 20 - 110 | 5.261 | 5.25 | 0.0110 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 72.0 | 40 - 110 | 7.343 | 7.351 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 4.000 | 61.0 | 10 - 110 | 6.28 | 6.293 | -0.0130 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 86.9 | 50 - 135 | 14.138 | 14.146 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.333 | -11.3330 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Sequence: 0L34710

SDG: CTOJM16KW_007

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011002-02 (1012005-02 ) ug/L** | | | | Lab File ID: 1200502.D | | Analyzed: 12/14/10 00:35 | | |
| 2-Fluorobiphenyl | 2.000 | 70.7 | 50 - 110 | 9.52 | 9.53 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 71.2 | 20 - 110 | 5.255 | 5.25 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 78.4 | 40 - 110 | 7.342 | 7.351 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 64.1 | 10 - 110 | 6.279 | 6.293 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 102 | 50 - 135 | 14.137 | 14.146 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 26.7 | 40 - 125 | 11.328 | 11.333 | -0.0050 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35113
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35113-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1.D | | Analyzed: 12/14/10 12:13 | | |
| 2-Fluorobiphenyl | 50.00 | 94.8 | 80 - 120 | 9.5 | 9.5 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 94.3 | 80 - 120 | 5.22 | 5.22 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 104 | 80 - 120 | 7.321 | 7.321 | 0.0000 | +/-0.500 | |
| Phenol-d6 | 100.0 | 94.4 | 80 - 120 | 6.268 | 6.268 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 98.0 | 80 - 120 | 14.111 | 14.111 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 117 | 80 - 120 | 11.298 | 11.298 | 0.0000 | +/-0.500 | |
| **1011002-03 (1012005-03 ) ug/L** | | | | Lab File ID: 1200503.D | | Analyzed: 12/14/10 12:49 | | |
| 2-Fluorobiphenyl | 2.000 | 67.5 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 66.0 | 20 - 110 | 5.222 | 5.22 | 0.0020 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 76.8 | 40 - 110 | 7.309 | 7.321 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 4.000 | 66.7 | 10 - 110 | 6.246 | 6.268 | -0.0220 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 91.9 | 50 - 135 | 14.103 | 14.111 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 51.8 | 40 - 125 | 11.29 | 11.298 | -0.0080 | +/-0.500 | |
| **1011002-04 (1012005-04 ) ug/L** | | | | Lab File ID: 1200504.D | | Analyzed: 12/14/10 13:19 | | |
| 2-Fluorobiphenyl | 2.000 | 70.8 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 71.6 | 20 - 110 | 5.226 | 5.22 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 84.4 | 40 - 110 | 7.313 | 7.321 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 4.000 | 65.7 | 10 - 110 | 6.25 | 6.268 | -0.0180 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 102 | 50 - 135 | 14.103 | 14.111 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 64.7 | 40 - 125 | 11.29 | 11.298 | -0.0080 | +/-0.500 | |
| **1011002-05 (1012005-05 ) ug/L** | | | | Lab File ID: 1200505.D | | Analyzed: 12/14/10 13:49 | | |
| 2-Fluorobiphenyl | 2.000 | 67.5 | 50 - 110 | 9.49 | 9.5 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 62.3 | 20 - 110 | 5.225 | 5.22 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 77.5 | 40 - 110 | 7.312 | 7.321 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 65.7 | 10 - 110 | 6.249 | 6.268 | -0.0190 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 97.8 | 50 - 135 | 14.102 | 14.111 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 50.6 | 40 - 125 | 11.289 | 11.298 | -0.0090 | +/-0.500 | |
| **1011002-06 (1012005-06 ) ug/L** | | | | Lab File ID: 1200506.D | | Analyzed: 12/14/10 14:20 | | |
| 2-Fluorobiphenyl | 2.000 | 67.8 | 50 - 110 | 9.487 | 9.5 | -0.0130 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 67.5 | 20 - 110 | 5.227 | 5.22 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 77.8 | 40 - 110 | 7.309 | 7.321 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 4.000 | 67.8 | 10 - 110 | 6.251 | 6.268 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 95.1 | 50 - 135 | 14.099 | 14.111 | -0.0120 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 30.8 | 40 - 125 | 11.286 | 11.298 | -0.0120 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35113
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011002-07 (1012005-07 ) ug/L** | | | | Lab File ID: 1200507.D | | Analyzed: 12/14/10 14:50 | | |
| 2-Fluorobiphenyl | 2.000 | 68.8 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 67.5 | 20 - 110 | 5.226 | 5.22 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 77.1 | 40 - 110 | 7.309 | 7.321 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 4.000 | 66.1 | 10 - 110 | 6.251 | 6.268 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 105 | 50 - 135 | 14.099 | 14.111 | -0.0120 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 35.5 | 40 - 125 | 11.286 | 11.298 | -0.0120 | +/-0.500 | * |
| **1011002-08 (1012005-08 ) ug/L** | | | | Lab File ID: 1200508.D | | Analyzed: 12/14/10 15:20 | | |
| 2-Fluorobiphenyl | 2.000 | 72.2 | 50 - 110 | 9.491 | 9.5 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 71.6 | 20 - 110 | 5.226 | 5.22 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 78.9 | 40 - 110 | 7.308 | 7.321 | -0.0130 | +/-0.500 | |
| Phenol-d6 | 4.000 | 66.5 | 10 - 110 | 6.25 | 6.268 | -0.0180 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 96.2 | 50 - 135 | 14.103 | 14.111 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 51.8 | 40 - 125 | 11.289 | 11.298 | -0.0090 | +/-0.500 | |
| **1011002-09 (1012005-09 ) ug/L** | | | | Lab File ID: 1200509.D | | Analyzed: 12/14/10 15:50 | | |
| 2-Fluorobiphenyl | 2.000 | 71.3 | 50 - 110 | 9.491 | 9.5 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 65.2 | 20 - 110 | 5.225 | 5.22 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 78.4 | 40 - 110 | 7.313 | 7.321 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 4.000 | 66.9 | 10 - 110 | 6.25 | 6.268 | -0.0180 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 93.8 | 50 - 135 | 14.103 | 14.111 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 49.0 | 40 - 125 | 11.289 | 11.298 | -0.0090 | +/-0.500 | |
| **1011002-10 (1012005-10 ) ug/L** | | | | Lab File ID: 1200510.D | | Analyzed: 12/14/10 16:20 | | |
| 2-Fluorobiphenyl | 2.000 | 74.3 | 50 - 110 | 9.49 | 9.5 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 68.0 | 20 - 110 | 5.225 | 5.22 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 77.1 | 40 - 110 | 7.312 | 7.321 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 67.5 | 10 - 110 | 6.249 | 6.268 | -0.0190 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 105 | 50 - 135 | 14.102 | 14.111 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 55.5 | 40 - 125 | 11.289 | 11.298 | -0.0090 | +/-0.500 | |
| **1011002-11 (1012005-11 ) ug/L** | | | | Lab File ID: 1200511.D | | Analyzed: 12/14/10 16:50 | | |
| 2-Fluorobiphenyl | 2.000 | 73.6 | 50 - 110 | 9.488 | 9.5 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 70.6 | 20 - 110 | 5.228 | 5.22 | 0.0080 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 78.7 | 40 - 110 | 7.31 | 7.321 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 4.000 | 69.8 | 10 - 110 | 6.252 | 6.268 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 105 | 50 - 135 | 14.1 | 14.111 | -0.0110 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.298 | -11.2980 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35113
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011002-12 (1012005-12 ) ug/L** | | | | Lab File ID: 1200512.D | | Analyzed: 12/14/10 17:20 | | |
| 2-Fluorobiphenyl | 2.000 | 68.3 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 64.9 | 20 - 110 | 5.222 | 5.22 | 0.0020 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 74.1 | 40 - 110 | 7.309 | 7.321 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 4.000 | 64.7 | 10 - 110 | 6.251 | 6.268 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 90.8 | 50 - 135 | 14.099 | 14.111 | -0.0120 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.298 | -11.2980 | +/-0.500 | * |
| **1011002-13 (1012005-13 ) ug/L** | | | | Lab File ID: 1200513.D | | Analyzed: 12/14/10 17:50 | | |
| 2-Fluorobiphenyl | 2.000 | 66.8 | 50 - 110 | 9.488 | 9.5 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 62.9 | 20 - 110 | 5.227 | 5.22 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 70.3 | 40 - 110 | 7.31 | 7.321 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 4.000 | 62.9 | 10 - 110 | 6.252 | 6.268 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 89.9 | 50 - 135 | 14.1 | 14.111 | -0.0110 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.298 | -11.2980 | +/-0.500 | * |
| **1011002-14 (1012005-14 ) ug/L** | | | | Lab File ID: 1200514.D | | Analyzed: 12/14/10 18:20 | | |
| 2-Fluorobiphenyl | 2.000 | 66.6 | 50 - 110 | 9.493 | 9.5 | -0.0070 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 69.3 | 20 - 110 | 5.228 | 5.22 | 0.0080 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 104 | 40 - 110 | 7.31 | 7.321 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 4.000 | 66.0 | 10 - 110 | 6.252 | 6.268 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 110 | 50 - 135 | 14.105 | 14.111 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 93.9 | 40 - 125 | 11.296 | 11.298 | -0.0020 | +/-0.500 | |
| **1011002-15 (1012005-15 ) ug/L** | | | | Lab File ID: 1200515.D | | Analyzed: 12/14/10 18:50 | | |
| 2-Fluorobiphenyl | 2.000 | 72.1 | 50 - 110 | 9.488 | 9.5 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 67.6 | 20 - 110 | 5.227 | 5.22 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 77.9 | 40 - 110 | 7.314 | 7.321 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | 67.0 | 10 - 110 | 6.252 | 6.268 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 100 | 50 - 135 | 14.1 | 14.111 | -0.0110 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 32.0 | 40 - 125 | 11.291 | 11.298 | -0.0070 | +/-0.500 | * |
| **1011002-16 (1012005-16 ) ug/L** | | | | Lab File ID: 1200516.D | | Analyzed: 12/14/10 19:20 | | |
| 2-Fluorobiphenyl | 2.000 | 71.3 | 50 - 110 | 9.488 | 9.5 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 69.4 | 20 - 110 | 5.223 | 5.22 | 0.0030 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 77.1 | 40 - 110 | 7.314 | 7.321 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | 63.1 | 10 - 110 | 6.252 | 6.268 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 102 | 50 - 135 | 14.1 | 14.111 | -0.0110 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 45.1 | 40 - 125 | 11.291 | 11.298 | -0.0070 | +/-0.500 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L34710

SDG: CTOJM16KW_007
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L34710-CCV1 )** | | | Lab File ID: SEQ-CCV1.D | | | Analyzed: 12/13/10 14:13 | | | |
| 1,4-Dichlorobenzene-d4 | 469053 | 6.712 | 520490 | 6.774 | 90 | 50 - 200 | -0.0620 | +/-0.50 | |
| Naphthalene-d8 | 1577770 | 8.217 | 1864250 | 8.284 | 85 | 50 - 200 | -0.0670 | +/-0.50 | |
| Acenaphthene-d10 | 863688 | 10.361 | 1011290 | 10.429 | 85 | 50 - 200 | -0.0680 | +/-0.50 | |
| Phenanthrene-d10 | 1430428 | 12.189 | 1690574 | 12.256 | 85 | 50 - 200 | -0.0670 | +/-0.50 | |
| Chrysene-d12 | 1198602 | 15.488 | 1331643 | 15.56 | 90 | 50 - 200 | -0.0720 | +/-0.50 | |
| Perylene-d12 | 853727 | 17.334 | 1068595 | 17.426 | 80 | 50 - 200 | -0.0920 | +/-0.50 | |
| **LCS (0L14025-BS1 )** | | | Lab File ID: 1200518.D | | | Analyzed: 12/13/10 22:39 | | | |
| 1,4-Dichlorobenzene-d4 | 541339 | 6.712 | 469053 | 6.712 | 115 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1807384 | 8.212 | 1577770 | 8.217 | 115 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 1003869 | 10.357 | 863688 | 10.361 | 116 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1617964 | 12.184 | 1430428 | 12.189 | 113 | 50 - 200 | -0.0050 | +/-0.50 | |
| Chrysene-d12 | 1281736 | 15.478 | 1198602 | 15.488 | 107 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 976004 | 17.33 | 853727 | 17.334 | 114 | 50 - 200 | -0.0040 | +/-0.50 | |
| **LCS Dup (0L14025-BSD1 )** | | | Lab File ID: 1200519.D | | | Analyzed: 12/13/10 23:08 | | | |
| 1,4-Dichlorobenzene-d4 | 719280 | 6.712 | 469053 | 6.712 | 153 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 2479667 | 8.217 | 1577770 | 8.217 | 157 | 50 - 200 | 0.0000 | +/-0.50 | |
| Acenaphthene-d10 | 1435606 | 10.357 | 863688 | 10.361 | 166 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 2402615 | 12.184 | 1430428 | 12.189 | 168 | 50 - 200 | -0.0050 | +/-0.50 | |
| Chrysene-d12 | 2126543 | 15.483 | 1198602 | 15.488 | 177 | 50 - 200 | -0.0050 | +/-0.50 | |
| Perylene-d12 | 1724663 | 17.339 | 853727 | 17.334 | 202 | 50 - 200 | 0.0050 | +/-0.50 | * |
| **Blank (0L14025-BLK1 )** | | | Lab File ID: 1200517.D | | | Analyzed: 12/13/10 23:37 | | | |
| 1,4-Dichlorobenzene-d4 | 581076 | 6.712 | 469053 | 6.712 | 124 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 2043837 | 8.213 | 1577770 | 8.217 | 130 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 1164893 | 10.357 | 863688 | 10.361 | 135 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1874655 | 12.185 | 1430428 | 12.189 | 131 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 1684311 | 15.479 | 1198602 | 15.488 | 141 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 1399760 | 17.335 | 853727 | 17.334 | 164 | 50 - 200 | 0.0010 | +/-0.50 | |
| **1011002-01 (1012005-01 )** | | | Lab File ID: 1200501.D | | | Analyzed: 12/14/10 00:06 | | | |
| 1,4-Dichlorobenzene-d4 | 680583 | 6.708 | 469053 | 6.712 | 145 | 50 - 200 | -0.0040 | +/-0.50 | |
| Naphthalene-d8 | 2314277 | 8.213 | 1577770 | 8.217 | 147 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 1260899 | 10.358 | 863688 | 10.361 | 146 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1970011 | 12.185 | 1430428 | 12.189 | 138 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 1699603 | 15.479 | 1198602 | 15.488 | 142 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 1398594 | 17.336 | 853727 | 17.334 | 164 | 50 - 200 | 0.0020 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34710
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011002-02 (1012005-02 )** | | | Lab File ID: 1200502.D | | | Analyzed: 12/14/10 00:35 | | | |
| 1,4-Dichlorobenzene-d4 | 460976 | 6.707 | 469053 | 6.712 | 98 | 50 - 200 | -0.0050 | +/-0.50 | |
| Naphthalene-d8 | 1589059 | 8.212 | 1577770 | 8.217 | 101 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 856972 | 10.357 | 863688 | 10.361 | 99 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1321137 | 12.179 | 1430428 | 12.189 | 92 | 50 - 200 | -0.0100 | +/-0.50 | |
| Chrysene-d12 | 985731 | 15.478 | 1198602 | 15.488 | 82 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 707870 | 17.33 | 853727 | 17.334 | 83 | 50 - 200 | -0.0040 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35113

SDG: CTOJM16KW_007
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35113-CCV1 )** | | | Lab File ID: SEQ-CCV1.D | | | Analyzed: 12/14/10 12:13 | | | |
| 1,4-Dichlorobenzene-d4 | 488058 | 6.677 | 520490 | 6.774 | 94 | 50 - 200 | -0.0970 | +/-0.50 | |
| Naphthalene-d8 | 1693550 | 8.187 | 1864250 | 8.284 | 91 | 50 - 200 | -0.0970 | +/-0.50 | |
| Acenaphthene-d10 | 975787 | 10.332 | 1011290 | 10.429 | 96 | 50 - 200 | -0.0970 | +/-0.50 | |
| Phenanthrene-d10 | 1652418 | 12.154 | 1690574 | 12.256 | 98 | 50 - 200 | -0.1020 | +/-0.50 | |
| Chrysene-d12 | 1476924 | 15.448 | 1331643 | 15.56 | 111 | 50 - 200 | -0.1120 | +/-0.50 | |
| Perylene-d12 | 1191026 | 17.29 | 1068595 | 17.426 | 111 | 50 - 200 | -0.1360 | +/-0.50 | |
| **1011002-03 (1012005-03 )** | | | Lab File ID: 1200503.D | | | Analyzed: 12/14/10 12:49 | | | |
| 1,4-Dichlorobenzene-d4 | 461901 | 6.674 | 488058 | 6.677 | 95 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1618862 | 8.179 | 1693550 | 8.187 | 96 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 896212 | 10.324 | 975787 | 10.332 | 92 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1389312 | 12.146 | 1652418 | 12.154 | 84 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1161732 | 15.44 | 1476924 | 15.448 | 79 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 1021521 | 17.287 | 1191026 | 17.29 | 86 | 50 - 200 | -0.0030 | +/-0.50 | |
| **1011002-04 (1012005-04 )** | | | Lab File ID: 1200504.D | | | Analyzed: 12/14/10 13:19 | | | |
| 1,4-Dichlorobenzene-d4 | 519654 | 6.678 | 488058 | 6.677 | 106 | 50 - 200 | 0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1773273 | 8.179 | 1693550 | 8.187 | 105 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 967562 | 10.323 | 975787 | 10.332 | 99 | 50 - 200 | -0.0090 | +/-0.50 | |
| Phenanthrene-d10 | 1526105 | 12.146 | 1652418 | 12.154 | 92 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1300448 | 15.44 | 1476924 | 15.448 | 88 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 1162292 | 17.282 | 1191026 | 17.29 | 98 | 50 - 200 | -0.0080 | +/-0.50 | |
| **1011002-05 (1012005-05 )** | | | Lab File ID: 1200505.D | | | Analyzed: 12/14/10 13:49 | | | |
| 1,4-Dichlorobenzene-d4 | 548401 | 6.677 | 488058 | 6.677 | 112 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1881398 | 8.182 | 1693550 | 8.187 | 111 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 1027601 | 10.322 | 975787 | 10.332 | 105 | 50 - 200 | -0.0100 | +/-0.50 | |
| Phenanthrene-d10 | 1579562 | 12.149 | 1652418 | 12.154 | 96 | 50 - 200 | -0.0050 | +/-0.50 | |
| Chrysene-d12 | 1321243 | 15.439 | 1476924 | 15.448 | 89 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 1114453 | 17.285 | 1191026 | 17.29 | 94 | 50 - 200 | -0.0050 | +/-0.50 | |
| **1011002-06 (1012005-06 )** | | | Lab File ID: 1200506.D | | | Analyzed: 12/14/10 14:20 | | | |
| 1,4-Dichlorobenzene-d4 | 622213 | 6.679 | 488058 | 6.677 | 127 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 2129383 | 8.179 | 1693550 | 8.187 | 126 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 1178000 | 10.324 | 975787 | 10.332 | 121 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1770865 | 12.147 | 1652418 | 12.154 | 107 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1416611 | 15.436 | 1476924 | 15.448 | 96 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 1218653 | 17.282 | 1191026 | 17.29 | 102 | 50 - 200 | -0.0080 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35113
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011002-07 (1012005-07 )** | | | Lab File ID: 1200507.D | | | Analyzed: 12/14/10 14:50 | | | |
| 1,4-Dichlorobenzene-d4 | 535916 | 6.679 | 488058 | 6.677 | 110 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1853729 | 8.179 | 1693550 | 8.187 | 109 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 1023886 | 10.324 | 975787 | 10.332 | 105 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1525270 | 12.146 | 1652418 | 12.154 | 92 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1056950 | 15.436 | 1476924 | 15.448 | 72 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 851746 | 17.282 | 1191026 | 17.29 | 72 | 50 - 200 | -0.0080 | +/-0.50 | |
| **1011002-08 (1012005-08 )** | | | Lab File ID: 1200508.D | | | Analyzed: 12/14/10 15:20 | | | |
| 1,4-Dichlorobenzene-d4 | 511566 | 6.678 | 488058 | 6.677 | 105 | 50 - 200 | 0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1789817 | 8.183 | 1693550 | 8.187 | 106 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 972382 | 10.323 | 975787 | 10.332 | 100 | 50 - 200 | -0.0090 | +/-0.50 | |
| Phenanthrene-d10 | 1496835 | 12.145 | 1652418 | 12.154 | 91 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1191712 | 15.435 | 1476924 | 15.448 | 81 | 50 - 200 | -0.0130 | +/-0.50 | |
| Perylene-d12 | 1033399 | 17.281 | 1191026 | 17.29 | 87 | 50 - 200 | -0.0090 | +/-0.50 | |
| **1011002-09 (1012005-09 )** | | | Lab File ID: 1200509.D | | | Analyzed: 12/14/10 15:50 | | | |
| 1,4-Dichlorobenzene-d4 | 432687 | 6.678 | 488058 | 6.677 | 89 | 50 - 200 | 0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1495806 | 8.178 | 1693550 | 8.187 | 88 | 50 - 200 | -0.0090 | +/-0.50 | |
| Acenaphthene-d10 | 833800 | 10.323 | 975787 | 10.332 | 85 | 50 - 200 | -0.0090 | +/-0.50 | |
| Phenanthrene-d10 | 1256015 | 12.145 | 1652418 | 12.154 | 76 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1041184 | 15.435 | 1476924 | 15.448 | 70 | 50 - 200 | -0.0130 | +/-0.50 | |
| Perylene-d12 | 864191 | 17.281 | 1191026 | 17.29 | 73 | 50 - 200 | -0.0090 | +/-0.50 | |
| **1011002-10 (1012005-10 )** | | | Lab File ID: 1200510.D | | | Analyzed: 12/14/10 16:20 | | | |
| 1,4-Dichlorobenzene-d4 | 541547 | 6.677 | 488058 | 6.677 | 111 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1877530 | 8.178 | 1693550 | 8.187 | 111 | 50 - 200 | -0.0090 | +/-0.50 | |
| Acenaphthene-d10 | 1030386 | 10.322 | 975787 | 10.332 | 106 | 50 - 200 | -0.0100 | +/-0.50 | |
| Phenanthrene-d10 | 1618456 | 12.145 | 1652418 | 12.154 | 98 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1325104 | 15.439 | 1476924 | 15.448 | 90 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 1076249 | 17.285 | 1191026 | 17.29 | 90 | 50 - 200 | -0.0050 | +/-0.50 | |
| **1011002-11 (1012005-11 )** | | | Lab File ID: 1200511.D | | | Analyzed: 12/14/10 16:50 | | | |
| 1,4-Dichlorobenzene-d4 | 465719 | 6.675 | 488058 | 6.677 | 95 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1609565 | 8.18 | 1693550 | 8.187 | 95 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 888282 | 10.325 | 975787 | 10.332 | 91 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1381061 | 12.147 | 1652418 | 12.154 | 84 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1042570 | 15.437 | 1476924 | 15.448 | 71 | 50 - 200 | -0.0110 | +/-0.50 | |
| Perylene-d12 | 827374 | 17.283 | 1191026 | 17.29 | 69 | 50 - 200 | -0.0070 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35113

SDG: CTOJM16KW_007
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011002-12 (1012005-12 )** | | | Lab File ID: 1200512.D | | | Analyzed: 12/14/10 17:20 | | | |
| 1,4-Dichlorobenzene-d4 | 437682 | 6.679 | 488058 | 6.677 | 90 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1499554 | 8.179 | 1693550 | 8.187 | 89 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 830812 | 10.324 | 975787 | 10.332 | 85 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1278189 | 12.146 | 1652418 | 12.154 | 77 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1072146 | 15.436 | 1476924 | 15.448 | 73 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 901752 | 17.282 | 1191026 | 17.29 | 76 | 50 - 200 | -0.0080 | +/-0.50 | |
| **1011002-13 (1012005-13 )** | | | Lab File ID: 1200513.D | | | Analyzed: 12/14/10 17:50 | | | |
| 1,4-Dichlorobenzene-d4 | 489702 | 6.68 | 488058 | 6.677 | 100 | 50 - 200 | 0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1668543 | 8.18 | 1693550 | 8.187 | 99 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 924344 | 10.325 | 975787 | 10.332 | 95 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1431315 | 12.147 | 1652418 | 12.154 | 87 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1152192 | 15.437 | 1476924 | 15.448 | 78 | 50 - 200 | -0.0110 | +/-0.50 | |
| Perylene-d12 | 932824 | 17.283 | 1191026 | 17.29 | 78 | 50 - 200 | -0.0070 | +/-0.50 | |
| **1011002-14 (1012005-14 )** | | | Lab File ID: 1200514.D | | | Analyzed: 12/14/10 18:20 | | | |
| 1,4-Dichlorobenzene-d4 | 396754 | 6.68 | 488058 | 6.677 | 81 | 50 - 200 | 0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1300545 | 8.18 | 1693550 | 8.187 | 77 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 761338 | 10.325 | 975787 | 10.332 | 78 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1172297 | 12.152 | 1652418 | 12.154 | 71 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chrysene-d12 | 894482 | 15.442 | 1476924 | 15.448 | 61 | 50 - 200 | -0.0060 | +/-0.50 | |
| Perylene-d12 | 575327 | 17.283 | 1191026 | 17.29 | 48 | 50 - 200 | -0.0070 | +/-0.50 | * |
| **1011002-15 (1012005-15 )** | | | Lab File ID: 1200515.D | | | Analyzed: 12/14/10 18:50 | | | |
| 1,4-Dichlorobenzene-d4 | 438126 | 6.675 | 488058 | 6.677 | 90 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1516759 | 8.18 | 1693550 | 8.187 | 90 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 836781 | 10.325 | 975787 | 10.332 | 86 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1296333 | 12.147 | 1652418 | 12.154 | 78 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1041541 | 15.436 | 1476924 | 15.448 | 71 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 867181 | 17.283 | 1191026 | 17.29 | 73 | 50 - 200 | -0.0070 | +/-0.50 | |
| **1011002-16 (1012005-16 )** | | | Lab File ID: 1200516.D | | | Analyzed: 12/14/10 19:20 | | | |
| 1,4-Dichlorobenzene-d4 | 488599 | 6.68 | 488058 | 6.677 | 100 | 50 - 200 | 0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1682375 | 8.18 | 1693550 | 8.187 | 99 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 931412 | 10.325 | 975787 | 10.332 | 95 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1477867 | 12.147 | 1652418 | 12.154 | 89 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1218062 | 15.437 | 1476924 | 15.448 | 82 | 50 - 200 | -0.0110 | +/-0.50 | |
| Perylene-d12 | 951169 | 17.283 | 1191026 | 17.29 | 80 | 50 - 200 | -0.0070 | +/-0.50 | |

Data File: \\ELABNSH05\TARGET\chem\bna3.i\121310b3.b\SEQ-CCV1.D
Report Date: 13-Dec-2010 16:12

CCV 1 Std

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT (ng/ul) | AMOUNTS ON-COL (ng/ul) |
|---|---|---|---|---|---|---|---|
| 112 Anthracene | 178 | 12.280 | 12.280 | (1.007) | 2089044 | 50.0000 | 50.30 |
| 115 Di-n-butylphthalate | 149 | 12.901 | 12.901 | (1.058) | 2486072 | 50.0000 | 54.56 |
| 116 Fluoranthene | 202 | 13.680 | 13.680 | (1.122) | 2087008 | 50.0000 | 51.47 |
| 129 Atrazine | 200 | 11.833 | 11.833 | (0.971) | 401643 | 50.0000 | 48.98 |
| * 132 Chrysene-d12 | 240 | 15.488 | 15.488 | (1.000) | 1198602 | 40.0000 | |
| 133 Benzidine | 184 | 13.833 | 13.833 | (0.893) | 484550 | 50.0000 | 25.39 |
| 134 Pyrene | 202 | 13.963 | 13.963 | (0.902) | 2065537 | 50.0000 | 49.95 |
| $ 135 Terphenyl-d14 | 244 | 14.146 | 14.146 | (0.913) | 1326065 | 50.0000 | 50.01 |
| 136 Butylbenzylphthalate | 149 | 14.752 | 14.752 | (0.952) | 1021247 | 50.0000 | 51.18 |
| 137 3,3'-Dichlorobenzidine | 252 | 15.430 | 15.430 | (0.996) | 422775 | 50.0000 | 36.17 |
| 138 Benzo(a)anthracene | 228 | 15.468 | 15.468 | (0.999) | 1757906 | 50.0000 | 49.16 |
| 139 Chrysene | 228 | 15.521 | 15.521 | (1.002) | 1640623 | 50.0000 | 44.74 |
| 140 Bis(2-ethylhexyl)phthalate | 149 | 15.492 | 15.492 | (1.000) | 1345019 | 50.0000 | 51.60 |
| * 154 Perylene-d12 | 264 | 17.334 | 17.334 | (1.000) | 853727 | 40.0000 | |
| 155 Di-n-octylphthalate | 149 | 16.305 | 16.305 | (0.941) | 2021572 | 50.0000 | 59.89 |
| 156 Benzo(b)fluoranthene | 252 | 16.834 | 16.834 | (0.971) | 1466402 | 50.0000 | 57.60 |
| 157 Benzo(k)fluoranthene | 252 | 16.868 | 16.868 | (0.973) | 1528153 | 50.0000 | 58.01 |
| 158 Benzo(a)pyrene | 252 | 17.257 | 17.257 | (0.996) | 1225518 | 50.0000 | 54.08 |
| 159 Indeno(1,2,3-cd)pyrene | 276 | 18.964 | 18.964 | (1.094) | 1054337 | 50.0000 | 47.18 |
| 160 Dibenz(a,h)anthracene | 278 | 18.984 | 18.984 | (1.095) | 867318 | 50.0000 | 48.17 |
| 161 Benzo(g,h,i)perylene | 276 | 19.445 | 19.445 | (1.122) | 830241 | 50.0000 | 44.85 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **JOSEPH KALINYAK** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – SVOC**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_008**

**SAMPLES:** 7 / Aqueous / SVOC

| | | |
|---|---|---|
| GKHMS-GW-017-1010 | GKHMS-GW-018-1010 | GKHMS-GW-019-1010 |
| GKHMS-GW-022-1010 | GKHMS-GW-023-1010 | |
| GKHMS-GW-FD002-1010 | GKHMS-GW-FD003-1010 | |

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_008 consisted of seven (7) aqueous environmental samples. The samples were analyzed for semi-volatile organics (SVOC) as indicated above. Two field duplicate sample pairs were included in the Sample Delivery Group (SDG); GKHMS-GW-FD002-1010 / GKHMS-GW-019-1010 and GKHMS-GW-FD003-1010 / GKHMS-GW-022-1010.

The samples were collected by Tetra Tech NUS on November 2, 2010 and analyzed by Empirical Laboratories LLC upon transfer from Centauri Labs who performed the initial sample method extraction. The analyses were conducted in accordance with SW-846 Method 8270C Full Scan analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

| | |
|---|---|
| | • Data Completeness |
| * | • Holding Times/Sample Preservation |
| * | • GC/MS Instrument Tuning and System Performance |
| | • Initial/Continuing Calibrations |
| * | • Laboratory Method Blank Results |
| | • Blank Spike Results |
| | • Matrix Spike/Matrix Spike Duplicate Results |
| | • Surrogate Recovery Results |
| * | • Internal Standard Recovery Results |
| * | • Field Duplicate Precision |
| * | • Detection Limits |

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

SVOC

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for benzaldehyde, 2,2'-oxybis-1-chloropropane, hexachlorocyclopentadiene, and 2-nitroaniline for instrument MS-BNA3 on 12/14/10 @ 12:13 affecting samples GKHMS-GW-017-1010, GKHMS-GW-018-

1010, GKHMS-GW-019-1010, GKHMS-GW-022-1010, GKHMS-GW-023-1010, and GKHMS-GW-FD002-1010. The non-detected results for 2,2'-oxybis-1-chloropropane and hexachlorocyclopentadiene were qualified estimated, (UJ), for the aforementioned samples. The non-detected results for benzaldehyde and 2-nitroaniline were rejected for other reasons as listed below for the aforementioned samples.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for 2,2'-oxybis-1-chloropropane, hexachlorocyclopentadiene, 4-nitroaniline, and 2-nitroaniline for instrument MS-BNA3 on 12/15/10 @ 11:42 affecting sample GKHMS-GW-FD003-1010. The non-detected results for 2,2'-oxybis-1-chloropropane, hexachlorocyclopentadiene, and 4-nitroaniline were qualified estimated, (UJ), for the sample GKHMS-GW-FD003-1010. The non-detected result for 2-nitroaniline was qualified rejected for another reason as listed below for the affected sample.

The laboratory control sample (LCS) percent recoveries (%R) were less than the quality control limit at 0% for benzaldehyde, 4-chloroaniline, 2,4-dinitrophenol, 2-nitroaniline and N-nitrosodiphenylamine for the batch 0L14026 affecting all samples. The samples were not re-analyzed due to this issue and the non-detected results for the aforementioned analytes were qualified rejected, (UR).

The matrix spike (MS) and the MS duplicate (MSD) %Rs were less than the laboratory quality control limits at 0% for benzaldehyde, 4-chloroaniline, 2,4-dinitriophenol, 2-nitroaniline and N-nitrosodi-phenylamine for spike sample GKHMS-GW-FD003-1010. The aforementioned analytes for the sample were qualified rejected, (UR), due to the MS/MSD %R quality control limit non-compliances.

The surrogate 2,4,6-tribromophenol %Rs were less than the laboratory quality control limits at 0% for samples GKHMS-GW-019-1010, GKHMS-GW-022-1010, and GKHMS-GW-FD002-1010. The associated acid fraction non-detected analytes were qualified rejected, (UR).

Additional Comments

Some of the samples were extracted marginally greater than the 7 day sample to extraction hold time. As all the samples were extracted at less than 7.5 days after sampling, no action was taken for this issue.

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J). Non-detected analyte results were reported to the MDL.

## Executive Summary

**Laboratory Performance:** SVOC continuing calibration verification %Ds which exceeded the quality control limits resulted in the qualification of non-detected SVOC sample results. Non-detected SVOC analyte results were qualified for LCS and surrogate %R quality control limit non-compliances.

**Other Factors Affecting Data Quality:** Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site Sample Analysis Plan (SAP), and Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

**Appendix A**

Qualified Analytical Results

## Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

## DATA QUALIFICATION CODE (QUAL CODE)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_008 | LAB_ID | 1012007-01 | | | 1012007-02 | | | 1012007-03 | | | 1012007-04 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | UR | R | 1.25 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | U | | 0.5 | U | | 0.5 | UR | R | 0.5 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | U | | 0.73 | U | | 0.73 | UR | R | 0.73 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.44 | U | | 0.44 | U | | 0.44 | UR | R | 0.44 | UR | R |
| 2,4-DIMETHYLPHENOL | | 5 | U | | 5 | U | | 5 | UR | R | 5 | UR | R |
| 2,4-DINITROPHENOL | | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | ER | 12.5 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.49 | U | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | | 0.65 | U | | 0.65 | U | | 0.65 | U | | 0.65 | U | |
| 2-CHLORONAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2-CHLOROPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | UR | R | 1.25 | UR | R |
| 2-METHYLPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | UR | R | 1.25 | UR | R |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | UR | R | 1.25 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | U | | 0.89 | U | | 0.89 | U | | 0.89 | U | |
| 3-NITROANILINE | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | U | | 5 | U | | 5 | UR | R | 5 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | UR | R | 1.25 | UR | R |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-METHYLPHENOL | | 0.77 | U | | 0.77 | U | | 0.77 | UR | R | 0.77 | UR | R |
| 4-NITROANILINE | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| 4-NITROPHENOL | | 5 | U | | 5 | U | | 5 | UR | R | 5 | UR | R |
| ACETOPHENONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| ATRAZINE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | U | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 3.78 | J | P | 1.66 | J | P | 1.25 | U | | 2.63 | J | P |
| BUTYL BENZYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | | 4.03 | J | P | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | | 0.69 | U | | 0.69 | U | | 0.69 | U | | 0.69 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-023-1010 | | | GKHMS-GW-FD002-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_008 | LAB_ID | 1012007-05 | | | 1012007-07 | | | 1012007-08 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | C | 0.85 | UJ | C | 0.85 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | U | | 1.25 | UR | R | 1.25 | U | |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | U | | 0.5 | UR | R | 0.5 | U | |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | U | | 0.73 | UR | R | 0.73 | U | |
| 2,4-DICHLOROPHENOL | | 0.44 | U | | 0.44 | UR | R | 0.44 | U | |
| 2,4-DIMETHYLPHENOL | | 5 | U | | 5 | UR | R | 5 | U | |
| 2,4-DINITROPHENOL | | 12.5 | UR | E | 12.5 | UR | ER | 12.5 | UR | E |
| 2,4-DINITROTOLUENE | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | | 0.65 | U | | 0.65 | U | | 0.65 | U | |
| 2-CHLORONAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2-CHLOROPHENOL | | 1.25 | U | | 1.25 | UR | R | 1.25 | U | |
| 2-METHYLPHENOL | | 1.25 | U | | 1.25 | UR | R | 1.25 | U | |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UR | E |
| 2-NITROPHENOL | | 1.25 | U | | 1.25 | UR | R | 1.25 | U | |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | U | | 0.89 | U | | 0.89 | U | |
| 3-NITROANILINE | | 1 | U | | 1 | U | | 1 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | U | | 5 | UR | R | 5 | U | |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | U | | 1.25 | UR | R | 1.25 | U | |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-METHYLPHENOL | | 0.77 | U | | 0.77 | UR | R | 0.77 | U | |
| 4-NITROANILINE | | 2 | U | | 2 | U | | 2 | UJ | C |
| 4-NITROPHENOL | | 5 | U | | 5 | UR | R | 5 | U | |
| ACETOPHENONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| ATRAZINE | | 0.69 | U | | 0.69 | U | | 0.69 | U | |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | U | | 0.45 | U | | 0.45 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.34 | J | P |
| BUTYL BENZYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | | 0.69 | U | | 0.69 | U | | 0.69 | U | |

| PROJ_NO: 02607<br>SDG: CTOJM16KW_008<br>FRACTION: OS<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1012007-01 | | | 1012007-02 | | | 1012007-03 | | | 1012007-04 | | |
| | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | | | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 3.8 | J | P | 3.4 | J | P | 1.4 | J | P | 6.66 | | |
| DI-N-OCTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | U | | 0.47 | U | | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | U | | 0.93 | U | | 0.93 | U | | 0.93 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| HEXACHLOROETHANE | | 0.46 | U | | 0.46 | U | | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NAPHTHALENE | | 11.7 | | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NITROBENZENE | | 0.62 | U | | 0.62 | U | | 0.62 | U | | 0.62 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | U | | 0.9 | U | | 0.9 | U | | 0.9 | U | |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | U | | 1 | U | | 1 | UR | R | 1 | UR | R |
| PHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | UR | R | 1.25 | UR | R |

| PROJ_NO: 02607<br>SDG: CTOJM16KW_008<br>FRACTION: OS<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-023-1010 | | | GKHMS-GW-FD002-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1012007-05 | | | 1012007-07 | | | 1012007-08 | | |
| | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | | | | | | | | | |
| | DUP_OF | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 1.42 | J | P | 1.25 | U | | 3.6 | J | P |
| DI-N-OCTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | U | | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | U | | 0.93 | U | | 0.93 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| HEXACHLOROETHANE | | 0.46 | U | | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NITROBENZENE | | 0.62 | U | | 0.62 | U | | 0.62 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | U | | 0.9 | U | | 0.9 | U | |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | U | | 1 | UR | R | 1 | U | |
| PHENOL | | 1.25 | U | | 1.25 | UR | R | 1.25 | U | |

## Appendix B

Results as Reported by the Laboratory

# ANALYSIS DATA SHEET

1011003-02

GKHMS-GW-017-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010 * 1/12/11

Matrix: Water Laboratory ID: 1012007-01 File ID: 1200701.D

Sampled: 11/02/10 08:40 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 20:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | 4.03 | 1.25 | 2.50 | 5.00 | I |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | 3.80 | 1.25 | 2.50 | 5.00 | I |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 3.78 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | 11.7 | 1.25 | 2.50 | 5.00 | |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1011003-02

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-01 File ID: 1200701.D

Sampled: 11/02/10 08:40 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 20:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.427 | 71.4 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.610 | 65.2 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.700 | 85.0 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.445 | 61.1 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.183 | 109 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 3.515 | 87.9 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011003-03

GKHMS-GW-018-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010 JK 1/12/11

Matrix: Water Laboratory ID: 1012007-02 File ID: 1200702.D

Sampled: 11/02/10 08:00 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 21:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, N, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, N U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | 3.40 | 1.25 | 2.50 | 5.00 | I |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 1.66 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X, N U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1011003-03

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-02 File ID: 1200702.D

Sampled: 11/02/10 08:00 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 21:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q, N U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | N, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q, N U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q, N U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.532 | 76.6 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.805 | 70.1 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.678 | 83.9 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.675 | 66.9 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.195 | 110 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 3.393 | 84.8 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011003-04

GKHMS-GW-019-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-03 File ID: 1200703.D JK 1/12/11

Sampled: 11/02/10 09:20 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 21:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | 1.40 | 1.25 | 2.50 | 5.00 | I |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1011003-04

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-03 File ID: 1200703.D

Sampled: 11/02/10 09:20 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 21:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.499 | 74.9 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.543 | 63.6 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.644 | 82.2 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.455 | 61.4 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.060 | 103 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 2.892 | 72.3 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011003-05

GKHMS-GW-022-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-04 File ID: 1200704.D

Sampled: 11/02/10 10:50 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 22:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | 6.66 | 1.25 | 2.50 | 5.00 | |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 2.63 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1011003-05

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-04 File ID: 1200704.D

Sampled: 11/02/10 10:50 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 22:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.345 | 67.3 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.428 | 60.7 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.377 | 68.9 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.320 | 58.0 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.058 | 103 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | * |

# ANALYSIS DATA SHEET

1011003-06

GKHMS-GW-023-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-05 File ID: 1200705.D 1/12/11

Sampled: 11/02/10 10:00 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 22:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | 1.42 | 1.25 | 2.50 | 5.00 | I |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1011003-06

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-05 File ID: 1200705.D

Sampled: 11/02/10 10:00 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 22:50

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.438 | 71.9 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.792 | 69.8 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.687 | 84.4 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.544 | 63.6 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.040 | 102 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | * |

# ANALYSIS DATA SHEET

1011003-08

GKHMS-GW-FD0082-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-07 File ID: 1200707.D

Sampled: 11/02/10 00:00 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 23:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1011003-08

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-07 File ID: 1200707.D

Sampled: 11/02/10 00:00 Prepared: 11/09/10 08:20 Analyzed: 12/14/10 23:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.678 | 83.9 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 3.037 | 75.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.693 | 84.7 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.644 | 66.1 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.321 | 116 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 2.161 | 54.0 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011003-09

GKHMS-GW-F0003-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-08 File ID: 1200708.D

Sampled: 11/02/10 00:00 Prepared: 11/09/10 08:20 Analyzed: 12/15/10 12:12

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | 3.60 | 1.25 | 2.50 | 5.00 | I |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 1.34 | 1.25 | 2.50 | 5.00 | I |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | X U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |

# ANALYSIS DATA SHEET

1011003-09

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012007-08 File ID: 1200708.D

Sampled: 11/02/10 00:00 Prepared: 11/09/10 08:20 Analyzed: 12/15/10 12:12

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.588 | 79.4 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.800 | 70.0 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.646 | 82.3 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.965 | 74.1 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.205 | 110 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | * |

**Appendix C**

Support Documentation

HOLDTIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | UG/L | GKHMS-GW-FD003-1010 | 1012007-08 | SUR | 11/02/2010 | 11/09/2010 | 12/15/2010 | 7 | 36 | 43 |
| OS | UG/L | GKHMS-GW-FD003-1010 | 1012007-08 | NM | 11/02/2010 | 11/09/2010 | 12/15/2010 | 7 | 36 | 43 |
| OS | UG/L | GKHMS-GW-FD002-1010 | 1012007-07 | SUR | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-FD002-1010 | 1012007-07 | NM | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-023-1010 | 1012007-05 | SUR | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-023-1010 | 1012007-05 | NM | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-022-1010 | 1012007-04 | SUR | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-022-1010 | 1012007-04 | NM | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-019-1010 | 1012007-03 | SUR | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-019-1010 | 1012007-03 | NM | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-018-1010 | 1012007-02 | SUR | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-018-1010 | 1012007-02 | NM | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-017-1010 | 1012007-01 | SUR | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |
| OS | UG/L | GKHMS-GW-017-1010 | 1012007-01 | NM | 11/02/2010 | 11/09/2010 | 12/14/2010 | 7 | 35 | 42 |

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-6

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs 7210 Corporate Court Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz 301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/01/2010 | GKHMS-TB-03 | 08:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |
| 11/02/2010 | GKHMS-GW-017-1010 | 08:40 | **SW846 8260B** | GKHMS-GW017 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-017-1010 | 08:40 | **SW846 8720D/8270DSIM** | GKHMS-GW017 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-017-1010 | 08:40 | **SW846 6020A** | GKHMS-GW017 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-018-1010 | 08:00 | **SW846 8260B** | GKHMS-GW018 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | run ms/msd |
| 11/02/2010 | GKHMS-GW-018-1010 | 08:00 | **SW846 8720D/8270DSIM** | GKHMS-GW018 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | run ms/msd |
| 11/02/2010 | GKHMS-GW-018-1010 | 08:00 | **SW846 6020A** | GKHMS-GW018 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | run ms/msd |
| 11/02/2010 | GKHMS-GW-019-1010 | 09:20 | **SW846 8260B** | GKHMS-GW019 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-019-1010 | 09:20 | **SW846 8720D/8270DSIM** | GKHMS-GW019 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-019-1010 | 09:20 | **SW846 6020A** | GKHMS-GW019 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | **SW846 8260B** | GKHMS-GW022 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | **SW846 8720D/8270DSIM** | GKHMS-GW022 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | **SW846 6020A** | GKHMS-GW022 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | **SW846 8082A** | GKHMS-GW022 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | **SW846 8081B** | GKHMS-GW022 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-023-1010 | 10:00 | **SW846 8260B** | GKHMS-GW023 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-023-1010 | 10:00 | **SW846 8720D/8270DSIM** | GKHMS-GW023 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-023-1010 | 10:00 | **SW846 6020A** | GKHMS-GW023 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD001-1010 | 00:00 | **SW846 8260B** | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-FD001-1010 | 00:00 | **SW846 6020A** | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD001-1010 | 00:00 | **SW846 8720D/8270DSIM** | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD002-1010 | 00:00 | **SW846 8260B** | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |

1011003

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-GW-FD002-1010 | 00:00 | **SW846 8720D/8270DSIM** | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD002-1010 | 00:00 | **SW846 6020A** | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 6020A** | QC | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8260B** | QC | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8720D/8270DSIM** | QC | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8081B** | QC | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **SW846 8082A** | QC | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By:<br>**Gary Braganza** | Date:<br>11/02/2010 | Time:<br>15:32 | Received By:<br>**Federal Express** | Date:<br>11/02/2010 | Time:<br>16:32 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date:<br>11/3/10 | Time:<br>10:00 |

Comments:

CENTAURI LABS™

WORK ORDER

Printed: 11/3/2010 11:46:13AM

**1011003**

**Approved**

*Due Date: 11/17/10 00:00 (14 day TAT)*

*Date Received: 11/03/10 10:10*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!!

| Analysis | Expires | Comments |
|---|---|---|
| 1011003-01 GKHMS-TB-03 [Water] Sampled 11/01/10 08:00 Eastern | | |
| 8260B LL VOA | 11/15/10 08:00 | |
| 1011003-02 GKHMS-GW-017-1010 [Water] Sampled 11/02/10 08:40 Eastern | | |
| 6020A QSM TAL | 05/01/11 08:40 | |
| 8260B LL VOA | 11/16/10 08:40 | |
| 8270D LL SVOC TCL | 11/09/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 08:40 | |
| 1011003-03 GKHMS-GW-018-1010 [Water] Sampled 11/02/10 08:00 Eastern | | *Use for QC* |
| 8270D LL SVOC TCL | 11/09/10 08:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 08:00 | |
| 8260B LL VOA | 11/16/10 08:00 | |
| 6020A QSM TAL | 05/01/11 08:00 | |
| 1011003-04 GKHMS-GW-019-1010 [Water] Sampled 11/02/10 09:20 Eastern | | |
| 8260B LL VOA | 11/16/10 09:20 | |
| 8270D LL SVOC TCL | 11/09/10 09:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 09:20 | |
| 6020A QSM TAL | 05/01/11 09:20 | |
| 1011003-05 GKHMS-GW-022-1010 [Water] Sampled 11/02/10 10:50 Eastern | | |
| 8270D LL SVOC TCL | 11/09/10 10:50 | PLUS SIM PAHs |
| 8260B LL VOA | 11/16/10 10:50 | |
| 6020A QSM TAL | 05/01/11 10:50 | |
| 8081B Pesticides | 11/09/10 10:50 | |
| Mercury, Total 7470A | 11/30/10 10:50 | |
| 8082 PCBs | 11/09/10 10:50 | |

CENTAURI LABS™

WORK ORDER

1011003

Approved

Printed: 11/3/2010 11:46:13AM

*Due Date: 11/17/10 00:00 (14 day TAT)*

*Date Received: 11/03/10 10:10*

| Analysis | Expires | Comments |
|---|---|---|
| 1011003-06 GKHMS-GW-023-1010 [Water] | | Sampled 11/02/10 10:00 Eastern |
| 6020A QSM TAL | 05/01/11 10:00 | |
| 8260B LL VOA | 11/16/10 10:00 | |
| 8270D LL SVOC TCL | 11/09/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 10:00 | |
| 1011003-07 GKHMS-GW-FD001-1010 [Water] | | Sampled 11/02/10 00:00 Eastern |
| 8260B LL VOA | 11/16/10 00:00 | |
| 1011003-08 GKHMS-GW-FD002-1010 [Water] | | Sampled 11/02/10 00:00 Eastern |
| 6020A QSM TAL | 05/01/11 00:00 | |
| Mercury, Total 7470A | 11/30/10 00:00 | |
| 8260B LL VOA | 11/16/10 00:00 | |
| 8270D LL SVOC TCL | 11/09/10 00:00 | PLUS SIM PAHs |
| 1011003-09 GKHMS-GW-FD003-1010 [Water] | | Sampled 11/02/10 00:00 Eastern |
| Mercury, Total 7470A | 11/30/10 00:00 | |
| 6020A QSM TAL | 05/01/11 00:00 | |
| 8081B Pesticides | 11/09/10 00:00 | |
| 8082 PCBs | 11/09/10 00:00 | |
| 8260B LL VOA | 11/16/10 00:00 | |
| 8270D LL SVOC TCL | 11/09/10 00:00 | PLUS SIM PAHs |

Container Locations

| | |
|---|---|
| 32oz Am | WB-1 |
| 32oz HDPE w/ HNO3 | WB-1 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11/3/10

Date

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011003**

| **SENDING LABORATORY:** | **RECEIVING LABORATORY:** |
|---|---|
| Centauri Labs, LLC | EMPERICAL LABS |
| 7210 Corporate Court | 621 MAINSTREAM DR SUITE 270 |
| Frederick, MD 21703 | NASHVILLE, TN 37228 |
| Phone: 301.694.5310 | Phone :(615) 345-1115 |
| Fax: 301.620.0731 | Fax: (000) 000-0000 |
| Project Manager: Chino Ortiz | |

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011003-02** | **Water** | **Sampled:11/02/10 08:40** | 1011255-01 ↓ |
| Mercury, Total 7470A | | 11/30/10 08:40 | |
| 6020A QSM TAL | | 05/01/11 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-03** | **Water** | **Sampled:11/02/10 08:00** | -02 ↓ |
| 6020A QSM TAL | | 05/01/11 08:00 | |
| Mercury, Total 7470A | | 11/30/10 08:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-04** | **Water** | **Sampled:11/02/10 09:20** | -03 |
| 6020A QSM TAL | | 05/01/11 09:20 | |
| Mercury, Total 7470A | | 11/30/10 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-05** | **Water** | **Sampled:11/02/10 10:50** | -04 |
| Mercury, Total 7470A | | 11/30/10 10:50 | |
| 6020A QSM TAL | | 05/01/11 10:50 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-06** | **Water** | **Sampled:11/02/10 10:00** | -05 |
| Mercury, Total 7470A | | 11/30/10 10:00 | |
| 6020A QSM TAL | | 05/01/11 10:00 | |
| *Containers Supplied:* | | | 2.4°C |

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/29 | [signature] | 11/30/10 08:05 |
| | | | |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011003**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011003-07** | **Water** | **Sampled:11/02/10 00:00** | 1011255-06 |
| 6020A QSM TAL | | 05/01/11 00:00 | |
| Mercury, Total 7470A | | 11/30/10 00:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-08** | **Water** | **Sampled:11/02/10 00:00** | -07 |
| 6020A QSM TAL | | 05/01/11 00:00 | |
| Mercury, Total 7470A | | 11/30/10 00:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-09** | **Water** | **Sampled:11/02/10 00:00** | -08 |
| Mercury, Total 7470A | | 11/30/10 00:00 | |
| 6020A QSM TAL | | 05/01/11 00:00 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/17/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2.4°C

| | | | |
|---|---|---|---|
| Released By | 11/29 Date | Received By | 11/30/10 08:25 Date |
| Released By | Date | Received By | Date |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011255 Number of Coolers: 1 of 2

Client: CenturiLabs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Donald (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered

EL Courier Other: —

If applicable, enter airbill number here: 0594

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | (Yes) | No | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.7 °C Correction Factor: -0.3 °C Final Value: 2.4 °C

Dates samples were logged-in: 11/30/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schaed (Initial): ws

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | (Yes) | No | N/A |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | (Yes) | No | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: —

All Hg's rec'd out of hold. Rec'd triple volume for 1011003-03 but no MS/MSD specified on COC. pH<2 for all metals

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1011255 Number of Coolers: 2 of 2

Client: Centuri Labs Project: —

Date/Time Received: 11/30/10 08:25 Date cooler(s) opened: 11/30/10

Opened By (print): Chris Dowd (signature):

Circle response below as appropriate

1. How did the samples arrive? **FedEx** UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0572

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No (N/A)
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A
7. Was project identifiable from custody papers? ..... (Yes) No N/A
8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.3 °C Correction Factor: -0.3 °C Final Value: 3.0 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

See 1 of 2

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011003**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011003-02** | **Water** | **Sampled:11/02/10 08:40** | 1012007-01 |
| 8270D LL SVOC TCL | | 11/09/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/30/10 08:40 | |
| 6020A QSM TAL | | 05/01/11 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-03** | **Water** | **Sampled:11/02/10 08:00** | -02 |
| 6020A QSM TAL | | 05/01/11 08:00 | |
| 8270D LL SVOC TCL | | 11/09/10 08:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/30/10 08:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-04** | **Water** | **Sampled:11/02/10 09:20** | -03 |
| 6020A QSM TAL | | 05/01/11 09:20 | |
| 8270D LL SVOC TCL | | 11/09/10 09:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/30/10 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-05** | **Water** | **Sampled:11/02/10 10:50** | -04 |
| Mercury, Total 7470A | | 11/30/10 10:50 | |
| 6020A QSM TAL | | 05/01/11 10:50 | |
| 8270D LL SVOC TCL | | 11/09/10 10:50 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| | 11/30 | | 12/1/10 08:11 |
| Released By | Date | Received By | Date |
| | | | |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011003**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011003-06** | **Water** | **Sampled:11/02/10 10:00** | 1012007-05 |
| 8270D LL SVOC TCL | | 11/09/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/30/10 10:00 | |
| 6020A QSM TAL | | 05/01/11 10:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-07** | **Water** | **Sampled:11/02/10 00:00** | < -06 |
| 6020A QSM TAL | | 05/01/11 00:00 | |
| 8270D LL SVOC TCL | | 11/09/10 00:00 | |
| Mercury, Total 7470A | | 11/30/10 00:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-08** | **Water** | **Sampled:11/02/10 00:00** | -07 |
| 6020A QSM TAL | | 05/01/11 00:00 | |
| 8270D LL SVOC TCL | | 11/09/10 00:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | | 11/30/10 00:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-09** | **Water** | **Sampled:11/02/10 00:00** | -08 |
| Mercury, Total 7470A | | 11/30/10 00:00 | |
| 6020A QSM TAL | | 05/01/11 00:00 | |
| 8270D LL SVOC TCL | | 11/09/10 00:00 | PLUS SIM PAHs |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/17/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| | | | |
| Released By | Date | Received By | Date |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 1012007 Number of Coolers: 1 of 1

Client: Centauri Labs Project: —

Date/Time Received: 12/1/10 08:11 Date cooler(s) opened: 12/1/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9680

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? | Yes | (No) | N/A |
| 8. If required, was enough ice present in the cooler(s)? | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in: 12/1/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? | Yes | No | (N/A) |
| 16. Was residual chlorine present in any applicable sample containers? | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? | Yes | (No) | N/A |
| 18. Was headspace present in any included VOA vials? | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

Rec'd triple volume for 1011003-03

No metals volume rec'd!

Rec'd extracts BLK+BFB not on COC. Tagged as -09→10

1011003-07 not rec'd in shipment.

WORK ORDER

**1012007**

Printed: 12/22/2010 5:21:09PM

# Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/22/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 12/01/2010 08:11
Date Logged In 12/01/2010 11:16

Samples Received at: 2.3°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012007-06 1011003-07 [Water] Sampled 11/02/2010 00:00 Eastern** | | | | | **not received in shipment!** |
| **1012007-01 1011003-02 [Water] Sampled 11/02/2010 08:40 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/09/2010 07:40 | client list | see client list |
| **1012007-02 1011003-03 [Water] Sampled 11/02/2010 08:00 Eastern** | | | | | **MS/MSD. Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/09/2010 07:00 | client list | see client list |
| **1012007-03 1011003-04 [Water] Sampled 11/02/2010 09:20 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/09/2010 08:20 | client list | see client list |



CTOJM16KW_008 Summ Package

WORK ORDER

**1012007**

Printed: 12/22/2010 5:21:09PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012007-04 1011003-05 [Water] Sampled 11/02/2010 10:50 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/09/2010 09:50 | client list | see client list |
| **1012007-05 1011003-06 [Water] Sampled 11/02/2010 10:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/09/2010 09:00 | client list | see client list |
| **1012007-07 1011003-08 [Water] Sampled 11/02/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/08/2010 23:00 | client list | see client list |
| **1012007-08 1011003-09 [Water] Sampled 11/02/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/08/2010 23:00 | client list | see client list |
| **1012007-09 1011003-BLK [Water] Sampled 11/02/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/08/2010 23:00 | client list | see client list |
| **1012007-10 1011003-BKS [Water] Sampled 11/02/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/08/2010 23:00 | client list | see client list |

# Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: CTOJM16 Key West 2010
SDG #: CTOJM16KW_008
MATRIX: Water

QC LEVEL: EDD/IVQSM
Report Due: 12/22/2010
Client Sample Count: 10

| Sample Type | Sampled | Received | Lab ID | Client ID | SW8270C |
|---|---|---|---|---|---|
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-01 | 1011003-02 | Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-02 | 1011003-03 | MS/MSD. Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-03 | 1011003-04 | Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-04 | 1011003-05 | Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-05 | 1011003-06 | Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-06 | 1011003-07 | |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-07 | 1011003-08 | Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-08 | 1011003-09 | Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-09 | 1011003-BLK | Sample is an extract!! |
| Client Sample | 11/2/2010 | 12/1/2010 | 1012007-10 | 1011003-BKS | Sample is an extract!! |

## Sample Delivery Group Case Narrative

**Receipt Information**
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

No sample volume was received for SW6020 or SW7470A.

**Changes to the Revision**
This is an original submittal of the final report package.

**Analytical Information**
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

**Chromatographic Flags for Manual Integration:**
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

**SW8270C:**
The surrogate 2,4,6-Tribromophenol did not recover in 0L14026-BLK1 and samples 1012005-01, -11, -12 and-13 and the -04, -05 and -08. Samples were not able to be re-extracted since the extracts were received from another laboratory.

The continuing calibration verifications exceeded criteria in 0L35113-CCV1 with a negative bias for Benzaldehyde and 2,2'-Oxybis-1-chloropropane and with a positive bias for Hexachlorocyclopentadiene and 2-Nitroaniline and in 0L35403-CCV1 with a

negative bias for 2,2'-Oxybis-1-chloropropane and with a positive bias for Hexachlorocyclopentadiene, 4-Nitroaniline and 2-Nitroaniline.

The batch spikes associated to batch 0L14026 exceeded criteria with no recovery for Benzaldehyde, 4-Chloroaniline, 2,4-Dinitrophenol, 2-Nitroaniline, N-nitrosodiphenylamine, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol. Samples were not able to be re-extracted since the extracts were received from another laboratory.

The matrix spikes associated to sample 1012007-02 exceeded criteria with no recovery for Benzaldehyde, 4-Chloroaniline, Hexachlorocyclopentadiene, 2-Nitroaniline, N-nitrosodiphenylamine, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**

As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

***:** An exceeding quality control criteria is associated with the reported result.

**B:** The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1:** The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

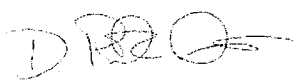
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

# Data for SW8270C Forms

# HOLDING TIME SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011003-02 | 11/02/10 08:40 | 12/01/10 08:11 | 11/09/10 08:20 | 7.03 | 7.00 | 12/14/10 20:50 | 35.52 | 40.00 | |
| 1011003-03 | 11/02/10 08:00 | 12/01/10 08:11 | 11/09/10 08:20 | 7.06 | 7.00 | 12/14/10 21:20 | 35.54 | 40.00 | |
| 1011003-04 | 11/02/10 09:20 | 12/01/10 08:11 | 11/09/10 08:20 | 7.00 | 7.00 | 12/14/10 21:50 | 35.56 | 40.00 | |
| 1011003-05 | 11/02/10 10:50 | 12/01/10 08:11 | 11/09/10 08:20 | 6.94 | 7.00 | 12/14/10 22:20 | 35.58 | 40.00 | |
| 1011003-06 | 11/02/10 10:00 | 12/01/10 08:11 | 11/09/10 08:20 | 6.97 | 7.00 | 12/14/10 22:50 | 35.60 | 40.00 | |
| 1011003-08 | 11/02/10 00:00 | 12/01/10 08:11 | 11/09/10 08:20 | 7.39 | 7.00 | 12/14/10 23:20 | 35.63 | 40.00 | |
| 1011003-09 | 11/02/10 00:00 | 12/01/10 08:11 | 11/09/10 08:20 | 7.39 | 7.00 | 12/15/10 12:12 | 36.16 | 40.00 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35109 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35109-TUN1 | SEQ-TUN1.D | 12/07/10 17:31 |
| Cal Standard | 0L35109-CAL1 | SEQ-CAL1.D | 12/07/10 17:58 |
| Cal Standard | 0L35109-CAL2 | SEQ-CAL2.D | 12/07/10 18:29 |
| Cal Standard | 0L35109-CAL3 | SEQ-CAL3.D | 12/07/10 18:59 |
| Cal Standard | 0L35109-CAL4 | SEQ-CAL4.D | 12/07/10 19:29 |
| Cal Standard | 0L35109-CAL5 | SEQ-CAL5.D | 12/07/10 19:59 |
| Cal Standard | 0L35109-CAL6 | SEQ-CAL6.D | 12/07/10 20:29 |
| Cal Standard | 0L35109-CAL7 | SEQ-CAL7.D | 12/07/10 20:59 |
| Cal Standard | 0L35109-CAL9 | SEQ-CAL9.D | 12/07/10 21:58 |
| Cal Standard | 0L35109-CALA | SEQ-CALA.D | 12/07/10 22:28 |
| Cal Standard | 0L35109-CALB | SEQ-CALB.D | 12/07/10 22:57 |
| Cal Standard | 0L35109-CALC | SEQ-CALC.D | 12/07/10 23:27 |
| Cal Standard | 0L35109-CALD | SEQ-CALD.D | 12/07/10 23:56 |
| Cal Standard | 0L35109-CALE | SEQ-CALE.D | 12/08/10 00:25 |
| Cal Standard | 0L35109-CALF | SEQ-CALF.D | 12/08/10 00:54 |
| Cal Standard | 0L35109-CALG | SEQ-CALG.D | 12/08/10 01:23 |
| Cal Standard | 0L35109-CALH | SEQ-CALH.D | 12/08/10 01:52 |
| Cal Standard | 0L35109-CALJ | SEQ-CALJ.D | 12/08/10 02:51 |
| Cal Standard | 0L35109-CALK | SEQ-CALK.D | 12/08/10 03:20 |
| MS Tune | 0L35109-TUN2 | SEQ-TUN2.D | 12/08/10 03:49 |
| Initial Cal Check | 0L35109-ICV3 | SEQ-ICV3.D | 12/08/10 10:01 |
| Initial Cal Check | 0L35109-ICV4 | SEQ-ICV4.D | 12/08/10 10:31 |
| Initial Cal Check | 0L35109-ICV5 | SEQ-ICV5.D | 12/08/10 11:04 |
| Initial Cal Check | 0L35109-ICV7 | SEQ-ICV7.D | 12/08/10 12:04 |
| Initial Cal Check | 0L35109-ICVA | SEQ-ICVA.D | 12/08/10 14:09 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/07/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 17:31 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 44.4 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 47.6 | PASS |
| 70 | Less than 2% of 69 | 0.454 | PASS |
| 127 | 40 - 60% of 198 | 57.6 | PASS |
| 197 | Less than 1% of 198 | 0.468 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.79 | PASS |
| 275 | 10 - 30% of 198 | 25.5 | PASS |
| 365 | 1 - 200% of 198 | 3.23 | PASS |
| 441 | 0.001 - 100% of 443 | 77 | PASS |
| 442 | 40 - 200% of 198 | 77 | PASS |
| 443 | 17 - 23% of 442 | 20.1 | PASS |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN2.D | Injection Date: | 12/08/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 03:49 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN2 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 46.1 | PASS |
| 68 | Less than 2% of 69 | 0.759 | PASS |
| 69 | Less than 200% of 198 | 46.1 | PASS |
| 70 | Less than 2% of 69 | 0.512 | PASS |
| 127 | 40 - 60% of 198 | 57.3 | PASS |
| 197 | Less than 1% of 198 | 0.26 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 7.25 | PASS |
| 275 | 10 - 30% of 198 | 24.8 | PASS |
| 365 | 1 - 200% of 198 | 3.45 | PASS |
| 441 | 0.001 - 100% of 443 | 73.2 | PASS |
| 442 | 40 - 200% of 198 | 81 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.269597 | 4.903152 | 10.465 | 4.763744E-02 | | | CCC (30) | |
| Acenaphthylene | 1.959083 | 4.154041 | 10.24944 | 4.133794E-02 | | | 15 | |
| Acetophenone | 1.714419 | 4.130585 | 7.227222 | 3.094706E-02 | | | 15 | |
| Aniline | 1.900007 | 3.284542 | 6.390556 | 8.799762E-02 | | | 15 | |
| Anthracene | 1.161307 | 4.582293 | 12.34144 | 4.433106E-02 | | | 15 | |
| Atrazine | 0.2293025 | 11.08458 | 11.88522 | 5.410601E-02 | | | 15 | |
| Benzaldehyde | 1.057258 | 4.80575 | 6.264667 | 2.697619E-02 | | | 15 | |
| Benzidine | 0.6369679 | 13.40551 | 13.89371 | 2.662737E-02 | | | 15 | |
| Benzo(a)anthracene | 1.193431 | 4.385626 | 15.53889 | 2.902238E-02 | | | 15 | |
| Benzo(a)pyrene | 1.061849 | 12.15633 | 17.34322 | 4.821226E-02 | | | CCC (30) | |
| Benzo(b)fluoranthene | 1.192834 | 9.469779 | 16.90622 | 0.0364467 | | | 15 | |
| Benzo(g,h,i)perylene | 0.8673976 | 9.832135 | 19.57289 | 8.613339E-02 | | | 15 | |
| Benzoic acid | 0.1667293 | 34.36929 | 7.9865 | 0.5465472 | 0.9972413 | | 0.995 | |
| Benzo(k)fluoranthene | 1.234244 | 5.160575 | 16.9405 | 4.784776E-02 | | | 15 | |
| Benzyl alcohol | 0.7918529 | 8.384648 | 6.922 | 7.858658E-02 | | | 15 | |
| 1,1-Biphenyl | 1.647464 | 6.941428 | 9.711111 | 3.672288E-02 | | | 15 | |
| 4-Bromophenyl-phenylether | 0.2396007 | 4.615409 | 11.69178 | 3.160712E-02 | | | 15 | |
| Butylbenzylphthalate | 0.6659619 | 10.75201 | 14.81629 | 1.927271E-02 | | | 15 | |
| Caprolactam | 0.0983814 | 13.1947 | 8.739 | 0.1800642 | | | 15 | |
| Carbazole | 1.033588 | 5.537093 | 12.53067 | 4.187015E-02 | | | 15 | |
| 4-Chloro-3-methylphenol | 0.2791833 | 13.73393 | 8.943625 | 3.777953E-02 | | | CCC (30) | |
| 4-Chloroaniline | 0.4236872 | 4.041706 | 8.357222 | 5.579471E-02 | | | 15 | |
| Bis(2-chloroethoxy)methane | 0.4015206 | 5.043312 | 7.969778 | 4.750625E-02 | | | 15 | |
| Bis(2-chloroethyl)ether | 1.242957 | 3.412662 | 6.456667 | 9.612344E-02 | | | 15 | |
| 2,2'-Oxybis-1-chloropropane | 1.791162 | 4.894321 | 7.083555 | 4.525434E-02 | | | 15 | |
| 2-Chloronaphthalene | 1.223416 | 4.351312 | 9.738445 | 4.355056E-02 | | | 15 | |
| 2-Chlorophenol | 1.320483 | 5.059863 | 6.533111 | 6.571699E-02 | | | 15 | |
| 4-Chlorophenyl phenyl ether | 0.6482639 | 4.698305 | 11.09078 | 0.034051 | | | 15 | |
| Chrysene | 1.223868 | 3.849079 | 15.58856 | 3.824456E-02 | | | 15 | |
| Dibenz(a,h)anthracene | 0.843577 | 13.39613 | 19.10544 | 0.064455 | | | 15 | |
| Dibenzofuran | 1.702459 | 5.478968 | 10.67456 | 4.805089E-02 | | | 15 | |
| Di-n-butylphthalate | 1.274102 | 10.33933 | 12.96089 | 3.198878E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 1.590354 | 5.068212 | 6.791 | 3.285709E-02 | | | CCC (30) | |
| 1,3-Dichlorobenzene | 1.556634 | 4.82334 | 6.712111 | 3.840334E-02 | | | 15 | |
| 1,2-Dichlorobenzene | 1.498241 | 3.960279 | 6.972778 | 3.854247E-02 | | | 15 | |
| 3,3'-Dichlorobenzidine | 0.3901063 | 11.47408 | 15.49443 | 2.260094E-02 | | | 15 | |
| 2,6-Dichlorophenol | 0.2593817 | 8.91257 | 8.374111 | 1.822758E-02 | | | 15 | |
| 2,4-Dichlorophenol | 0.2708646 | 11.75671 | 8.104445 | 7.489039E-02 | | | CCC (30) | |
| Diethylphthalate | 1.375716 | 4.066081 | 10.94922 | 7.018966E-02 | | | 15 | |
| 2,4-Dimethylphenol | 0.3567735 | 5.191635 | 7.862444 | 7.425377E-02 | | | 15 | |
| Dimethyl phthalate | 1.360327 | 2.760394 | 10.08487 | 0.1018539 | | | 15 | |
| 4,6-Dinitro-2-methylphenol | 0.1141426 | 30.80017 | 11.15414 | 8.948876E-02 | 0.9987724 | | 0.995 | |
| 2,4-Dinitrophenol | 0.1317034 | 34.87347 | 10.48617 | 6.439793E-02 | 0.9970944 | | SPCC (0.05) | |
| 2,4-Dinitrotoluene | 0.3873439 | 14.36567 | 10.647 | 8.872293E-02 | | | 15 | |
| 2,6-Dinitrotoluene | 0.3161974 | 6.525335 | 10.15025 | 8.086076E-02 | | | 15 | |
| Di-n-octylphthalate | 1.581621 | 12.56055 | 16.37467 | 1.584676E-02 | | | CCC (30) | |
| 1,4-Dioxane | 0.5824199 | 4.647384 | 3.461222 | 6.378529E-02 | | | 15 | |
| 1,2-Diphenylhydrazine | 0.8266591 | 5.85195 | 11.28589 | 4.479164E-02 | | | 15 | |
| Bis(2-ethylhexyl)phthalate | 0.8698317 | 14.06275 | 15.55788 | 2.160886E-02 | | | 15 | |
| Fluoranthene | 1.133942 | 6.426527 | 13.74544 | 3.010434E-02 | | | CCC (30) | |
| Fluorene | 1.377626 | 2.611998 | 11.09611 | 4.668763E-02 | | | 15 | |
| 2-Fluorobiphenyl | 1.429188 | 5.299247 | 9.590445 | 4.316615E-02 | | | 15 | |
| 2-Fluorophenol | 1.163095 | 4.537913 | 5.309444 | 4.883207E-02 | | | 15 | |
| Hexachlorobenzene | 0.2675089 | 4.583392 | 11.79278 | 3.935515E-02 | | | 15 | |
| Hexachlorobutadiene | 0.1897728 | 3.248719 | 8.468444 | 2.541857E-02 | | | CCC (30) | |
| Hexachlorocyclopentadiene | 0.2719697 | 13.77204 | 9.354667 | 0.0244126 | | | SPCC (0.05) | |
| Hexachloroethane | 0.5839827 | 5.21415 | 7.374556 | 2.041353E-02 | | | 15 | |
| Indeno(1,2,3-cd)pyrene | 1.046936 | 11.15244 | 19.08733 | 6.484222E-02 | | | 15 | |
| Isophorone | 0.6532573 | 4.164348 | 7.718667 | 0.1211494 | | | 15 | |
| 1-Methylnaphthalene | 0.6166441 | 3.550294 | 9.265111 | 3.593918E-02 | | | 15 | |
| 2-Methylnaphthalene | 0.5927061 | 2.758044 | 9.143334 | 3.771168E-02 | | | 15 | |
| 2-Methylphenol | 1.129245 | 5.890276 | 7.051444 | 5.962201E-02 | | | 15 | |
| 3-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |
| 4-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | 1.098195 | 7.090559 | 8.304222 | 3.938283E-02 | | | 15 | |
| 4-Nitroaniline | 0.2492193 | 10.6119 | 11.10488 | 0.1012271 | | | 15 | |
| 3-Nitroaniline | 0.3039612 | 12.46666 | 10.355 | 8.761057E-02 | | | 15 | |
| 2-Nitroaniline | 0.3312246 | 12.35964 | 9.851625 | 5.605301E-02 | | | 15 | |
| Nitrobenzene | 0.3690184 | 3.243848 | 7.433 | 8.670105E-02 | | | 15 | |
| Nitrobenzene-d5 | 0.3614526 | 4.787386 | 7.410333 | 7.322044E-02 | | | 15 | |
| 4-Nitrophenol | 0.1965166 | 21.52661 | 10.55771 | 9.363783E-02 | 0.9988059 | | SPCC (0.05) | |
| 2-Nitrophenol | 0.1835837 | 10.09707 | 7.816143 | 0.0460575 | | | CCC (30) | |
| N-Nitrosodimethylamine | 0.7067011 | 3.972251 | 3.796889 | 0.112963 | | | 15 | |
| N-Nitrosodiphenylamine | 0.7463088 | 5.779425 | 11.23333 | 6.231948E-02 | | | CCC (30) | |
| N-Nitroso-di-n-propylamine | 0.8544344 | 3.82209 | 7.235111 | 0.132911 | | | SPCC (0.05) | |
| Pentachlorophenol | 0.1195033 | 31.15399 | 12.02443 | 2.565489E-02 | 0.9986727 | | CCC (30) | * |
| Phenanthrene | 1.206234 | 6.535522 | 12.27844 | 3.596534E-02 | | | 15 | |
| Phenol | 1.491659 | 4.640746 | 6.357889 | 0.1599589 | | | CCC (30) | |
| Phenol-d6 | 1.434991 | 4.1192 | 6.341889 | 0.1499449 | | | 15 | |
| Pyrene | 1.380107 | 4.996263 | 14.02522 | 3.880092E-02 | | | 15 | |
| Pyridine | 1.377958 | 4.121152 | 3.838111 | 8.916254E-02 | | | 15 | |
| Terphenyl-d14 | 0.8848596 | 4.382233 | 14.21 | 0.0194432 | | | 15 | |
| 1,2,4,5-Tetrachlorobenzene | 0.3170295 | 5.342813 | 9.355222 | 3.483054E-02 | | | 15 | |
| 2,3,4,6-Tetrachlorophenol | 0.2870772 | 13.54627 | 10.82871 | 2.564344E-02 | | | 15 | |
| 2,4,6-Tribromophenol | 0.1159566 | 8.307173 | 11.39514 | 4.977028E-02 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.3581999 | 4.302402 | 8.212111 | 0.0416875 | | | 15 | |
| 2,4,6-Trichlorophenol | 0.3425101 | 14.8708 | 9.487875 | 3.202461E-02 | | | CCC (30) | |
| 2,4,5-Trichlorophenol | 0.3356329 | 18.90298 | 9.529444 | 3.382823E-02 | 0.9992251 | | 0.995 | |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 1 | 1.374103 | 2 | 1.315472 | 5 | 1.294825 | 10 | 1.297991 | 20 | 1.275653 | 40 | 1.264744 |
| Acenaphthylene | 1 | 1.977639 | 2 | 1.856101 | 5 | 2.054718 | 10 | 2.034701 | 20 | 2.004486 | 40 | 2.016175 |
| Acetophenone | | | | | | | | | | | | |
| Aniline | 1 | 1.893837 | 2 | 1.776582 | 5 | 1.860449 | 10 | 1.905373 | 20 | 1.96982 | 40 | 1.974599 |
| Anthracene | 1 | 1.152616 | 2 | 1.06955 | 5 | 1.199769 | 10 | 1.197299 | 20 | 1.226635 | 40 | 1.202224 |
| Atrazine | | | | | | | | | | | | |
| Benzaldehyde | | | | | | | | | | | | |
| Benzidine | | | | | | | | | | | | |
| Benzo(a)anthracene | 1 | 1.176974 | 2 | 1.111061 | 5 | 1.144412 | 10 | 1.151915 | 20 | 1.206273 | 40 | 1.273851 |
| Benzo(a)pyrene | 1 | 0.8141702 | 2 | 0.8979174 | 5 | 1.012763 | 10 | 1.07342 | 20 | 1.117703 | 40 | 1.177321 |
| Benzo(b)fluoranthene | 1 | 1.125665 | 2 | 0.9776505 | 5 | 1.090132 | 10 | 1.171102 | 20 | 1.29305 | 40 | 1.2449 |
| Benzo(g,h,i)perylene | 1 | 0.8361077 | 2 | 0.7984972 | 5 | 0.8140256 | 10 | 0.9111468 | 20 | 0.7364742 | 40 | 0.9464765 |
| Benzoic acid | 1 | | 2 | | 5 | ~~4.781063E-02~~ | 10 | 0.0826069 | 20 | 0.1115828 | 40 | 0.1730795 |
| Benzo(k)fluoranthene | 1 | 1.14576 | 2 | 1.154252 | 5 | 1.251529 | 10 | 1.234315 | 20 | 1.330375 | 40 | 1.295232 |
| Benzyl alcohol | 1 | 0.6727378 | 2 | 0.6959354 | 5 | 0.772278 | 10 | 0.795494 | 20 | 0.8202954 | 40 | 0.8572062 |
| 1,1-Biphenyl | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | 1 | 0.2518511 | 2 | 0.2324228 | 5 | 0.2437731 | 10 | 0.256832 | 20 | 0.2460901 | 40 | 0.2374707 |
| Butylbenzylphthalate | 1 | ~~0.4212315~~ | 2 | ~~0.4213914~~ | 5 | 0.5348313 | 10 | 0.6014097 | 20 | 0.6750239 | 40 | 0.7266313 |
| Caprolactam | | | | | | | | | | | | |
| Carbazole | 1 | 1.01038 | 2 | 0.9970601 | 5 | 1.12402 | 10 | 1.080297 | 20 | 1.103171 | 40 | 1.03857 |
| 4-Chloro-3-methylphenol | 1 | ~~0.2181994~~ | 2 | 0.1973558 | 5 | 0.2555061 | 10 | 0.2703475 | 20 | 0.2869397 | 40 | 0.3103583 |
| 4-Chloroaniline | 1 | 0.4024068 | 2 | 0.3901094 | 5 | 0.4361041 | 10 | 0.428376 | 20 | 0.4378298 | 40 | 0.4407009 |
| Bis(2-chloroethoxy)methane | 1 | 0.4428005 | 2 | 0.3937843 | 5 | 0.4134067 | 10 | 0.4132365 | 20 | 0.4016128 | 40 | 0.4006352 |
| Bis(2-chloroethyl)ether | 1 | 1.305395 | 2 | 1.271392 | 5 | 1.279374 | 10 | 1.244134 | 20 | 1.24794 | 40 | 1.248168 |
| 2,2'-Oxybis-1-chloropropane | 1 | 1.965289 | 2 | 1.793817 | 5 | 1.845471 | 10 | 1.811628 | 20 | 1.795887 | 40 | 1.79747 |
| 2-Chloronaphthalene | 1 | 1.301941 | 2 | 1.234577 | 5 | 1.261078 | 10 | 1.265583 | 20 | 1.232031 | 40 | 1.224941 |
| 2-Chlorophenol | 1 | 1.214973 | 2 | 1.209461 | 5 | 1.305111 | 10 | 1.33217 | 20 | 1.378026 | 40 | 1.389739 |
| 4-Chlorophenyl phenyl ether | 1 | 0.7071653 | 2 | 0.6593299 | 5 | 0.6773879 | 10 | 0.6525344 | 20 | 0.636283 | 40 | 0.641452 |
| Chrysene | 1 | 1.306708 | 2 | 1.164201 | 5 | 1.238881 | 10 | 1.248779 | 20 | 1.219789 | 40 | 1.261333 |
| Dibenz(a,h)anthracene | 1 | 0.7512715 | 2 | 0.654872 | 5 | 0.7969043 | 10 | 0.8919851 | 20 | 0.7541061 | 40 | 0.941626 |
| Dibenzofuran | 1 | 1.871373 | 2 | 1.740989 | 5 | 1.77835 | 10 | 1.705143 | 20 | 1.70834 | 40 | 1.703961 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 1 | 1.082426 | 2 | 1.046644 | 5 | 1.297638 | 10 | 1.304534 | 20 | 1.412773 | 40 | 1.396991 |
| 1,4-Dichlorobenzene | 1 | 1.763261 | 2 | 1.615997 | 5 | 1.634718 | 10 | 1.593686 | 20 | 1.585729 | 40 | 1.569702 |
| 1,3-Dichlorobenzene | 1 | 1.712108 | 2 | 1.509974 | 5 | 1.605202 | 10 | 1.591847 | 20 | 1.585144 | 40 | 1.527454 |
| 1,2-Dichlorobenzene | 1 | 1.614674 | 2 | 1.490364 | 5 | 1.546689 | 10 | 1.516537 | 20 | 1.510281 | 40 | 1.482237 |
| 3,3'-Dichlorobenzidine | | | | | | | | | | | | |
| 2,6-Dichlorophenol | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 1 | 0.2193633 | 2 | 0.2189929 | 5 | 0.2564872 | 10 | 0.2777847 | 20 | 0.2877571 | 40 | 0.2934208 |
| Diethylphthalate | 1 | 1.305598 | 2 | 1.272227 | 5 | 1.418943 | 10 | 1.386613 | 20 | 1.419902 | 40 | 1.434097 |
| 2,4-Dimethylphenol | 1 | 0.3408463 | 2 | 0.315261 | 5 | 0.3594693 | 10 | 0.3685544 | 20 | 0.370695 | 40 | 0.3730775 |
| Dimethyl phthalate | 1 | | 2 | 1.3603 | 5 | 1.387939 | 10 | 1.399916 | 20 | 1.384977 | 40 | 1.382422 |
| 4,6-Dinitro-2-methylphenol | 1 | | 2 | | 5 | 5.314518E-02 | 10 | 8.603549E-02 | 20 | 0.1020477 | 40 | 0.1278111 |
| 2,4-Dinitrophenol | 1 | | 2 | | 5 | ~~4.447398E-02~~ | 10 | 6.358993E-02 | 20 | 8.773021E-02 | 40 | 0.1367475 |
| 2,4-Dinitrotoluene | 1 | | 2 | 0.2696124 | 5 | 0.3483922 | 10 | 0.3796104 | 20 | 0.3959347 | 40 | 0.432168 |
| 2,6-Dinitrotoluene | 1 | | 2 | 0.2748954 | 5 | 0.2969673 | 10 | 0.3157389 | 20 | 0.320917 | 40 | 0.3377335 |
| Di-n-octylphthalate | 1 | ~~0.777665~~ | 2 | ~~0.7972759~~ | 5 | ~~1.157303~~ | 10 | 1.226168 | 20 | 1.667762 | 40 | 1.640777 |
| 1,4-Dioxane | | | | | | | | | | | | |
| 1,2-Diphenylhydrazine | 1 | 0.8633715 | 2 | 0.7922832 | 5 | 0.851889 | 10 | 0.902869 | 20 | 0.8523618 | 40 | 0.8367419 |
| Bis(2-ethylhexyl)phthalate | 1 | ~~0.5629525~~ | 2 | 0.623236 | 5 | 0.7692422 | 10 | 0.8261352 | 20 | 0.9295948 | 40 | 0.9699243 |
| Fluoranthene | 1 | 1.010262 | 2 | 1.050371 | 5 | 1.174781 | 10 | 1.087186 | 20 | 1.202634 | 40 | 1.216382 |
| Fluorene | 1 | 1.417605 | 2 | 1.334531 | 5 | 1.437789 | 10 | 1.382289 | 20 | 1.384069 | 40 | 1.391212 |
| 2-Fluorobiphenyl | 1 | 1.529612 | 2 | 1.450802 | 5 | 1.515443 | 10 | 1.491745 | 20 | 1.421812 | 40 | 1.419088 |
| 2-Fluorophenol | 2 | 1.169393 | 4 | 1.036011 | 10 | 1.183087 | 20 | 1.188432 | 40 | 1.218105 | 80 | 1.194993 |
| Hexachlorobenzene | 1 | 0.2870931 | 2 | 0.2718521 | 5 | 0.2738817 | 10 | 0.2758146 | 20 | 0.2709715 | 40 | 0.2670496 |
| Hexachlorobutadiene | 1 | 0.1996622 | 2 | 0.1865372 | 5 | 0.1967719 | 10 | 0.1932208 | 20 | 0.1899233 | 40 | 0.1887931 |
| Hexachlorocyclopentadiene | 1 | ~~0.166607~~ | 2 | ~~0.1547457~~ | 5 | ~~0.2130315~~ | 10 | 0.2250949 | 20 | 0.2330708 | 40 | 0.2880169 |
| Hexachloroethane | 1 | 0.6451315 | 2 | 0.5286661 | 5 | 0.5787438 | 10 | 0.5669407 | 20 | 0.5836949 | 40 | 0.5978446 |
| Indeno(1,2,3-cd)pyrene | 1 | 0.9439524 | 2 | 0.8985737 | 5 | 0.9919689 | 10 | 1.096168 | 20 | 0.9191515 | 40 | 1.154267 |
| Isophorone | 1 | 0.6213175 | 2 | 0.5968757 | 5 | 0.655194 | 10 | 0.6761772 | 20 | 0.6705981 | 40 | 0.6772569 |
| 1-Methylnaphthalene | 1 | 0.6465797 | 2 | 0.6184212 | 5 | 0.6369707 | 10 | 0.6319121 | 20 | 0.6193783 | 40 | 0.6184568 |
| 2-Methylnaphthalene | 1 | 0.6007326 | 2 | 0.5838361 | 5 | 0.6129738 | 10 | 0.6049021 | 20 | 0.6013921 | 40 | 0.6039252 |
| 2-Methylphenol | 1 | 1.026084 | 2 | 1.011589 | 5 | 1.14484 | 10 | 1.136228 | 20 | 1.174352 | 40 | 1.20347 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Calibration: 0351002

Instrument: MS-BNA3

Matrix: Water

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| 4-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| Naphthalene | 1 | 1.247118 | 2 | 1.106848 | 5 | 1.148925 | 10 | 1.133299 | 20 | 1.11088 | 40 | 1.079891 |
| 4-Nitroaniline | 1 | ~~0.1637579~~ | 2 | 0.2187884 | 5 | 0.2653623 | 10 | 0.2143523 | 20 | 0.2396615 | 40 | 0.2459712 |
| 3-Nitroaniline | 1 | 0.2521217 | 2 | 0.2314275 | 5 | 0.3066698 | 10 | 0.2972167 | 20 | 0.3176403 | 40 | 0.3340046 |
| 2-Nitroaniline | 1 | ~~0.2316115~~ | 2 | 0.2444902 | 5 | 0.300972 | 10 | 0.329205 | 20 | 0.3393918 | 40 | 0.3674347 |
| Nitrobenzene | 1 | 0.3854216 | 2 | 0.3471099 | 5 | 0.3691849 | 10 | 0.3758157 . | 20 | 0.3757619 | 40 | 0.3756076 |
| Nitrobenzene-d5 | 1 | 0.352723 | 2 | 0.3219239 | 5 | 0.3538833 | 10 | 0.3730289 | 20 | 0.3752849 | 40 | 0.3765852 |
| 4-Nitrophenol | 1 | | 2 | | 5 | 0.1331172 | 10 | 0.1539397 | 20 | 0.1740912 | 40 | 0.215041 |
| 2-Nitrophenol | 1 | ~~0.129178~~ | 2 | ~~0.1163139~~ | 5 | 0.1485732 | 10 | 0.17082 | 20 | 0.1803181 | 40 | 0.1943955 |
| N-Nitrosodimethylamine | 1 | 0.7647097 | 2 | 0.661789 | 5 | 0.6967903 | 10 | 0.688223 | 20 | 0.7105897 | 40 | 0.7218412 |
| N-Nitrosodiphenylamine | 1 | 0.7364883 | 2 | 0.7242688 | 5 | 0.7675569 | 10 | 0.8277756 | 20 | 0.7829048 | 40 | 0.7552249 |
| N-Nitroso-di-n-propylamine | 1 | 0.8476763 | 2 | 0.7771541 | 5 | 0.853617 | 10 | 0.8701614 | 20 | 0.8776069 | 40 | 0.8946144 |
| Pentachlorophenol | 1 | | 2 | | 5 | 5.778394E-02 | 10 | 8.270825E-02 | 20 | 0.1099003 | 40 | 0.1367365 |
| Phenanthrene | 1 | 1.342498 | 2 | 1.263175 | 5 | 1.243815 | 10 | 1.236225 | 20 | 1.217743 | 40 | 1.191144 |
| Phenol | 1 | 1.490667 | 2 | 1.31629 | 5 | 1.525052 | 10 | 1.523419 | 20 | 1.537998 | 40 | 1.5435 |
| Phenol-d6 | 2 | 1.404785 | 4 | 1.320014 | 10 | 1.47159 | 20 | 1.488608 | 40 | 1.497926 | 80 | 1.486483 |
| Pyrene | 1 | 1.333765 | 2 | 1.276026 | 5 | 1.300614 | 10 | 1.457668 | 20 | 1.450879 | 40 | 1.446398 |
| Pyridine | 1 | 1.454129 | 2 | 1.255486 | 5 | 1.344622 | 10 | 1.386362 | 20 | 1.421998 | 40 | 1.414011 |
| Terphenyl-d14 | 1 | 0.8692116 | 2 | 0.8169587 | 5 | 0.8477459 | 10 | 0.9168767 | 20 | 0.9257567 | 40 | 0.924241 |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | | | | | | |
| 2,3,4,6-Tetrachlorophenol | 1 | | 2 | | 5 | 0.225384 | 10 | 0.248152 | 20 | 0.2704891 | 40 | 0.311669 |
| 2,4,6-Tribromophenol | 2 | | 4 | ~~7.386201E-02~~ | 10 | 0.0957204 | 20 | 0.1146915 | 40 | 0.1142205 | 80 | 0.1204485 |
| 1,2,4-Trichlorobenzene | 1 | 0.3839343 | 2 | 0.374162 | 5 | 0.3658839 | 10 | 0.3641081 | 20 | 0.3579797 | 40 | 0.3484484 |
| 2,4,6-Trichlorophenol | 1 | ~~0.2252043~~ | 2 | 0.2345706 | 5 | 0.3036388 | 10 | 0.3406874 | 20 | 0.3510972 | 40 | 0.380565 |
| 2,4,5-Trichlorophenol | 1 | 0.2421286 | 2 | 0.2367774 | 5 | 0.2965186 | 10 | 0.340473 | 20 | 0.3434994 | 40 | 0.3869717 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 50 | 1.238488 | 80 | 1.19577 | 100 | 1.16933 | | | | | | |
| Acenaphthylene | 50 | 1.97121 | 80 | 1.884909 | 100 | 1.831805 | | | | | | |
| Acetophenone | | | | | | | 1 | 1.733387 | 2 | 1.611126 | 5 | 1.755035 |
| Aniline | 50 | 1.948951 | 80 | 1.907822 | 100 | 1.862631 | | | | | | |
| Anthracene | 50 | 1.178258 | 80 | 1.127398 | 100 | 1.098018 | | | | | | |
| Atrazine | | | | | | | 1 | 0.1680055 | 2 | 0.213903 | 5 | 0.2370567 |
| Benzaldehyde | | | | | | | 1 | 1.068138 | 2 | 1.056947 | 5 | 1.110207 |
| Benzidine | | | | | | | 1 | | 2 | ~~0.3685161~~ | 5 | 0.5108731 |
| Benzo(a)anthracene | 50 | 1.249589 | 80 | 1.222044 | 100 | 1.204762 | | | | | | |
| Benzo(a)pyrene | 50 | 1.167092 | 80 | 1.14047 | 100 | 1.155787 | | | | | | |
| Benzo(b)fluoranthene | 50 | 1.275165 | 80 | 1.224665 | 100 | 1.333177 | | | | | | |
| Benzo(g,h,i)perylene | 50 | 0.9771522 | 80 | 0.9672074 | 100 | 0.8194906 | | | | | | |
| Benzoic acid | 50 | 0.1965843 | 80 | 0.2128701 | 100 | 0.2236522 | | | | | | |
| Benzo(k)fluoranthene | 50 | 1.252373 | 80 | 1.210115 | 100 | ~~1.293734~~ | | | | | | |
| Benzyl alcohol | 50 | 0.8433992 | 80 | 0.8408955 | 100 | 0.828434 | | | | | | |
| 1,1-Biphenyl | | | | | | | 1 | 1.729905 | 2 | 1.761782 | 5 | 1.778887 |
| 4-Bromophenyl-phenylether | 50 | 0.236109 | 80 | 0.2297848 | 100 | 0.222073 | | | | | | |
| Butylbenzylphthalate | 50 | 0.7153074 | 80 | 0.6926723 | 100 | 0.7158573 | | | | | | |
| Caprolactam | | | | | | | 1 | ~~6.332556E-02~~ | 2 | ~~6.355997E-02~~ | 5 | 8.324675E-02 |
| Carbazole | 50 | 1.01202 | 80 | 0.9766254 | 100 | 0.9601454 | | | | | | |
| 4-Chloro-3-methylphenol | 50 | 0.3070247 | 80 | 0.3059882 | 100 | 0.2999465 | | | | | | |
| 4-Chloroaniline | 50 | 0.4323715 | 80 | 0.4259841 | 100 | 0.4193021 | | | | | | |
| Bis(2-chloroethoxy)methane | 50 | 0.3916945 | 80 | 0.3836585 | 100 | 0.3728562 | | | | | | |
| Bis(2-chloroethyl)ether | 50 | 1.226619 | 80 | 1.198521 | 100 | 1.165071 | | | | | | |
| 2,2'-Oxybis-1-chloropropane | 50 | 1.757395 | 80 | 1.690954 | 100 | 1.662549 | | | | | | |
| 2-Chloronaphthalene | 50 | 1.199244 | 80 | 1.160444 | 100 | 1.130907 | | | | | | |
| 2-Chlorophenol | 50 | 1.373857 | 80 | 1.348389 | 100 | 1.332618 | | | | | | |
| 4-Chlorophenyl phenyl ether | 50 | 0.6356375 | 80 | 0.6158727 | 100 | 0.608712 | | | | | | |
| Chrysene | 50 | 1.226559 | 80 | 1.182619 | 100 | 1.165941 | | | | | | |
| Dibenz(a,h)anthracene | 50 | 0.969048 | 80 | 0.9854922 | 100 | 0.8468877 | | | | | | |
| Dibenzofuran | 50 | 1.658712 | 80 | 1.596439 | 100 | 1.558825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 50 | 1.391006 | 80 | 1.287289 | 100 | 1.247621 | | | | | | |
| 1,4-Dichlorobenzene | 50 | 1.556736 | 80 | 1.509165 | 100 | 1.484188 | | | | | | |
| 1,3-Dichlorobenzene | 50 | 1.520602 | 80 | 1.482944 | 100 | 1.474431 | | | | | | |
| 1,2-Dichlorobenzene | 50 | 1.473125 | 80 | 1.433567 | 100 | 1.416697 | | | | | | |
| 3,3'-Dichlorobenzidine | | | | | | | 1 | ~~0.2115697~~ | 2 | ~~0.2588051~~ | 5 | 0.3243157 |
| 2,6-Dichlorophenol | | | | | | | 1 | 0.2370254 | 2 | 0.2189698 | 5 | 0.2517737 |
| 2,4-Dichlorophenol | 50 | 0.2969539 | 80 | 0.2962102 | 100 | 0.2908114 | | | | | | |
| Diethylphthalate | 50 | 1.416848 | 80 | 1.369631 | 100 | 1.357585 | | | | | | |
| 2,4-Dimethylphenol | 50 | 0.3684433 | 80 | 0.3608579 | 100 | 0.3537564 | | | | | | |
| Dimethyl phthalate | 50 | 1.359098 | 80 | 1.310816 | 100 | 1.297145 | | | | | | |
| 4,6-Dinitro-2-methylphenol | 50 | 0.1401067 | 80 | 0.1437955 | 100 | 0.1460562 | | | | | | |
| 2,4-Dinitrophenol | 50 | 0.159813 | 80 | 0.1664924 | 100 | 0.1758471 | | | | | | |
| 2,4-Dinitrotoluene | 50 | 0.4298704 | 80 | 0.422104 | 100 | 0.421059 | | | | | | |
| 2,6-Dinitrotoluene | 50 | 0.330395 | 80 | 0.3281434 | 100 | 0.3247883 | | | | | | |
| Di-n-octylphthalate | 50 | 1.621448 | 80 | 1.518511 | 100 | 1.815061 | | | | | | |
| 1,4-Dioxane | | | | | | | 1 | 0.5750144 | 2 | 0.6155307 | 5 | 0.5975798 |
| 1,2-Diphenylhydrazine | 50 | 0.8174537 | 80 | 0.7756974 | 100 | 0.7472643 | | | | | | |
| Bis(2-ethylhexyl)phthalate | 50 | 0.9644317 | 80 | 0.9327127 | 100 | 0.9433765 | | | | | | |
| Fluoranthene | 50 | 1.200663 | 80 | 1.145228 | 100 | 1.117971 | | | | | | |
| Fluorene | 50 | 1.371696 | 80 | 1.3477 | 100 | 1.331747 | | | | | | |
| 2-Fluorobiphenyl | 50 | 1.380741 | 80 | 1.342227 | 100 | 1.31122 | | | | | | |
| 2-Fluorophenol | 100 | 1.184307 | 160 | 1.150476 | 200 | 1.143049 | | | | | | |
| Hexachlorobenzene | 50 | 0.2611324 | 80 | 0.2528165 | 100 | 0.2469684 | | | | | | |
| Hexachlorobutadiene | 50 | 0.1898094 | 80 | 0.1823152 | 100 | 0.1809221 | | | | | | |
| Hexachlorocyclopentadiene | 50 | 0.3205142 | 80 | 0.2672985 | 100 | 0.2978232 | | | | | | |
| Hexachloroethane | 50 | 0.5928387 | 80 | 0.5834398 | 100 | 0.5785441 | | | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 1.184644 | 80 | 1.201734 | 100 | 1.031961 | | | | | | |
| Isophorone | 50 | 0.6693467 | 80 | 0.6606669 | 100 | 0.651883 | | | | | | |
| 1-Methylnaphthalene | 50 | 0.6110108 | 80 | 0.5887133 | 100 | 0.578354 | | | | | | |
| 2-Methylnaphthalene | 50 | 0.5899842 | 80 | 0.5725228 | 100 | 0.5640864 | | | | | | |
| 2-Methylphenol | 50 | 1.174288 | 80 | 1.161528 | 100 | 1.130825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| 4-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| Naphthalene | 50 | 1.062289 | 80 | 1.009165 | 100 | 0.9853361 | | | | | | |
| 4-Nitroaniline | 50 | 0.245583 | 80 | 0.2713623 | 100 | 0.2926737 | | | | | | |
| 3-Nitroaniline | 50 | 0.3328151 | 80 | 0.3335098 | 100 | 0.3302451 | | | | | | |
| 2-Nitroaniline | 50 | 0.3604391 | 80 | 0.3575911 | 100 | 0.3502726 | | | | | | |
| Nitrobenzene | 50 | 0.3742193 | 80 | 0.3632219 | 100 | 0.3548228 | | | | | | |
| Nitrobenzene-d5 | 50 | 0.3716804 | 80 | 0.3677033 | 100 | 0.3602605 | | | | | | |
| 4-Nitrophenol | 50 | 0.2302537 | 80 | 0.2312482 | 100 | 0.237925 | | | | | | |
| 2-Nitrophenol | 50 | 0.1987571 | 80 | 0.1969275 | 100 | 0.1952942 | | | | | | |
| N-Nitrosodimethylamine | 50 | 0.7179275 | 80 | 0.699562 | 100 | 0.6988776 | | | | | | |
| N-Nitrosodiphenylamine | 50 | 0.734013 | 80 | 0.7049383 | 100 | 0.6836085 | | | | | | |
| N-Nitroso-di-n-propylamine | 50 | 0.8590022 | 80 | 0.8618547 | 100 | 0.8482223 | | | | | | |
| Pentachlorophenol | 50 | 0.1477524 | 80 | 0.152323 | 100 | 0.1493187 | | | | | | |
| Phenanthrene | 50 | 1.165403 | 80 | 1.107075 | 100 | 1.089032 | | | | | | |
| Phenol | 50 | 1.515388 | 80 | 1.487162 | 100 | 1.485453 | | | | | | |
| Phenol-d6 | 100 | 1.444334 | 160 | 1.417009 | 200 | 1.38417 | | | | | | |
| Pyrene | 50 | 1.376348 | 80 | 1.350116 | 100 | 1.429147 | | | | | | |
| Pyridine | 50 | 1.386096 | 80 | 1.382983 | 100 | 1.355936 | | | | | | |
| Terphenyl-d14 | 50 | 0.8866 | 80 | 0.8605814 | 100 | 0.9157647 | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | 1 | 0.3530087 | 2 | 0.3195873 | 5 | 0.3252684 |
| 2,3,4,6-Tetrachlorophenol | 50 | 0.3149583 | 80 | 0.3195705 | 100 | 0.3193177 | | | | | | |
| 2,4,6-Tribromophenol | 100 | 0.1236089 | 160 | 0.1225882 | 200 | 0.120418 | | | | | | |
| 1,2,4-Trichlorobenzene | 50 | 0.3509992 | 80 | 0.3419386 | 100 | 0.3363453 | | | | | | |
| 2,4,6-Trichlorophenol | 50 | 0.3746937 | 80 | 0.3778514 | 100 | 0.3769771 | | | | | | |
| 2,4,5-Trichlorophenol | 50 | 0.3892628 | 80 | 0.399019 | 100 | 0.3860452 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | |
| Acetophenone | 10 | 1.704303 | 20 | 1.801178 | 40 | 1.795701 | 50 | 1.710426 | 80 | 1.718945 | 100 | 1.59967 |
| Aniline | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | |
| Atrazine | 10 | 0.2348484 | 20 | 0.2490883 | 40 | 0.2501657 | 50 | 0.2413828 | 80 | 0.2398009 | 100 | 0.2294713 |
| Benzaldehyde | 10 | 1.071349 | 20 | 1.114882 | 40 | 1.084654 | 50 | 1.035449 | 80 | 1.026022 | 100 | 0.9476697 |
| Benzidine | 10 | 0.5256135 | 20 | 0.6359201 | 40 | 0.7009071 | 50 | 0.7077408 | 80 | 0.7108148 | 100 | 0.6669063 |
| Benzo(a)anthracene | | | | | | | | | | | | |
| Benzo(a)pyrene | | | | | | | | | | | | |
| Benzo(b)fluoranthene | | | | | | | | | | | | |
| Benzo(g,h,i)perylene | | | | | | | | | | | | |
| Benzoic acid | | | | | | | | | | | | |
| Benzo(k)fluoranthene | | | | | | | | | | | | |
| Benzyl alcohol | | | | | | | | | | | | |
| 1,1-Biphenyl | 10 | 1.698813 | 20 | 1.690111 | 40 | 1.617949 | 50 | 1.584418 | 80 | 1.52658 | 100 | 1.43873 |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | |
| Caprolactam | 10 | 7.727893E-02 | 20 | 9.873525E-02 | 40 | 0.1074636 | 50 | 0.1070435 | 80 | 0.1101464 | 100 | 0.1047554 |
| Carbazole | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | | | | | | | | | | |
| 4-Chloroaniline | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | | | | | | | | | | | | |
| 2,2'-Oxybis-1-chloropropane | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | | | | | | | | | | | | |
| Dibenzofuran | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 10 | 0.3330745 | 20 | 0.3900825 | 40 | 0.4220677 | 50 | 0.4388195 | 80 | 0.42004 | 100 | 0.4023442 |
| 2,6-Dichlorophenol | 10 | 0.2406157 | 20 | 0.2739896 | 40 | 0.2837769 | 50 | 0.2807297 | 80 | 0.2789585 | 100 | 0.2685961 |
| 2,4-Dichlorophenol | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | |
| Dimethyl phthalate | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | | | | | | | | | | |
| 2,4-Dinitrophenol | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | |
| Di-n-octylphthalate | | | | | | | | | | | | |
| 1,4-Dioxane | 10 | 0.6181946 | 20 | 0.5750216 | 40 | 0.597864 | 50 | 0.5649718 | 80 | 0.5618798 | 100 | 0.5357223 |
| 1,2-Diphenylhydrazine | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | |
| 2-Fluorobiphenyl | | | | | | | | | | | | |
| 2-Fluorophenol | | | | | | | | | | | | |
| Hexachlorobenzene | | | | | | | | | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | | | | | | | | | | | | |
| Hexachloroethane | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | | | | | | | | | | | | |
| Isophorone | | | | | | | | | | | | |
| 1-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | | | | | | | | | | | | |
| 4-Methylphenol | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | |
| 4-Nitroaniline | | | | | | | | | | | | |
| 3-Nitroaniline | | | | | | | | | | | | |
| 2-Nitroaniline | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | |
| Nitrobenzene-d5 | | | | | | | | | | | | |
| 4-Nitrophenol | | | | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | |
| N-Nitrosodimethylamine | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | |
| N-Nitroso-di-n-propylamine | | | | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | |
| Phenol | | | | | | | | | | | | |
| Phenol-d6 | | | | | | | | | | | | |
| Pyrene | | | | | | | | | | | | |
| Pyridine | | | | | | | | | | | | |
| Terphenyl-d14 | | | | | | | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | 10 | 0.3142966 | 20 | 0.3196447 | 40 | 0.3170485 | 50 | 0.3100616 | 80 | 0.3033013 | 100 | 0.2910487 |
| 2,3,4,6-Tetrachlorophenol | | | | | | | | | | | | |
| 2,4,6-Tribromophenol | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV3.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV3 | Injection Time: | 10:01 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Benzaldehyde | A | 50.00 | 47.93 | 1.057258 | 1.013398 | | -4.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV4.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV4 | Injection Time: | 10:31 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 3,3'-Dichlorobenzidine | A | 50.00 | 47.61 | 0.3901063 | 0.3714708 | | -4.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV5.D | Calibration Date: | ~~12/07/10 17:31~~ |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV5 | Injection Time: | 11:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Acetophenone | A | 50.00 | 48.49 | 1.714419 | 1.662733 | | -3.0 | 20 |
| Caprolactam | A | 50.00 | 52.93 | 0.0983814 | 0.1041517 | | 5.9 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 46.99 | 0.3170295 | 0.2979379 | | -6.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV7.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV7 | Injection Time: | 12:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| N-Nitrosodiphenylamine | A | 50.00 | 51.34 | 0.7463088 | 0.7662808 | | 2.7 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 43.50 | 0.2870772 | 0.249777 | | -13.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| COMPOUND | TYPE | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Bromophenyl-phenylether | A | 50.00 | 51.04 | 0.2396007 | 0.2446022 | | 2.1 | 20 |
| Butylbenzylphthalate | A | 50.00 | 54.90 | 0.6659619 | 0.731176 | | 9.8 | 20 |
| Carbazole | A | 50.00 | 44.33 | 1.033588 | 0.9164384 | | -11.3 | 20 |
| 4-Chloro-3-methylphenol | A | 50.00 | 51.74 | 0.2791833 | 0.2888752 | | 3.5 | 20 |
| 4-Chloroaniline | A | 50.00 | 50.74 | 0.4236872 | 0.4299877 | | 1.5 | 20 |
| Bis(2-chloroethoxy)methane | A | 50.00 | 49.55 | 0.4015206 | 0.397907 | | -0.9 | 20 |
| Bis(2-chloroethyl)ether | A | 50.00 | 49.26 | 1.242957 | 1.224652 | | -1.5 | 20 |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 49.35 | 1.791162 | 1.767772 | | -1.3 | 20 |
| 2-Chloronaphthalene | A | 50.00 | 49.94 | 1.223416 | 1.222017 | | -0.1 | 20 |
| 2-Chlorophenol | A | 50.00 | 50.72 | 1.320483 | 1.339391 | | 1.4 | 20 |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 48.94 | 0.6482639 | 0.6345678 | | -2.1 | 20 |
| Dibenzofuran | A | 50.00 | 52.29 | 1.702459 | 1.780513 | | 4.6 | 20 |
| Di-n-butylphthalate | A | 50.00 | 53.56 | 1.274102 | 1.364881 | | 7.1 | 20 |
| 2,4-Dichlorophenol | A | 50.00 | 53.23 | 0.2708646 | 0.2883479 | | 6.5 | 20 |
| Diethylphthalate | A | 50.00 | 50.07 | 1.375716 | 1.37777 | | 0.1 | 20 |
| 2,4-Dimethylphenol | A | 50.00 | 45.98 | 0.3567735 | 0.3280623 | | -8.0 | 20 |
| Dimethyl phthalate | A | 50.00 | 50.41 | 1.360327 | 1.371495 | | 0.8 | 20 |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 43.80 | 0.1141426 | 0.118963 | | -12.4 | 20 |
| 2,4-Dinitrophenol | L | 50.00 | 41.03 | 0.1317034 | 0.1214933 | 0.05 | -17.9 | 20 |
| 2,4-Dinitrotoluene | A | 50.00 | 54.89 | 0.3873439 | 0.4252053 | | 9.8 | 20 |
| 2,6-Dinitrotoluene | A | 50.00 | 50.97 | 0.3161974 | 0.3223188 | | 1.9 | 20 |
| Di-n-octylphthalate | A | 50.00 | 52.54 | 1.581621 | 1.662112 | | 5.1 | 20 |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 54.27 | 0.8698317 | 0.944141 | | 8.5 | 20 |
| Hexachlorobenzene | A | 50.00 | 48.64 | 0.2675089 | 0.2602515 | | -2.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 50.27 | 0.1897728 | 0.1907933 | | 0.5 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 47.27 | 0.2719697 | 0.2571016 | 0.05 | -5.5 | 20 |
| Hexachloroethane | A | 50.00 | 51.17 | 0.5839827 | 0.5976224 | | 2.3 | 20 |
| Isophorone | A | 50.00 | 49.58 | 0.6532573 | 0.6477211 | | -0.8 | 20 |
| 2-Methylphenol | A | 50.00 | 50.79 | 1.129245 | 1.147068 | | 1.6 | 20 |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Methylphenol | A | 50.00 | 46.61 | 1.146708 | 1.068856 | | -6.8 | 20 |
| Naphthalene | A | 50.00 | 47.81 | 1.098195 | 1.050188 | | -4.4 | 20 |
| 4-Nitroaniline | A | 50.00 | 48.63 | 0.2492193 | 0.2423702 | | -2.7 | 20 |
| 3-Nitroaniline | A | 50.00 | 54.97 | 0.3039612 | 0.3341951 | | 9.9 | 20 |
| 2-Nitroaniline | A | 50.00 | 58.93 | 0.3312246 | 0.3904014 | | 17.9 | 20 |
| Nitrobenzene | A | 50.00 | 50.66 | 0.3690184 | 0.3738603 | | 1.3 | 20 |
| 4-Nitrophenol | L | 50.00 | 45.62 | 0.1965166 | 0.2046322 | 0.05 | -8.8 | 20 |
| 2-Nitrophenol | A | 50.00 | 50.69 | 0.1835837 | 0.1861302 | | 1.4 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 51.06 | 0.8544344 | 0.872589 | 0.05 | 2.1 | 20 |
| Pentachlorophenol | L | 50.00 | 47.55 | 0.1195033 | 0.1362715 | | -4.9 | 20 |
| Phenol | A | 50.00 | 49.32 | 1.491659 | 1.471449 | | -1.4 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 52.15 | 0.3425101 | 0.3572326 | | 4.3 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 48.75 | 0.3356329 | 0.3771646 | | -2.5 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 48.29 | 1.429188 | 1.380386 | | -3.4 | 20 |
| 2-Fluorophenol | A | 100.0 | 101.4 | 1.163095 | 1.179091 | | 1.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 50.95 | 0.3614526 | 0.3682965 | | 1.9 | 20 |
| Phenol-d6 | A | 100.0 | 97.70 | 1.434991 | 1.402014 | | -2.3 | 20 |
| Terphenyl-d14 | A | 50.00 | 52.29 | 0.8848596 | 0.925348 | | 4.6 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 97.03 | 0.1159566 | 0.1125125 | | -3.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35113 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35113-TUN1 | SEQ-TUN1.D | 12/14/10 11:46 |
| Calibration Check | 0L35113-CCV1 | SEQ-CCV1.D | 12/14/10 12:13 |
| LCS | 0L14026-BS1 | 1200710.D | 12/14/10 19:50 |
| Blank | 0L14026-BLK1 | 1200709.D | 12/14/10 20:20 |
| 1011003-02 | 1012007-01 | 1200701.D | 12/14/10 20:50 |
| 1011003-03 | 1012007-02 | 1200702.D | 12/14/10 21:20 |
| 1011003-04 | 1012007-03 | 1200703.D | 12/14/10 21:50 |
| 1011003-05 | 1012007-04 | 1200704.D | 12/14/10 22:20 |
| 1011003-06 | 1012007-05 | 1200705.D | 12/14/10 22:50 |
| 1011003-08 | 1012007-07 | 1200707.D | 12/14/10 23:20 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/14/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 11:46 |
| Sequence: | 0L35113 | Lab Sample ID: | 0L35113-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 42 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 44.2 | PASS |
| 70 | Less than 2% of 69 | 0.732 | PASS |
| 127 | 40 - 60% of 198 | 55.7 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.15 | PASS |
| 275 | 10 - 30% of 198 | 28.6 | PASS |
| 365 | 1 - 200% of 198 | 3.8 | PASS |
| 441 | 0.001 - 100% of 443 | 76.3 | PASS |
| 442 | 40 - 200% of 198 | 94.5 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35113 | Injection Date: | 12/14/10 |
| Lab Sample ID: | 0L35113-CCV1 | Injection Time: | 12:13 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Acetophenone | A | 50.00 | 53.14 | 1.714419 | 1.822018 | | 6.3 | 20 | |
| Atrazine | A | 50.00 | 46.65 | 0.2293025 | 0.2139502 | | -6.7 | 20 | |
| Benzaldehyde | A | 50.00 | 32.44 | 1.057258 | 0.6859922 | | -35.1 | 20 | * |
| 1,1-Biphenyl | A | 50.00 | 47.27 | 1.647464 | 1.557432 | | -5.5 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 49.49 | 0.2396007 | 0.2371434 | | -1.0 | 20 | |
| Butylbenzylphthalate | A | 50.00 | 50.63 | 0.6659619 | 0.6743513 | | 1.3 | 20 | |
| Caprolactam | A | 50.00 | 54.19 | 0.0983814 | 0.1066196 | | 8.4 | 20 | |
| Carbazole | A | 50.00 | 46.87 | 1.033588 | 0.9689839 | | -6.3 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 59.05 | 0.2791833 | 0.3296942 | | 18.1 | 20 | |
| 4-Chloroaniline | A | 50.00 | 49.73 | 0.4236872 | 0.4214111 | | -0.5 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 44.75 | 0.4015206 | 0.3593649 | | -10.5 | 20 | |
| Bis(2-chloroethyl)ether | A | 50.00 | 43.33 | 1.242957 | 1.077259 | | -13.3 | 20 | |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 37.73 | 1.791162 | 1.351536 | | -24.5 | 20 | * |
| 2-Chloronaphthalene | A | 50.00 | 58.14 | 1.223416 | 1.422578 | | 16.3 | 20 | |
| 2-Chlorophenol | A | 50.00 | 48.55 | 1.320483 | 1.282151 | | -2.9 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 52.84 | 0.6482639 | 0.6850298 | | 5.7 | 20 | |
| Dibenzofuran | A | 50.00 | 48.58 | 1.702459 | 1.654037 | | -2.8 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 54.38 | 1.274102 | 1.385739 | | 8.8 | 20 | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 41.63 | 0.3901063 | 0.324795 | | -16.7 | 20 | |
| 2,4-Dichlorophenol | A | 50.00 | 56.56 | 0.2708646 | 0.3063902 | | 13.1 | 20 | |
| Diethylphthalate | A | 50.00 | 54.00 | 1.375716 | 1.485794 | | 8.0 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 54.87 | 0.3567735 | 0.3915274 | | 9.7 | 20 | |
| Dimethyl phthalate | A | 50.00 | 50.17 | 1.360327 | 1.364883 | | 0.3 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 51.49 | 0.1141426 | 0.1425049 | | 3.0 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 50.21 | 0.1317034 | 0.1566432 | 0.05 | 0.4 | 20 | |
| 2,4-Dinitrotoluene | A | 50.00 | 56.97 | 0.3873439 | 0.4413545 | | 13.9 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 50.90 | 0.3161974 | 0.3218858 | | 1.8 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 55.74 | 1.581621 | 1.763167 | | 11.5 | 20 | |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 53.34 | 0.8698317 | 0.9278777 | | 6.7 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35113 | Injection Date: | 12/14/10 |
| Lab Sample ID: | 0L35113-CCV1 | Injection Time: | 12:13 |

| COMPOUND | TYPE | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Hexachlorobenzene | A | 50.00 | 50.19 | 0.2675089 | 0.2685345 | | 0.4 | 20 |
| Hexachlorobutadiene | A | 50.00 | 56.39 | 0.1897728 | 0.2140403 | | 12.8 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 63.47 | 0.2719697 | 0.345236 | 0.05 | 26.9 | 20 * |
| Hexachloroethane | A | 50.00 | 51.61 | 0.5839827 | 0.6028103 | | 3.2 | 20 |
| Isophorone | A | 50.00 | 49.67 | 0.6532573 | 0.648962 | | -0.7 | 20 |
| 2-Methylphenol | A | 50.00 | 47.70 | 1.129245 | 1.077234 | | -4.6 | 20 |
| 4-Methylphenol | A | 50.00 | 50.76 | 1.146708 | 1.164237 | | 1.5 | 20 |
| Naphthalene | A | 50.00 | 47.91 | 1.098195 | 1.052203 | | -4.2 | 20 |
| 4-Nitroaniline | A | 50.00 | 58.93 | 0.2492193 | 0.2937526 | | 17.9 | 20 |
| 3-Nitroaniline | A | 50.00 | 50.30 | 0.3039612 | 0.3057815 | | 0.6 | 20 |
| 2-Nitroaniline | A | 50.00 | 66.08 | 0.3312246 | 0.4377693 | | 32.2 | 20 * |
| Nitrobenzene | A | 50.00 | 51.58 | 0.3690184 | 0.3807127 | | 3.2 | 20 |
| 4-Nitrophenol | L | 50.00 | 51.58 | 0.1965166 | 0.2339281 | 0.05 | 3.2 | 20 |
| 2-Nitrophenol | A | 50.00 | 53.58 | 0.1835837 | 0.1967238 | | 7.2 | 20 |
| N-Nitrosodiphenylamine | A | 50.00 | 47.12 | 0.7463088 | 0.7032661 | | -5.8 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 50.66 | 0.8544344 | 0.8656725 | 0.05 | 1.3 | 20 |
| Pentachlorophenol | L | 50.00 | 51.39 | 0.1195033 | 0.1484578 | | 2.8 | 20 |
| Phenol | A | 50.00 | 50.02 | 1.491659 | 1.492229 | | 0.04 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 55.18 | 0.3170295 | 0.3498989 | | 10.4 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 56.69 | 0.2870772 | 0.3254866 | | 13.4 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 54.24 | 0.3425101 | 0.3715868 | | 8.5 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 50.62 | 0.3356329 | 0.3919241 | | 1.2 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 47.42 | 1.429188 | 1.355371 | | -5.2 | 20 |
| 2-Fluorophenol | A | 100.0 | 94.28 | 1.163095 | 1.096621 | | -5.7 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 52.23 | 0.3614526 | 0.3775685 | | 4.5 | 20 |
| Phenol-d6 | A | 100.0 | 94.42 | 1.434991 | 1.354914 | | -5.6 | 20 |
| Terphenyl-d14 | A | 50.00 | 49.00 | 0.8848596 | 0.8672051 | | -2.0 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 116.9 | 0.1159566 | 0.1355296 | | 16.9 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35403 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35403-TUN1 | SEQ-TUN1.D | 12/15/10 11:15 |
| Calibration Check | 0L35403-CCV1 | SEQ-CCV1.D | 12/15/10 11:42 |
| 1011003-09 | 1012007-08 | 1200708.D | 12/15/10 12:12 |
| 1011003-03 | 0L14026-MS1 | 1200702B.D | 12/15/10 12:42 |
| 1011003-03 | 0L14026-MSD1 | 1200702C.D | 12/15/10 13:12 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/15/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 11:15 |
| Sequence: | 0L35403 | Lab Sample ID: | 0L35403-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 39.7 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 40.9 | PASS |
| 70 | Less than 2% of 69 | 0.257 | PASS |
| 127 | 40 - 60% of 198 | 54.4 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.17 | PASS |
| 275 | 10 - 30% of 198 | 27.2 | PASS |
| 365 | 1 - 200% of 198 | 3.59 | PASS |
| 441 | 0.001 - 100% of 443 | 77.4 | PASS |
| 442 | 40 - 200% of 198 | 97.8 | PASS |
| 443 | 17 - 23% of 442 | 19.2 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35403 | Injection Date: | 12/15/10 |
| Lab Sample ID: | 0L35403-CCV1 | Injection Time: | 11:42 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Acetophenone | A | 50.00 | 52.85 | 1.714419 | 1.812169 | | 5.7 | 20 | |
| Atrazine | A | 50.00 | 56.06 | 0.2293025 | 0.2570962 | | 12.1 | 20 | |
| Benzaldehyde | A | 50.00 | 43.24 | 1.057258 | 0.9144419 | | -13.5 | 20 | |
| 1,1-Biphenyl | A | 50.00 | 49.08 | 1.647464 | 1.617089 | | -1.8 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 51.65 | 0.2396007 | 0.2475302 | | 3.3 | 20 | |
| Butylbenzylphthalate | A | 50.00 | 52.48 | 0.6659619 | 0.6989637 | | 5.0 | 20 | |
| Caprolactam | A | 50.00 | 52.83 | 0.0983814 | 0.1039494 | | 5.7 | 20 | |
| Carbazole | A | 50.00 | 49.29 | 1.033588 | 1.01883 | | -1.4 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 59.87 | 0.2791833 | 0.3343155 | | 19.7 | 20 | |
| 4-Chloroaniline | A | 50.00 | 50.75 | 0.4236872 | 0.4300493 | | 1.5 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 45.89 | 0.4015206 | 0.3684943 | | -8.2 | 20 | |
| Bis(2-chloroethyl)ether | A | 50.00 | 43.63 | 1.242957 | 1.084543 | | -12.7 | 20 | |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 38.55 | 1.791162 | 1.381002 | | -22.9 | 20 | * |
| 2-Chloronaphthalene | A | 50.00 | 57.68 | 1.223416 | 1.411402 | | 15.4 | 20 | |
| 2-Chlorophenol | A | 50.00 | 49.77 | 1.320483 | 1.314318 | | -0.5 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 54.18 | 0.6482639 | 0.7024062 | | 8.4 | 20 | |
| Dibenzofuran | A | 50.00 | 50.35 | 1.702459 | 1.714448 | | 0.7 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 56.10 | 1.274102 | 1.429615 | | 12.2 | 20 | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 43.32 | 0.3901063 | 0.337968 | | -13.4 | 20 | |
| 2,4-Dichlorophenol | A | 50.00 | 57.05 | 0.2708646 | 0.3090351 | | 14.1 | 20 | |
| Diethylphthalate | A | 50.00 | 54.32 | 1.375716 | 1.494527 | | 8.6 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 55.51 | 0.3567735 | 0.3960628 | | 11.0 | 20 | |
| Dimethyl phthalate | A | 50.00 | 51.82 | 1.360327 | 1.409873 | | 3.6 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 51.94 | 0.1141426 | 0.1438798 | | 3.9 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 48.36 | 0.1317034 | 0.1495725 | 0.05 | -3.3 | 20 | |
| 2,4-Dinitrotoluene | A | 50.00 | 57.27 | 0.3873439 | 0.4436941 | | 14.5 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 52.15 | 0.3161974 | 0.3297772 | | 4.3 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 56.72 | 1.581621 | 1.794147 | | 13.4 | 20 | |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 55.12 | 0.8698317 | 0.9588837 | | 10.2 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35403 | Injection Date: | 12/15/10 |
| Lab Sample ID: | 0L35403-CCV1 | Injection Time: | 11:42 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Hexachlorobenzene | A | 50.00 | 52.85 | 0.2675089 | 0.2827747 | | 5.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 57.31 | 0.1897728 | 0.2175115 | | 14.6 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 68.81 | 0.2719697 | 0.3742855 | 0.05 | 37.6 | 20 * |
| Hexachloroethane | A | 50.00 | 53.45 | 0.5839827 | 0.6242601 | | 6.9 | 20 |
| Isophorone | A | 50.00 | 50.66 | 0.6532573 | 0.6619262 | | 1.3 | 20 |
| 2-Methylphenol | A | 50.00 | 47.91 | 1.129245 | 1.082045 | | -4.2 | 20 |
| 4-Methylphenol | A | 50.00 | 51.94 | 1.146708 | 1.191142 | | 3.9 | 20 |
| Naphthalene | A | 50.00 | 48.73 | 1.098195 | 1.070344 | | -2.5 | 20 |
| 4-Nitroaniline | A | 50.00 | 61.72 | 0.2492193 | 0.307653 | | 23.4 | 20 * |
| 3-Nitroaniline | A | 50.00 | 52.56 | 0.3039612 | 0.3195416 | | 5.1 | 20 |
| 2-Nitroaniline | A | 50.00 | 68.86 | 0.3312246 | 0.4561643 | | 37.7 | 20 * |
| Nitrobenzene | A | 50.00 | 52.32 | 0.3690184 | 0.3861582 | | 4.6 | 20 |
| 4-Nitrophenol | L | 50.00 | 51.56 | 0.1965166 | 0.2338382 | 0.05 | 3.1 | 20 |
| 2-Nitrophenol | A | 50.00 | 53.62 | 0.1835837 | 0.1968619 | | 7.2 | 20 |
| N-Nitrosodiphenylamine | A | 50.00 | 49.37 | 0.7463088 | 0.736918 | | -1.3 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 51.74 | 0.8544344 | 0.8841163 | 0.05 | 3.5 | 20 |
| Pentachlorophenol | L | 50.00 | 49.90 | 0.1195033 | 0.1437457 | | -0.2 | 20 |
| Phenol | A | 50.00 | 51.36 | 1.491659 | 1.532158 | | 2.7 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 55.80 | 0.3170295 | 0.3538419 | | 11.6 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 55.78 | 0.2870772 | 0.3202527 | | 11.6 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 55.26 | 0.3425101 | 0.3785833 | | 10.5 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 51.41 | 0.3356329 | 0.3981848 | | 2.8 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 49.96 | 1.429188 | 1.428095 | | -0.08 | 20 |
| 2-Fluorophenol | A | 100.0 | 98.59 | 1.163095 | 1.146736 | | -1.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 54.02 | 0.3614526 | 0.3905026 | | 8.0 | 20 |
| Phenol-d6 | A | 100.0 | 96.69 | 1.434991 | 1.387491 | | -3.3 | 20 |
| Terphenyl-d14 | A | 50.00 | 50.90 | 0.8848596 | 0.900758 | | 1.8 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 117.5 | 0.1159566 | 0.1362611 | | 17.5 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L14026 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14026-BLK1 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| LCS | 0L14026-BS1 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-03 | 0L14026-MS1 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-03 | 0L14026-MSD1 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-02 | 1012007-01 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-03 | 1012007-02 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-04 | 1012007-03 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-05 | 1012007-04 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-06 | 1012007-05 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-08 | 1012007-07 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011003-09 | 1012007-08 | 11/09/10 08:20 | 1,000.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14026-BLK1 File ID: 1200709.D

Sampled: Prepared: Analyzed: 12/14/10 20:20

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14026-BLK1 File ID: 1200709.D

Sampled: Prepared: Analyzed: 12/14/10 20:20

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.522 | 76.1 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.674 | 66.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.633 | 81.6 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.503 | 62.6 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.018 | 101 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L14026
Laboratory ID: 0L14026-BS1
Preparation: EXT_3510
Initial/Final: 1000 mL / 1 mL

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Acetophenone | 5.000 | 4.140 | 82.8 | 50 - 110 |
| Atrazine | 5.000 | 4.397 | 87.9 | 70 - 115 |
| **Benzaldehyde** | **5.000** | **5.00 U** | **0** | **10 - 180** |
| 1,1-Biphenyl | 5.000 | 4.098 | 82.0 | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | 4.968 | 99.4 | 50 - 115 |
| Butylbenzylphthalate | 5.000 | 4.692 | 93.8 | 45 - 115 |
| Caprolactam | 5.000 | 3.434 | 68.7 | 20 - 110 |
| Carbazole | 5.000 | 4.161 | 83.2 | 50 - 115 |
| 4-Chloro-3-methylphenol | 15.00 | 14.81 | 98.7 | 45 - 110 |
| **4-Chloroaniline** | **5.000** | **5.00 U** | **0** | **15 - 110** |
| Bis(2-chloroethoxy)methane | 5.000 | 4.024 | 80.5 | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | 3.668 | 73.4 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 3.599 | 72.0 | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | 4.492 | 89.8 | 50 - 105 |
| 2-Chlorophenol | 15.00 | 11.47 | 76.5 | 35 - 105 |
| 4-Chlorophenyl phenyl ether | 5.000 | 4.534 | 90.7 | 50 - 110 |
| Dibenzofuran | 5.000 | 4.353 | 87.1 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 4.986 | 99.7 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 3.397 | 67.9 | 20 - 110 |
| 2,4-Dichlorophenol | 15.00 | 14.17 | 94.5 | 40 - 110 |
| Diethylphthalate | 5.000 | 4.746 | 94.9 | 40 - 120 |
| 2,4-Dimethylphenol | 15.00 | 13.82 | 92.2 | 30 - 110 |
| Dimethyl phthalate | 5.000 | 4.704 | 94.1 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 12.01 | 80.1 | 40 - 130 |
| **2,4-Dinitrophenol** | **15.00** | **50.0 U** | **0** | **15 - 140** |
| 2,4-Dinitrotoluene | 5.000 | 4.498 | 90.0 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 4.348 | 87.0 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 5.207 | 104 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 4.797 | 95.9 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 4.784 | 95.7 | 50 - 110 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_008 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14026 | Laboratory ID: | 0L14026-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobutadiene | 5.000 | 5.237 | 105 | 25 - 105 |
| Hexachlorocyclopentadiene | 5.000 | 2.038 | 40.8 | 10 - 110 |
| Hexachloroethane | 5.000 | 4.435 | 88.7 | 30 - 95 |
| Isophorone | 5.000 | 3.951 | 79.0 | 50 - 110 |
| 2-Methylphenol | 15.00 | 11.85 | 79.0 | 40 - 110 |
| 4-Methylphenol | 30.00 | 15.64 | 52.1 | 30 - 110 |
| Naphthalene | 5.000 | 4.372 | 87.4 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 4.413 | 88.3 | 35 - 120 |
| 3-Nitroaniline | 5.000 | 3.531 | 70.6 | 20 - 125 |
| **2-Nitroaniline** | **5.000** | **20.0 U** | **0** | **50 - 115** |
| Nitrobenzene | 5.000 | 4.370 | 87.4 | 30 - 110 |
| 4-Nitrophenol | 15.00 | 12.90 | 86.0 | 0 - 125 |
| 2-Nitrophenol | 15.00 | 11.93 | 79.5 | 40 - 115 |
| **N-Nitrosodiphenylamine** | **5.000** | **5.00 U** | **0** | **50 - 110** |
| N-Nitroso-di-n-propylamine | 5.000 | 4.206 | 84.1 | 35 - 130 |
| Pentachlorophenol | 15.00 | 8.299 | 55.3 | 40 - 115 |
| Phenol | 15.00 | 11.13 | 74.2 | 0 - 115 |
| 2,4,6-Trichlorophenol | 15.00 | 12.77 | 85.1 | 50 - 115 |
| 2,4,5-Trichlorophenol | 15.00 | 13.22 | 88.1 | 50 - 110 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8270C**

**1011003-03**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_008

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L14026

% Solids:

Source Sample Name: **1012007-02**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Acetophenone | 5.000 | ND | 3.945 | 78.9 | | 50 - 110 |
| Atrazine | 5.000 | ND | 4.146 | 82.9 | | 70 - 115 |
| Benzaldehyde | 5.000 | ND | 5.00 U | 0 | * | 10 - 180 |
| 1,1-Biphenyl | 5.000 | ND | 3.842 | 76.8 | | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | ND | 4.614 | 92.3 | | 50 - 115 |
| Butylbenzylphthalate | 5.000 | ND | 5.174 | 103 | | 45 - 115 |
| Caprolactam | 5.000 | ND | 3.630 | 72.6 | | 20 - 110 |
| Carbazole | 5.000 | ND | 3.988 | 79.8 | | 50 - 115 |
| 4-Chloro-3-methylphenol | 15.00 | ND | 14.36 | 95.8 | | 45 - 110 |
| 4-Chloroaniline | 5.000 | ND | 5.00 U | 0 | * | 15 - 110 |
| Bis(2-chloroethoxy)methane | 5.000 | ND | 3.841 | 76.8 | | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | ND | 3.405 | 68.1 | | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | ND | 3.501 | 70.0 | | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | ND | 4.160 | 83.2 | | 50 - 105 |
| 2-Chlorophenol | 15.00 | ND | 11.32 | 75.4 | | 35 - 105 |
| 4-Chlorophenyl phenyl ether | 5.000 | ND | 4.462 | 89.2 | | 50 - 110 |
| Dibenzofuran | 5.000 | ND | 4.417 | 88.3 | | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 3.405 | 7.905 | 90.0 | | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | ND | 1.905 | 38.1 | | 20 - 110 |
| 2,4-Dichlorophenol | 15.00 | ND | 14.35 | 95.7 | | 40 - 110 |
| Diethylphthalate | 5.000 | ND | 4.687 | 93.7 | | 40 - 120 |
| 2,4-Dimethylphenol | 15.00 | ND | 13.45 | 89.7 | | 30 - 110 |
| Dimethyl phthalate | 5.000 | ND | 4.475 | 89.5 | | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | ND | 16.55 | 110 | | 40 - 130 |
| 2,4-Dinitrophenol | 15.00 | ND | 15.02 | 100 | | 15 - 140 |
| 2,4-Dinitrotoluene | 5.000 | ND | 4.079 | 81.6 | | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | ND | 4.207 | 84.1 | | 50 - 115 |
| Di-n-octylphthalate | 5.000 | ND | 5.111 | 102 | | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 1.659 | 5.585 | 78.5 | | 40 - 125 |
| Hexachlorobenzene | 5.000 | ND | 4.752 | 95.0 | | 50 - 110 |
| Hexachlorobutadiene | 5.000 | ND | 4.892 | 97.8 | | 25 - 105 |
| Hexachlorocyclopentadiene | 5.000 | ND | 5.00 U | 0 | * | 10 - 110 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8270C**

**1011003-03**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L14026

% Solids:

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

Source Sample Name: **1012007-02**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Hexachloroethane | 5.000 | ND | 4.225 | 84.5 | | 30 - 95 |
| Isophorone | 5.000 | ND | 3.838 | 76.8 | | 50 - 110 |
| 2-Methylphenol | 15.00 | ND | 11.65 | 77.7 | | 40 - 110 |
| 4-Methylphenol | 30.00 | ND | 15.35 | 51.2 | | 30 - 110 |
| Naphthalene | 5.000 | ND | 4.079 | 81.6 | | 40 - 100 |
| 4-Nitroaniline | 5.000 | ND | 4.109 | 82.2 | | 35 - 120 |
| 3-Nitroaniline | 5.000 | ND | 2.794 | 55.9 | | 20 - 125 |
| 2-Nitroaniline | 5.000 | ND | 20.0 U | 0 | * | 50 - 115 |
| Nitrobenzene | 5.000 | ND | 4.251 | 85.0 | | 30 - 110 |
| 4-Nitrophenol | 15.00 | ND | 14.17 | 94.5 | | 0 - 125 |
| 2-Nitrophenol | 15.00 | ND | 12.92 | 86.2 | | 40 - 115 |
| N-Nitrosodiphenylamine | 5.000 | ND | 5.00 U | 0 | * | 50 - 110 |
| N-Nitroso-di-n-propylamine | 5.000 | ND | 4.037 | 80.7 | | 35 - 130 |
| Pentachlorophenol | 15.00 | ND | 13.47 | 89.8 | | 40 - 115 |
| Phenol | 15.00 | ND | 10.92 | 72.8 | | 0 - 115 |
| 2,4,6-Trichlorophenol | 15.00 | ND | 13.07 | 87.1 | | 50 - 115 |
| 2,4,5-Trichlorophenol | 15.00 | ND | 13.20 | 88.0 | | 50 - 110 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## SW8270C

**1011003-03**

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Matrix: Water
Batch: 0L14026
% Solids:
Source Sample Name: **1012007-02**

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Acetophenone | 5.000 | 3.575 | 71.5 | 9.82 | | 30 | 50 - 110 |
| Atrazine | 5.000 | 3.963 | 79.3 | 4.52 | | 30 | 70 - 115 |
| Benzaldehyde | 5.000 | 5.00 U | 0 | | * | 30 | 10 - 180 |
| 1,1-Biphenyl | 5.000 | 3.426 | 68.5 | 11.4 | | 30 | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | 4.472 | 89.4 | 3.12 | | 30 | 50 - 115 |
| Butylbenzylphthalate | 5.000 | 4.926 | 98.5 | 4.90 | | 30 | 45 - 115 |
| Caprolactam | 5.000 | 3.713 | 74.3 | 2.28 | | 30 | 20 - 110 |
| Carbazole | 5.000 | 3.971 | 79.4 | 0.421 | | 30 | 50 - 115 |
| 4-Chloro-3-methylphenol | 15.00 | 14.42 | 96.2 | 0.429 | | 30 | 45 - 110 |
| 4-Chloroaniline | 5.000 | 5.00 U | 0 | | * | 30 | 15 - 110 |
| Bis(2-chloroethoxy)methane | 5.000 | 3.444 | 68.9 | 10.9 | | 30 | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | 3.040 | 60.8 | 11.3 | | 30 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 3.144 | 62.9 | 10.8 | | 30 | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | 3.837 | 76.7 | 8.10 | | 30 | 50 - 105 |
| 2-Chlorophenol | 15.00 | 10.09 | 67.3 | 11.5 | | 30 | 35 - 105 |
| 4-Chlorophenyl phenyl ether | 5.000 | 4.100 | 82.0 | 8.45 | | 30 | 50 - 110 |
| Dibenzofuran | 5.000 | 4.246 | 84.9 | 3.93 | | 30 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 6.665 | 65.2 | 17.0 | | 30 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 2.107 | 42.1 | 10.1 | | 30 | 20 - 110 |
| 2,4-Dichlorophenol | 15.00 | 13.07 | 87.1 | 9.37 | | 30 | 40 - 110 |
| Diethylphthalate | 5.000 | 4.615 | 92.3 | 1.54 | | 30 | 40 - 120 |
| 2,4-Dimethylphenol | 15.00 | 12.49 | 83.3 | 7.40 | | 30 | 30 - 110 |
| Dimethyl phthalate | 5.000 | 4.317 | 86.3 | 3.59 | | 30 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 15.89 | 106 | 4.10 | | 30 | 40 - 130 |
| 2,4-Dinitrophenol | 15.00 | 13.64 | 91.0 | 9.59 | | 30 | 15 - 140 |
| 2,4-Dinitrotoluene | 5.000 | 4.399 | 88.0 | 7.56 | | 30 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 3.996 | 79.9 | 5.15 | | 30 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 5.343 | 107 | 4.43 | | 30 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 5.723 | 81.3 | 2.43 | | 30 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 4.344 | 86.9 | 8.96 | | 30 | 50 - 110 |
| Hexachlorobutadiene | 5.000 | 4.679 | 93.6 | 4.45 | | 30 | 25 - 105 |
| Hexachlorocyclopentadiene | 5.000 | 5.00 U | 0 | | * | 30 | 10 - 110 |
| Hexachloroethane | 5.000 | 3.693 | 73.9 | 13.4 | | 30 | 30 - 95 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8270C**

**1011003-03**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L14026

% Solids:

Source Sample Name: **1012007-02**

SDG: CTOJM16KW_008

Project: CTOJM16 Key West 2010

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Isophorone | 5.000 | 3.455 | 69.1 | 10.5 | | 30 | 50 - 110 |
| 2-Methylphenol | 15.00 | 10.91 | 72.7 | 6.60 | | 30 | 40 - 110 |
| 4-Methylphenol | 30.00 | 14.39 | 48.0 | 6.44 | | 30 | 30 - 110 |
| Naphthalene | 5.000 | 3.714 | 74.3 | 9.37 | | 30 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 4.412 | 88.2 | 7.10 | | 30 | 35 - 120 |
| 3-Nitroaniline | 5.000 | 3.040 | 60.8 | 8.44 | | 30 | 20 - 125 |
| 2-Nitroaniline | 5.000 | 20.0 U | 0 | | * | 30 | 50 - 115 |
| Nitrobenzene | 5.000 | 3.846 | 76.9 | 9.99 | | 30 | 30 - 110 |
| 4-Nitrophenol | 15.00 | 14.02 | 93.5 | 1.02 | | 30 | 0 - 125 |
| 2-Nitrophenol | 15.00 | 11.53 | 76.8 | 11.4 | | 30 | 40 - 115 |
| N-Nitrosodiphenylamine | 5.000 | 5.00 U | 0 | | * | 30 | 50 - 110 |
| N-Nitroso-di-n-propylamine | 5.000 | 3.668 | 73.4 | 9.57 | | 30 | 35 - 130 |
| Pentachlorophenol | 15.00 | 11.80 | 78.7 | 13.2 | | 30 | 40 - 115 |
| Phenol | 15.00 | 9.940 | 66.3 | 9.37 | | 30 | 0 - 115 |
| 2,4,6-Trichlorophenol | 15.00 | 12.48 | 83.2 | 4.65 | | 30 | 50 - 115 |
| 2,4,5-Trichlorophenol | 15.00 | 12.98 | 86.5 | 1.71 | | 30 | 50 - 110 |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35113

SDG: CTOJM16KW_008
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35113-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1.D | | Analyzed: 12/14/10 12:13 | | |
| 2-Fluorobiphenyl | 50.00 | 94.8 | 80 - 120 | 9.5 | 9.5 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 94.3 | 80 - 120 | 5.22 | 5.22 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 104 | 80 - 120 | 7.321 | 7.321 | 0.0000 | +/-0.500 | |
| Phenol-d6 | 100.0 | 94.4 | 80 - 120 | 6.268 | 6.268 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 98.0 | 80 - 120 | 14.111 | 14.111 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 117 | 80 - 120 | 11.298 | 11.298 | 0.0000 | +/-0.500 | |
| **LCS (0L14026-BS1 ) ug/L** | | | | Lab File ID: 1200710.D | | Analyzed: 12/14/10 19:50 | | |
| 2-Fluorobiphenyl | 2.000 | 81.4 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 72.7 | 20 - 110 | 5.232 | 5.22 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 90.3 | 40 - 110 | 7.314 | 7.321 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | 74.8 | 10 - 110 | 6.251 | 6.268 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 106 | 50 - 135 | 14.104 | 14.111 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 72.9 | 40 - 125 | 11.286 | 11.298 | -0.0120 | +/-0.500 | |
| **Blank (0L14026-BLK1 ) ug/L** | | | | Lab File ID: 1200709.D | | Analyzed: 12/14/10 20:20 | | |
| 2-Fluorobiphenyl | 2.000 | 76.1 | 50 - 110 | 9.49 | 9.5 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 66.9 | 20 - 110 | 5.23 | 5.22 | 0.0100 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 81.6 | 40 - 110 | 7.312 | 7.321 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 62.6 | 10 - 110 | 6.249 | 6.268 | -0.0190 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 101 | 50 - 135 | 14.102 | 14.111 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.298 | -11.2980 | +/-0.500 | * |
| **1011003-02 (1012007-01 ) ug/L** | | | | Lab File ID: 1200701.D | | Analyzed: 12/14/10 20:50 | | |
| 2-Fluorobiphenyl | 2.000 | 71.4 | 50 - 110 | 9.49 | 9.5 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 65.2 | 20 - 110 | 5.235 | 5.22 | 0.0150 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 85.0 | 40 - 110 | 7.312 | 7.321 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 61.1 | 10 - 110 | 6.254 | 6.268 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 109 | 50 - 135 | 14.107 | 14.111 | -0.0040 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 87.9 | 40 - 125 | 11.294 | 11.298 | -0.0040 | +/-0.500 | |
| **1011003-03 (1012007-02 ) ug/L** | | | | Lab File ID: 1200702.D | | Analyzed: 12/14/10 21:20 | | |
| 2-Fluorobiphenyl | 2.000 | 76.6 | 50 - 110 | 9.49 | 9.5 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 70.1 | 20 - 110 | 5.229 | 5.22 | 0.0090 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 83.9 | 40 - 110 | 7.312 | 7.321 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 66.9 | 10 - 110 | 6.254 | 6.268 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 110 | 50 - 135 | 14.102 | 14.111 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 84.8 | 40 - 125 | 11.288 | 11.298 | -0.0100 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35113
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011003-04 (1012007-03 ) ug/L** | | | | Lab File ID: 1200703.D | | Analyzed: 12/14/10 21:50 | | |
| 2-Fluorobiphenyl | 2.000 | 74.9 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 63.6 | 20 - 110 | 5.226 | 5.22 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 82.2 | 40 - 110 | 7.308 | 7.321 | -0.0130 | +/-0.500 | |
| Phenol-d6 | 4.000 | 61.4 | 10 - 110 | 6.255 | 6.268 | -0.0130 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 103 | 50 - 135 | 14.103 | 14.111 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 72.3 | 40 - 125 | 11.29 | 11.298 | -0.0080 | +/-0.500 | |
| **1011003-05 (1012007-04 ) ug/L** | | | | Lab File ID: 1200704.D | | Analyzed: 12/14/10 22:20 | | |
| 2-Fluorobiphenyl | 2.000 | 67.3 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 60.7 | 20 - 110 | 5.227 | 5.22 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 68.9 | 40 - 110 | 7.309 | 7.321 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 4.000 | 58.0 | 10 - 110 | 6.256 | 6.268 | -0.0120 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 103 | 50 - 135 | 14.104 | 14.111 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.298 | -11.2980 | +/-0.500 | * |
| **1011003-06 (1012007-05 ) ug/L** | | | | Lab File ID: 1200705.D | | Analyzed: 12/14/10 22:50 | | |
| 2-Fluorobiphenyl | 2.000 | 71.9 | 50 - 110 | 9.493 | 9.5 | -0.0070 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 69.8 | 20 - 110 | 5.228 | 5.22 | 0.0080 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 84.4 | 40 - 110 | 7.31 | 7.321 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 4.000 | 63.6 | 10 - 110 | 6.252 | 6.268 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 102 | 50 - 135 | 14.105 | 14.111 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.298 | -11.2980 | +/-0.500 | * |
| **1011003-08 (1012007-07 ) ug/L** | | | | Lab File ID: 1200707.D | | Analyzed: 12/14/10 23:20 | | |
| 2-Fluorobiphenyl | 2.000 | 83.9 | 50 - 110 | 9.488 | 9.5 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 75.9 | 20 - 110 | 5.232 | 5.22 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 84.7 | 40 - 110 | 7.314 | 7.321 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | 66.1 | 10 - 110 | 6.256 | 6.268 | -0.0120 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 116 | 50 - 135 | 14.104 | 14.111 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 54.0 | 40 - 125 | 11.286 | 11.298 | -0.0120 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35403
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35403-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1.D | | Analyzed: 12/15/10 11:42 | | |
| 2-Fluorobiphenyl | 50.00 | 99.9 | 80 - 120 | 9.464 | 9.464 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 98.6 | 80 - 120 | 5.184 | 5.184 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 108 | 80 - 120 | 7.286 | 7.286 | 0.0000 | +/-0.500 | |
| Phenol-d6 | 100.0 | 96.7 | 80 - 120 | 6.233 | 6.233 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 102 | 80 - 120 | 14.071 | 14.071 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 118 | 80 - 120 | 11.263 | 11.263 | 0.0000 | +/-0.500 | |
| **1011003-09 (1012007-08 ) ug/L** | | | | Lab File ID: 1200708.D | | Analyzed: 12/15/10 12:12 | | |
| 2-Fluorobiphenyl | 2.000 | 79.4 | 50 - 110 | 9.454 | 9.464 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 70.0 | 20 - 110 | 5.189 | 5.184 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 82.3 | 40 - 110 | 7.276 | 7.286 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 4.000 | 74.1 | 10 - 110 | 6.218 | 6.233 | -0.0150 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 110 | 50 - 135 | 14.066 | 14.071 | -0.0050 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.263 | -11.2630 | +/-0.500 | * |
| **Matrix Spike (0L14026-MS1 ) ug/L** | | | | Lab File ID: 1200702B.D | | Analyzed: 12/15/10 12:42 | | |
| 2-Fluorobiphenyl | 2.000 | 80.4 | 50 - 110 | 9.455 | 9.464 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 76.1 | 20 - 110 | 5.19 | 5.184 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 89.7 | 40 - 110 | 7.277 | 7.286 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 77.8 | 10 - 110 | 6.219 | 6.233 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 118 | 50 - 135 | 14.067 | 14.071 | -0.0040 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 85.2 | 40 - 125 | 11.254 | 11.263 | -0.0090 | +/-0.500 | |
| **Matrix Spike Dup (0L14026-MSD1 ) ug/L** | | | | Lab File ID: 1200702C.D | | Analyzed: 12/15/10 13:12 | | |
| 2-Fluorobiphenyl | 2.000 | 73.9 | 50 - 110 | 9.454 | 9.464 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 71.0 | 20 - 110 | 5.188 | 5.184 | 0.0040 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 87.4 | 40 - 110 | 7.275 | 7.286 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 4.000 | 72.5 | 10 - 110 | 6.217 | 6.233 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 119 | 50 - 135 | 14.065 | 14.071 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 82.2 | 40 - 125 | 11.252 | 11.263 | -0.0110 | +/-0.500 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35113
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35113-CCV1 )** | | | Lab File ID: SEQ-CCV1.D | | | Analyzed: 12/14/10 12:13 | | | |
| 1,4-Dichlorobenzene-d4 | 488058 | 6.677 | 520490 | 6.774 | 94 | 50 - 200 | -0.0970 | +/-0.50 | |
| Naphthalene-d8 | 1693550 | 8.187 | 1864250 | 8.284 | 91 | 50 - 200 | -0.0970 | +/-0.50 | |
| Acenaphthene-d10 | 975787 | 10.332 | 1011290 | 10.429 | 96 | 50 - 200 | -0.0970 | +/-0.50 | |
| Phenanthrene-d10 | 1652418 | 12.154 | 1690574 | 12.256 | 98 | 50 - 200 | -0.1020 | +/-0.50 | |
| Chrysene-d12 | 1476924 | 15.448 | 1331643 | 15.56 | 111 | 50 - 200 | -0.1120 | +/-0.50 | |
| Perylene-d12 | 1191026 | 17.29 | 1068595 | 17.426 | 111 | 50 - 200 | -0.1360 | +/-0.50 | |
| **LCS (0L14026-BS1 )** | | | Lab File ID: 1200710.D | | | Analyzed: 12/14/10 19:50 | | | |
| 1,4-Dichlorobenzene-d4 | 532065 | 6.679 | 488058 | 6.677 | 109 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1770146 | 8.179 | 1693550 | 8.187 | 105 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 978872 | 10.324 | 975787 | 10.332 | 100 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1533222 | 12.147 | 1652418 | 12.154 | 93 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1237617 | 15.441 | 1476924 | 15.448 | 84 | 50 - 200 | -0.0070 | +/-0.50 | |
| Perylene-d12 | 919602 | 17.282 | 1191026 | 17.29 | 77 | 50 - 200 | -0.0080 | +/-0.50 | |
| **Blank (0L14026-BLK1 )** | | | Lab File ID: 1200709.D | | | Analyzed: 12/14/10 20:20 | | | |
| 1,4-Dichlorobenzene-d4 | 557453 | 6.677 | 488058 | 6.677 | 114 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1922307 | 8.182 | 1693550 | 8.187 | 114 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 1062415 | 10.322 | 975787 | 10.332 | 109 | 50 - 200 | -0.0100 | +/-0.50 | |
| Phenanthrene-d10 | 1666171 | 12.145 | 1652418 | 12.154 | 101 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1282339 | 15.439 | 1476924 | 15.448 | 87 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 982185 | 17.285 | 1191026 | 17.29 | 82 | 50 - 200 | -0.0050 | +/-0.50 | |
| **1011003-02 (1012007-01 )** | | | Lab File ID: 1200701.D | | | Analyzed: 12/14/10 20:50 | | | |
| 1,4-Dichlorobenzene-d4 | 440527 | 6.677 | 488058 | 6.677 | 90 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1436908 | 8.182 | 1693550 | 8.187 | 85 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 765762 | 10.327 | 975787 | 10.332 | 78 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1163052 | 12.15 | 1652418 | 12.154 | 70 | 50 - 200 | -0.0040 | +/-0.50 | |
| Chrysene-d12 | 901381 | 15.439 | 1476924 | 15.448 | 61 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 708983 | 17.281 | 1191026 | 17.29 | 60 | 50 - 200 | -0.0090 | +/-0.50 | |
| **1011003-03 (1012007-02 )** | | | Lab File ID: 1200702.D | | | Analyzed: 12/14/10 21:20 | | | |
| 1,4-Dichlorobenzene-d4 | 477113 | 6.677 | 488058 | 6.677 | 98 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1659390 | 8.182 | 1693550 | 8.187 | 98 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 911648 | 10.322 | 975787 | 10.332 | 93 | 50 - 200 | -0.0100 | +/-0.50 | |
| Phenanthrene-d10 | 1436319 | 12.149 | 1652418 | 12.154 | 87 | 50 - 200 | -0.0050 | +/-0.50 | |
| Chrysene-d12 | 1152397 | 15.438 | 1476924 | 15.448 | 78 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 927045 | 17.285 | 1191026 | 17.29 | 78 | 50 - 200 | -0.0050 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35113

SDG: CTOJM16KW_008
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011003-04 (1012007-03 )** | | | Lab File ID: 1200703.D | | | Analyzed: 12/14/10 21:50 | | | |
| 1,4-Dichlorobenzene-d4 | 435930 | 6.678 | 488058 | 6.677 | 89 | 50 - 200 | 0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1453043 | 8.179 | 1693550 | 8.187 | 86 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 787225 | 10.324 | 975787 | 10.332 | 81 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1270527 | 12.146 | 1652418 | 12.154 | 77 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1046332 | 15.44 | 1476924 | 15.448 | 71 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 827215 | 17.282 | 1191026 | 17.29 | 69 | 50 - 200 | -0.0080 | +/-0.50 | |
| **1011003-05 (1012007-04 )** | | | Lab File ID: 1200704.D | | | Analyzed: 12/14/10 22:20 | | | |
| 1,4-Dichlorobenzene-d4 | 463507 | 6.679 | 488058 | 6.677 | 95 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1549555 | 8.18 | 1693550 | 8.187 | 91 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 846446 | 10.324 | 975787 | 10.332 | 87 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1322059 | 12.147 | 1652418 | 12.154 | 80 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1015610 | 15.441 | 1476924 | 15.448 | 69 | 50 - 200 | -0.0070 | +/-0.50 | |
| Perylene-d12 | 805797 | 17.283 | 1191026 | 17.29 | 68 | 50 - 200 | -0.0070 | +/-0.50 | |
| **1011003-06 (1012007-05 )** | | | Lab File ID: 1200705.D | | | Analyzed: 12/14/10 22:50 | | | |
| 1,4-Dichlorobenzene-d4 | 523230 | 6.68 | 488058 | 6.677 | 107 | 50 - 200 | 0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1773311 | 8.18 | 1693550 | 8.187 | 105 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 991582 | 10.325 | 975787 | 10.332 | 102 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1522207 | 12.147 | 1652418 | 12.154 | 92 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1169865 | 15.441 | 1476924 | 15.448 | 79 | 50 - 200 | -0.0070 | +/-0.50 | |
| Perylene-d12 | 916947 | 17.283 | 1191026 | 17.29 | 77 | 50 - 200 | -0.0070 | +/-0.50 | |
| **1011003-08 (1012007-07 )** | | | Lab File ID: 1200707.D | | | Analyzed: 12/14/10 23:20 | | | |
| 1,4-Dichlorobenzene-d4 | 498870 | 6.679 | 488058 | 6.677 | 102 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1694680 | 8.18 | 1693550 | 8.187 | 100 | 50 - 200 | -0.0070 | +/-0.50 | |
| Acenaphthene-d10 | 914061 | 10.324 | 975787 | 10.332 | 94 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1427414 | 12.147 | 1652418 | 12.154 | 86 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1083232 | 15.441 | 1476924 | 15.448 | 73 | 50 - 200 | -0.0070 | +/-0.50 | |
| Perylene-d12 | 733232 | 17.283 | 1191026 | 17.29 | 62 | 50 - 200 | -0.0070 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35403

SDG: CTOJM16KW_008
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35403-CCV1 )** | | | Lab File ID: SEQ-CCV1.D | | | Analyzed: 12/15/10 11:42 | | | |
| 1,4-Dichlorobenzene-d4 | 456511 | 6.642 | 520490 | 6.774 | 88 | 50 - 200 | -0.1320 | +/-0.50 | |
| Naphthalene-d8 | 1572603 | 8.147 | 1864250 | 8.284 | 84 | 50 - 200 | -0.1370 | +/-0.50 | |
| Acenaphthene-d10 | 877482 | 10.291 | 1011290 | 10.429 | 87 | 50 - 200 | -0.1380 | +/-0.50 | |
| Phenanthrene-d10 | 1461336 | 12.119 | 1690574 | 12.256 | 86 | 50 - 200 | -0.1370 | +/-0.50 | |
| Chrysene-d12 | 1282145 | 15.408 | 1331643 | 15.56 | 96 | 50 - 200 | -0.1520 | +/-0.50 | |
| Perylene-d12 | 1049873 | 17.245 | 1068595 | 17.426 | 98 | 50 - 200 | -0.1810 | +/-0.50 | |
| **1011003-09 (1012007-08 )** | | | Lab File ID: 1200708.D | | | Analyzed: 12/15/10 12:12 | | | |
| 1,4-Dichlorobenzene-d4 | 528990 | 6.641 | 456511 | 6.642 | 116 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1787504 | 8.141 | 1572603 | 8.147 | 114 | 50 - 200 | -0.0060 | +/-0.50 | |
| Acenaphthene-d10 | 963284 | 10.286 | 877482 | 10.291 | 110 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1447847 | 12.108 | 1461336 | 12.119 | 99 | 50 - 200 | -0.0110 | +/-0.50 | |
| Chrysene-d12 | 1099528 | 15.403 | 1282145 | 15.408 | 86 | 50 - 200 | -0.0050 | +/-0.50 | |
| Perylene-d12 | 901550 | 17.239 | 1049873 | 17.245 | 86 | 50 - 200 | -0.0060 | +/-0.50 | |
| **Matrix Spike (0L14026-MS1 )** | | | Lab File ID: 1200702B.D | | | Analyzed: 12/15/10 12:42 | | | |
| 1,4-Dichlorobenzene-d4 | 582043 | 6.642 | 456511 | 6.642 | 127 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1948691 | 8.142 | 1572603 | 8.147 | 124 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 1039848 | 10.287 | 877482 | 10.291 | 119 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1594535 | 12.11 | 1461336 | 12.119 | 109 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1165163 | 15.404 | 1282145 | 15.408 | 91 | 50 - 200 | -0.0040 | +/-0.50 | |
| Perylene-d12 | 900137 | 17.241 | 1049873 | 17.245 | 86 | 50 - 200 | -0.0040 | +/-0.50 | |
| **Matrix Spike Dup (0L14026-MSD1 )** | | | Lab File ID: 1200702C.D | | | Analyzed: 12/15/10 13:12 | | | |
| 1,4-Dichlorobenzene-d4 | 527947 | 6.641 | 456511 | 6.642 | 116 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1770393 | 8.146 | 1572603 | 8.147 | 113 | 50 - 200 | -0.0010 | +/-0.50 | |
| Acenaphthene-d10 | 962910 | 10.286 | 877482 | 10.291 | 110 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1509036 | 12.113 | 1461336 | 12.119 | 103 | 50 - 200 | -0.0060 | +/-0.50 | |
| Chrysene-d12 | 1155143 | 15.402 | 1282145 | 15.408 | 90 | 50 - 200 | -0.0060 | +/-0.50 | |
| Perylene-d12 | 898532 | 17.239 | 1049873 | 17.245 | 86 | 50 - 200 | -0.0060 | +/-0.50 | |

# NAS KEY WEST
# WATER DATA
# CTOJM16KW_008

| FRACTION | CHEMICAL | GKHMS-GW-FD002-1010 | UNITS | GKHMS-GW-019-1010 | RPD | D |
|---|---|---|---|---|---|---|
| OS | DI-N-BUTYL PHTHALATE | ND | UG/L | 1.4 J | 200.00 | 1.40 |

N/A
<2XR.L.

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# NAS KEY WEST
# WATER DATA
# CTOJM16KW_008

| FRACTION | CHEMICAL | GKHMS-GW-FD003-1010 | UNITS | GKHMS-GW-022-1010 | RPD | D |
|---|---|---|---|---|---|---|
| OS | BIS(2-ETHYLHEXYL)PHTHALATE | 1.34 J | UG/L | 2.63 J | 64.99 | 1.29 N/A<2XR.L. |
| OS | DI-N-BUTYL PHTHALATE | 3.6 J | UG/L | 6.66 | 59.65 | 3.06 N/A<2XR.L. |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **A. COGNETTI** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION- SVOC**
**CTO JM16, NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_009**

**SAMPLES:** 21/Solid/SVOC

| | | |
|---|---|---|
| GKHMS-SO-001-1010 | GKHMS-SO-002-1010 | GKHMS-SO-003-1010 |
| GKHMS-SO-005-1010 | GKHMS-SO-007-1010 | GKHMS-SO-011-1010 |
| GKHMS-SO-012-1010 | GKHMS-SO-014-1010 | GKHMS-SO-017-1010 |
| GKHMS-SO-019-1010 | GKHMS-SO-021-1010 | GKHMS-SO-022-1010 |
| GKHMS-SO-023-1010 | GKHMS-SO-025-1010 | GKHMS-SO-028-1010 |
| GKHMS-SO-030-1010 | GKHMS-SO-031-1010 | GKHMS-SO-032-1010 |
| GKHMS-SO-034-1010 | GKHMS-SO-FD001-1010 | GKHMS-SO-FD002-1010 |

OVERVIEW

The sample set for CTO JM16, NAS Key West, SDG CTOJM16KW_009 consists of twenty one (21) solid environmental samples analyzed for semivolatile organic compounds (SVOC). There are two field duplicate pairs included within this SDG: GKHMS-SO-021-1010/GKHMS-SO-FD001-1010 and GKHMS-SO-031-1010/GKHMS-SO-FD002-1010.

The samples were collected by Tetra Tech on November 2, 2010 and analyzed by Empirical Laboratories. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Method 8270C analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
• Initial and Continuing Calibration Verification Results
* • Blank Results
• Surrogate Recoveries
• Matrix Spike / Matrix Spike Duplicate Results
• Laboratory Control Sample /Laboratory Control Sample Duplicate Results
• Internal Standard Recoveries
* • Detection Limits
* • Compound Indentification
* • Field Duplicate Precision

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

SVOC

The continuing calibration percent differences (%Ds) for 2,2'-oxybis-1-chloropropane, hexachlorocyclopentadiene, 4-nitroaniline and 2-nitroaniline were greater than the 20% quality control limit on December 15, 2010 @ 11:42 on instrument MS-BNA3. The nondetected results of the aforementioned compounds were qualified as estimated (UJ) in the affected samples GKHMS-SO-002-1010, GKHMS-SO-003-1010, GKHMS-SO-005-1010, GKHMS-SO-007-1010, GKHMS-SO-011-1010, GKHMS-SO-012-1010, GKHMS-SO-014-1010, GKHMS-SO-025-1010, GKHMS-SO-028-1010, GKHMS-SO-031-1010, GKHMS-SO-032-1010, GKHMS-SO-034-1010, GKHMS-SO-FD002-1010, GKHMS-SO-001-1010 and GKHMS-SO-017-1010.

The continuing calibration %Ds for several target compounds were greater than the 20% quality control limit on December 20, 2010 @ 17:10 on instrument MS-BNA3. The compounds were 3,3'-dichlorobenzidine, atrazine, benzaldehyde, 4-bromophenyl phenyl ether, carbazole, 4-chloroaniline, bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, 2-chloronaphthalene, 4-chlorophenyl phenyl ether, 4,6-dinitro-2-methylphenol, 2,6-dinitrotoluene, hexachlorobutadiene, isophorone, 3-nitroaniline, 2-nitroaniline, nitrobenzene, 4-nitrophenol, N-Nitroso-di-n-propylamine, 2,4,6-trichlorophenol and 2,4,5-trichlorophenol. The nondetected results of the aforementioned compounds were qualified as estimated (UJ) in the affected samples GKHMS-SO-019-1010, GKHMS-SO-021-1010, GKHMS-SO-022-1010, GKHMS-SO-023-1010 and GKHMS-SO-030-1010.

The continuing calibration %Ds for several target compounds were greater than the 20% quality control limit on December 21, 2010 @ 5:33 on instrument MS-BNA3. The compounds were acetophenone, atrazine, 4-bromophenyl phenyl ether, caprolactam, 4-chloro-3-methylphenol, bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, 2-chloronaphthalene, 2,4-dichlorophenol, 2,4-dimethylphenol, 2,4-dinitrophenol, di-n-octylphthalate, hexachlorobutadiene, isophorone, 2-nitroaniline, nitrobenzene, N-Nitrosodiphenylamine, N-Nitroso-di-n-propylamine, phenol and 2,4,6-trichlorophenol. The nondetected results of the aforementioned compounds were qualified as estimated (UJ) in the affected sample GKHMS-SO-FD001-1010.

There were numerous noncompliances found with the surrogate recoveries for several samples. Upon examining the raw data for samples with percent recoveries within quality control limits, the blank and samples with no reported percent recoveries, that there existed a possibility of a surrogate present when none was reported. The data reviewer contacted the laboratory in regards to the several samples with no recoveries for either one or several surrogates. The laboratory re-examined the data and manually reintegrated the surrogate peaks. The samples could not be re-extracted because the initial extraction was performed at Centauri Labs which has closed. The laboratory resubmitted revised form 1s and surrogate recovery summary forms. Action was taken on the following samples because of surrogate recoveries outside quality control limits as indicated in the table.

| Sample | Surrogate | Percent Recovery | Affected fraction | Qualification |
|---|---|---|---|---|
| GKHMS-SO-002-1010 | 2,4,6-tribromophenol | No recovery | Acid | UR all nondetects |
| GKHMS-SO-003-1010 | 2,4,6-tribromophenol | No recovery | Acid | UR all nondetects |
| GKHMS-SO-005-1010 | 2,4,6-tribromophenol | No recovery | Acid | UR all nondetects |
| GKHMS-SO-032-1010 | 2,4,6-tribromophenol | No recovery | Acid | UR all nondetects |
| GKHMS-SO-007-1010 | 2,4,6-tribromophenol | <10% | Acid | UR all nondetects |
| GKHMS-SO-021-1010 | All | No recovery | Acid/base/neutral | UR all nondetects |
| GKHMS-SO-022-1010 | All | No recovery | Acid/base/neutral | UR all nondetects |
| GKHMS-SO-023-1010 | All | No recovery | Acid/base/neutral | UR all nondetects |
| GKHMS-SO-FD001-1010 | All | No recovery | Acid/base/neutral | UR all nondetects |

The laboratory control sample (LCS) associated with batch 0L14027 had zero percent recoveries (%Rs) for benzaldehyde, 4-chloroaniline and N-Nitrosodiphenylamine. The nondetected benzaldehyde, 4-chloroaniline and N-Nitrosodiphenylamine results in the affected sample GKHMS-SO-FD001-1010 were qualified as rejected (UR).

The LCS associated with batch 0L14029 had zero %Rs for benzaldehyde, 4-chloroaniline, 2,4-dinitrophenol and N-Nitrosodiphenylamine. The nondeteceted benzaldehyde, 4-chloroaniline, 2,4-dinitrophenol and N-Nitrosodiphenylamine results were qualified as rejected (UR) in the affected samples GKHMS-SO-001-1010, GKHMS-SO-002-1010, GKHMS-SO-003-1010, GKHMS-SO-005-1010, GKHMS-SO-007-1010, GKHMS-SO-011-1010, GKHMS-SO-012-1010, GKHMS-SO-014-1010, GKHMS-SO-017-1010, GKHMS-SO-019-1010, GKHMS-SO-021-1010, GKHMS-SO-022-1010, GKHMS-SO-023-1010, GKHMS-SO-025-1010, GKHMS-SO-028-1010, GKHMS-SO-030-1010, GKHMS-SO-031-1010, GKHMS-SO-032-1010, GKHMS-SO-034-1010 and GKHMS-SO-FD002-1010.

The matrix spike/matrix spike duplicate (MS/MSD) of sample GKHMS-SO-001-1010 had zero percent recoveries for benzaldehyde, 4-chloroaniline, 2,4-dinitropehnol and N-Nitrosodiphenylamine. The nondetected benzaldehyde, 4-chloroaniline, 2,4-dinitropehnol and N-Nitrosodiphenylamine results were qualified as rejected (UR) in sample GKHMS-SO-001-1010.

The MS/MSD %Rs of di-n-butyl phthalate, di-n-octyl phthalate and bis(2-ehtylhexyl)phthalate were greater than the upper quality control limit in sample GKHMS-SO-001-1010. The positive bis(2-ethylhexyl)phthalate result in sample GKHMS-SO-001-1010 was qualified as estimated (J). No action was taken on the nondetected di-n-butyl phthalate and di-n-octyl phthalate results in sample GKHMS-SO-001-1010.

The internal standard perylene-d12 had a %R less than the lower quality control limit in sample GKHMS-SO-017-1010. The nondetected di-n-octylphthalate result was qualified as estimated (UJ) in smaple GKHMS-SO-017-1010. A copy of the continuing calibration standard ran on the same day as sample GKHMS-SO-017-1010 is included as reference in Appendix C.

Notes:

The samples were assigned sample identification numbers from Centauri Labs. Centauri Labs closed and sent the samples to Empirical Laboratories for analysis. Attached in Appendix C are the forms that match the sample identification on the chain of custody to Centauri's sample identification number. The data validator manually edited the sample identification as noted on the chain of custody on all of the forms.

As previously mentioned in this report, several noncompliances were noted for surrogate recoveries outside quality control limits. The following samples had surrogate recoveries outside quality control limits but no action was taken on the results.

The following samples had %Rs of the acid surrogate 2,4,6-tribromophneol less than the lower quality control limit but greater than 10%. No action is taken on a single surrogate noncompliance with a recovery greater than 10%. The samples were GKHMS-SO-012-1010, GKHMS-SO-025-1010, GKHMS-SO-028-1010, GKHMS-SO-031-1010 and GKHMS-SO-FD002-1010.

Samples GKHMS-SO-014-1010 and GKHMS-SO-017-1010 had %Rs of the surrogate terphenyl-d14 greater than the upper quality control limit. No action was taken on the nondetected results in samples GKHMS-SO-014-1010 and GKHMS-SO-017-1010.

Sample GKHMS-SO-030-1010 had %Rs of base/neutral surrogates nitrobenzene-d5 and terphnyl-d14 greater than the upper quality control limit. No action was taken on the nondetected results in sample GKHMS-SO-030-1010.

Sample GKHMS-SO-034-1010 had %Rs of base/neutral surrogate terphenyl-d14 greater than the upper quality control limit and %R of acid surrogate 2,4,6-tribromophenol less than the lower quality control limit but greater than 10%. No action was taken on the nondetected results in sample GKHMS-SO-034-1010.

Sample GKHMS-SO-019-1010 had %Rs of base/neutral surrogates 2-fluorobiphenyl and nitrobenzene-d5 greater than the upper quality control limit. The %R of acid surrogate 2,4,6-tribromophenol was less than the lower quality control limit but greater than 10%. No action was taken on the nondetected results in sample GKHMS-SO-019-1010.

The LCS associated with batch 0L14027 had high %Rs for the following compounds: bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, 2-chloronaphthalene, 4-chlorophenyl phenyl ether, 2,4-dimethylphenol, dimethyl phthalate, hexachlorobutadiene, isophorone, 2-nitroaniline, nitrobenzene, N-Nitroso-di-n-propylamine, phenol, 2,4,6-trichlorophenol and 2,4,5-trichlorophenol. No action was taken on the nondetected results of the aforementioned compounds in the affected sample GKHMS-SO-FD001-1010.

The MS %R of hexachloropentadiene was zero in sample GKHMS-SO-001-1010. The %R of hexachloropentadiene was within quality control limits in the MSD. No action was taken on the nondetected hexachloropentadiene result in sample GKHMS-SO-001-1010.

The relative percent differences (RPDs) for bis(2-ethylhexyl)phthalate and di-n-butyl phthalate were greater than the 50% quality control limit in the field duplicate pair GKHMS-SO-031-1010 and GKHMS-SO-FD002-1010. No action was taken on the bis(2-ethylhexyl)phthalate and di-n-butyl phthalate results because one result was less than the reporting limit and the other result was nondetected.

Nondetected results were reported to the method detection limit (MDL).

Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** Several target compounds had %Ds greater than the quality control limit. Both LCSs associated with samples in this SDG had zero percent recoveries for several compounds. The internal standard perylene-d12 had a %R less than the lower quality control limit in sample GKHMS-SO-017-1010. Several samples had surrogate recoveries outside of quality control limits resulting in the rejection of data.

**Other Factors Affecting Data Quality:** The MS/MSD of sample GKHMS-SO-001-1010 had zero percent recoveries for benzaldehyde, 4-chloroaniline, 2,4-dinitropehnol and N-Nitrosodiphenylamine and %Rs of di-n-butyl phthalate, di-n-octyl phthalate and bis(2-ehtylhexyl)phthalate greater than the quality control limit.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-01 | | | 1012008-02 | | | 1012008-03 | | | 1012008-04 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 86.1 | | | 87.5 | | | 86.6 | | | 85.7 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 0.116 | U | | 0.114 | U | | 0.115 | U | | 0.117 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.0592 | UJ | C | 0.0583 | UJ | C | 0.0589 | UJ | C | 0.0595 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | | 0.116 | U | | 0.114 | UR | R | 0.115 | UR | R | 0.117 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.0967 | U | | 0.0952 | UR | R | 0.0962 | UR | R | 0.0972 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.0407 | U | | 0.04 | UR | R | 0.0404 | UR | R | 0.0408 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.0967 | U | | 0.0952 | UR | R | 0.0962 | UR | R | 0.0972 | UR | R |
| 2,4-DIMETHYLPHENOL | | 0.387 | U | | 0.381 | UR | R | 0.385 | UR | R | 0.389 | UR | R |
| 2,4-DINITROPHENOL | | 0.151 | UR | E | 0.149 | UR | ER | 0.15 | UR | ER | 0.152 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.0279 | U | | 0.0274 | U | | 0.0277 | U | | 0.028 | U | |
| 2,6-DINITROTOLUENE | | 0.0441 | U | | 0.0434 | U | | 0.0439 | U | | 0.0443 | U | |
| 2-CHLORONAPHTHALENE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| 2-CHLOROPHENOL | | 0.0967 | U | | 0.0952 | UR | R | 0.0962 | UR | R | 0.0972 | UR | R |
| 2-METHYLPHENOL | | 0.387 | U | | 0.381 | UR | R | 0.385 | UR | R | 0.389 | UR | R |
| 2-NITROANILINE | | 0.0372 | UJ | C | 0.0366 | UJ | C | 0.037 | UJ | C | 0.0373 | UJ | C |
| 2-NITROPHENOL | | 0.0967 | U | | 0.0952 | UR | R | 0.0962 | UR | R | 0.0972 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.036 | U | | 0.0354 | U | | 0.0358 | U | | 0.0362 | U | |
| 3-NITROANILINE | | 0.0546 | U | | 0.0537 | U | | 0.0543 | U | | 0.0548 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | | 0.0256 | U | | 0.0251 | UR | R | 0.0254 | UR | R | 0.0257 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| 4-CHLORO-3-METHYLPHENOL | | 0.0967 | U | | 0.0952 | UR | R | 0.0962 | UR | R | 0.0972 | UR | R |
| 4-CHLOROANILINE | | 0.0967 | UR | E | 0.0952 | UR | E | 0.0962 | UR | E | 0.0972 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| 4-METHYLPHENOL | | 0.0967 | U | | 0.0952 | UR | R | 0.0962 | UR | R | 0.0972 | UR | R |
| 4-NITROANILINE | | 0.116 | UJ | C | 0.114 | UJ | C | 0.115 | UJ | C | 0.117 | UJ | C |
| 4-NITROPHENOL | | 0.387 | U | | 0.381 | UR | R | 0.385 | UR | R | 0.389 | UR | R |
| ACETOPHENONE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| ATRAZINE | | 0.0325 | U | | 0.032 | U | | 0.0323 | U | | 0.0327 | U | |
| BENZALDEHYDE | | 0.0967 | UR | E | 0.0952 | UR | E | 0.0962 | UR | E | 0.0972 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| BIS(2-CHLOROETHYL)ETHER | | 0.0476 | U | | 0.0469 | U | | 0.0473 | U | | 0.0478 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 0.0523 | J | DP | 0.0411 | U | | 0.128 | J | P | 0.042 | U | |
| BUTYL BENZYL PHTHALATE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| CAPROLACTAM | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| CARBAZOLE | | 0.0418 | U | | 0.0411 | U | | 0.0416 | U | | 0.042 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-05 | | | 1012008-06 | | | 1012008-07 | | | 1012008-08 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.8 | | | 80.4 | | | 83.6 | | | 85.4 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 0.114 | U | | 0.124 | U | | 0.12 | U | | 0.117 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.0581 | UJ | C | 0.0634 | UJ | C | 0.061 | UJ | C | 0.0597 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | | 0.114 | UR | R | 0.124 | U | | 0.12 | U | | 0.117 | U | |
| 2,4,5-TRICHLOROPHENOL | | 0.0949 | UR | R | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 2,4,6-TRICHLOROPHENOL | | 0.0399 | UR | R | 0.0435 | U | | 0.0419 | U | | 0.041 | U | |
| 2,4-DICHLOROPHENOL | | 0.0949 | UR | R | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 2,4-DIMETHYLPHENOL | | 0.379 | UR | R | 0.414 | U | | 0.398 | U | | 0.39 | U | |
| 2,4-DINITROPHENOL | | 0.148 | UR | ER | 0.162 | UR | E | 0.156 | UR | E | 0.152 | UR | E |
| 2,4-DINITROTOLUENE | | 0.0273 | U | | 0.0299 | U | | 0.0287 | U | | 0.0281 | U | |
| 2,6-DINITROTOLUENE | | 0.0433 | U | | 0.0473 | U | | 0.0455 | U | | 0.0445 | U | |
| 2-CHLORONAPHTHALENE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 2-CHLOROPHENOL | | 0.0949 | UR | R | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 2-METHYLPHENOL | | 0.379 | UR | R | 0.414 | U | | 0.398 | U | | 0.39 | U | |
| 2-NITROANILINE | | 0.0364 | UJ | C | 0.0398 | UJ | C | 0.0383 | UJ | C | 0.0375 | UJ | C |
| 2-NITROPHENOL | | 0.0949 | UR | R | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 3,3'-DICHLOROBENZIDINE | | 0.0353 | U | | 0.0386 | U | | 0.0371 | U | | 0.0363 | U | |
| 3-NITROANILINE | | 0.0535 | U | | 0.0585 | U | | 0.0562 | U | | 0.055 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | | 0.0251 | UR | R | 0.0274 | U | | 0.0263 | U | | 0.0258 | U | |
| 4-BROMOPHENYL PHENYL ETHER | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 4-CHLORO-3-METHYLPHENOL | | 0.0949 | UR | R | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 4-CHLOROANILINE | | 0.0949 | UR | E | 0.104 | UR | E | 0.0996 | UR | E | 0.0975 | R | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 4-METHYLPHENOL | | 0.0949 | UR | R | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| 4-NITROANILINE | | 0.114 | UJ | C | 0.124 | UJ | C | 0.12 | UJ | C | 0.117 | UJ | C |
| 4-NITROPHENOL | | 0.379 | UR | R | 0.414 | U | | 0.398 | U | | 0.39 | U | |
| ACETOPHENONE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| ATRAZINE | | 0.0319 | U | | 0.0348 | U | | 0.0335 | U | | 0.0328 | U | |
| BENZALDEHYDE | | 0.0949 | UR | E | 0.104 | UR | E | 0.0996 | UR | E | 0.0975 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| BIS(2-CHLOROETHYL)ETHER | | 0.0467 | U | | 0.051 | U | | 0.049 | U | | 0.048 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 0.041 | U | | 0.0448 | U | | 0.175 | J | P | 0.0545 | J | P |
| BUTYL BENZYL PHTHALATE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| CAPROLACTAM | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| CARBAZOLE | | 0.041 | U | | 0.0448 | U | | 0.0431 | U | | 0.0422 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-09 | | | 1012008-10 | | | 1012008-11 | | | 1012008-12 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.8 | | | 86.7 | | | 87.0 | | | 85.3 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| 1,2,4,5-TETRACHLOROBENZENE | | 0.114 | U | | 0.115 | U | | 0.575 | UR | R | 0.586 | UR | R |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.0581 | UJ | C | 0.0588 | U | | 0.293 | UR | R | 0.299 | UR | R |
| 2,3,4,6-TETRACHLOROPHENOL | | 0.114 | U | | 0.115 | U | | 0.575 | UR | R | 0.586 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.0949 | U | | 0.0961 | UJ | C | 0.479 | UR | CR | 0.488 | UR | CR |
| 2,4,6-TRICHLOROPHENOL | | 0.0399 | U | | 0.0404 | UJ | C | 0.201 | UR | R | 0.205 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| 2,4-DIMETHYLPHENOL | | 0.379 | U | | 0.384 | U | | 1.91 | UR | R | 1.95 | UR | R |
| 2,4-DINITROPHENOL | | 0.148 | UR | E | 0.15 | UR | E | 0.747 | UR | ER | 0.762 | UR | ER |
| 2,4-DINITROTOLUENE | | 0.0273 | U | | 0.0277 | U | | 0.138 | UR | R | 0.141 | UR | R |
| 2,6-DINITROTOLUENE | | 0.0433 | U | | 0.0438 | UJ | C | 0.218 | UR | R | 0.223 | UR | R |
| 2-CHLORONAPHTHALENE | | 0.0949 | U | | 0.0961 | UJ | C | 0.479 | UR | R | 0.488 | UR | R |
| 2-CHLOROPHENOL | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| 2-METHYLPHENOL | | 0.379 | U | | 0.384 | U | | 1.91 | UR | R | 1.95 | UR | R |
| 2-NITROANILINE | | 0.0364 | UJ | C | 0.0369 | UJ | C | 0.184 | UR | R | 0.188 | UR | R |
| 2-NITROPHENOL | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.0353 | U | | 0.0358 | UJ | C | 0.178 | UR | R | 0.182 | UR | R |
| 3-NITROANILINE | | 0.0535 | U | | 0.0542 | UJ | C | 0.27 | UR | R | 0.275 | UR | R |
| 4,6-DINITRO-2-METHYLPHENOL | | 0.0251 | U | | 0.0254 | UJ | C | 0.126 | UR | R | 0.129 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 0.0949 | U | | 0.0961 | UJ | C | 0.479 | UR | R | 0.488 | UR | R |
| 4-CHLORO-3-METHYLPHENOL | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| 4-CHLOROANILINE | | 0.0949 | UR | E | 0.0961 | UR | CE | 0.479 | UR | ER | 0.488 | UR | ER |
| 4-CHLOROPHENYL PHENYL ETHER | | 0.0949 | U | | 0.0961 | UJ | C | 0.479 | UR | R | 0.488 | UR | R |
| 4-METHYLPHENOL | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| 4-NITROANILINE | | 0.114 | UJ | C | 0.115 | UJ | C | 0.575 | UR | R | 0.586 | UR | R |
| 4-NITROPHENOL | | 0.379 | U | | 0.384 | UJ | C | 1.91 | UR | R | 1.95 | UR | R |
| ACETOPHENONE | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| ATRAZINE | | 0.0319 | U | | 0.0323 | UJ | C | 0.161 | UR | R | 0.164 | UR | R |
| BENZALDEHYDE | | 0.0949 | UR | E | 0.0961 | UR | CE | 0.479 | UR | ER | 0.488 | UR | ER |
| BIS(2-CHLOROETHOXY)METHANE | | 0.0949 | U | | 0.0961 | UJ | C | 0.479 | UR | R | 0.488 | UR | R |
| BIS(2-CHLOROETHYL)ETHER | | 0.0467 | U | | 0.0473 | UJ | C | 0.236 | UR | R | 0.24 | UR | R |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 0.041 | U | | 0.0415 | U | | 0.207 | UR | R | 0.211 | UR | R |
| BUTYL BENZYL PHTHALATE | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| CAPROLACTAM | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| CARBAZOLE | | 0.041 | U | | 0.0415 | UJ | C | 0.207 | UR | R | 0.211 | UR | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-13 | | | 1012008-14 | | | 1012008-15 | | | 1012008-16 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 86.2 | | | 84.1 | | | 85.7 | | | 87.9 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 0.58 | UR | R | 0.119 | U | | 0.117 | U | | 0.114 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.296 | UR | R | 0.0606 | UJ | C | 0.0595 | UJ | C | 0.058 | U | |
| 2,3,4,6-TETRACHLOROPHENOL | | 0.58 | UR | R | 0.119 | U | | 0.117 | U | | 0.114 | U | |
| 2,4,5-TRICHLOROPHENOL | | 0.483 | UR | CR | 0.099 | U | | 0.0972 | U | | 0.0948 | UJ | C |
| 2,4,6-TRICHLOROPHENOL | | 0.203 | UR | R | 0.0416 | U | | 0.0408 | U | | 0.0398 | UJ | C |
| 2,4-DICHLOROPHENOL | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| 2,4-DIMETHYLPHENOL | | 1.93 | UR | R | 0.396 | U | | 0.389 | U | | 0.379 | U | |
| 2,4-DINITROPHENOL | | 0.754 | UR | ER | 0.155 | UR | E | 0.152 | UR | E | 0.148 | UR | E |
| 2,4-DINITROTOLUENE | | 0.139 | UR | R | 0.0285 | U | | 0.028 | U | | 0.0273 | U | |
| 2,6-DINITROTOLUENE | | 0.22 | UR | R | 0.0452 | U | | 0.0443 | U | | 0.0432 | UJ | C |
| 2-CHLORONAPHTHALENE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | UJ | C |
| 2-CHLOROPHENOL | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| 2-METHYLPHENOL | | 1.93 | UR | R | 0.396 | U | | 0.389 | U | | 0.379 | U | |
| 2-NITROANILINE | | 0.186 | UR | R | 0.038 | UJ | C | 0.0373 | UJ | C | 0.0364 | UJ | C |
| 2-NITROPHENOL | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| 3,3'-DICHLOROBENZIDINE | | 0.18 | UR | R | 0.0369 | U | | 0.0362 | U | | 0.0353 | UJ | C |
| 3-NITROANILINE | | 0.273 | UR | R | 0.0559 | U | | 0.0548 | U | | 0.0535 | UJ | C |
| 4,6-DINITRO-2-METHYLPHENOL | | 0.128 | UR | R | 0.0262 | U | | 0.0257 | U | | 0.025 | UJ | C |
| 4-BROMOPHENYL PHENYL ETHER | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | UJ | C |
| 4-CHLORO-3-METHYLPHENOL | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| 4-CHLOROANILINE | | 0.483 | UR | ER | 0.099 | UR | E | 0.0972 | UR | E | 0.0948 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | UJ | C |
| 4-METHYLPHENOL | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| 4-NITROANILINE | | 0.58 | UR | R | 0.119 | UJ | C | 0.117 | UJ | C | 0.114 | U | |
| 4-NITROPHENOL | | 1.93 | UR | R | 0.396 | U | | 0.389 | U | | 0.379 | UJ | C |
| ACETOPHENONE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| ATRAZINE | | 0.162 | UR | R | 0.0333 | U | | 0.0327 | U | | 0.0319 | UJ | C |
| BENZALDEHYDE | | 0.483 | UR | ER | 0.099 | UR | E | 0.0972 | UR | E | 0.0948 | UR | CE |
| BIS(2-CHLOROETHOXY)METHANE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | UJ | C |
| BIS(2-CHLOROETHYL)ETHER | | 0.238 | UR | R | 0.0488 | U | | 0.0478 | U | | 0.0466 | UJ | C |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 0.209 | UR | R | 0.0428 | U | | 0.042 | U | | 0.041 | U | |
| BUTYL BENZYL PHTHALATE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| CAPROLACTAM | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| CARBAZOLE | | 0.209 | UR | R | 0.0428 | U | | 0.042 | U | | 0.041 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD001-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-17 | | | 1012008-18 | | | 1012008-19 | | | 1012008-21 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.9 | | | 81.5 | | | 85.8 | | | 80.4 | | |
| | DUP_OF | | | | | | | | | | GKHMS-SO-021-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| 1,2,4,5-TETRACHLOROBENZENE | | 0.114 | U | | 0.123 | U | | 0.117 | U | | 0.622 | UR | R |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.058 | UJ | C | 0.0626 | UJ | C | 0.0594 | UJ | C | 0.317 | UR | R |
| 2,3,4,6-TETRACHLOROPHENOL | | 0.114 | U | | 0.123 | UR | R | 0.117 | U | | 0.622 | UR | R |
| 2,4,5-TRICHLOROPHENOL | | 0.0948 | U | | 0.102 | UR | R | 0.0971 | U | | 0.518 | UR | R |
| 2,4,6-TRICHLOROPHENOL | | 0.0398 | U | | 0.0429 | UR | R | 0.0408 | U | | 0.218 | UR | R |
| 2,4-DICHLOROPHENOL | | 0.0948 | U | | 0.102 | UR | R | 0.0971 | U | | 0.518 | UR | R |
| 2,4-DIMETHYLPHENOL | | 0.379 | U | | 0.409 | UR | R | 0.388 | U | | 2.07 | UR | R |
| 2,4-DINITROPHENOL | | 0.148 | UR | E | 0.16 | UR | ER | 0.152 | UR | E | 0.808 | UR | R |
| 2,4-DINITROTOLUENE | | 0.0273 | U | | 0.0294 | U | | 0.028 | U | | 0.149 | UR | R |
| 2,6-DINITROTOLUENE | | 0.0432 | U | | 0.0466 | U | | 0.0443 | U | | 0.236 | UR | R |
| 2-CHLORONAPHTHALENE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| 2-CHLOROPHENOL | | 0.0948 | U | | 0.102 | UR | R | 0.0971 | U | | 0.518 | UR | R |
| 2-METHYLPHENOL | | 0.379 | U | | 0.409 | UR | R | 0.388 | U | | 2.07 | UR | R |
| 2-NITROANILINE | | 0.0364 | UJ | C | 0.0393 | UJ | C | 0.0373 | UJ | C | 0.199 | UR | R |
| 2-NITROPHENOL | | 0.0948 | U | | 0.102 | UR | R | 0.0971 | U | | 0.518 | UR | R |
| 3,3'-DICHLOROBENZIDINE | | 0.0353 | U | | 0.038 | U | | 0.0361 | U | | 0.193 | UR | R |
| 3-NITROANILINE | | 0.0535 | U | | 0.0577 | U | | 0.0548 | U | | 0.292 | UR | R |
| 4,6-DINITRO-2-METHYLPHENOL | | 0.025 | U | | 0.027 | UR | R | 0.0256 | U | | 0.137 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| 4-CHLORO-3-METHYLPHENOL | | 0.0948 | U | | 0.102 | UR | R | 0.0971 | U | | 0.518 | UR | R |
| 4-CHLOROANILINE | | 0.0948 | UR | E | 0.102 | UR | E | 0.0971 | UR | E | 0.518 | UR | ER |
| 4-CHLOROPHENYL PHENYL ETHER | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| 4-METHYLPHENOL | | 0.0948 | U | | 0.102 | UR | R | 0.0971 | U | | 0.518 | UR | R |
| 4-NITROANILINE | | 0.114 | UJ | C | 0.123 | UJ | C | 0.117 | UJ | C | 0.622 | UR | R |
| 4-NITROPHENOL | | 0.379 | U | | 0.409 | UR | R | 0.388 | U | | 2.07 | UR | R |
| ACETOPHENONE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| ATRAZINE | | 0.0319 | U | | 0.0344 | U | | 0.0326 | U | | 0.174 | UR | R |
| BENZALDEHYDE | | 0.0948 | UR | E | 0.102 | UR | E | 0.0971 | UR | E | 0.518 | UR | ER |
| BIS(2-CHLOROETHOXY)METHANE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| BIS(2-CHLOROETHYL)ETHER | | 0.0466 | U | | 0.0503 | U | | 0.0478 | U | | 0.255 | UR | R |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 0.0973 | J | P | 0.0724 | J | P | 0.042 | U | | 0.224 | UR | R |
| BUTYL BENZYL PHTHALATE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| CAPROLACTAM | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| CARBAZOLE | | 0.041 | U | | 0.0442 | U | | 0.042 | U | | 0.224 | UR | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD002-1010 |
|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-20 |
| FRACTION: OS | SAMP_DATE | 11/2/2010 |
| MEDIA: SOIL | QC_TYPE | NM |
| | UNITS | MG/KG |
| | PCT_SOLIDS | 87.7 |
| | DUP_OF | GKHMS-SO-031-1010 |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 1,1-BIPHENYL | 0.095 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | 0.114 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | 0.0582 | UJ | C |
| 2,3,4,6-TETRACHLOROPHENOL | 0.114 | U | |
| 2,4,5-TRICHLOROPHENOL | 0.095 | U | |
| 2,4,6-TRICHLOROPHENOL | 0.0399 | U | |
| 2,4-DICHLOROPHENOL | 0.095 | U | |
| 2,4-DIMETHYLPHENOL | 0.38 | U | |
| 2,4-DINITROPHENOL | 0.148 | UR | E |
| 2,4-DINITROTOLUENE | 0.0274 | U | |
| 2,6-DINITROTOLUENE | 0.0433 | U | |
| 2-CHLORONAPHTHALENE | 0.095 | U | |
| 2-CHLOROPHENOL | 0.095 | U | |
| 2-METHYLPHENOL | 0.38 | U | |
| 2-NITROANILINE | 0.0365 | UJ | C |
| 2-NITROPHENOL | 0.095 | U | |
| 3,3'-DICHLOROBENZIDINE | 0.0353 | U | |
| 3-NITROANILINE | 0.0536 | U | |
| 4,6-DINITRO-2-METHYLPHENOL | 0.0251 | U | |
| 4-BROMOPHENYL PHENYL ETHER | 0.095 | U | |
| 4-CHLORO-3-METHYLPHENOL | 0.095 | U | |
| 4-CHLOROANILINE | 0.095 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | 0.095 | U | |
| 4-METHYLPHENOL | 0.095 | U | |
| 4-NITROANILINE | 0.114 | UJ | C |
| 4-NITROPHENOL | 0.38 | U | |
| ACETOPHENONE | 0.095 | U | |
| ATRAZINE | 0.0319 | U | |
| BENZALDEHYDE | 0.095 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | 0.095 | U | |
| BIS(2-CHLOROETHYL)ETHER | 0.0468 | U | |
| BIS(2-ETHYLHEXYL)PHTHALATE | 0.041 | U | |
| BUTYL BENZYL PHTHALATE | 0.095 | U | |
| CAPROLACTAM | 0.095 | U | |
| CARBAZOLE | 0.041 | U | |

| PROJ_NO: 02607<br>SDG: CTOJM16KW_009<br>FRACTION: OS<br>MEDIA: SOIL | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | 1012008-01 | | | 1012008-02 | | | 1012008-03 | | | 1012008-04 | | |
| | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 86.1 | | | 87.5 | | | 86.6 | | | 85.7 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| DIETHYL PHTHALATE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| DIMETHYL PHTHALATE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| DI-N-BUTYL PHTHALATE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| DI-N-OCTYL PHTHALATE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| HEXACHLOROBENZENE | | 0.0407 | U | | 0.04 | U | | 0.0404 | U | | 0.0408 | U | |
| HEXACHLOROBUTADIENE | | 0.0383 | U | | 0.0377 | U | | 0.0381 | U | | 0.0385 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.0708 | UJ | C | 0.0697 | UJ | C | 0.0704 | UJ | C | 0.0712 | UJ | C |
| HEXACHLOROETHANE | | 0.0453 | U | | 0.0446 | U | | 0.045 | U | | 0.0455 | U | |
| ISOPHORONE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| NAPHTHALENE | | 0.0372 | U | | 0.0366 | U | | 0.037 | U | | 0.0373 | U | |
| NITROBENZENE | | 0.0395 | U | | 0.0389 | U | | 0.0393 | U | | 0.0397 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.0639 | UR | E | 0.0629 | UR | E | 0.0635 | UR | E | 0.0642 | UR | E |
| N-NITROSODIPHENYLAMINE | | 0.0967 | U | | 0.0952 | U | | 0.0962 | U | | 0.0972 | U | |
| PENTACHLOROPHENOL | | 0.0395 | U | | 0.0389 | UR | R | 0.0393 | UR | R | 0.0397 | UR | R |
| PHENOL | | 0.0967 | U | | 0.0952 | UR | R | 0.0962 | UR | R | 0.0972 | UR | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-05 | | | 1012008-06 | | | 1012008-07 | | | 1012008-08 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.8 | | | 80.4 | | | 83.6 | | | 85.4 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| DIETHYL PHTHALATE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| DIMETHYL PHTHALATE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| DI-N-BUTYL PHTHALATE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| DI-N-OCTYL PHTHALATE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| HEXACHLOROBENZENE | | 0.0399 | U | | 0.0435 | U | | 0.0419 | U | | 0.041 | U | |
| HEXACHLOROBUTADIENE | | 0.0376 | U | | 0.041 | U | | 0.0395 | U | | 0.0386 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.0695 | UJ | C | 0.0759 | UJ | C | 0.073 | UJ | C | 0.0714 | UJ | C |
| HEXACHLOROETHANE | | 0.0444 | U | | 0.0485 | U | | 0.0467 | U | | 0.0457 | U | |
| ISOPHORONE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| NAPHTHALENE | | 0.0364 | U | | 0.0398 | U | | 0.0383 | U | | 0.0375 | U | |
| NITROBENZENE | | 0.0387 | U | | 0.0423 | U | | 0.0407 | U | | 0.0398 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.0626 | UR | E | 0.0684 | UR | E | 0.0658 | UR | E | 0.0644 | UR | E |
| N-NITROSODIPHENYLAMINE | | 0.0949 | U | | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |
| PENTACHLOROPHENOL | | 0.0387 | UR | R | 0.0423 | U | | 0.0407 | U | | 0.0398 | U | |
| PHENOL | | 0.0949 | UR | R | 0.104 | U | | 0.0996 | U | | 0.0975 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | | GKHMS-SO-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-09 | | | 1012008-10 | | | 1012008-11 | | | 1012008-12 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.8 | | | 86.7 | | | 87.0 | | | 85.3 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| DIETHYL PHTHALATE | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| DIMETHYL PHTHALATE | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| DI-N-BUTYL PHTHALATE | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| DI-N-OCTYL PHTHALATE | | 0.0949 | UJ | N | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| HEXACHLOROBENZENE | | 0.0399 | U | | 0.0404 | U | | 0.201 | UR | R | 0.205 | UR | R |
| HEXACHLOROBUTADIENE | | 0.0376 | U | | 0.0381 | UJ | C | 0.19 | UR | R | 0.193 | UR | R |
| HEXACHLOROCYCLOPENTADIENE | | 0.0695 | UJ | C | 0.0704 | U | | 0.351 | UR | R | 0.358 | UR | R |
| HEXACHLOROETHANE | | 0.0444 | U | | 0.045 | U | | 0.224 | UR | R | 0.229 | UR | R |
| ISOPHORONE | | 0.0949 | U | | 0.0961 | UJ | C | 0.479 | UR | R | 0.488 | UR | R |
| NAPHTHALENE | | 0.0364 | U | | 0.0369 | U | | 0.184 | UR | R | 0.188 | UR | R |
| NITROBENZENE | | 0.0387 | U | | 0.0392 | UJ | C | 0.195 | UR | R | 0.199 | UR | R |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.0626 | UR | E | 0.0634 | UR | C | 0.316 | UR | CR | 0.322 | UR | CR |
| N-NITROSODIPHENYLAMINE | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |
| PENTACHLOROPHENOL | | 0.0387 | U | | 0.0392 | U | | 0.195 | UR | R | 0.199 | UR | R |
| PHENOL | | 0.0949 | U | | 0.0961 | U | | 0.479 | UR | R | 0.488 | UR | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | | GKHMS-SO-030-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-13 | | | 1012008-14 | | | 1012008-15 | | | 1012008-16 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 86.2 | | | 84.1 | | | 85.7 | | | 87.9 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| DIETHYL PHTHALATE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| DIMETHYL PHTHALATE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| DI-N-BUTYL PHTHALATE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| DI-N-OCTYL PHTHALATE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| HEXACHLOROBENZENE | | 0.203 | UR | R | 0.0416 | U | | 0.0408 | U | | 0.0398 | U | |
| HEXACHLOROBUTADIENE | | 0.191 | UR | R | 0.0392 | U | | 0.0385 | U | | 0.0375 | UJ | C |
| HEXACHLOROCYCLOPENTADIENE | | 0.354 | UR | R | 0.0725 | UJ | C | 0.0712 | UJ | C | 0.0694 | U | |
| HEXACHLOROETHANE | | 0.226 | UR | R | 0.0464 | U | | 0.0455 | U | | 0.0444 | U | |
| ISOPHORONE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | UJ | C |
| NAPHTHALENE | | 0.186 | UR | R | 0.038 | U | | 0.0373 | U | | 0.0364 | U | |
| NITROBENZENE | | 0.197 | UR | R | 0.0404 | U | | 0.0397 | U | | 0.0387 | UJ | C |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.319 | UR | CR | 0.0654 | UR | E | 0.0642 | UR | E | 0.0626 | UR | C |
| N-NITROSODIPHENYLAMINE | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |
| PENTACHLOROPHENOL | | 0.197 | UR | R | 0.0404 | U | | 0.0397 | U | | 0.0387 | U | |
| PHENOL | | 0.483 | UR | R | 0.099 | U | | 0.0972 | U | | 0.0948 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | | GKHMS-SO-FD001-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-17 | | | 1012008-18 | | | 1012008-19 | | | 1012008-21 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.9 | | | 81.5 | | | 85.8 | | | 80.4 | | |
| | DUP_OF | | | | | | | | | | GKHMS-SO-021-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| DIETHYL PHTHALATE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| DIMETHYL PHTHALATE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| DI-N-BUTYL PHTHALATE | | 0.135 | J | P | 0.12 | J | P | 0.0971 | U | | 0.518 | UR | R |
| DI-N-OCTYL PHTHALATE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| HEXACHLOROBENZENE | | 0.0398 | U | | 0.0429 | U | | 0.0408 | U | | 0.218 | UR | R |
| HEXACHLOROBUTADIENE | | 0.0375 | U | | 0.0405 | U | | 0.0385 | U | | 0.205 | UR | R |
| HEXACHLOROCYCLOPENTADIENE | | 0.0694 | UJ | C | 0.0748 | UJ | C | 0.0711 | UJ | C | 0.379 | UR | R |
| HEXACHLOROETHANE | | 0.0444 | U | | 0.0479 | U | | 0.0455 | U | | 0.243 | UR | R |
| ISOPHORONE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| NAPHTHALENE | | 0.0364 | U | | 0.0393 | U | | 0.0373 | U | | 0.199 | UR | R |
| NITROBENZENE | | 0.0387 | U | | 0.0417 | U | | 0.0396 | U | | 0.211 | UR | R |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.0626 | UR | E | 0.0675 | UR | E | 0.0641 | UR | E | 0.342 | UR | ER |
| N-NITROSODIPHENYLAMINE | | 0.0948 | U | | 0.102 | U | | 0.0971 | U | | 0.518 | UR | R |
| PENTACHLOROPHENOL | | 0.0387 | U | | 0.0417 | UR | R | 0.0396 | U | | 0.211 | UR | R |
| PHENOL | | 0.0948 | U | | 0.102 | UR | R | 0.0971 | U | | 0.518 | UR | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD002-1010 | | |
|---|---|---|---|---|
| SDG: CTOJM16KW_009 | LAB_ID | 1012008-20 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | |
| | UNITS | MG/KG | | |
| | PCT_SOLIDS | 87.7 | | |
| | DUP_OF | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 0.095 | U | |
| DIETHYL PHTHALATE | | 0.095 | U | |
| DIMETHYL PHTHALATE | | 0.095 | U | |
| DI-N-BUTYL PHTHALATE | | 0.095 | U | |
| DI-N-OCTYL PHTHALATE | | 0.095 | U | |
| HEXACHLOROBENZENE | | 0.0399 | U | |
| HEXACHLOROBUTADIENE | | 0.0376 | U | |
| HEXACHLOROCYCLOPENTADIENE | | 0.0696 | UJ | C |
| HEXACHLOROETHANE | | 0.0445 | U | |
| ISOPHORONE | | 0.095 | U | |
| NAPHTHALENE | | 0.0365 | U | |
| NITROBENZENE | | 0.0388 | U | |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.0627 | UR | E |
| N-NITROSODIPHENYLAMINE | | 0.095 | U | |
| PENTACHLOROPHENOL | | 0.0388 | U | |
| PHENOL | | 0.095 | U | |

# APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

# ANALYSIS DATA SHEET

1011013-01

GKHMS-50-001-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-01 File ID: 1200801.D

Sampled: 11/02/10 08:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 21:14

Solids: 86.10 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0360 | 0.194 | 0.387 | U |
| 98-86-2 | Acetophenone | | 0.0967 | 0.194 | 0.387 | U |
| 1912-24-9 | Atrazine | | 0.0325 | 0.194 | 0.387 | U |
| 100-52-7 | Benzaldehyde | | 0.0967 | 0.194 | 0.387 | N, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0967 | 0.194 | 0.387 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0967 | 0.194 | 0.387 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0967 | 0.194 | 0.387 | U |
| 105-60-2 | Caprolactam | | 0.0967 | 0.194 | 0.387 | U |
| 86-74-8 | Carbazole | | 0.0418 | 0.194 | 0.387 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0967 | 0.194 | 0.387 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0967 | 0.194 | 0.387 | N, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0967 | 0.194 | 0.387 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0476 | 0.194 | 0.387 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0592 | 0.194 | 0.387 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0967 | 0.194 | 0.387 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0967 | 0.194 | 0.387 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0967 | 0.194 | 0.387 | U |
| 132-64-9 | Dibenzofuran | | 0.0967 | 0.194 | 0.387 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0967 | 0.194 | 0.387 | N U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0967 | 0.194 | 0.387 | U |
| 84-66-2 | Diethylphthalate | | 0.0967 | 0.194 | 0.387 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.387 | 0.775 | 1.54 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0967 | 0.194 | 0.387 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0256 | 1.94 | 3.87 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.151 | 1.94 | 3.87 | N, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0279 | 0.194 | 0.387 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0441 | 0.194 | 0.387 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0967 | 0.194 | 0.387 | N U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.0523 | 0.0418 | 0.194 | 0.387 | N I |
| 118-74-1 | Hexachlorobenzene | | 0.0407 | 0.194 | 0.387 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0383 | 0.194 | 0.387 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0708 | 0.194 | 0.387 | N, X U |
| 67-72-1 | Hexachloroethane | | 0.0453 | 0.194 | 0.387 | U |
| 78-59-1 | Isophorone | | 0.0967 | 0.194 | 0.387 | U |
| 95-48-7 | 2-Methylphenol | | 0.387 | 0.775 | 1.54 | U |
| 106-44-5 | 4-Methylphenol | | 0.0967 | 0.194 | 0.387 | U |
| 91-20-3 | Naphthalene | | 0.0372 | 0.194 | 0.387 | U |
| 100-01-6 | 4-Nitroaniline | | 0.116 | 0.775 | 1.54 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0546 | 0.775 | 1.54 | U |

# ANALYSIS DATA SHEET

1011013-01

GKHMS-SO-001-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-01 File ID: 1200801.D

Sampled: 11/02/10 08:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 21:14

Solids: 86.10 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0372 | 0.775 | 1.54 | X U |
| 98-95-3 | Nitrobenzene | | 0.0395 | 0.194 | 0.387 | U |
| 100-02-7 | 4-Nitrophenol | | 0.387 | 0.775 | 1.54 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0967 | 0.194 | 0.387 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0967 | 0.194 | 0.387 | N, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0639 | 0.194 | 0.387 | U |
| 87-86-5 | Pentachlorophenol | | 0.0395 | 0.775 | 1.54 | U |
| 108-95-2 | Phenol | | 0.0967 | 0.194 | 0.387 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.116 | 0.194 | 0.387 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.116 | 0.194 | 0.387 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0407 | 0.194 | 0.387 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0967 | 0.194 | 0.387 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07743 | 0.05831 | 75.3 | 45 - 105 | |
| 2-Fluorophenol | 0.1549 | 0.1090 | 70.4 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07743 | 0.06115 | 79.0 | 35 - 100 | |
| Phenol-d6 | 0.1549 | 0.1056 | 68.2 | 40 - 100 | |
| Terphenyl-d14 | 0.07743 | 0.09352 | 121 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1549 | 0.09793 | 63.2 | 35 - 125 | |

# ANALYSIS DATA SHEET

1011013-02

6KHMS-50-002-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-02 File ID: 1200802.D

Sampled: 11/02/10 08:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 14:43

Solids: 87.50 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0354 | 0.191 | 0.381 | U |
| 98-86-2 | Acetophenone | | 0.0952 | 0.191 | 0.381 | U |
| 1912-24-9 | Atrazine | | 0.0320 | 0.191 | 0.381 | U |
| 100-52-7 | Benzaldehyde | | 0.0952 | 0.191 | 0.381 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0952 | 0.191 | 0.381 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0952 | 0.191 | 0.381 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0952 | 0.191 | 0.381 | U |
| 105-60-2 | Caprolactam | | 0.0952 | 0.191 | 0.381 | U |
| 86-74-8 | Carbazole | | 0.0411 | 0.191 | 0.381 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0952 | 0.191 | 0.381 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0952 | 0.191 | 0.381 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0952 | 0.191 | 0.381 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0469 | 0.191 | 0.381 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0583 | 0.191 | 0.381 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0952 | 0.191 | 0.381 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0952 | 0.191 | 0.381 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0952 | 0.191 | 0.381 | U |
| 132-64-9 | Dibenzofuran | | 0.0952 | 0.191 | 0.381 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0952 | 0.191 | 0.381 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0952 | 0.191 | 0.381 | U |
| 84-66-2 | Diethylphthalate | | 0.0952 | 0.191 | 0.381 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.381 | 0.762 | 1.52 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0952 | 0.191 | 0.381 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0251 | 1.91 | 3.81 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.149 | 1.91 | 3.81 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0274 | 0.191 | 0.381 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0434 | 0.191 | 0.381 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0952 | 0.191 | 0.381 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0411 | 0.191 | 0.381 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0400 | 0.191 | 0.381 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0377 | 0.191 | 0.381 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0697 | 0.191 | 0.381 | X U |
| 67-72-1 | Hexachloroethane | | 0.0446 | 0.191 | 0.381 | U |
| 78-59-1 | Isophorone | | 0.0952 | 0.191 | 0.381 | U |
| 95-48-7 | 2-Methylphenol | | 0.381 | 0.762 | 1.52 | U |
| 106-44-5 | 4-Methylphenol | | 0.0952 | 0.191 | 0.381 | U |
| 91-20-3 | Naphthalene | | 0.0366 | 0.191 | 0.381 | U |
| 100-01-6 | 4-Nitroaniline | | 0.114 | 0.762 | 1.52 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0537 | 0.762 | 1.52 | U |

# ANALYSIS DATA SHEET

1011013-02

GKHMS-50-002-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-02 File ID: 1200802.D

Sampled: 11/02/10 08:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 14:43

Solids: 87.50 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0366 | 0.762 | 1.52 | X U |
| 98-95-3 | Nitrobenzene | | 0.0389 | 0.191 | 0.381 | U |
| 100-02-7 | 4-Nitrophenol | | 0.381 | 0.762 | 1.52 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0952 | 0.191 | 0.381 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0952 | 0.191 | 0.381 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0629 | 0.191 | 0.381 | U |
| 87-86-5 | Pentachlorophenol | | 0.0389 | 0.762 | 1.52 | U |
| 108-95-2 | Phenol | | 0.0952 | 0.191 | 0.381 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.114 | 0.191 | 0.381 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.114 | 0.191 | 0.381 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0400 | 0.191 | 0.381 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0952 | 0.191 | 0.381 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07619 | 0.06237 | 81.9 | 45 - 105 | |
| 2-Fluorophenol | 0.1524 | 0.1230 | 80.7 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07619 | 0.06742 | 88.5 | 35 - 100 | |
| Phenol-d6 | 0.1524 | 0.1231 | 80.8 | 40 - 100 | |
| Terphenyl-d14 | 0.07619 | 0.08991 | 118 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1524 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-03

GKHMS-50-003-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-03 File ID: 1200803.D

Sampled: 11/02/10 08:40 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 15:13

Solids: 86.60 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0358 | 0.193 | 0.385 | U |
| 98-86-2 | Acetophenone | | 0.0962 | 0.193 | 0.385 | U |
| 1912-24-9 | Atrazine | | 0.0323 | 0.193 | 0.385 | U |
| 100-52-7 | Benzaldehyde | | 0.0962 | 0.193 | 0.385 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0962 | 0.193 | 0.385 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0962 | 0.193 | 0.385 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0962 | 0.193 | 0.385 | U |
| 105-60-2 | Caprolactam | | 0.0962 | 0.193 | 0.385 | U |
| 86-74-8 | Carbazole | | 0.0416 | 0.193 | 0.385 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0962 | 0.193 | 0.385 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0962 | 0.193 | 0.385 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0962 | 0.193 | 0.385 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0473 | 0.193 | 0.385 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0589 | 0.193 | 0.385 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0962 | 0.193 | 0.385 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0962 | 0.193 | 0.385 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0962 | 0.193 | 0.385 | U |
| 132-64-9 | Dibenzofuran | | 0.0962 | 0.193 | 0.385 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0962 | 0.193 | 0.385 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0962 | 0.193 | 0.385 | U |
| 84-66-2 | Diethylphthalate | | 0.0962 | 0.193 | 0.385 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.385 | 0.770 | 1.54 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0962 | 0.193 | 0.385 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0254 | 1.93 | 3.85 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.150 | 1.93 | 3.85 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0277 | 0.193 | 0.385 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0439 | 0.193 | 0.385 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0962 | 0.193 | 0.385 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.128 | 0.0416 | 0.193 | 0.385 | I |
| 118-74-1 | Hexachlorobenzene | | 0.0404 | 0.193 | 0.385 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0381 | 0.193 | 0.385 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0704 | 0.193 | 0.385 | X U |
| 67-72-1 | Hexachloroethane | | 0.0450 | 0.193 | 0.385 | U |
| 78-59-1 | Isophorone | | 0.0962 | 0.193 | 0.385 | U |
| 95-48-7 | 2-Methylphenol | | 0.385 | 0.770 | 1.54 | U |
| 106-44-5 | 4-Methylphenol | | 0.0962 | 0.193 | 0.385 | U |
| 91-20-3 | Naphthalene | | 0.0370 | 0.193 | 0.385 | U |
| 100-01-6 | 4-Nitroaniline | | 0.115 | 0.770 | 1.54 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0543 | 0.770 | 1.54 | U |

# ANALYSIS DATA SHEET

1011013-03

GKHMS-50-003-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-03 File ID: 1200803.D

Sampled: 11/02/10 08:40 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 15:13

Solids: 86.60 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0370 | 0.770 | 1.54 | X U |
| 98-95-3 | Nitrobenzene | | 0.0393 | 0.193 | 0.385 | U |
| 100-02-7 | 4-Nitrophenol | | 0.385 | 0.770 | 1.54 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0962 | 0.193 | 0.385 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0962 | 0.193 | 0.385 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0635 | 0.193 | 0.385 | U |
| 87-86-5 | Pentachlorophenol | | 0.0393 | 0.770 | 1.54 | U |
| 108-95-2 | Phenol | | 0.0962 | 0.193 | 0.385 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.115 | 0.193 | 0.385 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.115 | 0.193 | 0.385 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0404 | 0.193 | 0.385 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0962 | 0.193 | 0.385 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07698 | 0.06083 | 79.0 | 45 - 105 | |
| 2-Fluorophenol | 0.1540 | 0.07812 | 50.7 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07698 | 0.06190 | 80.4 | 35 - 100 | |
| Phenol-d6 | 0.1540 | 0.1048 | 68.1 | 40 - 100 | |
| Terphenyl-d14 | 0.07698 | 0.08218 | 107 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1540 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-04

6KHMS-50-005-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-04 File ID: 1200804.D

Sampled: 11/02/10 09:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 15:43

Solids: 85.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0362 | 0.195 | 0.389 | U |
| 98-86-2 | Acetophenone | | 0.0972 | 0.195 | 0.389 | U |
| 1912-24-9 | Atrazine | | 0.0327 | 0.195 | 0.389 | U |
| 100-52-7 | Benzaldehyde | | 0.0972 | 0.195 | 0.389 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0972 | 0.195 | 0.389 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0972 | 0.195 | 0.389 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 105-60-2 | Caprolactam | | 0.0972 | 0.195 | 0.389 | U |
| 86-74-8 | Carbazole | | 0.0420 | 0.195 | 0.389 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0972 | 0.195 | 0.389 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0972 | 0.195 | 0.389 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0972 | 0.195 | 0.389 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0478 | 0.195 | 0.389 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0595 | 0.195 | 0.389 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0972 | 0.195 | 0.389 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0972 | 0.195 | 0.389 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0972 | 0.195 | 0.389 | U |
| 132-64-9 | Dibenzofuran | | 0.0972 | 0.195 | 0.389 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0972 | 0.195 | 0.389 | U |
| 84-66-2 | Diethylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.389 | 0.778 | 1.55 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0972 | 0.195 | 0.389 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0257 | 1.95 | 3.89 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.152 | 1.95 | 3.89 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0280 | 0.195 | 0.389 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0443 | 0.195 | 0.389 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0420 | 0.195 | 0.389 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0408 | 0.195 | 0.389 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0385 | 0.195 | 0.389 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0712 | 0.195 | 0.389 | X U |
| 67-72-1 | Hexachloroethane | | 0.0455 | 0.195 | 0.389 | U |
| 78-59-1 | Isophorone | | 0.0972 | 0.195 | 0.389 | U |
| 95-48-7 | 2-Methylphenol | | 0.389 | 0.778 | 1.55 | U |
| 106-44-5 | 4-Methylphenol | | 0.0972 | 0.195 | 0.389 | U |
| 91-20-3 | Naphthalene | | 0.0373 | 0.195 | 0.389 | U |
| 100-01-6 | 4-Nitroaniline | | 0.117 | 0.778 | 1.55 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0548 | 0.778 | 1.55 | U |

# ANALYSIS DATA SHEET

1011013-04

GKHMS-SO-005-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-04 File ID: 1200804.D

Sampled: 11/02/10 09:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 15:43

Solids: 85.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0373 | 0.778 | 1.55 | X U |
| 98-95-3 | Nitrobenzene | | 0.0397 | 0.195 | 0.389 | U |
| 100-02-7 | 4-Nitrophenol | | 0.389 | 0.778 | 1.55 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0972 | 0.195 | 0.389 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0972 | 0.195 | 0.389 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0642 | 0.195 | 0.389 | U |
| 87-86-5 | Pentachlorophenol | | 0.0397 | 0.778 | 1.55 | U |
| 108-95-2 | Phenol | | 0.0972 | 0.195 | 0.389 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.117 | 0.195 | 0.389 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.117 | 0.195 | 0.389 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0408 | 0.195 | 0.389 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0972 | 0.195 | 0.389 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07779 | 0.06487 | 83.4 | 45 - 105 | |
| 2-Fluorophenol | 0.1556 | 0.07504 | 48.2 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07779 | 0.06550 | 84.2 | 35 - 100 | |
| Phenol-d6 | 0.1556 | 0.1064 | 68.4 | 40 - 100 | |
| Terphenyl-d14 | 0.07779 | 0.09213 | 118 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1556 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-05

GKHMS-SD-007-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-05 File ID: 1200805.D

Sampled: 11/02/10 09:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 16:13

Solids: 87.80 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0353 | 0.190 | 0.379 | U |
| 98-86-2 | Acetophenone | | 0.0949 | 0.190 | 0.379 | U |
| 1912-24-9 | Atrazine | | 0.0319 | 0.190 | 0.379 | U |
| 100-52-7 | Benzaldehyde | | 0.0949 | 0.190 | 0.379 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0949 | 0.190 | 0.379 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0949 | 0.190 | 0.379 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0949 | 0.190 | 0.379 | U |
| 105-60-2 | Caprolactam | | 0.0949 | 0.190 | 0.379 | U |
| 86-74-8 | Carbazole | | 0.0410 | 0.190 | 0.379 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0949 | 0.190 | 0.379 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0949 | 0.190 | 0.379 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0949 | 0.190 | 0.379 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0467 | 0.190 | 0.379 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0581 | 0.190 | 0.379 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0949 | 0.190 | 0.379 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0949 | 0.190 | 0.379 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0949 | 0.190 | 0.379 | U |
| 132-64-9 | Dibenzofuran | | 0.0949 | 0.190 | 0.379 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0949 | 0.190 | 0.379 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0949 | 0.190 | 0.379 | U |
| 84-66-2 | Diethylphthalate | | 0.0949 | 0.190 | 0.379 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.379 | 0.760 | 1.51 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0949 | 0.190 | 0.379 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0251 | 1.90 | 3.79 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.148 | 1.90 | 3.79 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0273 | 0.190 | 0.379 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0433 | 0.190 | 0.379 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0949 | 0.190 | 0.379 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0410 | 0.190 | 0.379 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0399 | 0.190 | 0.379 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0376 | 0.190 | 0.379 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0695 | 0.190 | 0.379 | X U |
| 67-72-1 | Hexachloroethane | | 0.0444 | 0.190 | 0.379 | U |
| 78-59-1 | Isophorone | | 0.0949 | 0.190 | 0.379 | U |
| 95-48-7 | 2-Methylphenol | | 0.379 | 0.760 | 1.51 | U |
| 106-44-5 | 4-Methylphenol | | 0.0949 | 0.190 | 0.379 | U |
| 91-20-3 | Naphthalene | | 0.0364 | 0.190 | 0.379 | U |
| 100-01-6 | 4-Nitroaniline | | 0.114 | 0.760 | 1.51 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0535 | 0.760 | 1.51 | U |

# ANALYSIS DATA SHEET

1011013-05

GKHMS-SO-007-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-05 File ID: 1200805.D

Sampled: 11/02/10 09:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 16:13

Solids: 87.80 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0364 | 0.760 | 1.51 | X U |
| 98-95-3 | Nitrobenzene | | 0.0387 | 0.190 | 0.379 | U |
| 100-02-7 | 4-Nitrophenol | | 0.379 | 0.760 | 1.51 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0949 | 0.190 | 0.379 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0949 | 0.190 | 0.379 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0626 | 0.190 | 0.379 | U |
| 87-86-5 | Pentachlorophenol | | 0.0387 | 0.760 | 1.51 | U |
| 108-95-2 | Phenol | | 0.0949 | 0.190 | 0.379 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.114 | 0.190 | 0.379 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.114 | 0.190 | 0.379 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0399 | 0.190 | 0.379 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0949 | 0.190 | 0.379 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07593 | 0.06376 | 84.0 | 45 - 105 | |
| 2-Fluorophenol | 0.1519 | 0.1194 | 78.6 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07593 | 0.07068 | 93.1 | 35 - 100 | |
| Phenol-d6 | 0.1519 | 0.1171 | 77.1 | 40 - 100 | |
| Terphenyl-d14 | 0.07593 | 0.08494 | 112 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1519 | 0.01514 | 9.97 | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-06

GKHMS-50-011-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-06 File ID: 1200806.D

Sampled: 11/02/10 09:40 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 16:43

Solids: 80.40 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0386 | 0.208 | 0.414 | U |
| 98-86-2 | Acetophenone | | 0.104 | 0.208 | 0.414 | U |
| 1912-24-9 | Atrazine | | 0.0348 | 0.208 | 0.414 | U |
| 100-52-7 | Benzaldehyde | | 0.104 | 0.208 | 0.414 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.104 | 0.208 | 0.414 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.104 | 0.208 | 0.414 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.104 | 0.208 | 0.414 | U |
| 105-60-2 | Caprolactam | | 0.104 | 0.208 | 0.414 | U |
| 86-74-8 | Carbazole | | 0.0448 | 0.208 | 0.414 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.104 | 0.208 | 0.414 | U |
| 106-47-8 | 4-Chloroaniline | | 0.104 | 0.208 | 0.414 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.104 | 0.208 | 0.414 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0510 | 0.208 | 0.414 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0634 | 0.208 | 0.414 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.104 | 0.208 | 0.414 | U |
| 95-57-8 | 2-Chlorophenol | | 0.104 | 0.208 | 0.414 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.104 | 0.208 | 0.414 | U |
| 132-64-9 | Dibenzofuran | | 0.104 | 0.208 | 0.414 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.104 | 0.208 | 0.414 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.104 | 0.208 | 0.414 | U |
| 84-66-2 | Diethylphthalate | | 0.104 | 0.208 | 0.414 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.414 | 0.830 | 1.65 | U |
| 131-11-3 | Dimethyl phthalate | | 0.104 | 0.208 | 0.414 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0274 | 2.08 | 4.14 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.162 | 2.08 | 4.14 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0299 | 0.208 | 0.414 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0473 | 0.208 | 0.414 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.104 | 0.208 | 0.414 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0448 | 0.208 | 0.414 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0435 | 0.208 | 0.414 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0410 | 0.208 | 0.414 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0759 | 0.208 | 0.414 | X U |
| 67-72-1 | Hexachloroethane | | 0.0485 | 0.208 | 0.414 | U |
| 78-59-1 | Isophorone | | 0.104 | 0.208 | 0.414 | U |
| 95-48-7 | 2-Methylphenol | | 0.414 | 0.830 | 1.65 | U |
| 106-44-5 | 4-Methylphenol | | 0.104 | 0.208 | 0.414 | U |
| 91-20-3 | Naphthalene | | 0.0398 | 0.208 | 0.414 | U |
| 100-01-6 | 4-Nitroaniline | | 0.124 | 0.830 | 1.65 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0585 | 0.830 | 1.65 | U |

# ANALYSIS DATA SHEET

1011013-06

GKHMS-SO-011-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-06 File ID: 1200806.D

Sampled: 11/02/10 09:40 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 16:43

Solids: 80.40 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0398 | 0.830 | 1.65 | X U |
| 98-95-3 | Nitrobenzene | | 0.0423 | 0.208 | 0.414 | U |
| 100-02-7 | 4-Nitrophenol | | 0.414 | 0.830 | 1.65 | U |
| 88-75-5 | 2-Nitrophenol | | 0.104 | 0.208 | 0.414 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.104 | 0.208 | 0.414 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0684 | 0.208 | 0.414 | U |
| 87-86-5 | Pentachlorophenol | | 0.0423 | 0.830 | 1.65 | U |
| 108-95-2 | Phenol | | 0.104 | 0.208 | 0.414 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.124 | 0.208 | 0.414 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.124 | 0.208 | 0.414 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0435 | 0.208 | 0.414 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.104 | 0.208 | 0.414 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.08292 | 0.07074 | 85.3 | 45 - 105 | |
| 2-Fluorophenol | 0.1658 | 0.1425 | 85.9 | 35 - 105 | |
| Nitrobenzene-d5 | 0.08292 | 0.07806 | 94.1 | 35 - 100 | |
| Phenol-d6 | 0.1658 | 0.1404 | 84.7 | 40 - 100 | |
| Terphenyl-d14 | 0.08292 | 0.09883 | 119 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1658 | 0.07381 | 44.5 | 35 - 125 | |

# ANALYSIS DATA SHEET

1011013-07

GKHMS-SO-012-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-07 File ID: 1200807.D

Sampled: 11/02/10 12:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 17:13

Solids: 83.60 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0371 | 0.200 | 0.398 | U |
| 98-86-2 | Acetophenone | | 0.0996 | 0.200 | 0.398 | U |
| 1912-24-9 | Atrazine | | 0.0335 | 0.200 | 0.398 | U |
| 100-52-7 | Benzaldehyde | | 0.0996 | 0.200 | 0.398 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0996 | 0.200 | 0.398 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0996 | 0.200 | 0.398 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0996 | 0.200 | 0.398 | U |
| 105-60-2 | Caprolactam | | 0.0996 | 0.200 | 0.398 | U |
| 86-74-8 | Carbazole | | 0.0431 | 0.200 | 0.398 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0996 | 0.200 | 0.398 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0996 | 0.200 | 0.398 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0996 | 0.200 | 0.398 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0490 | 0.200 | 0.398 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0610 | 0.200 | 0.398 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0996 | 0.200 | 0.398 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0996 | 0.200 | 0.398 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0996 | 0.200 | 0.398 | U |
| 132-64-9 | Dibenzofuran | | 0.0996 | 0.200 | 0.398 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0996 | 0.200 | 0.398 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0996 | 0.200 | 0.398 | U |
| 84-66-2 | Diethylphthalate | | 0.0996 | 0.200 | 0.398 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.398 | 0.798 | 1.59 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0996 | 0.200 | 0.398 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0263 | 2.00 | 3.98 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.156 | 2.00 | 3.98 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0287 | 0.200 | 0.398 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0455 | 0.200 | 0.398 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0996 | 0.200 | 0.398 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.175 | 0.0431 | 0.200 | 0.398 | |
| 118-74-1 | Hexachlorobenzene | | 0.0419 | 0.200 | 0.398 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0395 | 0.200 | 0.398 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0730 | 0.200 | 0.398 | X U |
| 67-72-1 | Hexachloroethane | | 0.0467 | 0.200 | 0.398 | U |
| 78-59-1 | Isophorone | | 0.0996 | 0.200 | 0.398 | U |
| 95-48-7 | 2-Methylphenol | | 0.398 | 0.798 | 1.59 | U |
| 106-44-5 | 4-Methylphenol | | 0.0996 | 0.200 | 0.398 | U |
| 91-20-3 | Naphthalene | | 0.0383 | 0.200 | 0.398 | U |
| 100-01-6 | 4-Nitroaniline | | 0.120 | 0.798 | 1.59 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0562 | 0.798 | 1.59 | U |

# ANALYSIS DATA SHEET

1011013-07

GKHMS-50-012-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-07 File ID: 1200807.D

Sampled: 11/02/10 12:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 17:13

Solids: 83.60 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0383 | 0.798 | 1.59 | X U |
| 98-95-3 | Nitrobenzene | | 0.0407 | 0.200 | 0.398 | U |
| 100-02-7 | 4-Nitrophenol | | 0.398 | 0.798 | 1.59 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0996 | 0.200 | 0.398 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0996 | 0.200 | 0.398 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0658 | 0.200 | 0.398 | U |
| 87-86-5 | Pentachlorophenol | | 0.0407 | 0.798 | 1.59 | U |
| 108-95-2 | Phenol | | 0.0996 | 0.200 | 0.398 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.120 | 0.200 | 0.398 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.120 | 0.200 | 0.398 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0419 | 0.200 | 0.398 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0996 | 0.200 | 0.398 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07974 | 0.06804 | 85.3 | 45 - 105 | |
| 2-Fluorophenol | 0.1595 | 0.1034 | 64.9 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07974 | 0.07463 | 93.6 | 35 - 100 | |
| Phenol-d6 | 0.1595 | 0.1254 | 78.6 | 40 - 100 | |
| Terphenyl-d14 | 0.07974 | 0.09077 | 114 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1595 | 0.03048 | 19.1 | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-08

GKHMS-50-014-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-08 File ID: 1200808.D

Sampled: 11/02/10 14:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 17:43

Solids: 85.40 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0363 | 0.196 | 0.390 | U |
| 98-86-2 | Acetophenone | | 0.0975 | 0.196 | 0.390 | U |
| 1912-24-9 | Atrazine | | 0.0328 | 0.196 | 0.390 | U |
| 100-52-7 | Benzaldehyde | | 0.0975 | 0.196 | 0.390 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0975 | 0.196 | 0.390 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0975 | 0.196 | 0.390 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0975 | 0.196 | 0.390 | U |
| 105-60-2 | Caprolactam | | 0.0975 | 0.196 | 0.390 | U |
| 86-74-8 | Carbazole | | 0.0422 | 0.196 | 0.390 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0975 | 0.196 | 0.390 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0975 | 0.196 | 0.390 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0975 | 0.196 | 0.390 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0480 | 0.196 | 0.390 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0597 | 0.196 | 0.390 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0975 | 0.196 | 0.390 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0975 | 0.196 | 0.390 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0975 | 0.196 | 0.390 | U |
| 132-64-9 | Dibenzofuran | | 0.0975 | 0.196 | 0.390 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0975 | 0.196 | 0.390 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0975 | 0.196 | 0.390 | U |
| 84-66-2 | Diethylphthalate | | 0.0975 | 0.196 | 0.390 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.390 | 0.781 | 1.56 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0975 | 0.196 | 0.390 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0258 | 1.96 | 3.90 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.152 | 1.96 | 3.90 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0281 | 0.196 | 0.390 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0445 | 0.196 | 0.390 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0975 | 0.196 | 0.390 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.0545 | 0.0422 | 0.196 | 0.390 | I |
| 118-74-1 | Hexachlorobenzene | | 0.0410 | 0.196 | 0.390 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0386 | 0.196 | 0.390 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0714 | 0.196 | 0.390 | X U |
| 67-72-1 | Hexachloroethane | | 0.0457 | 0.196 | 0.390 | U |
| 78-59-1 | Isophorone | | 0.0975 | 0.196 | 0.390 | U |
| 95-48-7 | 2-Methylphenol | | 0.390 | 0.781 | 1.56 | U |
| 106-44-5 | 4-Methylphenol | | 0.0975 | 0.196 | 0.390 | U |
| 91-20-3 | Naphthalene | | 0.0375 | 0.196 | 0.390 | U |
| 100-01-6 | 4-Nitroaniline | | 0.117 | 0.781 | 1.56 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0550 | 0.781 | 1.56 | U |

# ANALYSIS DATA SHEET

1011013-08

GKHMS-SO-014-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-08 File ID: 1200808.D

Sampled: 11/02/10 14:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 17:43

Solids: 85.40 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0375 | 0.781 | 1.56 | X U |
| 98-95-3 | Nitrobenzene | | 0.0398 | 0.196 | 0.390 | U |
| 100-02-7 | 4-Nitrophenol | | 0.390 | 0.781 | 1.56 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0975 | 0.196 | 0.390 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0975 | 0.196 | 0.390 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0644 | 0.196 | 0.390 | U |
| 87-86-5 | Pentachlorophenol | | 0.0398 | 0.781 | 1.56 | U |
| 108-95-2 | Phenol | | 0.0975 | 0.196 | 0.390 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.117 | 0.196 | 0.390 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.117 | 0.196 | 0.390 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0410 | 0.196 | 0.390 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0975 | 0.196 | 0.390 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07806 | 0.06954 | 89.1 | 45 - 105 | |
| 2-Fluorophenol | 0.1561 | 0.1259 | 80.6 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07806 | 0.07665 | 98.2 | 35 - 100 | I |
| Phenol-d6 | 0.1561 | 0.1340 | 85.8 | 40 - 100 | I |
| Terphenyl-d14 | 0.07806 | 0.1013 | 130 | 30 - 125 | * I |
| 2,4,6-Tribromophenol | 0.1561 | 0.06251 | 40.0 | 35 - 125 | |

# ANALYSIS DATA SHEET

1011013-09

GKHMS-SO-017-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-09 File ID: 1200809.D

Sampled: 11/02/10 10:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 21:44

Solids: 87.80 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0353 | 0.190 | 0.379 | U |
| 98-86-2 | Acetophenone | | 0.0949 | 0.190 | 0.379 | U |
| 1912-24-9 | Atrazine | | 0.0319 | 0.190 | 0.379 | U |
| 100-52-7 | Benzaldehyde | | 0.0949 | 0.190 | 0.379 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0949 | 0.190 | 0.379 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0949 | 0.190 | 0.379 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0949 | 0.190 | 0.379 | U |
| 105-60-2 | Caprolactam | | 0.0949 | 0.190 | 0.379 | U |
| 86-74-8 | Carbazole | | 0.0410 | 0.190 | 0.379 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0949 | 0.190 | 0.379 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0949 | 0.190 | 0.379 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0949 | 0.190 | 0.379 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0467 | 0.190 | 0.379 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0581 | 0.190 | 0.379 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0949 | 0.190 | 0.379 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0949 | 0.190 | 0.379 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0949 | 0.190 | 0.379 | U |
| 132-64-9 | Dibenzofuran | | 0.0949 | 0.190 | 0.379 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0949 | 0.190 | 0.379 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0949 | 0.190 | 0.379 | U |
| 84-66-2 | Diethylphthalate | | 0.0949 | 0.190 | 0.379 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.379 | 0.760 | 1.51 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0949 | 0.190 | 0.379 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0251 | 1.90 | 3.79 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.148 | 1.90 | 3.79 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0273 | 0.190 | 0.379 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0433 | 0.190 | 0.379 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0949 | 0.190 | 0.379 | S U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0410 | 0.190 | 0.379 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0399 | 0.190 | 0.379 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0376 | 0.190 | 0.379 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0695 | 0.190 | 0.379 | X U |
| 67-72-1 | Hexachloroethane | | 0.0444 | 0.190 | 0.379 | U |
| 78-59-1 | Isophorone | | 0.0949 | 0.190 | 0.379 | U |
| 95-48-7 | 2-Methylphenol | | 0.379 | 0.760 | 1.51 | U |
| 106-44-5 | 4-Methylphenol | | 0.0949 | 0.190 | 0.379 | U |
| 91-20-3 | Naphthalene | | 0.0364 | 0.190 | 0.379 | U |
| 100-01-6 | 4-Nitroaniline | | 0.114 | 0.760 | 1.51 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0535 | 0.760 | 1.51 | U |

# ANALYSIS DATA SHEET

1011013-09

6KHMS-50-017-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-09 File ID: 1200809.D

Sampled: 11/02/10 10:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 21:44

Solids: 87.80 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0364 | 0.760 | 1.51 | X U |
| 98-95-3 | Nitrobenzene | | 0.0387 | 0.190 | 0.379 | U |
| 100-02-7 | 4-Nitrophenol | | 0.379 | 0.760 | 1.51 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0949 | 0.190 | 0.379 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0949 | 0.190 | 0.379 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0626 | 0.190 | 0.379 | U |
| 87-86-5 | Pentachlorophenol | | 0.0387 | 0.760 | 1.51 | U |
| 108-95-2 | Phenol | | 0.0949 | 0.190 | 0.379 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.114 | 0.190 | 0.379 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.114 | 0.190 | 0.379 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0399 | 0.190 | 0.379 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0949 | 0.190 | 0.379 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07593 | 0.07426 | 97.8 | 45 - 105 | |
| 2-Fluorophenol | 0.1519 | 0.1405 | 92.5 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07593 | 0.07553 | 99.5 | 35 - 100 | |
| Phenol-d6 | 0.1519 | 0.1423 | 93.7 | 40 - 100 | |
| Terphenyl-d14 | 0.07593 | 0.1085 | 143 | 30 - 125 | * |
| 2,4,6-Tribromophenol | 0.1519 | 0.1031 | 67.9 | 35 - 125 | |

# ANALYSIS DATA SHEET

1011013-10

GKHMS-SO-019-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-10 File ID: 1200810.D

Sampled: 11/02/10 10:20 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 02:33

Solids: 86.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0358 | 0.193 | 0.384 | Y U |
| 98-86-2 | Acetophenone | | 0.0961 | 0.193 | 0.384 | U |
| 1912-24-9 | Atrazine | | 0.0323 | 0.193 | 0.384 | X U |
| 100-52-7 | Benzaldehyde | | 0.0961 | 0.193 | 0.384 | Q, X U |
| 92-52-4 | 1,1-Biphenyl | | 0.0961 | 0.193 | 0.384 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0961 | 0.193 | 0.384 | X U |
| 85-68-7 | Butylbenzylphthalate | | 0.0961 | 0.193 | 0.384 | U |
| 105-60-2 | Caprolactam | | 0.0961 | 0.193 | 0.384 | U |
| 86-74-8 | Carbazole | | 0.0415 | 0.193 | 0.384 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0961 | 0.193 | 0.384 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0961 | 0.193 | 0.384 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0961 | 0.193 | 0.384 | X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0473 | 0.193 | 0.384 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0588 | 0.193 | 0.384 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0961 | 0.193 | 0.384 | X U |
| 95-57-8 | 2-Chlorophenol | | 0.0961 | 0.193 | 0.384 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0961 | 0.193 | 0.384 | X U |
| 132-64-9 | Dibenzofuran | | 0.0961 | 0.193 | 0.384 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0961 | 0.193 | 0.384 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0961 | 0.193 | 0.384 | U |
| 84-66-2 | Diethylphthalate | | 0.0961 | 0.193 | 0.384 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.384 | 0.769 | 1.53 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0961 | 0.193 | 0.384 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0254 | 1.93 | 3.84 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.150 | 1.93 | 3.84 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0277 | 0.193 | 0.384 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0438 | 0.193 | 0.384 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.0961 | 0.193 | 0.384 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0415 | 0.193 | 0.384 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0404 | 0.193 | 0.384 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0381 | 0.193 | 0.384 | X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0704 | 0.193 | 0.384 | U |
| 67-72-1 | Hexachloroethane | | 0.0450 | 0.193 | 0.384 | U |
| 78-59-1 | Isophorone | | 0.0961 | 0.193 | 0.384 | X U |
| 95-48-7 | 2-Methylphenol | | 0.384 | 0.769 | 1.53 | U |
| 106-44-5 | 4-Methylphenol | | 0.0961 | 0.193 | 0.384 | U |
| 91-20-3 | Naphthalene | | 0.0369 | 0.193 | 0.384 | U |
| 100-01-6 | 4-Nitroaniline | | 0.115 | 0.769 | 1.53 | U |
| 99-09-2 | 3-Nitroaniline | | 0.0542 | 0.769 | 1.53 | Y U |

# ANALYSIS DATA SHEET

1011013-10

GKHMS-50-019-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-10 File ID: 1200810.D

Sampled: 11/02/10 10:20 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 02:33

Solids: 86.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0369 | 0.769 | 1.53 | X U |
| 98-95-3 | Nitrobenzene | | 0.0392 | 0.193 | 0.384 | X U |
| 100-02-7 | 4-Nitrophenol | | 0.384 | 0.769 | 1.53 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.0961 | 0.193 | 0.384 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0961 | 0.193 | 0.384 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0634 | 0.193 | 0.384 | X U |
| 87-86-5 | Pentachlorophenol | | 0.0392 | 0.769 | 1.53 | U |
| 108-95-2 | Phenol | | 0.0961 | 0.193 | 0.384 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.115 | 0.193 | 0.384 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.115 | 0.193 | 0.384 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0404 | 0.193 | 0.384 | X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0961 | 0.193 | 0.384 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07689 | 0.08562 | 111 | 45 - 105 | *X |
| 2-Fluorophenol | 0.1538 | 0.1037 | 67.4 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07689 | 0.1026 | 133 | 35 - 100 | *X |
| Phenol-d6 | 0.1538 | 0.1450 | 94.3 | 40 - 100 | |
| Terphenyl-d14 | 0.07689 | 0.08285 | 108 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1538 | 0.02495 | 16.2 | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-11

GKHMS-50-021-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-11 File ID: 1200811D.D

Sampled: 11/02/10 10:40 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 03:03

Solids: 87.00 Preparation: EXT_3546 Dilution: 5

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.178 | 0.960 | 1.91 | Y U |
| 98-86-2 | Acetophenone | | 0.479 | 0.960 | 1.91 | U |
| 1912-24-9 | Atrazine | | 0.161 | 0.960 | 1.91 | X U |
| 100-52-7 | Benzaldehyde | | 0.479 | 0.960 | 1.91 | Q, X U |
| 92-52-4 | 1,1-Biphenyl | | 0.479 | 0.960 | 1.91 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.479 | 0.960 | 1.91 | X U |
| 85-68-7 | Butylbenzylphthalate | | 0.479 | 0.960 | 1.91 | U |
| 105-60-2 | Caprolactam | | 0.479 | 0.960 | 1.91 | U |
| 86-74-8 | Carbazole | | 0.207 | 0.960 | 1.91 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.479 | 0.960 | 1.91 | U |
| 106-47-8 | 4-Chloroaniline | | 0.479 | 0.960 | 1.91 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.479 | 0.960 | 1.91 | X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.236 | 0.960 | 1.91 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.293 | 0.960 | 1.91 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.479 | 0.960 | 1.91 | X U |
| 95-57-8 | 2-Chlorophenol | | 0.479 | 0.960 | 1.91 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.479 | 0.960 | 1.91 | X U |
| 132-64-9 | Dibenzofuran | | 0.479 | 0.960 | 1.91 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.479 | 0.960 | 1.91 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.479 | 0.960 | 1.91 | U |
| 84-66-2 | Diethylphthalate | | 0.479 | 0.960 | 1.91 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 1.91 | 3.83 | 7.64 | U |
| 131-11-3 | Dimethyl phthalate | | 0.479 | 0.960 | 1.91 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.126 | 9.60 | 19.1 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.747 | 9.60 | 19.1 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.138 | 0.960 | 1.91 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.218 | 0.960 | 1.91 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.479 | 0.960 | 1.91 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.207 | 0.960 | 1.91 | U |
| 118-74-1 | Hexachlorobenzene | | 0.201 | 0.960 | 1.91 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.190 | 0.960 | 1.91 | X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.351 | 0.960 | 1.91 | U |
| 67-72-1 | Hexachloroethane | | 0.224 | 0.960 | 1.91 | U |
| 78-59-1 | Isophorone | | 0.479 | 0.960 | 1.91 | X U |
| 95-48-7 | 2-Methylphenol | | 1.91 | 3.83 | 7.64 | U |
| 106-44-5 | 4-Methylphenol | | 0.479 | 0.960 | 1.91 | U |
| 91-20-3 | Naphthalene | | 0.184 | 0.960 | 1.91 | U |
| 100-01-6 | 4-Nitroaniline | | 0.575 | 3.83 | 7.64 | U |
| 99-09-2 | 3-Nitroaniline | | 0.270 | 3.83 | 7.64 | Y U |

# ANALYSIS DATA SHEET

1011013-11

6KHMS-SO-0214010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-11 File ID: 1200811D.D

Sampled: 11/02/10 10:40 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 03:03

Solids: 87.00 Preparation: EXT_3546 Dilution: 5

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.184 | 3.83 | 7.64 | X U |
| 98-95-3 | Nitrobenzene | | 0.195 | 0.960 | 1.91 | X U |
| 100-02-7 | 4-Nitrophenol | | 1.91 | 3.83 | 7.64 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.479 | 0.960 | 1.91 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.479 | 0.960 | 1.91 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.316 | 0.960 | 1.91 | X U |
| 87-86-5 | Pentachlorophenol | | 0.195 | 3.83 | 7.64 | U |
| 108-95-2 | Phenol | | 0.479 | 0.960 | 1.91 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.575 | 0.960 | 1.91 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.575 | 0.960 | 1.91 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.201 | 0.960 | 1.91 | X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.479 | 0.960 | 1.91 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07663 | ND | | 45 - 105 | *X |
| 2-Fluorophenol | 0.1533 | ND | | 35 - 105 | * |
| Nitrobenzene-d5 | 0.07663 | ND | | 35 - 100 | *X |
| Phenol-d6 | 0.1533 | ND | | 40 - 100 | * |
| Terphenyl-d14 | 0.07663 | ND | | 30 - 125 | * |
| 2,4,6-Tribromophenol | 0.1533 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-12

GKHMS-SO-022-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-12 File ID: 1200812D.D

Sampled: 11/02/10 11:00 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 03:34

Solids: 85.30 Preparation: EXT_3546 Dilution: 5

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.182 | 0.979 | 1.95 | Y U |
| 98-86-2 | Acetophenone | | 0.488 | 0.979 | 1.95 | U |
| 1912-24-9 | Atrazine | | 0.164 | 0.979 | 1.95 | X U |
| 100-52-7 | Benzaldehyde | | 0.488 | 0.979 | 1.95 | Q, X U |
| 92-52-4 | 1,1-Biphenyl | | 0.488 | 0.979 | 1.95 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.488 | 0.979 | 1.95 | X U |
| 85-68-7 | Butylbenzylphthalate | | 0.488 | 0.979 | 1.95 | U |
| 105-60-2 | Caprolactam | | 0.488 | 0.979 | 1.95 | U |
| 86-74-8 | Carbazole | | 0.211 | 0.979 | 1.95 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.488 | 0.979 | 1.95 | U |
| 106-47-8 | 4-Chloroaniline | | 0.488 | 0.979 | 1.95 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.488 | 0.979 | 1.95 | X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.240 | 0.979 | 1.95 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.299 | 0.979 | 1.95 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.488 | 0.979 | 1.95 | X U |
| 95-57-8 | 2-Chlorophenol | | 0.488 | 0.979 | 1.95 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.488 | 0.979 | 1.95 | X U |
| 132-64-9 | Dibenzofuran | | 0.488 | 0.979 | 1.95 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.488 | 0.979 | 1.95 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.488 | 0.979 | 1.95 | U |
| 84-66-2 | Diethylphthalate | | 0.488 | 0.979 | 1.95 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 1.95 | 3.91 | 7.80 | U |
| 131-11-3 | Dimethyl phthalate | | 0.488 | 0.979 | 1.95 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.129 | 9.79 | 19.5 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.762 | 9.79 | 19.5 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.141 | 0.979 | 1.95 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.223 | 0.979 | 1.95 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.488 | 0.979 | 1.95 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.211 | 0.979 | 1.95 | U |
| 118-74-1 | Hexachlorobenzene | | 0.205 | 0.979 | 1.95 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.193 | 0.979 | 1.95 | X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.358 | 0.979 | 1.95 | U |
| 67-72-1 | Hexachloroethane | | 0.229 | 0.979 | 1.95 | U |
| 78-59-1 | Isophorone | | 0.488 | 0.979 | 1.95 | X U |
| 95-48-7 | 2-Methylphenol | | 1.95 | 3.91 | 7.80 | U |
| 106-44-5 | 4-Methylphenol | | 0.488 | 0.979 | 1.95 | U |
| 91-20-3 | Naphthalene | | 0.188 | 0.979 | 1.95 | U |
| 100-01-6 | 4-Nitroaniline | | 0.586 | 3.91 | 7.80 | U |
| 99-09-2 | 3-Nitroaniline | | 0.275 | 3.91 | 7.80 | Y U |

# ANALYSIS DATA SHEET

1011013-12

GKHMS-SO-022-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-12 File ID: 1200812D.D

Sampled: 11/02/10 11:00 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 03:34

Solids: 85.30 Preparation: EXT_3546 Dilution: 5

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.188 | 3.91 | 7.80 | X U |
| 98-95-3 | Nitrobenzene | | 0.199 | 0.979 | 1.95 | X U |
| 100-02-7 | 4-Nitrophenol | | 1.95 | 3.91 | 7.80 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.488 | 0.979 | 1.95 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.488 | 0.979 | 1.95 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.322 | 0.979 | 1.95 | X U |
| 87-86-5 | Pentachlorophenol | | 0.199 | 3.91 | 7.80 | U |
| 108-95-2 | Phenol | | 0.488 | 0.979 | 1.95 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.586 | 0.979 | 1.95 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.586 | 0.979 | 1.95 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.205 | 0.979 | 1.95 | X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.488 | 0.979 | 1.95 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07816 | ND | | 45 - 105 | *X |
| 2-Fluorophenol | 0.1563 | ND | | 35 - 105 | * |
| Nitrobenzene-d5 | 0.07816 | ND | | 35 - 100 | *X |
| Phenol-d6 | 0.1563 | ND | | 40 - 100 | * |
| Terphenyl-d14 | 0.07816 | ND | | 30 - 125 | * |
| 2,4,6-Tribromophenol | 0.1563 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-13

6KHMS-SO-023-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-13 File ID: 1200813D.D

Sampled: 11/02/10 13:40 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 04:04

Solids: 86.20 Preparation: EXT_3546 Dilution: 5

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.180 | 0.969 | 1.93 | Y U |
| 98-86-2 | Acetophenone | | 0.483 | 0.969 | 1.93 | U |
| 1912-24-9 | Atrazine | | 0.162 | 0.969 | 1.93 | X U |
| 100-52-7 | Benzaldehyde | | 0.483 | 0.969 | 1.93 | Q, X U |
| 92-52-4 | 1,1-Biphenyl | | 0.483 | 0.969 | 1.93 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.483 | 0.969 | 1.93 | X U |
| 85-68-7 | Butylbenzylphthalate | | 0.483 | 0.969 | 1.93 | U |
| 105-60-2 | Caprolactam | | 0.483 | 0.969 | 1.93 | U |
| 86-74-8 | Carbazole | | 0.209 | 0.969 | 1.93 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.483 | 0.969 | 1.93 | U |
| 106-47-8 | 4-Chloroaniline | | 0.483 | 0.969 | 1.93 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.483 | 0.969 | 1.93 | X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.238 | 0.969 | 1.93 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.296 | 0.969 | 1.93 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.483 | 0.969 | 1.93 | X U |
| 95-57-8 | 2-Chlorophenol | | 0.483 | 0.969 | 1.93 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.483 | 0.969 | 1.93 | X U |
| 132-64-9 | Dibenzofuran | | 0.483 | 0.969 | 1.93 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.483 | 0.969 | 1.93 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.483 | 0.969 | 1.93 | U |
| 84-66-2 | Diethylphthalate | | 0.483 | 0.969 | 1.93 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 1.93 | 3.87 | 7.71 | U |
| 131-11-3 | Dimethyl phthalate | | 0.483 | 0.969 | 1.93 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.128 | 9.69 | 19.3 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.754 | 9.69 | 19.3 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.139 | 0.969 | 1.93 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.220 | 0.969 | 1.93 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.483 | 0.969 | 1.93 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.209 | 0.969 | 1.93 | U |
| 118-74-1 | Hexachlorobenzene | | 0.203 | 0.969 | 1.93 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.191 | 0.969 | 1.93 | X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.354 | 0.969 | 1.93 | U |
| 67-72-1 | Hexachloroethane | | 0.226 | 0.969 | 1.93 | U |
| 78-59-1 | Isophorone | | 0.483 | 0.969 | 1.93 | X U |
| 95-48-7 | 2-Methylphenol | | 1.93 | 3.87 | 7.71 | U |
| 106-44-5 | 4-Methylphenol | | 0.483 | 0.969 | 1.93 | U |
| 91-20-3 | Naphthalene | | 0.186 | 0.969 | 1.93 | U |
| 100-01-6 | 4-Nitroaniline | | 0.580 | 3.87 | 7.71 | U |
| 99-09-2 | 3-Nitroaniline | | 0.273 | 3.87 | 7.71 | Y U |

# ANALYSIS DATA SHEET

1011013-13

GKHMS-50-023-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-13 File ID: 1200813D.D

Sampled: 11/02/10 13:40 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 04:04

Solids: 86.20 Preparation: EXT_3546 Dilution: 5

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.186 | 3.87 | 7.71 | X U |
| 98-95-3 | Nitrobenzene | | 0.197 | 0.969 | 1.93 | X U |
| 100-02-7 | 4-Nitrophenol | | 1.93 | 3.87 | 7.71 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.483 | 0.969 | 1.93 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.483 | 0.969 | 1.93 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.319 | 0.969 | 1.93 | X U |
| 87-86-5 | Pentachlorophenol | | 0.197 | 3.87 | 7.71 | U |
| 108-95-2 | Phenol | | 0.483 | 0.969 | 1.93 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.580 | 0.969 | 1.93 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.580 | 0.969 | 1.93 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.203 | 0.969 | 1.93 | X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.483 | 0.969 | 1.93 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07734 | ND | | 45 - 105 | *X |
| 2-Fluorophenol | 0.1547 | ND | | 35 - 105 | * |
| Nitrobenzene-d5 | 0.07734 | ND | | 35 - 100 | *X |
| Phenol-d6 | 0.1547 | ND | | 40 - 100 | * |
| Terphenyl-d14 | 0.07734 | ND | | 30 - 125 | * |
| 2,4,6-Tribromophenol | 0.1547 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-14

6KHMS-50-025-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-14 File ID: 1200814.D

Sampled: 11/02/10 11:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 18:13

Solids: 84.10 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0369 | 0.199 | 0.396 | U |
| 98-86-2 | Acetophenone | | 0.0990 | 0.199 | 0.396 | U |
| 1912-24-9 | Atrazine | | 0.0333 | 0.199 | 0.396 | U |
| 100-52-7 | Benzaldehyde | | 0.0990 | 0.199 | 0.396 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0990 | 0.199 | 0.396 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0990 | 0.199 | 0.396 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0990 | 0.199 | 0.396 | U |
| 105-60-2 | Caprolactam | | 0.0990 | 0.199 | 0.396 | U |
| 86-74-8 | Carbazole | | 0.0428 | 0.199 | 0.396 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0990 | 0.199 | 0.396 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0990 | 0.199 | 0.396 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0990 | 0.199 | 0.396 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0488 | 0.199 | 0.396 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0606 | 0.199 | 0.396 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0990 | 0.199 | 0.396 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0990 | 0.199 | 0.396 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0990 | 0.199 | 0.396 | U |
| 132-64-9 | Dibenzofuran | | 0.0990 | 0.199 | 0.396 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0990 | 0.199 | 0.396 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0990 | 0.199 | 0.396 | U |
| 84-66-2 | Diethylphthalate | | 0.0990 | 0.199 | 0.396 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.396 | 0.793 | 1.58 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0990 | 0.199 | 0.396 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0262 | 1.99 | 3.96 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.155 | 1.99 | 3.96 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0285 | 0.199 | 0.396 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0452 | 0.199 | 0.396 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0990 | 0.199 | 0.396 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0428 | 0.199 | 0.396 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0416 | 0.199 | 0.396 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0392 | 0.199 | 0.396 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0725 | 0.199 | 0.396 | X U |
| 67-72-1 | Hexachloroethane | | 0.0464 | 0.199 | 0.396 | U |
| 78-59-1 | Isophorone | | 0.0990 | 0.199 | 0.396 | U |
| 95-48-7 | 2-Methylphenol | | 0.396 | 0.793 | 1.58 | U |
| 106-44-5 | 4-Methylphenol | | 0.0990 | 0.199 | 0.396 | U |
| 91-20-3 | Naphthalene | | 0.0380 | 0.199 | 0.396 | U |
| 100-01-6 | 4-Nitroaniline | | 0.119 | 0.793 | 1.58 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0559 | 0.793 | 1.58 | U |

# ANALYSIS DATA SHEET

1011013-14

6KHMS-50-025-1110

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-14 File ID: 1200814.D

Sampled: 11/02/10 11:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 18:13

Solids: 84.10 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0380 | 0.793 | 1.58 | X U |
| 98-95-3 | Nitrobenzene | | 0.0404 | 0.199 | 0.396 | U |
| 100-02-7 | 4-Nitrophenol | | 0.396 | 0.793 | 1.58 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0990 | 0.199 | 0.396 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0990 | 0.199 | 0.396 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0654 | 0.199 | 0.396 | U |
| 87-86-5 | Pentachlorophenol | | 0.0404 | 0.793 | 1.58 | U |
| 108-95-2 | Phenol | | 0.0990 | 0.199 | 0.396 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.119 | 0.199 | 0.396 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.119 | 0.199 | 0.396 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0416 | 0.199 | 0.396 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0990 | 0.199 | 0.396 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07927 | 0.06659 | 84.0 | 45 - 105 | |
| 2-Fluorophenol | 0.1585 | 0.1098 | 69.3 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07927 | 0.07542 | 95.1 | 35 - 100 | |
| Phenol-d6 | 0.1585 | 0.1262 | 79.6 | 40 - 100 | |
| Terphenyl-d14 | 0.07927 | 0.09101 | 115 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1585 | 0.03657 | 23.1 | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-15

6KHMS-50-028-1110

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-15 File ID: 1200815.D

Sampled: 11/02/10 13:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 18:44

Solids: 85.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0362 | 0.195 | 0.389 | U |
| 98-86-2 | Acetophenone | | 0.0972 | 0.195 | 0.389 | U |
| 1912-24-9 | Atrazine | | 0.0327 | 0.195 | 0.389 | U |
| 100-52-7 | Benzaldehyde | | 0.0972 | 0.195 | 0.389 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0972 | 0.195 | 0.389 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0972 | 0.195 | 0.389 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 105-60-2 | Caprolactam | | 0.0972 | 0.195 | 0.389 | U |
| 86-74-8 | Carbazole | | 0.0420 | 0.195 | 0.389 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0972 | 0.195 | 0.389 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0972 | 0.195 | 0.389 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0972 | 0.195 | 0.389 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0478 | 0.195 | 0.389 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0595 | 0.195 | 0.389 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0972 | 0.195 | 0.389 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0972 | 0.195 | 0.389 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0972 | 0.195 | 0.389 | U |
| 132-64-9 | Dibenzofuran | | 0.0972 | 0.195 | 0.389 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0972 | 0.195 | 0.389 | U |
| 84-66-2 | Diethylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.389 | 0.778 | 1.55 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0972 | 0.195 | 0.389 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0257 | 1.95 | 3.89 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.152 | 1.95 | 3.89 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0280 | 0.195 | 0.389 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0443 | 0.195 | 0.389 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0972 | 0.195 | 0.389 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0420 | 0.195 | 0.389 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0408 | 0.195 | 0.389 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0385 | 0.195 | 0.389 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0712 | 0.195 | 0.389 | X U |
| 67-72-1 | Hexachloroethane | | 0.0455 | 0.195 | 0.389 | U |
| 78-59-1 | Isophorone | | 0.0972 | 0.195 | 0.389 | U |
| 95-48-7 | 2-Methylphenol | | 0.389 | 0.778 | 1.55 | U |
| 106-44-5 | 4-Methylphenol | | 0.0972 | 0.195 | 0.389 | U |
| 91-20-3 | Naphthalene | | 0.0373 | 0.195 | 0.389 | U |
| 100-01-6 | 4-Nitroaniline | | 0.117 | 0.778 | 1.55 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0548 | 0.778 | 1.55 | U |

# ANALYSIS DATA SHEET

1011013-15

6KHMS-50-028-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-15 File ID: 1200815.D

Sampled: 11/02/10 13:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 18:44

Solids: 85.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0373 | 0.778 | 1.55 | X U |
| 98-95-3 | Nitrobenzene | | 0.0397 | 0.195 | 0.389 | U |
| 100-02-7 | 4-Nitrophenol | | 0.389 | 0.778 | 1.55 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0972 | 0.195 | 0.389 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0972 | 0.195 | 0.389 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0642 | 0.195 | 0.389 | U |
| 87-86-5 | Pentachlorophenol | | 0.0397 | 0.778 | 1.55 | U |
| 108-95-2 | Phenol | | 0.0972 | 0.195 | 0.389 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.117 | 0.195 | 0.389 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.117 | 0.195 | 0.389 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0408 | 0.195 | 0.389 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0972 | 0.195 | 0.389 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07779 | 0.07255 | 93.3 | 45 - 105 | |
| 2-Fluorophenol | 0.1556 | 0.09905 | 63.7 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07779 | 0.07459 | 95.9 | 35 - 100 | |
| Phenol-d6 | 0.1556 | 0.1212 | 77.9 | 40 - 100 | |
| Terphenyl-d14 | 0.07779 | 0.09705 | 125 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1556 | 0.02706 | 17.4 | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-16

6KHMS-50-030-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-16 File ID: 1200816.D

Sampled: 11/02/10 12:40 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 04:35

Solids: 87.90 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0353 | 0.190 | 0.379 | Y U |
| 98-86-2 | Acetophenone | | 0.0948 | 0.190 | 0.379 | U |
| 1912-24-9 | Atrazine | | 0.0319 | 0.190 | 0.379 | X U |
| 100-52-7 | Benzaldehyde | | 0.0948 | 0.190 | 0.379 | Q, X U |
| 92-52-4 | 1,1-Biphenyl | | 0.0948 | 0.190 | 0.379 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0948 | 0.190 | 0.379 | X U |
| 85-68-7 | Butylbenzylphthalate | | 0.0948 | 0.190 | 0.379 | U |
| 105-60-2 | Caprolactam | | 0.0948 | 0.190 | 0.379 | U |
| 86-74-8 | Carbazole | | 0.0410 | 0.190 | 0.379 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0948 | 0.190 | 0.379 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0948 | 0.190 | 0.379 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0948 | 0.190 | 0.379 | X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0466 | 0.190 | 0.379 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0580 | 0.190 | 0.379 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0948 | 0.190 | 0.379 | X U |
| 95-57-8 | 2-Chlorophenol | | 0.0948 | 0.190 | 0.379 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0948 | 0.190 | 0.379 | X U |
| 132-64-9 | Dibenzofuran | | 0.0948 | 0.190 | 0.379 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0948 | 0.190 | 0.379 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0948 | 0.190 | 0.379 | U |
| 84-66-2 | Diethylphthalate | | 0.0948 | 0.190 | 0.379 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.379 | 0.759 | 1.51 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0948 | 0.190 | 0.379 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0250 | 1.90 | 3.79 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.148 | 1.90 | 3.79 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0273 | 0.190 | 0.379 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0432 | 0.190 | 0.379 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.0948 | 0.190 | 0.379 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0410 | 0.190 | 0.379 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0398 | 0.190 | 0.379 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0375 | 0.190 | 0.379 | X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0694 | 0.190 | 0.379 | U |
| 67-72-1 | Hexachloroethane | | 0.0444 | 0.190 | 0.379 | U |
| 78-59-1 | Isophorone | | 0.0948 | 0.190 | 0.379 | X U |
| 95-48-7 | 2-Methylphenol | | 0.379 | 0.759 | 1.51 | U |
| 106-44-5 | 4-Methylphenol | | 0.0948 | 0.190 | 0.379 | U |
| 91-20-3 | Naphthalene | | 0.0364 | 0.190 | 0.379 | U |
| 100-01-6 | 4-Nitroaniline | | 0.114 | 0.759 | 1.51 | U |
| 99-09-2 | 3-Nitroaniline | | 0.0535 | 0.759 | 1.51 | Y U |

# ANALYSIS DATA SHEET

1011013-16

GKHMS-SO-030-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-16 File ID: 1200816.D

Sampled: 11/02/10 12:40 Prepared: 11/11/10 08:10 Analyzed: 12/21/10 04:35

Solids: 87.90 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0364 | 0.759 | 1.51 | X U |
| 98-95-3 | Nitrobenzene | | 0.0387 | 0.190 | 0.379 | X U |
| 100-02-7 | 4-Nitrophenol | | 0.379 | 0.759 | 1.51 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.0948 | 0.190 | 0.379 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0948 | 0.190 | 0.379 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0626 | 0.190 | 0.379 | X U |
| 87-86-5 | Pentachlorophenol | | 0.0387 | 0.759 | 1.51 | U |
| 108-95-2 | Phenol | | 0.0948 | 0.190 | 0.379 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.114 | 0.190 | 0.379 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.114 | 0.190 | 0.379 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0398 | 0.190 | 0.379 | X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0948 | 0.190 | 0.379 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07584 | 0.07167 | 94.5 | 45 - 105 | X |
| 2-Fluorophenol | 0.1517 | 0.1288 | 84.9 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07584 | 0.08495 | 112 | 35 - 100 | *X |
| Phenol-d6 | 0.1517 | 0.1483 | 97.8 | 40 - 100 | |
| Terphenyl-d14 | 0.07584 | 0.09776 | 129 | 30 - 125 | * |
| 2,4,6-Tribromophenol | 0.1517 | 0.05779 | 38.1 | 35 - 125 | |

# ANALYSIS DATA SHEET

1011013-17

6KHMS-SD-031-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-17 File ID: 1200817.D

Sampled: 11/02/10 11:40 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 19:14

Solids: 87.90 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0353 | 0.190 | 0.379 | U |
| 98-86-2 | Acetophenone | | 0.0948 | 0.190 | 0.379 | U |
| 1912-24-9 | Atrazine | | 0.0319 | 0.190 | 0.379 | U |
| 100-52-7 | Benzaldehyde | | 0.0948 | 0.190 | 0.379 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0948 | 0.190 | 0.379 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0948 | 0.190 | 0.379 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0948 | 0.190 | 0.379 | U |
| 105-60-2 | Caprolactam | | 0.0948 | 0.190 | 0.379 | U |
| 86-74-8 | Carbazole | | 0.0410 | 0.190 | 0.379 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0948 | 0.190 | 0.379 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0948 | 0.190 | 0.379 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0948 | 0.190 | 0.379 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0466 | 0.190 | 0.379 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0580 | 0.190 | 0.379 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0948 | 0.190 | 0.379 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0948 | 0.190 | 0.379 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0948 | 0.190 | 0.379 | U |
| 132-64-9 | Dibenzofuran | | 0.0948 | 0.190 | 0.379 | U |
| 84-74-2 | Di-n-butylphthalate | 0.135 | 0.0948 | 0.190 | 0.379 | I |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0948 | 0.190 | 0.379 | U |
| 84-66-2 | Diethylphthalate | | 0.0948 | 0.190 | 0.379 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.379 | 0.759 | 1.51 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0948 | 0.190 | 0.379 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0250 | 1.90 | 3.79 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.148 | 1.90 | 3.79 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0273 | 0.190 | 0.379 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0432 | 0.190 | 0.379 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0948 | 0.190 | 0.379 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.0973 | 0.0410 | 0.190 | 0.379 | I |
| 118-74-1 | Hexachlorobenzene | | 0.0398 | 0.190 | 0.379 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0375 | 0.190 | 0.379 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0694 | 0.190 | 0.379 | X U |
| 67-72-1 | Hexachloroethane | | 0.0444 | 0.190 | 0.379 | U |
| 78-59-1 | Isophorone | | 0.0948 | 0.190 | 0.379 | U |
| 95-48-7 | 2-Methylphenol | | 0.379 | 0.759 | 1.51 | U |
| 106-44-5 | 4-Methylphenol | | 0.0948 | 0.190 | 0.379 | U |
| 91-20-3 | Naphthalene | | 0.0364 | 0.190 | 0.379 | U |
| 100-01-6 | 4-Nitroaniline | | 0.114 | 0.759 | 1.51 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0535 | 0.759 | 1.51 | U |

# ANALYSIS DATA SHEET

1011013-17

6KHMS-50-031-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-17 File ID: 1200817.D

Sampled: 11/02/10 11:40 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 19:14

Solids: 87.90 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0364 | 0.759 | 1.51 | X U |
| 98-95-3 | Nitrobenzene | | 0.0387 | 0.190 | 0.379 | U |
| 100-02-7 | 4-Nitrophenol | | 0.379 | 0.759 | 1.51 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0948 | 0.190 | 0.379 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0948 | 0.190 | 0.379 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0626 | 0.190 | 0.379 | U |
| 87-86-5 | Pentachlorophenol | | 0.0387 | 0.759 | 1.51 | U |
| 108-95-2 | Phenol | | 0.0948 | 0.190 | 0.379 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.114 | 0.190 | 0.379 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.114 | 0.190 | 0.379 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0398 | 0.190 | 0.379 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0948 | 0.190 | 0.379 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07584 | 0.06884 | 90.8 | 45 - 105 | |
| 2-Fluorophenol | 0.1517 | 0.1099 | 72.5 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07584 | 0.07450 | 98.2 | 35 - 100 | |
| Phenol-d6 | 0.1517 | 0.1335 | 88.0 | 40 - 100 | |
| Terphenyl-d14 | 0.07584 | 0.09269 | 122 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1517 | 0.03300 | 21.8 | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-18

GKHMS-SO-032-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-18 File ID: 1200818.D

Sampled: 11/02/10 12:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 19:43

Solids: 81.50 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0380 | 0.205 | 0.409 | U |
| 98-86-2 | Acetophenone | | 0.102 | 0.205 | 0.409 | U |
| 1912-24-9 | Atrazine | | 0.0344 | 0.205 | 0.409 | U |
| 100-52-7 | Benzaldehyde | | 0.102 | 0.205 | 0.409 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.102 | 0.205 | 0.409 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.102 | 0.205 | 0.409 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.102 | 0.205 | 0.409 | U |
| 105-60-2 | Caprolactam | | 0.102 | 0.205 | 0.409 | U |
| 86-74-8 | Carbazole | | 0.0442 | 0.205 | 0.409 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.102 | 0.205 | 0.409 | U |
| 106-47-8 | 4-Chloroaniline | | 0.102 | 0.205 | 0.409 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.102 | 0.205 | 0.409 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0503 | 0.205 | 0.409 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0626 | 0.205 | 0.409 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.102 | 0.205 | 0.409 | U |
| 95-57-8 | 2-Chlorophenol | | 0.102 | 0.205 | 0.409 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.102 | 0.205 | 0.409 | U |
| 132-64-9 | Dibenzofuran | | 0.102 | 0.205 | 0.409 | U |
| 84-74-2 | Di-n-butylphthalate | 0.120 | 0.102 | 0.205 | 0.409 | I |
| 120-83-2 | 2,4-Dichlorophenol | | 0.102 | 0.205 | 0.409 | U |
| 84-66-2 | Diethylphthalate | | 0.102 | 0.205 | 0.409 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.409 | 0.818 | 1.63 | U |
| 131-11-3 | Dimethyl phthalate | | 0.102 | 0.205 | 0.409 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0270 | 2.05 | 4.09 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.160 | 2.05 | 4.09 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0294 | 0.205 | 0.409 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0466 | 0.205 | 0.409 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.102 | 0.205 | 0.409 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 0.0724 | 0.0442 | 0.205 | 0.409 | I |
| 118-74-1 | Hexachlorobenzene | | 0.0429 | 0.205 | 0.409 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0405 | 0.205 | 0.409 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0748 | 0.205 | 0.409 | X U |
| 67-72-1 | Hexachloroethane | | 0.0479 | 0.205 | 0.409 | U |
| 78-59-1 | Isophorone | | 0.102 | 0.205 | 0.409 | U |
| 95-48-7 | 2-Methylphenol | | 0.409 | 0.818 | 1.63 | U |
| 106-44-5 | 4-Methylphenol | | 0.102 | 0.205 | 0.409 | U |
| 91-20-3 | Naphthalene | | 0.0393 | 0.205 | 0.409 | U |
| 100-01-6 | 4-Nitroaniline | | 0.123 | 0.818 | 1.63 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0577 | 0.818 | 1.63 | U |

# ANALYSIS DATA SHEET

1011013-18

GKHMS-50-032-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-18 File ID: 1200818.D

Sampled: 11/02/10 12:20 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 19:43

Solids: 81.50 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0393 | 0.818 | 1.63 | X U |
| 98-95-3 | Nitrobenzene | | 0.0417 | 0.205 | 0.409 | U |
| 100-02-7 | 4-Nitrophenol | | 0.409 | 0.818 | 1.63 | U |
| 88-75-5 | 2-Nitrophenol | | 0.102 | 0.205 | 0.409 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.102 | 0.205 | 0.409 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0675 | 0.205 | 0.409 | U |
| 87-86-5 | Pentachlorophenol | | 0.0417 | 0.818 | 1.63 | U |
| 108-95-2 | Phenol | | 0.102 | 0.205 | 0.409 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.123 | 0.205 | 0.409 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.123 | 0.205 | 0.409 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0429 | 0.205 | 0.409 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.102 | 0.205 | 0.409 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.08180 | 0.07250 | 88.6 | 45 - 105 | |
| 2-Fluorophenol | 0.1636 | 0.07521 | 46.0 | 35 - 105 | |
| Nitrobenzene-d5 | 0.08180 | 0.08018 | 98.0 | 35 - 100 | |
| Phenol-d6 | 0.1636 | 0.1185 | 72.4 | 40 - 100 | |
| Terphenyl-d14 | 0.08180 | 0.09903 | 121 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1636 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-19

6KHMS-50-034-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-19 File ID: 1200819.D

Sampled: 11/02/10 13:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 20:13

Solids: 85.80 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0361 | 0.195 | 0.388 | U |
| 98-86-2 | Acetophenone | | 0.0971 | 0.195 | 0.388 | U |
| 1912-24-9 | Atrazine | | 0.0326 | 0.195 | 0.388 | U |
| 100-52-7 | Benzaldehyde | | 0.0971 | 0.195 | 0.388 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0971 | 0.195 | 0.388 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0971 | 0.195 | 0.388 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0971 | 0.195 | 0.388 | U |
| 105-60-2 | Caprolactam | | 0.0971 | 0.195 | 0.388 | U |
| 86-74-8 | Carbazole | | 0.0420 | 0.195 | 0.388 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0971 | 0.195 | 0.388 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0971 | 0.195 | 0.388 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0971 | 0.195 | 0.388 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0478 | 0.195 | 0.388 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0594 | 0.195 | 0.388 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0971 | 0.195 | 0.388 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0971 | 0.195 | 0.388 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0971 | 0.195 | 0.388 | U |
| 132-64-9 | Dibenzofuran | | 0.0971 | 0.195 | 0.388 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0971 | 0.195 | 0.388 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0971 | 0.195 | 0.388 | U |
| 84-66-2 | Diethylphthalate | | 0.0971 | 0.195 | 0.388 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.388 | 0.777 | 1.55 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0971 | 0.195 | 0.388 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0256 | 1.95 | 3.88 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.152 | 1.95 | 3.88 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0280 | 0.195 | 0.388 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0443 | 0.195 | 0.388 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0971 | 0.195 | 0.388 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0420 | 0.195 | 0.388 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0408 | 0.195 | 0.388 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0385 | 0.195 | 0.388 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0711 | 0.195 | 0.388 | X U |
| 67-72-1 | Hexachloroethane | | 0.0455 | 0.195 | 0.388 | U |
| 78-59-1 | Isophorone | | 0.0971 | 0.195 | 0.388 | U |
| 95-48-7 | 2-Methylphenol | | 0.388 | 0.777 | 1.55 | U |
| 106-44-5 | 4-Methylphenol | | 0.0971 | 0.195 | 0.388 | U |
| 91-20-3 | Naphthalene | | 0.0373 | 0.195 | 0.388 | U |
| 100-01-6 | 4-Nitroaniline | | 0.117 | 0.777 | 1.55 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0548 | 0.777 | 1.55 | U |

# ANALYSIS DATA SHEET

1011013-19

6KHMS-50-034-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-19 File ID: 1200819.D

Sampled: 11/02/10 13:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 20:13

Solids: 85.80 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0373 | 0.777 | 1.55 | X U |
| 98-95-3 | Nitrobenzene | | 0.0396 | 0.195 | 0.388 | U |
| 100-02-7 | 4-Nitrophenol | | 0.388 | 0.777 | 1.55 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0971 | 0.195 | 0.388 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0971 | 0.195 | 0.388 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0641 | 0.195 | 0.388 | U |
| 87-86-5 | Pentachlorophenol | | 0.0396 | 0.777 | 1.55 | U |
| 108-95-2 | Phenol | | 0.0971 | 0.195 | 0.388 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.117 | 0.195 | 0.388 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.117 | 0.195 | 0.388 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0408 | 0.195 | 0.388 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0971 | 0.195 | 0.388 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07770 | 0.06684 | 86.0 | 45 - 105 | |
| 2-Fluorophenol | 0.1554 | 0.1091 | 70.2 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07770 | 0.07265 | 93.5 | 35 - 100 | |
| Phenol-d6 | 0.1554 | 0.1274 | 82.0 | 40 - 100 | |
| Terphenyl-d14 | 0.07770 | 0.09837 | 127 | 30 - 125 | * |
| 2,4,6-Tribromophenol | 0.1554 | 0.02297 | 14.8 | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-21

GKHMS-SO-FD001-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-21 File ID: 1200821D.D

Sampled: 11/02/10 00:00 Prepared: 11/11/10 11:55 Analyzed: 12/21/10 06:03

Solids: 80.40 Preparation: EXT_3546 Dilution: 5

Batch: 0L14027 Sequence: 0L36307 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.193 | 1.04 | 2.07 | U |
| 98-86-2 | Acetophenone | | 0.518 | 1.04 | 2.07 | X U |
| 1912-24-9 | Atrazine | | 0.174 | 1.04 | 2.07 | X U |
| 100-52-7 | Benzaldehyde | | 0.518 | 1.04 | 2.07 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.518 | 1.04 | 2.07 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.518 | 1.04 | 2.07 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 0.518 | 1.04 | 2.07 | U |
| 105-60-2 | Caprolactam | | 0.518 | 1.04 | 2.07 | X U |
| 86-74-8 | Carbazole | | 0.224 | 1.04 | 2.07 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.518 | 1.04 | 2.07 | X U |
| 106-47-8 | 4-Chloroaniline | | 0.518 | 1.04 | 2.07 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.518 | 1.04 | 2.07 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.255 | 1.04 | 2.07 | Q, X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.317 | 1.04 | 2.07 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.518 | 1.04 | 2.07 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 0.518 | 1.04 | 2.07 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.518 | 1.04 | 2.07 | Q U |
| 132-64-9 | Dibenzofuran | | 0.518 | 1.04 | 2.07 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.518 | 1.04 | 2.07 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.518 | 1.04 | 2.07 | X U |
| 84-66-2 | Diethylphthalate | | 0.518 | 1.04 | 2.07 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 2.07 | 4.15 | 8.27 | Q, X U |
| 131-11-3 | Dimethyl phthalate | | 0.518 | 1.04 | 2.07 | Q U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.137 | 10.4 | 20.7 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.808 | 10.4 | 20.7 | Y U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.149 | 1.04 | 2.07 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.236 | 1.04 | 2.07 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.518 | 1.04 | 2.07 | X U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.224 | 1.04 | 2.07 | U |
| 118-74-1 | Hexachlorobenzene | | 0.218 | 1.04 | 2.07 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.205 | 1.04 | 2.07 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.379 | 1.04 | 2.07 | U |
| 67-72-1 | Hexachloroethane | | 0.243 | 1.04 | 2.07 | U |
| 78-59-1 | Isophorone | | 0.518 | 1.04 | 2.07 | Q, X U |
| 95-48-7 | 2-Methylphenol | | 2.07 | 4.15 | 8.27 | U |
| 106-44-5 | 4-Methylphenol | | 0.518 | 1.04 | 2.07 | U |
| 91-20-3 | Naphthalene | | 0.199 | 1.04 | 2.07 | U |
| 100-01-6 | 4-Nitroaniline | | 0.622 | 4.15 | 8.27 | U |
| 99-09-2 | 3-Nitroaniline | | 0.292 | 4.15 | 8.27 | U |

# ANALYSIS DATA SHEET

1011013-21

6KHMS-SO-FD001-1010

Laboratory: Empirical Laboratories, LLC | SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) | Project: CTOJM16 Key West 2010

Matrix: Solid | Laboratory ID: 1012008-21 | File ID: 1200821D.D

Sampled: 11/02/10 00:00 | Prepared: 11/11/10 11:55 | Analyzed: 12/21/10 06:03

Solids: 80.40 | Preparation: EXT_3546 | Dilution: 5

Batch: 0L14027 | Sequence: 0L36307 | Calibration: 0351002 | Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.199 | 4.15 | 8.27 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.211 | 1.04 | 2.07 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 2.07 | 4.15 | 8.27 | U |
| 88-75-5 | 2-Nitrophenol | | 0.518 | 1.04 | 2.07 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.518 | 1.04 | 2.07 | Q, X U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.342 | 1.04 | 2.07 | Q, X U |
| 87-86-5 | Pentachlorophenol | | 0.211 | 4.15 | 8.27 | U |
| 108-95-2 | Phenol | | 0.518 | 1.04 | 2.07 | Q, X U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.622 | 1.04 | 2.07 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.622 | 1.04 | 2.07 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.218 | 1.04 | 2.07 | Q, X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.518 | 1.04 | 2.07 | Q U |

| CAS NO. | TICS | CONC. (mg/Kg dry) | Response | R.T. | % Match | Q |
|---|---|---|---|---|---|---|
| 000123-42-2 | 2-Pentanone, 4-hydroxy-4-methyl- | 6.15 | 2986575 | 4.546 | 50 | N |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.08292 | ND | | 45 - 105 | * |
| 2-Fluorophenol | 0.1658 | ND | | 35 - 105 | * |
| Nitrobenzene-d5 | 0.08292 | ND | | 35 - 100 | *X |
| Phenol-d6 | 0.1658 | ND | | 40 - 100 | * |
| Terphenyl-d14 | 0.08292 | ND | | 30 - 125 | * |
| 2,4,6-Tribromophenol | 0.1658 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011013-20

GKHMS-SO-FD002-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-20 File ID: 1200820.D

Sampled: 11/02/10 00:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 20:44

Solids: 87.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0353 | 0.190 | 0.380 | U |
| 98-86-2 | Acetophenone | | 0.0950 | 0.190 | 0.380 | U |
| 1912-24-9 | Atrazine | | 0.0319 | 0.190 | 0.380 | U |
| 100-52-7 | Benzaldehyde | | 0.0950 | 0.190 | 0.380 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0950 | 0.190 | 0.380 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0950 | 0.190 | 0.380 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0950 | 0.190 | 0.380 | U |
| 105-60-2 | Caprolactam | | 0.0950 | 0.190 | 0.380 | U |
| 86-74-8 | Carbazole | | 0.0410 | 0.190 | 0.380 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0950 | 0.190 | 0.380 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0950 | 0.190 | 0.380 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0950 | 0.190 | 0.380 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0468 | 0.190 | 0.380 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0582 | 0.190 | 0.380 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0950 | 0.190 | 0.380 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0950 | 0.190 | 0.380 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0950 | 0.190 | 0.380 | U |
| 132-64-9 | Dibenzofuran | | 0.0950 | 0.190 | 0.380 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0950 | 0.190 | 0.380 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0950 | 0.190 | 0.380 | U |
| 84-66-2 | Diethylphthalate | | 0.0950 | 0.190 | 0.380 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.380 | 0.761 | 1.52 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0950 | 0.190 | 0.380 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0251 | 1.90 | 3.80 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.148 | 1.90 | 3.80 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0274 | 0.190 | 0.380 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0433 | 0.190 | 0.380 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0950 | 0.190 | 0.380 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0410 | 0.190 | 0.380 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0399 | 0.190 | 0.380 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0376 | 0.190 | 0.380 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0696 | 0.190 | 0.380 | X U |
| 67-72-1 | Hexachloroethane | | 0.0445 | 0.190 | 0.380 | U |
| 78-59-1 | Isophorone | | 0.0950 | 0.190 | 0.380 | U |
| 95-48-7 | 2-Methylphenol | | 0.380 | 0.761 | 1.52 | U |
| 106-44-5 | 4-Methylphenol | | 0.0950 | 0.190 | 0.380 | U |
| 91-20-3 | Naphthalene | | 0.0365 | 0.190 | 0.380 | U |
| 100-01-6 | 4-Nitroaniline | | 0.114 | 0.761 | 1.52 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0536 | 0.761 | 1.52 | U |

# ANALYSIS DATA SHEET

1011013-20

GKHMS-SO-FD002-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012008-20 File ID: 1200820.D

Sampled: 11/02/10 00:00 Prepared: 11/11/10 08:10 Analyzed: 12/15/10 20:44

Solids: 87.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0365 | 0.761 | 1.52 | X U |
| 98-95-3 | Nitrobenzene | | 0.0388 | 0.190 | 0.380 | U |
| 100-02-7 | 4-Nitrophenol | | 0.380 | 0.761 | 1.52 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0950 | 0.190 | 0.380 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0950 | 0.190 | 0.380 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0627 | 0.190 | 0.380 | U |
| 87-86-5 | Pentachlorophenol | | 0.0388 | 0.761 | 1.52 | U |
| 108-95-2 | Phenol | | 0.0950 | 0.190 | 0.380 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.114 | 0.190 | 0.380 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.114 | 0.190 | 0.380 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0399 | 0.190 | 0.380 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0950 | 0.190 | 0.380 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07602 | 0.05603 | 73.7 | 45 - 105 | |
| 2-Fluorophenol | 0.1520 | 0.09923 | 65.3 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07602 | 0.06146 | 80.9 | 35 - 100 | |
| Phenol-d6 | 0.1520 | 0.1062 | 69.9 | 40 - 100 | |
| Terphenyl-d14 | 0.07602 | 0.08053 | 106 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1520 | 0.03958 | 26.0 | 35 - 125 | * |

# APPENDIX C

## SUPPORT DOCUMENTATION

## Sample Delivery Group Case Narrative

### Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

No sample volume was received for SW6010C or SW7471.

### Changes to the Revision

This is an original submittal of the final report package.

### Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

### Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

### SW8270C:

The surrogate 2,4,6-Tribromophenol did not recover in 0L14029--BLK1, 0L14027-BLK1, and samples 1012008-02, -03, -04, -05, -06, -07, -08, -09, -10, -14, -15, -17, -18, -19 and -20. The surrogate Nitrobenzene-d5 exceeded criteria with a positive bias in 0L14029-BS1, 0L14027-BLK1, -BS1, 1012008-10 and -16. The surrogate 2-Fluorobiphenyl exceeded criteria with a positive bias in 0L14027-BS1 and 1012008-10. The surrogate Terphenyl-d14 exceeded criteria with a positive bias in 1012008-08, -09, -16, -19, -01MS and -01MSD. There was no surrogate recovery in samples

1012008-11, -12, -13 and -21. Samples were not able to be re-extracted since the extracts were received from another laboratory.

The continuing calibration verifications exceeded criteria in 0L35403-CCV1 with a negative bias for 2,2'-Oxybis-1-chloropropane and with a positive bias for Hexachlorocyclopentadiene, 4-Nitroaniline and 2-Nitroaniline, in 0L32614-CCV1 with a negative bias for 3,3'-Dichlorobenzidine, Carbazole and 3-Nitroaniline and with a positive bias for Atrazine, Benzaldehyde, 4-Bromophenyl-phenylether, 4-Chloroaniline, Bis(2-chloroethoxy)methane, Bis(2-chloroethyl)ether, 2-Chloronaphthalene, 4-Chlorophenyl phenyl ether, 4,6-Dinitro-2-methyphenol, 2,6-Dinitrotoluene, Hexachlorobutadiene, Isophorone, 2-Nitroaniline, Nitrobenzene, 4-Nitrophenol, N-nitroso-di-n-propylamine, 2,4,6-Trichlorophenol, 2,4,5-Trichlorophenol, 2-Fluorobiphenyl and Nitrobenzene-d5 and in 0L36307-CCV1 with a positive bias for Acetophenone, Atrazine, 4-Bromopheny-phenylether, Caprolactam, 4-Chloro-3-methylphenol, Bis(2-chloroethoxy)methane, Bis(2-chloroethyl)ether, 2-Chloronaphthalene, 2,4-Dichlorophenol, 2,4-Dimethylphenol, Di-n-octylphthalate, Hexachlorobutdiene, Isophorone, 2-Nitroaniline, Nitrobenzene, N-Nitrosodiphenylamine, N-nitroso-di-n-propylamine, Phenol, 2,4,6-Trichlorophenol and Nitrobenzene-d5 and with a negative bias for 2,4-Dinitrophenol.

The batch spike associated to batch 0L14027 exceeded criteria with no recovery for Benzaldehyde, 4-Chloroaniline and N-nitrosodiphenylamine, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol and with a positive bias for 4-Bromophenyl-phenyl ether, Bis(2-chloroethoxy)methane, Bis(2-chloroethyl)ether, 2-Chloronaphthalene, 4-Chlorophenyl phenylether, 2,4-Dimethylphenol, Dimethyl phthalate, Hexachlorobutadiene, Isophorone, 2-Nitroaniline, Nitrobenzene, N-nitroso-di-n-propylamine, Phenol, 2,4,6-Trichlorophenol and 2,4,5-Trichlorophenol. The batch spike associated to batch 0L14029 exceeded criteria with no recovery for Benzaldehyde, 4-Chloroaniline, 2,4-Dinitrophenol, 1,2,4,5-Tetrachlorobenzene, 2,3,4,6-Tetrachlorophenol.and N-Nitrosodiphenylamine. The samples were not able to be re-extracted since the extracts were received from another laboratory.

The matrix spikes associated to sample 1012008-01 exceeded criteria with no recovery for Benzaldehyde, 4-Chloroaniline, 2,4-Dinitrophenol, Hexachorocyclopentadiene, N-nitrosodiphenylamine, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol and with a positive bias for Di-n-butylphthalate, Di-n-octylphthalate and Bis(2-ethylhexyl)phthalate.

The internal standard Perylene-d12 exceeded criteria in 1012008-09, -01MS and -01MSD. Compounds associated to Perylene-d12 are qualified with an S.

No additional anomalies or deviations are noted and the data is properly qualified.

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-7

wo# 1011013

| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Centauri Labs** **7210 Corporate Court** **Fredrick, MD 21703** |
|---|---|---|---|---|
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Chino Ortiz** **301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8260B** | GKHMS-SO001 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO001 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8260B** | GKHMS-SO002 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO002 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8260B** | GKHMS-SO003 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO003 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8260B** | GKHMS-SO005 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO005 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8260B** | GKHMS-SO007 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO007 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8260B** | GKHMS-SO011 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | GKHMS-SO011 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-012-1010 | 12:00 | **SW846 8260B** | GKHMS-SO012 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-012- | 12:00 | **SW846** | GKHMS- | SO | SVOCs/SIM | 4°C | 1 | Glass - | 16 oz. wide-mouth | |



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CTOJM16KW_009 Summ Package

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1010 | | 8720D/8270DSIM/8082A/8081B/6010C | SO012 | | PAHs/PCBs/Pesticides/Metals | | | Clear | w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8260B | GKHMS-SO014 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO014 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8260B | GKHMS-SO017 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO017 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8260B | GKHMS-SO019 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO019 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8260B | GKHMS-SO021 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO021 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8260B | GKHMS-SO022 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO022 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8260B | GKHMS-SO023 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO023 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8260B | GKHMS-SO025 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO025 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8260B | GKHMS-SO028 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO028 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8260B | GKHMS-SO030 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO030 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8260B | GKHMS-SO031 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO031 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8260B | GKHMS-SO032 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO032 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8260B | GKHMS-SO034 | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | GKHMS-SO034 | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO-FD002-1010 | 00:00 | SW846 8720D/8270DSIM/8082A/8081B/6010C | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |
| 11/02/2010 | GKHMS-SO- | 00:00 | SW846 8260B | QC | SO | VOCs | 4°C/MeOH+DI | 3 | Glass - | 40 mL vial (pre- | |



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CTOJM16KW_009 Summ Package

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | FD002-1010 | | | | | | Combo | | Clear | tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8260B** | QC | SO | VOCs | 4°C/MeOH+DI Combo | 3 | Glass - Clear | 40 mL vial (pre-tared) | |
| 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | **SW846 8720D/8270DSIM/8082A/8081B/6010C** | QC | SO | SVOCs/SIM PAHs/PCBs/Pesticides/Metals | 4°C | 1 | Glass - Clear | 16 oz. wide-mouth w/Teflon cap | |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By: **Gary Braganza** | Date: 11/03/2010 | Time: 15:08 | Received By: **Federal Express** | Date: 11/03/2010 | Time: 16:08 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: 11/4/10 | Time: 12:50pm |

Comments:

WO# 1011013



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CTOJM16KW_009 Summ Package

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-01** | **Solid** | **Sampled:11/02/10 08:00** | 1012008-01 |
| 8270D LL SVOC TCL | | 11/16/10 08:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 08:00 | |
| 6010C Full | | 05/01/11 08:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-02** | **Solid** | **Sampled:11/02/10 08:20** | -02 |
| 6010C Full | | 05/01/11 08:20 | |
| 8270D LL SVOC TCL | | 11/16/10 08:20 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 08:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-03** | **Solid** | **Sampled:11/02/10 08:40** | -03 |
| 8270D LL SVOC TCL | | 11/16/10 08:40 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 08:40 | |
| 6010C Full | | 05/01/11 08:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-04** | **Solid** | **Sampled:11/02/10 09:00** | -04 |
| 8270D LL SVOC TCL | | 11/16/10 09:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 09:00 | |
| 6010C Full | | 05/01/11 09:00 | |
| *Containers Supplied:* | | | |

2-3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 11/30 | [signature] | 12/1/10 08:11 |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-05** | **Solid** | **Sampled:11/02/10 09:20** | 10/2008-05 |
| Mercury, Total 7471B | | 11/30/10 09:20 | |
| 6010C Full | | 05/01/11 09:20 | |
| 8270D LL SVOC TCL | | 11/16/10 09:20 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-06** | **Solid** | **Sampled:11/02/10 09:40** | -06 |
| Mercury, Total 7471B | | 11/30/10 09:40 | |
| 6010C Full | | 05/01/11 09:40 | |
| 8270D LL SVOC TCL | | 11/16/10 09:40 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-07** | **Solid** | **Sampled:11/02/10 12:00** | -07 |
| 6010C Full | | 05/01/11 12:00 | |
| 8270D LL SVOC TCL | | 11/16/10 12:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 12:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-08** | **Solid** | **Sampled:11/02/10 14:00** | -08 |
| 6010C Full | | 05/01/11 14:00 | |
| 8270D LL SVOC TCL | | 11/16/10 14:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 14:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-09** | **Solid** | **Sampled:11/02/10 10:00** | -09 |
| 6010C Full | | 05/01/11 10:00 | |
| 8270D LL SVOC TCL | | 11/16/10 10:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 10:00 | |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| RKW | 11/30 | | 12/1/10 08:11 |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-10** | **Solid** | **Sampled:11/02/10 10:20** | 1012008-10 |
| 6010C Full | | 05/01/11 10:20 | |
| 8270D LL SVOC TCL | | 11/16/10 10:20 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 10:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-11** | **Solid** | **Sampled:11/02/10 10:40** | -11 |
| Mercury, Total 7471B | | 11/30/10 10:40 | |
| 6010C Full | | 05/01/11 10:40 | |
| 8270D LL SVOC TCL | | 11/16/10 10:40 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-12** | **Solid** | **Sampled:11/02/10 11:00** | -12 |
| 6010C Full | | 05/01/11 11:00 | |
| 8270D LL SVOC TCL | | 11/16/10 11:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 11:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-13** | **Solid** | **Sampled:11/02/10 13:40** | -13 |
| Mercury, Total 7471B | | 11/30/10 13:40 | |
| 6010C Full | | 05/01/11 13:40 | |
| 8270D LL SVOC TCL | | 11/16/10 13:40 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-14** | **Solid** | **Sampled:11/02/10 11:20** | -14 |
| Mercury, Total 7471B | | 11/30/10 11:20 | |
| 6010C Full | | 05/01/11 11:20 | |
| 8270D LL SVOC TCL | | 11/16/10 11:20 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KKW | 11/30 | [signature] | 12/1/10 08:11 |
| | | | |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-15** | **Solid** | **Sampled:11/02/10 13:20** | 1012008-15 |
| 6010C Full | | 05/01/11 13:20 | |
| 8270D LL SVOC TCL | | 11/16/10 13:20 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 13:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-16** | **Solid** | **Sampled:11/02/10 12:40** | -16 |
| 8270D LL SVOC TCL | | 11/16/10 12:40 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 12:40 | |
| 6010C Full | | 05/01/11 12:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-17** | **Solid** | **Sampled:11/02/10 11:40** | -17 |
| 6010C Full | | 05/01/11 11:40 | |
| 8270D LL SVOC TCL | | 11/16/10 11:40 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 11:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-18** | **Solid** | **Sampled:11/02/10 12:20** | -18 |
| 6010C Full | | 05/01/11 12:20 | |
| 8270D LL SVOC TCL | | 11/16/10 12:20 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 12:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-19** | **Solid** | **Sampled:11/02/10 13:00** | -19 |
| 6010C Full | | 05/01/11 13:00 | |
| 8270D LL SVOC TCL | | 11/16/10 13:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 13:00 | |
| *Containers Supplied:* | | | |

2-3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| Released By | Date | Received By | Date |

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011013**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011013-20** | **Solid** | **Sampled:11/02/10 00:00** | 10120088 -20 |
| 6010C Full | | 05/01/11 00:00 | |
| 8270D LL SVOC TCL | | 11/16/10 00:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | | 11/30/10 00:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011013-21** | **Solid** | **Sampled:11/02/10 00:00** | -21 |
| Mercury, Total 7471B | | 11/30/10 00:00 | |
| 6010C Full | | 05/01/11 00:00 | |
| 8270D LL SVOC TCL | | 11/16/10 00:00 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/18/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| | | | |

Page 5 of 5

CENTAURI LABS™

WORK ORDER

1011013

Approved

Printed: 11/5/2010 10:52:13AM

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

| | | | |
|---|---|---|---|
| Client: | Tetra Tech NUS, Inc | Lab PM: | Chino Ortiz |
| Contact: | Shauna Stotler-Hardy | Project: | KEY WEST NAS |
| Address | 661 Andersen Dr., Foster Plaza 7 | Project # | [none] |
| | Pittsburgh, PA 15220 | Comments: | LEVEL 3 |
| Phone: | (803) 641-4944 | | EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!! |
| Fax: | (803) 642-8454 | | |

| Analysis | Expires | Comments |
|---|---|---|
| 1011013-01 GKHMS-SO-001-1010 [Solid] Sampled 11/02/10 08:00 Eastern | | |
| 8081A Pesticides | 11/16/10 08:00 | |
| 8082 PCBs | 11/16/10 08:00 | |
| 8260B VOA | 11/16/10 08:00 | |
| 8270D LL SVOC TCL | 11/16/10 08:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 08:00 | |
| Solids, Dry Weight | 01/31/11 08:00 | |
| 6010C Full | 05/01/11 08:00 | |
| 1011013-02 GKHMS-SO-002-1010 [Solid] Sampled 11/02/10 08:20 Eastern | | |
| 6010C Full | 05/01/11 08:20 | |
| Solids, Dry Weight | 01/31/11 08:20 | |
| Mercury, Total 7471B | 11/30/10 08:20 | |
| 8270D LL SVOC TCL | 11/16/10 08:20 | PLUS SIMs PAHs |
| 8260B VOA | 11/16/10 08:20 | |
| 8081A Pesticides | 11/16/10 08:20 | |
| 8082 PCBs | 11/16/10 08:20 | |
| 1011013-03 GKHMS-SO-003-1010 [Solid] Sampled 11/02/10 08:40 Eastern | | |
| 8260B VOA | 11/16/10 08:40 | |
| 8270D LL SVOC TCL | 11/16/10 08:40 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 08:40 | |
| 6010C Full | 05/01/11 08:40 | |
| 8081A Pesticides | 11/16/10 08:40 | |
| Solids, Dry Weight | 01/31/11 08:40 | |
| 8082 PCBs | 11/16/10 08:40 | |

CENTAURI LABS™

WORK ORDER

1011013

Approved

Printed: 11/5/2010 10:52:13AM

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

| Analysis | Expires | Comments |
|---|---|---|
| 1011013-04 GKHMS-SO-005-1010 [Solid] Sampled 11/02/10 09:00 Eastern | | |
| Mercury, Total 7471B | 11/30/10 09:00 | |
| Solids, Dry Weight | 01/31/11 09:00 | |
| 8270D LL SVOC TCL | 11/16/10 09:00 | PLUS SIMs PAHs |
| 8260B VOA | 11/16/10 09:00 | |
| 8082 PCBs | 11/16/10 09:00 | |
| 8081A Pesticides | 11/16/10 09:00 | |
| 6010C Full | 05/01/11 09:00 | |
| 1011013-05 GKHMS-SO-007-1010 [Solid] Sampled 11/02/10 09:20 Eastern | | |
| 8081A Pesticides | 11/16/10 09:20 | |
| 8082 PCBs | 11/16/10 09:20 | |
| 8260B VOA | 11/16/10 09:20 | |
| 8270D LL SVOC TCL | 11/16/10 09:20 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 09:20 | |
| Solids, Dry Weight | 01/31/11 09:20 | |
| 6010C Full | 05/01/11 09:20 | |
| 1011013-06 GKHMS-SO-011-1010 [Solid] Sampled 11/02/10 09:40 Eastern | | |
| 8260B VOA | 11/16/10 09:40 | |
| 8270D LL SVOC TCL | 11/16/10 09:40 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 09:40 | |
| 6010C Full | 05/01/11 09:40 | |
| 8081A Pesticides | 11/16/10 09:40 | |
| Solids, Dry Weight | 01/31/11 09:40 | |
| 8082 PCBs | 11/16/10 09:40 | |
| 1011013-07 GKHMS-SO-012-1010 [Solid] Sampled 11/02/10 12:00 Eastern | | |
| 8082 PCBs | 11/16/10 12:00 | |
| Solids, Dry Weight | 01/31/11 12:00 | |
| Mercury, Total 7471B | 11/30/10 12:00 | |
| 8270D LL SVOC TCL | 11/16/10 12:00 | PLUS SIMs PAHs |
| 8081A Pesticides | 11/16/10 12:00 | |
| 6010C Full | 05/01/11 12:00 | |
| 8260B VOA | 11/16/10 12:00 | |

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

| Analysis | Expires | Comments |
|---|---|---|
| 1011013-08 GKHMS-SO-014-1010 [Solid] Sampled 11/02/10 14:00 Eastern | | |
| 8081A Pesticides | 11/16/10 14:00 | |
| 8082 PCBs | 11/16/10 14:00 | |
| 8260B VOA | 11/16/10 14:00 | |
| 8270D LL SVOC TCL | 11/16/10 14:00 | PLUS SIMs PAHs |
| 6010C Full | 05/01/11 14:00 | |
| Solids, Dry Weight | 01/31/11 14:00 | |
| Mercury, Total 7471B | 11/30/10 14:00 | |
| 1011013-09 GKHMS-SO-017-1010 [Solid] Sampled 11/02/10 10:00 Eastern | | |
| 8260B VOA | 11/16/10 10:00 | |
| 6010C Full | 05/01/11 10:00 | |
| 8082 PCBs | 11/16/10 10:00 | |
| Mercury, Total 7471B | 11/30/10 10:00 | |
| Solids, Dry Weight | 01/31/11 10:00 | |
| 8081A Pesticides | 11/16/10 10:00 | |
| 8270D LL SVOC TCL | 11/16/10 10:00 | PLUS SIMs PAHs |
| 1011013-10 GKHMS-SO-019-1010 [Solid] Sampled 11/02/10 10:20 Eastern | | |
| 8082 PCBs | 11/16/10 10:20 | |
| 8081A Pesticides | 11/16/10 10:20 | |
| 8260B VOA | 11/16/10 10:20 | |
| 8270D LL SVOC TCL | 11/16/10 10:20 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 10:20 | |
| Solids, Dry Weight | 01/31/11 10:20 | |
| 6010C Full | 05/01/11 10:20 | |
| 1011013-11 GKHMS-SO-021-1010 [Solid] Sampled 11/02/10 10:40 Eastern | | |
| 6010C Full | 05/01/11 10:40 | |
| 8270D LL SVOC TCL | 11/16/10 10:40 | PLUS SIMs PAHs |
| 8260B VOA | 11/16/10 10:40 | |
| 8082 PCBs | 11/16/10 10:40 | |
| 8081A Pesticides | 11/16/10 10:40 | |
| Mercury, Total 7471B | 11/30/10 10:40 | |
| Solids, Dry Weight | 01/31/11 10:40 | |

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

| Analysis | Expires | Comments |
|---|---|---|
| 1011013-12 GKHMS-SO-022-1010 [Solid] Sampled 11/02/10 11:00 Eastern | | |
| 8082 PCBs | 11/16/10 11:00 | |
| Solids, Dry Weight | 01/31/11 11:00 | |
| 6010C Full | 05/01/11 11:00 | |
| 8081A Pesticides | 11/16/10 11:00 | |
| 8260B VOA | 11/16/10 11:00 | |
| 8270D LL SVOC TCL | 11/16/10 11:00 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 11:00 | |
| 1011013-13 GKHMS-SO-023-1010 [Solid] Sampled 11/02/10 13:40 Eastern | | |
| 8260B VOA | 11/16/10 13:40 | |
| 8270D LL SVOC TCL | 11/16/10 13:40 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 13:40 | |
| 8082 PCBs | 11/16/10 13:40 | |
| 8081A Pesticides | 11/16/10 13:40 | |
| 6010C Full | 05/01/11 13:40 | |
| Solids, Dry Weight | 01/31/11 13:40 | |
| 1011013-14 GKHMS-SO-025-1010 [Solid] Sampled 11/02/10 11:20 Eastern | | |
| 8270D LL SVOC TCL | 11/16/10 11:20 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 11:20 | |
| Solids, Dry Weight | 01/31/11 11:20 | |
| 6010C Full | 05/01/11 11:20 | |
| 8081A Pesticides | 11/16/10 11:20 | |
| 8082 PCBs | 11/16/10 11:20 | |
| 8260B VOA | 11/16/10 11:20 | |
| 1011013-15 GKHMS-SO-028-1010 [Solid] Sampled 11/02/10 13:20 Eastern | | |
| Solids, Dry Weight | 01/31/11 13:20 | |
| 6010C Full | 05/01/11 13:20 | |
| 8081A Pesticides | 11/16/10 13:20 | |
| Mercury, Total 7471B | 11/30/10 13:20 | |
| 8270D LL SVOC TCL | 11/16/10 13:20 | PLUS SIMs PAHs |
| 8260B VOA | 11/16/10 13:20 | |
| 8082 PCBs | 11/16/10 13:20 | |

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

| Analysis | Expires | Comments |
|---|---|---|
| 1011013-16 GKHMS-SO-030-1010 [Solid] Sampled 11/02/10 12:40 Eastern | | |
| Mercury, Total 7471B | 11/30/10 12:40 | |
| 8260B VOA | 11/16/10 12:40 | |
| 8082 PCBs | 11/16/10 12:40 | |
| 8081A Pesticides | 11/16/10 12:40 | |
| 6010C Full | 05/01/11 12:40 | |
| 8270D LL SVOC TCL | 11/16/10 12:40 | PLUS SIMs PAHs |
| Solids, Dry Weight | 01/31/11 12:40 | |
| 1011013-17 GKHMS-SO-031-1010 [Solid] Sampled 11/02/10 11:40 Eastern | | |
| 8081A Pesticides | 11/16/10 11:40 | |
| 8260B VOA | 11/16/10 11:40 | |
| 8270D LL SVOC TCL | 11/16/10 11:40 | PLUS SIMs PAHs |
| Mercury, Total 7471B | 11/30/10 11:40 | |
| Solids, Dry Weight | 01/31/11 11:40 | |
| 8082 PCBs | 11/16/10 11:40 | |
| 6010C Full | 05/01/11 11:40 | |
| 1011013-18 GKHMS-SO-032-1010 [Solid] Sampled 11/02/10 12:20 Eastern | | |
| 8260B VOA | 11/16/10 12:20 | |
| Solids, Dry Weight | 01/31/11 12:20 | |
| 6010C Full | 05/01/11 12:20 | |
| 8270D LL SVOC TCL | 11/16/10 12:20 | PLUS SIMs PAHs |
| 8081A Pesticides | 11/16/10 12:20 | |
| 8082 PCBs | 11/16/10 12:20 | |
| Mercury, Total 7471B | 11/30/10 12:20 | |
| 1011013-19 GKHMS-SO-034-1010 [Solid] Sampled 11/02/10 13:00 Eastern | | |
| 6010C Full | 05/01/11 13:00 | |
| Solids, Dry Weight | 01/31/11 13:00 | |
| 8082 PCBs | 11/16/10 13:00 | |
| Mercury, Total 7471B | 11/30/10 13:00 | |
| 8260B VOA | 11/16/10 13:00 | |
| 8270D LL SVOC TCL | 11/16/10 13:00 | PLUS SIMs PAHs |
| 8081A Pesticides | 11/16/10 13:00 | |

CENTAURI LABS™

WORK ORDER

1011013

Approved

Printed: 11/5/2010 10:52:13AM

*Due Date: 11/18/10 00:00 (14 day TAT)*

*Date Received: 11/04/10 12:50*

| Analysis | Expires | Comments |
|---|---|---|
| 1011013-20 GKHMS-SO-FD002-1010 [Solid] | | Sampled 11/02/10 00:00 Eastern |
| 8082 PCBs | 11/16/10 00:00 | |
| 8260B VOA | 11/16/10 00:00 | |
| 8270D LL SVOC TCL | 11/16/10 00:00 | PLUS SIMs PAHs |
| Solids, Dry Weight | 01/31/11 00:00 | |
| Mercury, Total 7471B | 11/30/10 00:00 | |
| 6010C Full | 05/01/11 00:00 | |
| 8081A Pesticides | 11/16/10 00:00 | |
| 1011013-21 GKHMS-SO-FD001-1010 [Solid] | | Sampled 11/02/10 00:00 Eastern |
| 8270D LL SVOC TCL | 11/16/10 00:00 | PLUS SIMs PAHs |
| 8260B VOA | 11/16/10 00:00 | |
| 8082 PCBs | 11/16/10 00:00 | |
| 8081A Pesticides | 11/16/10 00:00 | |
| 6010C Full | 05/01/11 00:00 | |
| Mercury, Total 7471B | 11/30/10 00:00 | |
| Solids, Dry Weight | 01/31/11 00:00 | |
| 1011013-22 TRIP BLANK [Water] | | Sampled 11/04/10 00:00 Eastern |
| 8260B LL VOA | 11/18/10 00:00 | |

Container Locations

| | |
|---|---|
| 16oz jar | WG-4 |
| VOA 40mL Vial w/ HCL | VW-1 |
| VOA 40mL Vial w/ NaBiSO4 | VW-6 |

Reviewed By

Date 11/5/10

# HOLDING TIME SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011013-01 | 11/02/10 08:00 | 12/01/10 08:11 | 11/11/10 08:10 | 9.05 | 14.00 | 12/15/10 21:14 | 34.54 | 40.00 | |
| 1011013-02 | 11/02/10 08:20 | 12/01/10 08:11 | 11/11/10 08:10 | 9.03 | 14.00 | 12/15/10 14:43 | 34.27 | 40.00 | |
| 1011013-03 | 11/02/10 08:40 | 12/01/10 08:11 | 11/11/10 08:10 | 9.02 | 14.00 | 12/15/10 15:13 | 34.29 | 40.00 | |
| 1011013-04 | 11/02/10 09:00 | 12/01/10 08:11 | 11/11/10 08:10 | 9.01 | 14.00 | 12/15/10 15:43 | 34.31 | 40.00 | |
| 1011013-05 | 11/02/10 09:20 | 12/01/10 08:11 | 11/11/10 08:10 | 8.99 | 14.00 | 12/15/10 16:13 | 34.34 | 40.00 | |
| 1011013-06 | 11/02/10 09:40 | 12/01/10 08:11 | 11/11/10 08:10 | 8.98 | 14.00 | 12/15/10 16:43 | 34.36 | 40.00 | |
| 1011013-07 | 11/02/10 12:00 | 12/01/10 08:11 | 11/11/10 08:10 | 8.88 | 14.00 | 12/15/10 17:13 | 34.38 | 40.00 | |
| 1011013-08 | 11/02/10 14:00 | 12/01/10 08:11 | 11/11/10 08:10 | 8.80 | 14.00 | 12/15/10 17:43 | 34.40 | 40.00 | |
| 1011013-09 | 11/02/10 10:00 | 12/01/10 08:11 | 11/11/10 08:10 | 8.97 | 14.00 | 12/15/10 21:44 | 34.57 | 40.00 | |
| 1011013-10 | 11/02/10 10:20 | 12/01/10 08:11 | 11/11/10 08:10 | 8.95 | 14.00 | 12/21/10 02:33 | 39.77 | 40.00 | |
| 1011013-11 | 11/02/10 10:40 | 12/01/10 08:11 | 11/11/10 08:10 | 8.94 | 14.00 | 12/21/10 03:03 | 39.79 | 40.00 | |
| 1011013-12 | 11/02/10 11:00 | 12/01/10 08:11 | 11/11/10 08:10 | 8.92 | 14.00 | 12/21/10 03:34 | 39.81 | 40.00 | |
| 1011013-13 | 11/02/10 13:40 | 12/01/10 08:11 | 11/11/10 08:10 | 8.81 | 14.00 | 12/21/10 04:04 | 39.83 | 40.00 | |
| 1011013-14 | 11/02/10 11:20 | 12/01/10 08:11 | 11/11/10 08:10 | 8.91 | 14.00 | 12/15/10 18:13 | 34.42 | 40.00 | |
| 1011013-15 | 11/02/10 13:20 | 12/01/10 08:11 | 11/11/10 08:10 | 8.83 | 14.00 | 12/15/10 18:44 | 34.44 | 40.00 | |
| 1011013-16 | 11/02/10 12:40 | 12/01/10 08:11 | 11/11/10 08:10 | 8.85 | 14.00 | 12/21/10 04:35 | 39.85 | 40.00 | |
| 1011013-17 | 11/02/10 11:40 | 12/01/10 08:11 | 11/11/10 08:10 | 8.90 | 14.00 | 12/15/10 19:14 | 34.46 | 40.00 | |
| 1011013-18 | 11/02/10 12:20 | 12/01/10 08:11 | 11/11/10 08:10 | 8.87 | 14.00 | 12/15/10 19:43 | 34.48 | 40.00 | |
| 1011013-19 | 11/02/10 13:00 | 12/01/10 08:11 | 11/11/10 08:10 | 8.84 | 14.00 | 12/15/10 20:13 | 34.50 | 40.00 | |
| 1011013-20 | 11/02/10 00:00 | 12/01/10 08:11 | 11/11/10 08:10 | 9.38 | 14.00 | 12/15/10 20:44 | 34.52 | 40.00 | |
| 1011013-21 | 11/02/10 00:00 | 12/01/10 08:11 | 11/11/10 11:55 | 9.54 | 14.00 | 12/21/10 06:03 | 39.76 | 40.00 | |

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | MG/KG | GKHMS-SO-007-1010 | 1012008-05 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-001-1010 | 1012008-01 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-019-1010 | 1012008-10 | NM | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-017-1010 | 1012008-09 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-017-1010 | 1012008-09 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-014-1010 | 1012008-08 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-014-1010 | 1012008-08 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-012-1010 | 1012008-07 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-012-1010 | 1012008-07 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-021-1010 | 1012008-11 | NM | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-011-1010 | 1012008-06 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-021-1010 | 1012008-11 | SUR | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-007-1010 | 1012008-05 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-005-1010 | 1012008-04 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-005-1010 | 1012008-04 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | MG/KG | GKHMS-SO-003-1010 | 1012008-03 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-003-1010 | 1012008-03 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-002-1010 | 1012008-02 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-002-1010 | 1012008-02 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-001-1010 | 1012008-01 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-011-1010 | 1012008-06 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-030-1010 | 1012008-16 | NM | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-FD002-1010 | 1012008-20 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-FD001-1010 | 1012008-21 | SUR | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-FD001-1010 | 1012008-21 | NM | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-034-1010 | 1012008-19 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-034-1010 | 1012008-19 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-032-1010 | 1012008-18 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-032-1010 | 1012008-18 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-031-1010 | 1012008-17 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-019-1010 | 1012008-10 | SUR | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-030-1010 | 1012008-16 | SUR | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-FD002-1010 | 1012008-20 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | MG/KG | GKHMS-SO-028-1010 | 1012008-15 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-028-1010 | 1012008-15 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-025-1010 | 1012008-14 | SUR | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-025-1010 | 1012008-14 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |
| OS | MG/KG | GKHMS-SO-023-1010 | 1012008-13 | SUR | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-023-1010 | 1012008-13 | NM | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-022-1010 | 1012008-12 | SUR | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-022-1010 | 1012008-12 | NM | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-031-1010 | 1012008-17 | NM | 11/02/2010 | 11/11/2010 | 12/15/2010 | 9 | 34 | 43 |

# NAS KEY WEST
# SOIL DATA
# CTOJM16KW_009

| FRACTION | CHEMICAL | GKHMS-SO-031-1010 | UNITS | GKHMS-SO-FD002-1010 | RPD | D |
|---|---|---|---|---|---|---|
| OS | BIS(2-ETHYLHEXYL)PHTHALATE | 0.0973 J | MG/KG | ND | 200.00 | 0.10 |
| OS | DI-N-BUTYL PHTHALATE | 0.135 J | MG/KG | ND | 200.00 | 0.14 |

**Current RPD Quality Control Limit: 50 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35109 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35109-TUN1 | SEQ-TUN1.D | 12/07/10 17:31 |
| Cal Standard | 0L35109-CAL1 | SEQ-CAL1.D | 12/07/10 17:58 |
| Cal Standard | 0L35109-CAL2 | SEQ-CAL2.D | 12/07/10 18:29 |
| Cal Standard | 0L35109-CAL3 | SEQ-CAL3.D | 12/07/10 18:59 |
| Cal Standard | 0L35109-CAL4 | SEQ-CAL4.D | 12/07/10 19:29 |
| Cal Standard | 0L35109-CAL5 | SEQ-CAL5.D | 12/07/10 19:59 |
| Cal Standard | 0L35109-CAL6 | SEQ-CAL6.D | 12/07/10 20:29 |
| Cal Standard | 0L35109-CAL7 | SEQ-CAL7.D | 12/07/10 20:59 |
| Cal Standard | 0L35109-CAL9 | SEQ-CAL9.D | 12/07/10 21:58 |
| Cal Standard | 0L35109-CALA | SEQ-CALA.D | 12/07/10 22:28 |
| Cal Standard | 0L35109-CALB | SEQ-CALB.D | 12/07/10 22:57 |
| Cal Standard | 0L35109-CALC | SEQ-CALC.D | 12/07/10 23:27 |
| Cal Standard | 0L35109-CALD | SEQ-CALD.D | 12/07/10 23:56 |
| Cal Standard | 0L35109-CALE | SEQ-CALE.D | 12/08/10 00:25 |
| Cal Standard | 0L35109-CALF | SEQ-CALF.D | 12/08/10 00:54 |
| Cal Standard | 0L35109-CALG | SEQ-CALG.D | 12/08/10 01:23 |
| Cal Standard | 0L35109-CALH | SEQ-CALH.D | 12/08/10 01:52 |
| Cal Standard | 0L35109-CALJ | SEQ-CALJ.D | 12/08/10 02:51 |
| Cal Standard | 0L35109-CALK | SEQ-CALK.D | 12/08/10 03:20 |
| MS Tune | 0L35109-TUN2 | SEQ-TUN2.D | 12/08/10 03:49 |
| Initial Cal Check | 0L35109-ICV3 | SEQ-ICV3.D | 12/08/10 10:01 |
| Initial Cal Check | 0L35109-ICV4 | SEQ-ICV4.D | 12/08/10 10:31 |
| Initial Cal Check | 0L35109-ICV5 | SEQ-ICV5.D | 12/08/10 11:04 |
| Initial Cal Check | 0L35109-ICV7 | SEQ-ICV7.D | 12/08/10 12:04 |
| Initial Cal Check | 0L35109-ICVA | SEQ-ICVA.D | 12/08/10 14:09 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/07/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 17:31 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 44.4 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 47.6 | PASS |
| 70 | Less than 2% of 69 | 0.454 | PASS |
| 127 | 40 - 60% of 198 | 57.6 | PASS |
| 197 | Less than 1% of 198 | 0.468 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.79 | PASS |
| 275 | 10 - 30% of 198 | 25.5 | PASS |
| 365 | 1 - 200% of 198 | 3.23 | PASS |
| 441 | 0.001 - 100% of 443 | 77 | PASS |
| 442 | 40 - 200% of 198 | 77 | PASS |
| 443 | 17 - 23% of 442 | 20.1 | PASS |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN2.D | Injection Date: | 12/08/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 03:49 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN2 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 46.1 | PASS |
| 68 | Less than 2% of 69 | 0.759 | PASS |
| 69 | Less than 200% of 198 | 46.1 | PASS |
| 70 | Less than 2% of 69 | 0.512 | PASS |
| 127 | 40 - 60% of 198 | 57.3 | PASS |
| 197 | Less than 1% of 198 | 0.26 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 7.25 | PASS |
| 275 | 10 - 30% of 198 | 24.8 | PASS |
| 365 | 1 - 200% of 198 | 3.45 | PASS |
| 441 | 0.001 - 100% of 443 | 73.2 | PASS |
| 442 | 40 - 200% of 198 | 81 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0351002 | Instrument: | MS-BNA3 |
| Matrix: | Water | Calibration Date: | 12/7/2010 5:31:41PM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 0.3901063 | 11.47408 | 15.49443 | 2.260094E-02 | | | 15 | |
| Acenaphthene | 1.269597 | 4.903152 | 10.465 | 4.763744E-02 | | | CCC (30) | |
| Acenaphthylene | 1.959083 | 4.154041 | 10.24944 | 4.133794E-02 | | | 15 | |
| Acetophenone | 1.714419 | 4.130585 | 7.227222 | 3.094706E-02 | | | 15 | |
| Aniline | 1.900007 | 3.284542 | 6.390556 | 8.799762E-02 | | | 15 | |
| Anthracene | 1.161307 | 4.582293 | 12.34144 | 4.433106E-02 | | | 15 | |
| Atrazine | 0.2293025 | 11.08458 | 11.88522 | 5.410601E-02 | | | 15 | |
| Benzaldehyde | 1.057258 | 4.80575 | 6.264667 | 2.697619E-02 | | | 15 | |
| Benzidine | 0.6369679 | 13.40551 | 13.89371 | 2.662737E-02 | | | 15 | |
| Benzo(a)anthracene | 1.193431 | 4.385626 | 15.53889 | 2.902238E-02 | | | 15 | |
| Benzo(a)pyrene | 1.061849 | 12.15633 | 17.34322 | 4.821226E-02 | | | CCC (30) | |
| Benzo(b)fluoranthene | 1.192834 | 9.469779 | 16.90622 | 0.0364467 | | | 15 | |
| Benzo(g,h,i)perylene | 0.8673976 | 9.832135 | 19.57289 | 8.613339E-02 | | | 15 | |
| Benzoic acid | 0.1667293 | 34.36929 NOT TC | 7.9865 | 0.5465472 | 0.9972413 | | 0.995 | |
| Benzo(k)fluoranthene | 1.234244 | 5.160575 | 16.9405 | 4.784776E-02 | | | 15 | |
| Benzyl alcohol | 0.7918529 | 8.384648 | 6.922 | 7.858658E-02 | | | 15 | |
| 1,1-Biphenyl | 1.647464 | 6.941428 | 9.711111 | 3.672288E-02 | | | 15 | |
| 4-Bromophenyl-phenylether | 0.2396007 | 4.615409 | 11.69178 | 3.160712E-02 | | | 15 | |
| Butylbenzylphthalate | 0.6659619 | 10.75201 | 14.81629 | 1.927271E-02 | | | 15 | |
| Caprolactam | 0.0983814 | 13.1947 | 8.739 | 0.1800642 | | | 15 | |
| Carbazole | 1.033588 | 5.537093 | 12.53067 | 4.187015E-02 | | | 15 | |
| 4-Chloro-3-methylphenol | 0.2791833 | 13.73393 | 8.943625 | 3.777953E-02 | | | CCC (30) | |
| 4-Chloroaniline | 0.4236872 | 4.041706 | 8.357222 | 5.579471E-02 | | | 15 | |
| Bis(2-chloroethoxy)methane | 0.4015206 | 5.043312 | 7.969778 | 4.750625E-02 | | | 15 | |
| Bis(2-chloroethyl)ether | 1.242957 | 3.412662 | 6.456667 | 9.612344E-02 | | | 15 | |
| 2,2'-Oxybis-1-chloropropane | 1.791162 | 4.894321 | 7.083555 | 4.525434E-02 | | | 15 | |
| 2-Chloronaphthalene | 1.223416 | 4.351312 | 9.738445 | 4.355056E-02 | | | 15 | |
| 2-Chlorophenol | 1.320483 | 5.059863 | 6.533111 | 6.571699E-02 | | | 15 | |
| 4-Chlorophenyl phenyl ether | 0.6482639 | 4.698305 | 11.09078 | 0.034051 | | | 15 | |
| Chrysene | 1.223868 | 3.849079 | 15.58856 | 3.824456E-02 | | | 15 | |
| Dibenz(a,h)anthracene | 0.843577 | 13.39613 | 19.10544 | 0.064455 | | | 15 | |
| Dibenzofuran | 1.702459 | 5.478968 | 10.67456 | 4.805089E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_009
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | 1.274102 | 10.33933 | 12.96089 | 3.198878E-02 | | | 15 | |
| 1,4-Dichlorobenzene | 1.590354 | 5.068212 | 6.791 | 3.285709E-02 | | | CCC (30) | |
| 1,3-Dichlorobenzene | 1.556634 | 4.82334 | 6.712111 | 3.840334E-02 | | | 15 | |
| 1,2-Dichlorobenzene | 1.498241 | 3.960279 | 6.972778 | 3.854247E-02 | | | 15 | |
| 2,6-Dichlorophenol | 0.2593817 | 8.91257 | 8.374111 | 1.822758E-02 | | | 15 | |
| 2,4-Dichlorophenol | 0.2708646 | 11.75671 | 8.104445 | 7.489039E-02 | | | CCC (30) | |
| Diethylphthalate | 1.375716 | 4.066081 | 10.94922 | 7.018966E-02 | | | 15 | |
| 2,4-Dimethylphenol | 0.3567735 | 5.191635 | 7.862444 | 7.425377E-02 | | | 15 | |
| Dimethyl phthalate | 1.360327 | 2.760394 | 10.08487 | 0.1018539 | | | 15 | |
| 4,6-Dinitro-2-methylphenol | 0.1141426 | 30.80017 | 11.15414 | 8.948876E-02 | 0.9987724 OK | | 0.995 | |
| 2,4-Dinitrophenol | 0.1317034 | 34.87347 | 10.48617 | 6.439793E-02 | 0.9970944 OK | | SPCC (0.05) | |
| 2,4-Dinitrotoluene | 0.3873439 | 14.36567 | 10.647 | 8.872293E-02 | | | 15 | |
| 2,6-Dinitrotoluene | 0.3161974 | 6.525335 | 10.15025 | 8.086076E-02 | | | 15 | |
| Di-n-octylphthalate | 1.581621 | 12.56055 | 16.37467 | 1.584676E-02 | | | CCC (30) | |
| 1,4-Dioxane | 0.5824199 | 4.647384 | 3.461222 | 6.378529E-02 | | | 15 | |
| 1,2-Diphenylhydrazine | 0.8266591 | 5.85195 | 11.28589 | 4.479164E-02 | | | 15 | |
| Bis(2-ethylhexyl)phthalate | 0.8698317 | 14.06275 | 15.55788 | 2.160886E-02 | | | 15 | |
| Fluoranthene | 1.133942 | 6.426527 | 13.74544 | 3.010434E-02 | | | CCC (30) | |
| Fluorene | 1.377626 | 2.611998 | 11.09611 | 4.668763E-02 | | | 15 | |
| 2-Fluorobiphenyl | 1.429188 | 5.299247 | 9.590445 | 4.316615E-02 | | | 15 | |
| 2-Fluorophenol | 1.163095 | 4.537913 | 5.309444 | 4.883207E-02 | | | 15 | |
| Hexachlorobenzene | 0.2675089 | 4.583392 | 11.79278 | 3.935515E-02 | | | 15 | |
| Hexachlorobutadiene | 0.1897728 | 3.248719 | 8.468444 | 2.541857E-02 | | | CCC (30) | |
| Hexachlorocyclopentadiene | 0.2719697 | 13.77204 | 9.354667 | 0.0244126 | | | SPCC (0.05) | |
| Hexachloroethane | 0.5839827 | 5.21415 | 7.374556 | 2.041353E-02 | | | 15 | |
| Indeno(1,2,3-cd)pyrene | 1.046936 | 11.15244 | 19.08733 | 6.484222E-02 | | | 15 | |
| Isophorone | 0.6532573 | 4.164348 | 7.718667 | 0.1211494 | | | 15 | |
| 1-Methylnaphthalene | 0.6166441 | 3.550294 | 9.265111 | 3.593918E-02 | | | 15 | |
| 2-Methylnaphthalene | 0.5927061 | 2.758044 | 9.143334 | 3.771168E-02 | | | 15 | |
| 2-Methylphenol | 1.129245 | 5.890276 | 7.051444 | 5.962201E-02 | | | 15 | |
| 3-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |
| 4-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_009
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | 1.098195 | 7.090559 | 8.304222 | 3.938283E-02 | | | 15 | |
| 4-Nitroaniline | 0.2492193 | 10.6119 | 11.10488 | 0.1012271 | | | 15 | |
| 3-Nitroaniline | 0.3039612 | 12.46666 | 10.355 | 8.761057E-02 | | | 15 | |
| 2-Nitroaniline | 0.3312246 | 12.35964 | 9.851625 | 5.605301E-02 | | | 15 | |
| Nitrobenzene | 0.3690184 | 3.243848 | 7.433 | 8.670105E-02 | | | 15 | |
| Nitrobenzene-d5 | 0.3614526 | 4.787386 | 7.410333 | 7.322044E-02 | | | 15 | |
| 4-Nitrophenol | 0.1965166 | 21.52661 | 10.55771 | 9.363783E-02 | 0.9988059 OK | | SPCC (0.05) | |
| 2-Nitrophenol | 0.1835837 | 10.09707 | 7.816143 | 0.0460575 | | | CCC (30) | |
| N-Nitrosodimethylamine | 0.7067011 | 3.972251 | 3.796889 | 0.112963 | | | 15 | |
| N-Nitrosodiphenylamine | 0.7463088 | 5.779425 | 11.23333 | 6.231948E-02 | | | CCC (30) | |
| N-Nitroso-di-n-propylamine | 0.8544344 | 3.82209 | 7.235111 | 0.132911 | | | SPCC (0.05) | |
| Pentachlorophenol | 0.1195033 | 31.15399 | 12.02443 | 2.565489E-02 | 0.9986727 OK | | CCC (30) | * |
| Phenanthrene | 1.206234 | 6.535522 | 12.27844 | 3.596534E-02 | | | 15 | |
| Phenol | 1.491659 | 4.640746 | 6.357889 | 0.1599589 | | | CCC (30) | |
| Phenol-d6 | 1.434991 | 4.1192 | 6.341889 | 0.1499449 | | | 15 | |
| Pyrene | 1.380107 | 4.996263 | 14.02522 | 3.880092E-02 | | | 15 | |
| Pyridine | 1.377958 | 4.121152 | 3.838111 | 8.916254E-02 | | | 15 | |
| Terphenyl-d14 | 0.8848596 | 4.382233 | 14.21 | 0.0194432 | | | 15 | |
| 1,2,4,5-Tetrachlorobenzene | 0.3170295 | 5.342813 | 9.355222 | 3.483054E-02 | | | 15 | |
| 2,3,4,6-Tetrachlorophenol | 0.2870772 | 13.54627 | 10.82871 | 2.564344E-02 | | | 15 | |
| 2,4,6-Tribromophenol | 0.1159566 | 8.307173 | 11.39514 | 4.977028E-02 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.3581999 | 4.302402 | 8.212111 | 0.0416875 | | | 15 | |
| 2,4,6-Trichlorophenol | 0.3425101 | 14.8708 | 9.487875 | 3.202461E-02 | | | CCC (30) | |
| 2,4,5-Trichlorophenol | 0.3356329 | 18.90298 | 9.529444 | 3.382823E-02 | 0.9992251 | | 0.995 | |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV3.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV3 | Injection Time: | 10:01 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Benzaldehyde | A | 50.00 | 47.93 | 1.057258 | 1.013398 | | -4.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV4.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV4 | Injection Time: | 10:31 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 3,3'-Dichlorobenzidine | A | 50.00 | 47.61 | 0.3901063 | 0.3714708 | | -4.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV5.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV5 | Injection Time: | 11:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Acetophenone | A | 50.00 | 48.49 | 1.714419 | 1.662733 | | -3.0 | 20 |
| Atrazine | A | 50.00 | 49.51 | 0.2293025 | 0.2270669 | | -1.0 | 20 |
| 1,1-Biphenyl | A | 50.00 | 46.63 | 1.647464 | 1.536423 | | -6.7 | 20 |
| Caprolactam | A | 50.00 | 52.93 | 0.0983814 | 0.1041517 | | 5.9 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 46.99 | 0.3170295 | 0.2979379 | | -6.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV7.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV7 | Injection Time: | 12:04 |

| COMPOUND | TYPE | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| N-Nitrosodiphenylamine | A | 50.00 | 51.34 | 0.7463088 | 0.7662808 | | 2.7 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 43.50 | 0.2870772 | 0.249777 | | -13.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Bromophenyl-phenylether | A | 50.00 | 51.04 | 0.2396007 | 0.2446022 | | 2.1 | 20 |
| Butylbenzylphthalate | A | 50.00 | 54.90 | 0.6659619 | 0.731176 | | 9.8 | 20 |
| Carbazole | A | 50.00 | 44.33 | 1.033588 | 0.9164384 | | -11.3 | 20 |
| 4-Chloro-3-methylphenol | A | 50.00 | 51.74 | 0.2791833 | 0.2888752 | | 3.5 | 20 |
| 4-Chloroaniline | A | 50.00 | 50.74 | 0.4236872 | 0.4299877 | | 1.5 | 20 |
| Bis(2-chloroethoxy)methane | A | 50.00 | 49.55 | 0.4015206 | 0.397907 | | -0.9 | 20 |
| Bis(2-chloroethyl)ether | A | 50.00 | 49.26 | 1.242957 | 1.224652 | | -1.5 | 20 |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 49.35 | 1.791162 | 1.767772 | | -1.3 | 20 |
| 2-Chloronaphthalene | A | 50.00 | 49.94 | 1.223416 | 1.222017 | | -0.1 | 20 |
| 2-Chlorophenol | A | 50.00 | 50.72 | 1.320483 | 1.339391 | | 1.4 | 20 |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 48.94 | 0.6482639 | 0.6345678 | | -2.1 | 20 |
| Dibenzofuran | A | 50.00 | 52.29 | 1.702459 | 1.780513 | | 4.6 | 20 |
| Di-n-butylphthalate | A | 50.00 | 53.56 | 1.274102 | 1.364881 | | 7.1 | 20 |
| 2,4-Dichlorophenol | A | 50.00 | 53.23 | 0.2708646 | 0.2883479 | | 6.5 | 20 |
| Diethylphthalate | A | 50.00 | 50.07 | 1.375716 | 1.37777 | | 0.1 | 20 |
| 2,4-Dimethylphenol | A | 50.00 | 45.98 | 0.3567735 | 0.3280623 | | -8.0 | 20 |
| Dimethyl phthalate | A | 50.00 | 50.41 | 1.360327 | 1.371495 | | 0.8 | 20 |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 43.80 | 0.1141426 | 0.118963 | | -12.4 | 20 |
| 2,4-Dinitrophenol | L | 50.00 | 41.03 | 0.1317034 | 0.1214933 | 0.05 | -17.9 | 20 |
| 2,4-Dinitrotoluene | A | 50.00 | 54.89 | 0.3873439 | 0.4252053 | | 9.8 | 20 |
| 2,6-Dinitrotoluene | A | 50.00 | 50.97 | 0.3161974 | 0.3223188 | | 1.9 | 20 |
| Di-n-octylphthalate | A | 50.00 | 52.54 | 1.581621 | 1.662112 | | 5.1 | 20 |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 54.27 | 0.8698317 | 0.944141 | | 8.5 | 20 |
| Hexachlorobenzene | A | 50.00 | 48.64 | 0.2675089 | 0.2602515 | | -2.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 50.27 | 0.1897728 | 0.1907933 | | 0.5 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 47.27 | 0.2719697 | 0.2571016 | 0.05 | -5.5 | 20 |
| Hexachloroethane | A | 50.00 | 51.17 | 0.5839827 | 0.5976224 | | 2.3 | 20 |
| Isophorone | A | 50.00 | 49.58 | 0.6532573 | 0.6477211 | | -0.8 | 20 |
| 2-Methylphenol | A | 50.00 | 50.79 | 1.129245 | 1.147068 | | 1.6 | 20 |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 3-Methylphenol | A | 50.00 | 46.61 | 1.146708 | 1.068856 | | -6.8 | 20 |
| 4-Methylphenol | A | 50.00 | 46.61 | 1.146708 | 1.068856 | | -6.8 | 20 |
| Naphthalene | A | 50.00 | 47.81 | 1.098195 | 1.050188 | | -4.4 | 20 |
| 4-Nitroaniline | A | 50.00 | 48.63 | 0.2492193 | 0.2423702 | | -2.7 | 20 |
| 3-Nitroaniline | A | 50.00 | 54.97 | 0.3039612 | 0.3341951 | | 9.9 | 20 |
| 2-Nitroaniline | A | 50.00 | 58.93 | 0.3312246 | 0.3904014 | | 17.9 | 20 |
| Nitrobenzene | A | 50.00 | 50.66 | 0.3690184 | 0.3738603 | | 1.3 | 20 |
| 4-Nitrophenol | L | 50.00 | 45.62 | 0.1965166 | 0.2046322 | 0.05 | -8.8 | 20 |
| 2-Nitrophenol | A | 50.00 | 50.69 | 0.1835837 | 0.1861302 | | 1.4 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 51.06 | 0.8544344 | 0.872589 | 0.05 | 2.1 | 20 |
| Pentachlorophenol | L | 50.00 | 47.55 | 0.1195033 | 0.1362715 | | -4.9 | 20 |
| Phenol | A | 50.00 | 49.32 | 1.491659 | 1.471449 | | -1.4 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 52.15 | 0.3425101 | 0.3572326 | | 4.3 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 48.75 | 0.3356329 | 0.3771646 | | -2.5 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 48.29 | 1.429188 | 1.380386 | | -3.4 | 20 |
| 2-Fluorophenol | A | 100.0 | 101.4 | 1.163095 | 1.179091 | | 1.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 50.95 | 0.3614526 | 0.3682965 | | 1.9 | 20 |
| Phenol-d6 | A | 100.0 | 97.70 | 1.434991 | 1.402014 | | -2.3 | 20 |
| Terphenyl-d14 | A | 50.00 | 52.29 | 0.8848596 | 0.925348 | | 4.6 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 97.03 | 0.1159566 | 0.1125125 | | -3.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35403 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35403-TUN1 | SEQ-TUN1.D | 12/15/10 11:15 |
| Calibration Check | 0L35403-CCV1 | SEQ-CCV1.D | 12/15/10 11:42 |
| LCS | 0L14029-BS1 | 1200823.D | 12/15/10 13:43 |
| Blank | 0L14029-BLK1 | 1200822.D | 12/15/10 14:13 |
| 1011013-02 GKHMS-SO-002-1010 | 1012008-02 | 1200802.D | 12/15/10 14:43 |
| 1011013-03 GKHMS-SO-003-1010 | 1012008-03 | 1200803.D | 12/15/10 15:13 |
| 1011013-04 GKHMS-SO-005-1010 | 1012008-04 | 1200804.D | 12/15/10 15:43 |
| 1011013-05 GKHMS-SO-007-1010 | 1012008-05 | 1200805.D | 12/15/10 16:13 |
| 1011013-06 GKHMS-SO-011-1010 | 1012008-06 | 1200806.D | 12/15/10 16:43 |
| 1011013-07 GKHMS-SO-012-1010 | 1012008-07 | 1200807.D | 12/15/10 17:13 |
| 1011013-08 GKHMS-SO-014-1010 | 1012008-08 | 1200808.D | 12/15/10 17:43 |
| 1011013-14 GKHMS-SO-025-1010 | 1012008-14 | 1200814.D | 12/15/10 18:13 |
| 1011013-15 GKHMS-SO-028-1010 | 1012008-15 | 1200815.D | 12/15/10 18:44 |
| 1011013-17 GKHMS-SO-031-1010 | 1012008-17 | 1200817.D | 12/15/10 19:14 |
| 1011013-18 GKHMS-SO-032-1010 | 1012008-18 | 1200818.D | 12/15/10 19:43 |
| 1011013-19 GKHMS-SO-034-1010 | 1012008-19 | 1200819.D | 12/15/10 20:13 |
| 1011013-20 GKHMS-SO-FD002-1010 | 1012008-20 | 1200820.D | 12/15/10 20:44 |
| 1011013-01 GKHMS-SO-001-1010 | 1012008-01 | 1200801.D | 12/15/10 21:14 |
| 1011013-09 GKHMS-SO-017-1010 | 1012008-09 | 1200809.D | 12/15/10 21:44 |
| 1011013-01 | 0L14029-MS1 | 1200801B.D | 12/15/10 22:14 |
| 1011013-01 | 0L14029-MSD1 | 1200801C.D | 12/15/10 22:44 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/15/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 11:15 |
| Sequence: | 0L35403 | Lab Sample ID: | 0L35403-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 39.7 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 40.9 | PASS |
| 70 | Less than 2% of 69 | 0.257 | PASS |
| 127 | 40 - 60% of 198 | 54.4 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.17 | PASS |
| 275 | 10 - 30% of 198 | 27.2 | PASS |
| 365 | 1 - 200% of 198 | 3.59 | PASS |
| 441 | 0.001 - 100% of 443 | 77.4 | PASS |
| 442 | 40 - 200% of 198 | 97.8 | PASS |
| 443 | 17 - 23% of 442 | 19.2 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35403 | Injection Date: | 12/15/10 |
| Lab Sample ID: | 0L35403-CCV1 | Injection Time: | 11:42 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 43.32 | 0.3901063 | 0.337968 | | -13.4 | 20 | |
| Acetophenone | A | 50.00 | 52.85 | 1.714419 | 1.812169 | | 5.7 | 20 | |
| Atrazine | A | 50.00 | 56.06 | 0.2293025 | 0.2570962 | | 12.1 | 20 | |
| Benzaldehyde | A | 50.00 | 43.24 | 1.057258 | 0.9144419 | | -13.5 | 20 | |
| 1,1-Biphenyl | A | 50.00 | 49.08 | 1.647464 | 1.617089 | | -1.8 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 51.65 | 0.2396007 | 0.2475302 | | 3.3 | 20 | |
| Butylbenzylphthalate | A | 50.00 | 52.48 | 0.6659619 | 0.6989637 | | 5.0 | 20 | |
| Caprolactam | A | 50.00 | 52.83 | 0.0983814 | 0.1039494 | | 5.7 | 20 | |
| Carbazole | A | 50.00 | 49.29 | 1.033588 | 1.01883 | | -1.4 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 59.87 | 0.2791833 | 0.3343155 | | 19.7 | 20 | |
| 4-Chloroaniline | A | 50.00 | 50.75 | 0.4236872 | 0.4300493 | | 1.5 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 45.89 | 0.4015206 | 0.3684943 | | -8.2 | 20 | |
| Bis(2-chloroethyl)ether | A | 50.00 | 43.63 | 1.242957 | 1.084543 | | -12.7 | 20 | |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 38.55 | 1.791162 | 1.381002 | | -22.9 | 20 | * |
| 2-Chloronaphthalene | A | 50.00 | 57.68 | 1.223416 | 1.411402 | | 15.4 | 20 | |
| 2-Chlorophenol | A | 50.00 | 49.77 | 1.320483 | 1.314318 | | -0.5 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 54.18 | 0.6482639 | 0.7024062 | | 8.4 | 20 | |
| Dibenzofuran | A | 50.00 | 50.35 | 1.702459 | 1.714448 | | 0.7 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 56.10 | 1.274102 | 1.429615 | | 12.2 | 20 | |
| 2,4-Dichlorophenol | A | 50.00 | 57.05 | 0.2708646 | 0.3090351 | | 14.1 | 20 | |
| Diethylphthalate | A | 50.00 | 54.32 | 1.375716 | 1.494527 | | 8.6 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 55.51 | 0.3567735 | 0.3960628 | | 11.0 | 20 | |
| Dimethyl phthalate | A | 50.00 | 51.82 | 1.360327 | 1.409873 | | 3.6 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 51.94 | 0.1141426 | 0.1438798 | | 3.9 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 48.36 | 0.1317034 | 0.1495725 | 0.05 | -3.3 | 20 | |
| 2,4-Dinitrotoluene | A | 50.00 | 57.27 | 0.3873439 | 0.4436941 | | 14.5 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 52.15 | 0.3161974 | 0.3297772 | | 4.3 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 56.72 | 1.581621 | 1.794147 | | 13.4 | 20 | |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 55.12 | 0.8698317 | 0.9588837 | | 10.2 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35403 | Injection Date: | 12/15/10 |
| Lab Sample ID: | 0L35403-CCV1 | Injection Time: | 11:42 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobenzene | A | 50.00 | 52.85 | 0.2675089 | 0.2827747 | | 5.7 | 20 | |
| Hexachlorobutadiene | A | 50.00 | 57.31 | 0.1897728 | 0.2175115 | | 14.6 | 20 | |
| Hexachlorocyclopentadiene | A | 50.00 | 68.81 | 0.2719697 | 0.3742855 | 0.05 | 37.6 | 20 | * |
| Hexachloroethane | A | 50.00 | 53.45 | 0.5839827 | 0.6242601 | | 6.9 | 20 | |
| Isophorone | A | 50.00 | 50.66 | 0.6532573 | 0.6619262 | | 1.3 | 20 | |
| 2-Methylphenol | A | 50.00 | 47.91 | 1.129245 | 1.082045 | | -4.2 | 20 | |
| 3-Methylphenol | A | 50.00 | 51.94 | 1.146708 | 1.191142 | | 3.9 | 20 | |
| 4-Methylphenol | A | 50.00 | 51.94 | 1.146708 | 1.191142 | | 3.9 | 20 | |
| Naphthalene | A | 50.00 | 48.73 | 1.098195 | 1.070344 | | -2.5 | 20 | |
| 4-Nitroaniline | A | 50.00 | 61.72 | 0.2492193 | 0.307653 | | 23.4 | 20 | * |
| 3-Nitroaniline | A | 50.00 | 52.56 | 0.3039612 | 0.3195416 | | 5.1 | 20 | |
| 2-Nitroaniline | A | 50.00 | 68.86 | 0.3312246 | 0.4561643 | | 37.7 | 20 | * |
| Nitrobenzene | A | 50.00 | 52.32 | 0.3690184 | 0.3861582 | | 4.6 | 20 | |
| 4-Nitrophenol | L | 50.00 | 51.56 | 0.1965166 | 0.2338382 | 0.05 | 3.1 | 20 | |
| 2-Nitrophenol | A | 50.00 | 53.62 | 0.1835837 | 0.1968619 | | 7.2 | 20 | |
| N-Nitrosodiphenylamine | A | 50.00 | 49.37 | 0.7463088 | 0.736918 | | -1.3 | 20 | |
| N-Nitroso-di-n-propylamine | A | 50.00 | 51.74 | 0.8544344 | 0.8841163 | 0.05 | 3.5 | 20 | |
| Pentachlorophenol | L | 50.00 | 49.90 | 0.1195033 | 0.1437457 | | -0.2 | 20 | |
| Phenol | A | 50.00 | 51.36 | 1.491659 | 1.532158 | | 2.7 | 20 | |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 55.80 | 0.3170295 | 0.3538419 | | 11.6 | 20 | |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 55.78 | 0.2870772 | 0.3202527 | | 11.6 | 20 | |
| 2,4,6-Trichlorophenol | A | 50.00 | 55.26 | 0.3425101 | 0.3785833 | | 10.5 | 20 | |
| 2,4,5-Trichlorophenol | L | 50.00 | 51.41 | 0.3356329 | 0.3981848 | | 2.8 | 20 | |
| 2-Fluorobiphenyl | A | 50.00 | 49.96 | 1.429188 | 1.428095 | | -0.08 | 20 | |
| 2-Fluorophenol | A | 100.0 | 98.59 | 1.163095 | 1.146736 | | -1.4 | 20 | |
| Nitrobenzene-d5 | A | 50.00 | 54.02 | 0.3614526 | 0.3905026 | | 8.0 | 20 | |
| Phenol-d6 | A | 100.0 | 96.69 | 1.434991 | 1.387491 | | -3.3 | 20 | |
| Terphenyl-d14 | A | 50.00 | 50.90 | 0.8848596 | 0.900758 | | 1.8 | 20 | |
| 2,4,6-Tribromophenol | A | 100.0 | 117.5 | 0.1159566 | 0.1362611 | | 17.5 | 20 | |

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L14029 Batch Matrix: Solid Preparation: EXT_3546

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14029-BLK1 | 11/11/10 08:10 | 30.00 | 1.00 |
| LCS | 0L14029-BS1 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-01 | 0L14029-MS1 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-01 | 0L14029-MSD1 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-01 | 1012008-01 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-02 | 1012008-02 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-03 | 1012008-03 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-04 | 1012008-04 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-05 | 1012008-05 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-06 | 1012008-06 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-07 | 1012008-07 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-08 | 1012008-08 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-09 | 1012008-09 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-10 | 1012008-10 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-11 | 1012008-11 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-12 | 1012008-12 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-13 | 1012008-13 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-14 | 1012008-14 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-15 | 1012008-15 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-16 | 1012008-16 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-17 | 1012008-17 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-18 | 1012008-18 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-19 | 1012008-19 | 11/11/10 08:10 | 30.00 | 1.00 |
| 1011013-20 | 1012008-20 | 11/11/10 08:10 | 30.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW 009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14029-BLK1 File ID: 1200822.D

Sampled: Prepared: Analyzed: 12/15/10 14:13

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | ONC. (mg/Kg wc | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0310 | 0.167 | 0.333 | U |
| 98-86-2 | Acetophenone | | 0.0833 | 0.167 | 0.333 | U |
| 1912-24-9 | Atrazine | | 0.0280 | 0.167 | 0.333 | U |
| 100-52-7 | Benzaldehyde | | 0.0833 | 0.167 | 0.333 | Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0833 | 0.167 | 0.333 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0833 | 0.167 | 0.333 | U |
| 85-68-7 | Butylbenzylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 105-60-2 | Caprolactam | | 0.0833 | 0.167 | 0.333 | U |
| 86-74-8 | Carbazole | | 0.0360 | 0.167 | 0.333 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0833 | 0.167 | 0.333 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0833 | 0.167 | 0.333 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0833 | 0.167 | 0.333 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0410 | 0.167 | 0.333 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0510 | 0.167 | 0.333 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0833 | 0.167 | 0.333 | U |
| 95-57-8 | 2-Chlorophenol | | 0.0833 | 0.167 | 0.333 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0833 | 0.167 | 0.333 | U |
| 132-64-9 | Dibenzofuran | | 0.0833 | 0.167 | 0.333 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0833 | 0.167 | 0.333 | U |
| 84-66-2 | Diethylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.333 | 0.667 | 1.33 | U |
| 131-11-3 | Dimethyl phthalate | | 0.0833 | 0.167 | 0.333 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0220 | 1.67 | 3.33 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.130 | 1.67 | 3.33 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0240 | 0.167 | 0.333 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0380 | 0.167 | 0.333 | U |
| 117-84-0 | Di-n-octylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0360 | 0.167 | 0.333 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0350 | 0.167 | 0.333 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0330 | 0.167 | 0.333 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0610 | 0.167 | 0.333 | X U |
| 67-72-1 | Hexachloroethane | | 0.0390 | 0.167 | 0.333 | U |
| 78-59-1 | Isophorone | | 0.0833 | 0.167 | 0.333 | U |
| 95-48-7 | 2-Methylphenol | | 0.333 | 0.667 | 1.33 | U |
| 106-44-5 | 4-Methylphenol | | 0.0833 | 0.167 | 0.333 | U |
| 91-20-3 | Naphthalene | | 0.0320 | 0.167 | 0.333 | U |
| 100-01-6 | 4-Nitroaniline | | 0.100 | 0.667 | 1.33 | X U |
| 99-09-2 | 3-Nitroaniline | | 0.0470 | 0.667 | 1.33 | U |
| 88-74-4 | 2-Nitroaniline | | 0.0320 | 0.667 | 1.33 | X U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14029-BLK1 File ID: 1200822.D

Sampled: Prepared: Analyzed: 12/15/10 14:13

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L14029 Sequence: 0L35403 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | ONC. (mg/Kg we | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.0340 | 0.167 | 0.333 | U |
| 100-02-7 | 4-Nitrophenol | | 0.333 | 0.667 | 1.33 | U |
| 88-75-5 | 2-Nitrophenol | | 0.0833 | 0.167 | 0.333 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0833 | 0.167 | 0.333 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0550 | 0.167 | 0.333 | U |
| 87-86-5 | Pentachlorophenol | | 0.0340 | 0.667 | 1.33 | U |
| 108-95-2 | Phenol | | 0.0833 | 0.167 | 0.333 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.100 | 0.167 | 0.333 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.100 | 0.167 | 0.333 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0350 | 0.167 | 0.333 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0833 | 0.167 | 0.333 | U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg wet) | CONC (mg/Kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.06667 | 0.05595 | 83.9 | 45 - 105 | |
| 2-Fluorophenol | 0.1333 | 0.1057 | 79.3 | 35 - 105 | |
| Nitrobenzene-d5 | 0.06667 | 0.05800 | 87.0 | 35 - 100 | |
| Phenol-d6 | 0.1333 | 0.1024 | 76.8 | 40 - 100 | |
| Terphenyl-d14 | 0.06667 | 0.07669 | 115 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1333 | ND | | 35 - 125 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L36214 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L36214-TUN1 | SEQ-TUN1.D | 12/20/10 16:44 |
| Calibration Check | 0L36214-CCV1 | SEQ-CCV1s.D | 12/20/10 17:10 |
| LCS | 0L14027-BS1 | 1201409.D | 12/20/10 19:26 |
| Blank | 0L14027-BLK1 | 1201408.D | 12/20/10 19:56 |
| 1011013-10 GKHMS-50-019-1010 | 1012008-10 | 1200810.D | 12/21/10 02:33 |
| 1011013-11 GKHMS-50-021-1010 | 1012008-11 | 1200811D.D | 12/21/10 03:03 |
| 1011013-12 GKHMS-50-022-1010 | 1012008-12 | 1200812D.D | 12/21/10 03:34 |
| 1011013-13 GKHMS-50-023-1010 | 1012008-13 | 1200813D.D | 12/21/10 04:04 |
| 1011013-16 GKHMS-50-030-1010 | 1012008-16 | 1200816.D | 12/21/10 04:35 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/20/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 16:44 |
| Sequence: | 0L36214 | Lab Sample ID: | 0L36214-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 33.8 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 39.4 | PASS |
| 70 | Less than 2% of 69 | 0.566 | PASS |
| 127 | 40 - 60% of 198 | 49.8 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 7.64 | PASS |
| 275 | 10 - 30% of 198 | 22.7 | PASS |
| 365 | 1 - 200% of 198 | 3.26 | PASS |
| 441 | 0.001 - 100% of 443 | 71.7 | PASS |
| 442 | 40 - 200% of 198 | 57 | PASS |
| 443 | 17 - 23% of 442 | 19.7 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1s.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L36214 | Injection Date: | 12/20/10 |
| Lab Sample ID: | 0L36214-CCV1 | Injection Time: | 17:10 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 3,3'-Dichlorobenzidine | A | 50.00 | 37.12 | 0.3901063 | 0.2896268 | | -25.8 | 20 * |
| Acetophenone | A | 50.00 | 59.57 | 1.714419 | 2.042461 | | 19.1 | 20 |
| Atrazine | A | 50.00 | 65.12 | 0.2293025 | 0.2986665 | | 30.2 | 20 * |
| Benzaldehyde | A | 50.00 | 62.75 | 1.057258 | 1.326837 | | 25.5 | 20 * |
| 1,1-Biphenyl | A | 50.00 | 57.55 | 1.647464 | 1.896131 | | 15.1 | 20 |
| 4-Bromophenyl-phenylether | A | 50.00 | 66.01 | 0.2396007 | 0.3163066 | | 32.0 | 20 * |
| Butylbenzylphthalate | A | 50.00 | 48.69 | 0.6659619 | 0.6485491 | | -2.6 | 20 |
| Caprolactam | A | 50.00 | 58.52 | 0.0983814 | 0.1151436 | | 17.0 | 20 |
| Carbazole | A | 50.00 | 33.13 | 1.033588 | 0.6849096 | | -33.7 | 20 * |
| 4-Chloro-3-methylphenol | A | 50.00 | 55.56 | 0.2791833 | 0.3102025 | | 11.1 | 20 |
| 4-Chloroaniline | A | 50.00 | 39.19 | 0.4236872 | 0.332057 | | -21.6 | 20 * |
| Bis(2-chloroethoxy)methane | A | 50.00 | 65.75 | 0.4015206 | 0.527977 | | 31.5 | 20 * |
| Bis(2-chloroethyl)ether | A | 50.00 | 64.67 | 1.242957 | 1.607684 | | 29.3 | 20 * |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 45.29 | 1.791162 | 1.622433 | | -9.4 | 20 |
| 2-Chloronaphthalene | A | 50.00 | 63.86 | 1.223416 | 1.562689 | | 27.7 | 20 * |
| 2-Chlorophenol | A | 50.00 | 48.38 | 1.320483 | 1.2778 | | -3.2 | 20 |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 61.86 | 0.6482639 | 0.8019694 | | 23.7 | 20 * |
| Dibenzofuran | A | 50.00 | 43.88 | 1.702459 | 1.4942 | | -12.2 | 20 |
| Di-n-butylphthalate | A | 50.00 | 53.88 | 1.274102 | 1.3729 | | 7.8 | 20 |
| 2,4-Dichlorophenol | A | 50.00 | 55.45 | 0.2708646 | 0.3003853 | | 10.9 | 20 |
| Diethylphthalate | A | 50.00 | 48.39 | 1.375716 | 1.331468 | | -3.2 | 20 |
| 2,4-Dimethylphenol | A | 50.00 | 53.53 | 0.3567735 | 0.3819416 | | 7.1 | 20 |
| Dimethyl phthalate | A | 50.00 | 59.98 | 1.360327 | 1.632011 | | 20.0 | 20 |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 60.49 | 0.1141426 | 0.1700714 | | 21.0 | 20 * |
| 2,4-Dinitrophenol | L | 50.00 | 46.56 | 0.1317034 | 0.1426789 | 0.05 | -6.9 | 20 |
| 2,4-Dinitrotoluene | A | 50.00 | 59.75 | 0.3873439 | 0.4629076 | | 19.5 | 20 |
| 2,6-Dinitrotoluene | A | 50.00 | 69.29 | 0.3161974 | 0.4382155 | | 38.6 | 20 * |
| Di-n-octylphthalate | A | 50.00 | 49.16 | 1.581621 | 1.554907 | | -1.7 | 20 |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 50.52 | 0.8698317 | 0.8788329 | | 1.0 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1s.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L36214 | Injection Date: | 12/20/10 |
| Lab Sample ID: | 0L36214-CCV1 | Injection Time: | 17:10 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobenzene | A | 50.00 | 49.98 | 0.2675089 | 0.2674295 | | -0.03 | 20 | |
| Hexachlorobutadiene | A | 50.00 | 76.62 | 0.1897728 | 0.2908254 | | 53.2 | 20 | * |
| Hexachlorocyclopentadiene | A | 50.00 | 56.87 | 0.2719697 | 0.3093554 | 0.05 | 13.7 | 20 | |
| Hexachloroethane | A | 50.00 | 52.92 | 0.5839827 | 0.6180438 | | 5.8 | 20 | |
| Isophorone | A | 50.00 | 67.19 | 0.6532573 | 0.8778028 | | 34.4 | 20 | * |
| 2-Methylphenol | A | 50.00 | 50.44 | 1.129245 | 1.139243 | | 0.9 | 20 | |
| 3-Methylphenol | A | 50.00 | 48.30 | 1.146708 | 1.107701 | | -3.4 | 20 | |
| 4-Methylphenol | A | 50.00 | 48.30 | 1.146708 | 1.107701 | | -3.4 | 20 | |
| Naphthalene | A | 50.00 | 49.13 | 1.098195 | 1.079192 | | -1.7 | 20 | |
| 4-Nitroaniline | A | 50.00 | 56.54 | 0.2492193 | 0.2818219 | | 13.1 | 20 | |
| 3-Nitroaniline | A | 50.00 | 31.94 | 0.3039612 | 0.1941493 | | -36.1 | 20 | * |
| 2-Nitroaniline | A | 50.00 | 105.9 | 0.3312246 | 0.7018078 | | 112 | 20 | * |
| Nitrobenzene | A | 50.00 | 79.69 | 0.3690184 | 0.5881195 | | 59.4 | 20 | * |
| 4-Nitrophenol | L | 50.00 | 66.79 | 0.1965166 | 0.3087533 | 0.05 | 33.6 | 20 | * |
| 2-Nitrophenol | A | 50.00 | 49.88 | 0.1835837 | 0.1831518 | | -0.2 | 20 | |
| N-Nitrosodiphenylamine | A | 50.00 | 59.64 | 0.7463088 | 0.8901712 | | 19.3 | 20 | |
| N-Nitroso-di-n-propylamine | A | 50.00 | 64.72 | 0.8544344 | 1.106008 | 0.05 | 29.4 | 20 | * |
| Pentachlorophenol | L | 50.00 | 48.59 | 0.1195033 | 0.1395854 | | -2.8 | 20 | |
| Phenol | A | 50.00 | 59.33 | 1.491659 | 1.770109 | | 18.7 | 20 | |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 52.92 | 0.3170295 | 0.335548 | | 5.8 | 20 | |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 53.70 | 0.2870772 | 0.3083534 | | 7.4 | 20 | |
| 2,4,6-Trichlorophenol | A | 50.00 | 69.30 | 0.3425101 | 0.4747454 | | 38.6 | 20 | * |
| 2,4,5-Trichlorophenol | L | 50.00 | 60.61 | 0.3356329 | 0.4711027 | | 21.2 | 20 | * |
| 2-Fluorobiphenyl | A | 50.00 | 61.10 | 1.429188 | 1.746398 | | 22.2 | 20 | * |
| 2-Fluorophenol | A | 100.0 | 110.1 | 1.163095 | 1.280172 | | 10.1 | 20 | |
| Nitrobenzene-d5 | A | 50.00 | 79.83 | 0.3614526 | 0.5771302 | | 59.7 | 20 | * |
| Phenol-d6 | A | 100.0 | 103.9 | 1.434991 | 1.490434 | | 3.9 | 20 | |
| Terphenyl-d14 | A | 50.00 | 49.05 | 0.8848596 | 0.8679971 | | -1.9 | 20 | |
| 2,4,6-Tribromophenol | A | 100.0 | 115.0 | 0.1159566 | 0.133386 | | 15.0 | 20 | |

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_009
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Batch: 0L14027 Batch Matrix: Solid
Preparation: EXT_3546

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14027-BLK1 | 11/11/10 11:55 | 30.00 | 1.00 |
| LCS | 0L14027-BS1 | 11/11/10 11:55 | 30.00 | 1.00 |
| 1011013-21 | 1012008-21 | 11/11/10 11:55 | 30.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14027-BLK1 File ID: 1201408.D

Sampled: Prepared: Analyzed: 12/20/10 19:56

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L14027 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | ONC. (mg/Kg we | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0310 | 0.167 | 0.333 | Y U |
| 98-86-2 | Acetophenone | | 0.0833 | 0.167 | 0.333 | U |
| 1912-24-9 | Atrazine | | 0.0280 | 0.167 | 0.333 | X U |
| 100-52-7 | Benzaldehyde | | 0.0833 | 0.167 | 0.333 | Q, X U |
| 92-52-4 | 1,1-Biphenyl | | 0.0833 | 0.167 | 0.333 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0833 | 0.167 | 0.333 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 105-60-2 | Caprolactam | | 0.0833 | 0.167 | 0.333 | U |
| 86-74-8 | Carbazole | | 0.0360 | 0.167 | 0.333 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0833 | 0.167 | 0.333 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0833 | 0.167 | 0.333 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0833 | 0.167 | 0.333 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0410 | 0.167 | 0.333 | Q, X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0510 | 0.167 | 0.333 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0833 | 0.167 | 0.333 | Q, X U |
| 95-57-8 | 2-Chlorophenol | | 0.0833 | 0.167 | 0.333 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0833 | 0.167 | 0.333 | Q, X U |
| 132-64-9 | Dibenzofuran | | 0.0833 | 0.167 | 0.333 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0833 | 0.167 | 0.333 | U |
| 84-66-2 | Diethylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.333 | 0.667 | 1.33 | Q U |
| 131-11-3 | Dimethyl phthalate | | 0.0833 | 0.167 | 0.333 | Q U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0220 | 1.67 | 3.33 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.130 | 1.67 | 3.33 | U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0240 | 0.167 | 0.333 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0380 | 0.167 | 0.333 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.0833 | 0.167 | 0.333 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0360 | 0.167 | 0.333 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0350 | 0.167 | 0.333 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0330 | 0.167 | 0.333 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0610 | 0.167 | 0.333 | U |
| 67-72-1 | Hexachloroethane | | 0.0390 | 0.167 | 0.333 | U |
| 78-59-1 | Isophorone | | 0.0833 | 0.167 | 0.333 | Q, X U |
| 95-48-7 | 2-Methylphenol | | 0.333 | 0.667 | 1.33 | U |
| 106-44-5 | 4-Methylphenol | | 0.0833 | 0.167 | 0.333 | U |
| 91-20-3 | Naphthalene | | 0.0320 | 0.167 | 0.333 | U |
| 100-01-6 | 4-Nitroaniline | | 0.100 | 0.667 | 1.33 | U |
| 99-09-2 | 3-Nitroaniline | | 0.0470 | 0.667 | 1.33 | Y U |
| 88-74-4 | 2-Nitroaniline | | 0.0320 | 0.667 | 1.33 | Q, X U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14027-BLK1 File ID: 1201408.D

Sampled: Prepared: Analyzed: 12/20/10 19:56

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L14027 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | ONC. (mg/Kg we | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.0340 | 0.167 | 0.333 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 0.333 | 0.667 | 1.33 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.0833 | 0.167 | 0.333 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0833 | 0.167 | 0.333 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0550 | 0.167 | 0.333 | Q, X U |
| 87-86-5 | Pentachlorophenol | | 0.0340 | 0.667 | 1.33 | U |
| 108-95-2 | Phenol | | 0.0833 | 0.167 | 0.333 | Q U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.100 | 0.167 | 0.333 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.100 | 0.167 | 0.333 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0350 | 0.167 | 0.333 | Q, X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0833 | 0.167 | 0.333 | Q, X U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg wet) | CONC (mg/Kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.06667 | 0.06426 | 96.4 | 45 - 105 | X |
| 2-Fluorophenol | 0.1333 | 0.1177 | 88.2 | 35 - 105 | |
| Nitrobenzene-d5 | 0.06667 | 0.07307 | 110 | 35 - 100 | X |
| Phenol-d6 | 0.1333 | 0.1138 | 85.3 | 40 - 100 | |
| Terphenyl-d14 | 0.06667 | 0.05452 | 81.8 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1333 | ND | | 35 - 125 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L36307 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L36307-TUN1 | SEQ-TUN2.D | 12/21/10 05:05 |
| Calibration Check | 0L36307-CCV1 | SEQ-CCV2.D | 12/21/10 05:33 |
| 1011013-21 GKHMS-SO-FD001-1010 | 1012008-21 | 1200821D.D | 12/21/10 06:03 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN2.D | Injection Date: | 12/21/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 05:05 |
| Sequence: | 0L36307 | Lab Sample ID: | 0L36307-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 34.6 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 41.4 | PASS |
| 70 | Less than 2% of 69 | 0.434 | PASS |
| 127 | 40 - 60% of 198 | 45.7 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.35 | PASS |
| 275 | 10 - 30% of 198 | 21.1 | PASS |
| 365 | 1 - 200% of 198 | 2.98 | PASS |
| 441 | 0.001 - 100% of 443 | 74.3 | PASS |
| 442 | 40 - 200% of 198 | 54.3 | PASS |
| 443 | 17 - 23% of 442 | 18.5 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV2.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L36307 | Injection Date: | 12/21/10 |
| Lab Sample ID: | 0L36307-CCV1 | Injection Time: | 05:33 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 46.34 | 0.3901063 | 0.3615342 | | -7.3 | 20 | |
| Acetophenone | A | 50.00 | 60.12 | 1.714419 | 2.061607 | | 20.3 | 20 | * |
| Atrazine | A | 50.00 | 69.31 | 0.2293025 | 0.3178526 | | 38.6 | 20 | * |
| Benzaldehyde | A | 50.00 | 52.26 | 1.057258 | 1.105104 | | 4.5 | 20 | |
| 1,1-Biphenyl | A | 50.00 | 52.04 | 1.647464 | 1.714678 | | 4.1 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 65.85 | 0.2396007 | 0.3155359 | | 31.7 | 20 | * |
| Butylbenzylphthalate | A | 50.00 | 59.00 | 0.6659619 | 0.7858405 | | 18.0 | 20 | |
| Caprolactam | A | 50.00 | 63.22 | 0.0983814 | 0.1243923 | | 26.4 | 20 | * |
| Carbazole | A | 50.00 | 42.94 | 1.033588 | 0.8877253 | | -14.1 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 61.17 | 0.2791833 | 0.3415648 | | 22.3 | 20 | * |
| 4-Chloroaniline | A | 50.00 | 50.35 | 0.4236872 | 0.4266739 | | 0.7 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 63.89 | 0.4015206 | 0.5130445 | | 27.8 | 20 | * |
| Bis(2-chloroethyl)ether | A | 50.00 | 60.98 | 1.242957 | 1.515973 | | 22.0 | 20 | * |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 46.38 | 1.791162 | 1.661452 | | -7.2 | 20 | |
| 2-Chloronaphthalene | A | 50.00 | 63.06 | 1.223416 | 1.542961 | | 26.1 | 20 | * |
| 2-Chlorophenol | A | 50.00 | 52.48 | 1.320483 | 1.386022 | | 5.0 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 58.67 | 0.6482639 | 0.7606362 | | 17.3 | 20 | |
| Dibenzofuran | A | 50.00 | 45.89 | 1.702459 | 1.562558 | | -8.2 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 49.29 | 1.274102 | 1.25603 | | -1.4 | 20 | |
| 2,4-Dichlorophenol | A | 50.00 | 60.48 | 0.2708646 | 0.3276146 | | 21.0 | 20 | * |
| Diethylphthalate | A | 50.00 | 49.25 | 1.375716 | 1.35514 | | -1.5 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 60.78 | 0.3567735 | 0.4336601 | | 21.6 | 20 | * |
| Dimethyl phthalate | A | 50.00 | 55.69 | 1.360327 | 1.515094 | | 11.4 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 45.48 | 0.1141426 | 0.1240989 | | -9.0 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 28.91 | 0.1317034 | 7.503657E-02 | 0.05 | -42.2 | 20 | * |
| 2,4-Dinitrotoluene | A | 50.00 | 56.28 | 0.3873439 | 0.4360072 | | 12.6 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 58.70 | 0.3161974 | 0.3711995 | | 17.4 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 64.82 | 1.581621 | 2.050429 | | 29.6 | 20 | * |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 51.50 | 0.8698317 | 0.8959888 | | 3.0 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV2.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L36307 | Injection Date: | 12/21/10 |
| Lab Sample ID: | 0L36307-CCV1 | Injection Time: | 05:33 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobenzene | A | 50.00 | 49.80 | 0.2675089 | 0.2664157 | | -0.4 | 20 | |
| Hexachlorobutadiene | A | 50.00 | 69.04 | 0.1897728 | 0.2620571 | | 38.1 | 20 | * |
| Hexachlorocyclopentadiene | A | 50.00 | 41.85 | 0.2719697 | 0.2276545 | 0.05 | -16.3 | 20 | |
| Hexachloroethane | A | 50.00 | 57.67 | 0.5839827 | 0.6735327 | | 15.3 | 20 | |
| Isophorone | A | 50.00 | 68.08 | 0.6532573 | 0.8894906 | | 36.2 | 20 | * |
| 2-Methylphenol | A | 50.00 | 56.05 | 1.129245 | 1.265931 | | 12.1 | 20 | |
| 3-Methylphenol | A | 50.00 | 56.31 | 1.146708 | 1.291495 | | 12.6 | 20 | |
| 4-Methylphenol | A | 50.00 | 56.31 | 1.146708 | 1.291495 | | 12.6 | 20 | |
| Naphthalene | A | 50.00 | 49.61 | 1.098195 | 1.08972 | | -0.8 | 20 | |
| 4-Nitroaniline | A | 50.00 | 49.55 | 0.2492193 | 0.246975 | | -0.9 | 20 | |
| 3-Nitroaniline | A | 50.00 | 46.22 | 0.3039612 | 0.2809569 | | -7.6 | 20 | |
| 2-Nitroaniline | A | 50.00 | 82.49 | 0.3312246 | 0.5464738 | | 65.0 | 20 | * |
| Nitrobenzene | A | 50.00 | 70.28 | 0.3690184 | 0.5186925 | | 40.6 | 20 | * |
| 4-Nitrophenol | L | 50.00 | 48.90 | 0.1965166 | 0.2207721 | 0.05 | -2.2 | 20 | |
| 2-Nitrophenol | A | 50.00 | 54.70 | 0.1835837 | 0.2008576 | | 9.4 | 20 | |
| N-Nitrosodiphenylamine | A | 50.00 | 61.04 | 0.7463088 | 0.9110596 | | 22.1 | 20 | * |
| N-Nitroso-di-n-propylamine | A | 50.00 | 67.11 | 0.8544344 | 1.146875 | 0.05 | 34.2 | 20 | * |
| Pentachlorophenol | L | 50.00 | 45.87 | 0.1195033 | 0.1309652 | | -8.3 | 20 | |
| Phenol | A | 50.00 | 65.54 | 1.491659 | 1.955232 | | 31.1 | 20 | * |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 59.67 | 0.3170295 | 0.3783436 | | 19.3 | 20 | |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 54.58 | 0.2870772 | 0.313385 | | 9.2 | 20 | |
| 2,4,6-Trichlorophenol | A | 50.00 | 63.52 | 0.3425101 | 0.4351621 | | 27.1 | 20 | * |
| 2,4,5-Trichlorophenol | L | 50.00 | 56.59 | 0.3356329 | 0.4392393 | | 13.2 | 20 | |
| 2-Fluorobiphenyl | A | 50.00 | 53.22 | 1.429188 | 1.521271 | | 6.4 | 20 | |
| 2-Fluorophenol | A | 100.0 | 118.9 | 1.163095 | 1.383178 | | 18.9 | 20 | |
| Nitrobenzene-d5 | A | 50.00 | 71.32 | 0.3614526 | 0.5155498 | | 42.6 | 20 | * |
| Phenol-d6 | A | 100.0 | 116.6 | 1.434991 | 1.674028 | | 16.7 | 20 | |
| Terphenyl-d14 | A | 50.00 | 59.51 | 0.8848596 | 1.053201 | | 19.0 | 20 | |
| 2,4,6-Tribromophenol | A | 100.0 | 117.4 | 0.1159566 | 0.1361335 | | 17.4 | 20 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_009
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35403
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35403-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1.D | | Analyzed: 12/15/10 11:42 | | |
| 2-Fluorobiphenyl | 50.00 | 99.9 | 80 - 120 | 9.464 | 9.464 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 98.6 | 80 - 120 | 5.184 | 5.184 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 108 | 80 - 120 | 7.286 | 7.286 | 0.0000 | +/-0.500 | |
| Phenol-d6 | 100.0 | 96.7 | 80 - 120 | 6.233 | 6.233 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 102 | 80 - 120 | 14.071 | 14.071 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 118 | 80 - 120 | 11.263 | 11.263 | 0.0000 | +/-0.500 | |
| **LCS (0L14029-BS1 ) mg/Kg wet** | | | | Lab File ID: 1200823.D | | Analyzed: 12/15/10 13:43 | | |
| 2-Fluorobiphenyl | 0.06667 | 84.5 | 45 - 105 | 9.455 | 9.464 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 0.1333 | 87.3 | 35 - 105 | 5.19 | 5.184 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 0.06667 | 102 | 35 - 100 | 7.277 | 7.286 | -0.0090 | +/-0.500 | * |
| Phenol-d6 | 0.1333 | 84.4 | 40 - 100 | 6.219 | 6.233 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 0.06667 | 104 | 30 - 125 | 14.067 | 14.071 | -0.0040 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1333 | 64.0 | 35 - 125 | 11.249 | 11.263 | -0.0140 | +/-0.500 | |
| **Blank (0L14029-BLK1 ) mg/Kg wet** | | | | Lab File ID: 1200822.D | | Analyzed: 12/15/10 14:13 | | |
| 2-Fluorobiphenyl | 0.06667 | 83.9 | 45 - 105 | 9.456 | 9.464 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 0.1333 | 79.3 | 35 - 105 | 5.191 | 5.184 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 0.06667 | 87.0 | 35 - 100 | 7.273 | 7.286 | -0.0130 | +/-0.500 | |
| Phenol-d6 | 0.1333 | 76.8 | 40 - 100 | 6.215 | 6.233 | -0.0180 | +/-0.500 | |
| Terphenyl-d14 | 0.06667 | 115 | 30 - 125 | 14.068 | 14.071 | -0.0030 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1333 | | 35 - 125 | | 11.263 | -11.2630 | +/-0.500 | * |
| **1011013-02 (1012008-02 ) mg/Kg dry** 6KHMS-SO-002-1010 | | | | Lab File ID: 1200802.D | | Analyzed: 12/15/10 14:43 | | |
| 2-Fluorobiphenyl | 0.07619 | 81.9 | 45 - 105 | 9.452 | 9.464 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 0.1524 | 80.7 | 35 - 105 | 5.192 | 5.184 | 0.0080 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07619 | 88.5 | 35 - 100 | 7.274 | 7.286 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 0.1524 | 80.8 | 40 - 100 | 6.216 | 6.233 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 0.07619 | 118 | 30 - 125 | 14.064 | 14.071 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1524 | | 35 - 125 | | 11.263 | -11.2630 | +/-0.500 | * |
| **1011013-03 (1012008-03 ) mg/Kg dry** 6KHMS-SO-002-1010 | | | | Lab File ID: 1200803.D | | Analyzed: 12/15/10 15:13 | | |
| 2-Fluorobiphenyl | 0.07698 | 79.0 | 45 - 105 | 9.455 | 9.464 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 0.1540 | 50.7 | 35 - 105 | 5.189 | 5.184 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07698 | 80.4 | 35 - 100 | 7.271 | 7.286 | -0.0150 | +/-0.500 | |
| Phenol-d6 | 0.1540 | 68.1 | 40 - 100 | 6.218 | 6.233 | -0.0150 | +/-0.500 | |
| Terphenyl-d14 | 0.07698 | 107 | 30 - 125 | 14.066 | 14.071 | -0.0050 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1540 | | 35 - 125 | | 11.263 | -11.2630 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_009
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35403
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011013-04 (1012008-04 ) mg/Kg dry** GKHMS-SO-005-1010 | | | Lab File ID: 1200804.D | | Analyzed: 12/15/10 15:43 | | | |
| 2-Fluorobiphenyl | 0.07779 | 83.4 | 45 - 105 | 9.455 | 9.464 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 0.1556 | 48.2 | 35 - 105 | 5.189 | 5.184 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07779 | 84.2 | 35 - 100 | 7.276 | 7.286 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 0.1556 | 68.4 | 40 - 100 | 6.214 | 6.233 | -0.0190 | +/-0.500 | |
| Terphenyl-d14 | 0.07779 | 118 | 30 - 125 | 14.066 | 14.071 | -0.0050 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1556 | | 35 - 125 | | 11.263 | -11.2630 | +/-0.500 | * |
| **1011013-05 (1012008-05 ) mg/Kg dry** GKHMS-SO-007-1010 | | | Lab File ID: 1200805.D | | Analyzed: 12/15/10 16:13 | | | |
| 2-Fluorobiphenyl | 0.07593 | 84.0 | 45 - 105 | 9.454 | 9.464 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 0.1519 | 78.6 | 35 - 105 | 5.189 | 5.184 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07593 | 93.1 | 35 - 100 | 7.276 | 7.286 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 0.1519 | 77.1 | 40 - 100 | 6.218 | 6.233 | -0.0150 | +/-0.500 | |
| Terphenyl-d14 | 0.07593 | 112 | 30 - 125 | 14.066 | 14.071 | -0.0050 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1519 | 9.97 | 35 - 125 | 11.248 | 11.263 | -0.0150 | +/-0.500 | * |
| **1011013-06 (1012008-06 ) mg/Kg dry** GKHMS-SO-011-1010 | | | Lab File ID: 1200806.D | | Analyzed: 12/15/10 16:43 | | | |
| 2-Fluorobiphenyl | 0.08292 | 85.3 | 45 - 105 | 9.453 | 9.464 | -0.0110 | +/-0.500 | |
| 2-Fluorophenol | 0.1658 | 85.9 | 35 - 105 | 5.188 | 5.184 | 0.0040 | +/-0.500 | |
| Nitrobenzene-d5 | 0.08292 | 94.1 | 35 - 100 | 7.275 | 7.286 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 0.1658 | 84.7 | 40 - 100 | 6.217 | 6.233 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 0.08292 | 119 | 30 - 125 | 14.065 | 14.071 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1658 | 44.5 | 35 - 125 | 11.247 | 11.263 | -0.0160 | +/-0.500 | |
| **1011013-07 (1012008-07 ) mg/Kg dry** GKHMS-SO-012-1010 | | | Lab File ID: 1200807.D | | Analyzed: 12/15/10 17:13 | | | |
| 2-Fluorobiphenyl | 0.07974 | 85.3 | 45 - 105 | 9.454 | 9.464 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 0.1595 | 64.9 | 35 - 105 | 5.188 | 5.184 | 0.0040 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07974 | 93.6 | 35 - 100 | 7.275 | 7.286 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 0.1595 | 78.6 | 40 - 100 | 6.217 | 6.233 | -0.0160 | +/-0.500 | |
| Terphenyl-d14 | 0.07974 | 114 | 30 - 125 | 14.065 | 14.071 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1595 | 19.1 | 35 - 125 | 11.252 | 11.263 | -0.0110 | +/-0.500 | * |
| **1011013-08 (1012008-08 ) mg/Kg dry** GKHMS-SO-014-1010 | | | Lab File ID: 1200808.D | | Analyzed: 12/15/10 17:43 | | | |
| 2-Fluorobiphenyl | 0.07806 | 89.1 | 45 - 105 | 9.455 | 9.464 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 0.1561 | 80.6 | 35 - 105 | 5.189 | 5.184 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07806 | 98.2 | 35 - 100 | 7.277 | 7.286 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 0.1561 | 85.8 | 40 - 100 | 6.214 | 6.233 | -0.0190 | +/-0.500 | |
| Terphenyl-d14 | 0.07806 | 130 | 30 - 125 | 14.067 | 14.071 | -0.0040 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1561 | 40.0 | 35 - 125 | 11.249 | 11.263 | -0.0140 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_009
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35403
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011013-14 (1012008-14 ) mg/Kg dry** | 6KHMS-50-025-1010 | | | Lab File ID: 1200814.D | | Analyzed: 12/15/10 18:13 | | |
| 2-Fluorobiphenyl | 0.07927 | 84.0 | 45 - 105 | 9.454 | 9.464 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 0.1585 | 69.3 | 35 - 105 | 5.193 | 5.184 | 0.0090 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07927 | 95.1 | 35 - 100 | 7.275 | 7.286 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 0.1585 | 79.6 | 40 - 100 | 6.218 | 6.233 | -0.0150 | +/-0.500 | |
| Terphenyl-d14 | 0.07927 | 115 | 30 - 125 | 14.065 | 14.071 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1585 | 23.1 | 35 - 125 | 11.272 | 11.263 | 0.0090 | +/-0.500 | * |
| **1011013-15 (1012008-15 ) mg/Kg dry** | 6KHMS-50-028-1010 | | | Lab File ID: 1200815.D | | Analyzed: 12/15/10 18:44 | | |
| 2-Fluorobiphenyl | 0.07779 | 93.3 | 45 - 105 | 9.451 | 9.464 | -0.0130 | +/-0.500 | |
| 2-Fluorophenol | 0.1556 | 63.7 | 35 - 105 | 5.19 | 5.184 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07779 | 95.9 | 35 - 100 | 7.278 | 7.286 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 0.1556 | 77.9 | 40 - 100 | 6.215 | 6.233 | -0.0180 | +/-0.500 | |
| Terphenyl-d14 | 0.07779 | 125 | 30 - 125 | 14.068 | 14.071 | -0.0030 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1556 | 17.4 | 35 - 125 | 11.254 | 11.263 | -0.0090 | +/-0.500 | * |
| **1011013-17 (1012008-17 ) mg/Kg dry** | 6KHMS-50-031-1010 | | | Lab File ID: 1200817.D | | Analyzed: 12/15/10 19:14 | | |
| 2-Fluorobiphenyl | 0.07584 | 90.8 | 45 - 105 | 9.457 | 9.464 | -0.0070 | +/-0.500 | |
| 2-Fluorophenol | 0.1517 | 72.5 | 35 - 105 | 5.191 | 5.184 | 0.0070 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07584 | 98.2 | 35 - 100 | 7.278 | 7.286 | -0.0080 | +/-0.500 | |
| Phenol-d6 | 0.1517 | 88.0 | 40 - 100 | 6.22 | 6.233 | -0.0130 | +/-0.500 | |
| Terphenyl-d14 | 0.07584 | 122 | 30 - 125 | 14.064 | 14.071 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1517 | 21.8 | 35 - 125 | 11.25 | 11.263 | -0.0130 | +/-0.500 | * |
| **1011013-18 (1012008-18 ) mg/Kg dry** | 6KHMS-50-032-1010 | | | Lab File ID: 1200818.D | | Analyzed: 12/15/10 19:43 | | |
| 2-Fluorobiphenyl | 0.08180 | 88.6 | 45 - 105 | 9.452 | 9.464 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 0.1636 | 46.0 | 35 - 105 | 5.192 | 5.184 | 0.0080 | +/-0.500 | |
| Nitrobenzene-d5 | 0.08180 | 98.0 | 35 - 100 | 7.274 | 7.286 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 0.1636 | 72.4 | 40 - 100 | 6.216 | 6.233 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 0.08180 | 121 | 30 - 125 | 14.064 | 14.071 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1636 | | 35 - 125 | | 11.263 | -11.2630 | +/-0.500 | * |
| **1011013-19 (1012008-19 ) mg/Kg dry** | 6KHMS-50-034-1010 | | | Lab File ID: 1200819.D | | Analyzed: 12/15/10 20:13 | | |
| 2-Fluorobiphenyl | 0.07770 | 86.0 | 45 - 105 | 9.454 | 9.464 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 0.1554 | 70.2 | 35 - 105 | 5.189 | 5.184 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07770 | 93.5 | 35 - 100 | 7.276 | 7.286 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 0.1554 | 82.0 | 40 - 100 | 6.218 | 6.233 | -0.0150 | +/-0.500 | |
| Terphenyl-d14 | 0.07770 | 127 | 30 - 125 | 14.066 | 14.071 | -0.0050 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1554 | 14.8 | 35 - 125 | 11.253 | 11.263 | -0.0100 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35403

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011013-20 (1012008-20 ) mg/Kg dry** GKHMS-SO-FD002-1010 | | | | Lab File ID: 1200820.D | | Analyzed: 12/15/10 20:44 | | |
| 2-Fluorobiphenyl | 0.07602 | 73.7 | 45 - 105 | 9.456 | 9.464 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 0.1520 | 65.3 | 35 - 105 | 5.19 | 5.184 | 0.0060 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07602 | 80.9 | 35 - 100 | 7.273 | 7.286 | -0.0130 | +/-0.500 | |
| Phenol-d6 | 0.1520 | 69.9 | 40 - 100 | 6.219 | 6.233 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 0.07602 | 106 | 30 - 125 | 14.063 | 14.071 | -0.0080 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1520 | 26.0 | 35 - 125 | 11.254 | 11.263 | -0.0090 | +/-0.500 | * |
| **1011013-01 (1012008-01 ) mg/Kg dry** GKHMS-SO-001-1010 | | | | Lab File ID: 1200801.D | | Analyzed: 12/15/10 21:14 | | |
| 2-Fluorobiphenyl | 0.07743 | 75.3 | 45 - 105 | 9.454 | 9.464 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 0.1549 | 70.4 | 35 - 105 | 5.188 | 5.184 | 0.0040 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07743 | 79.0 | 35 - 100 | 7.275 | 7.286 | -0.0110 | +/-0.500 | |
| Phenol-d6 | 0.1549 | 68.2 | 40 - 100 | 6.218 | 6.233 | -0.0150 | +/-0.500 | |
| Terphenyl-d14 | 0.07743 | 121 | 30 - 125 | 14.065 | 14.071 | -0.0060 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1549 | 63.2 | 35 - 125 | 11.248 | 11.263 | -0.0150 | +/-0.500 | |
| **1011013-09 (1012008-09 ) mg/Kg dry** GKHMS-SO-017-1010 | | | | Lab File ID: 1200809.D | | Analyzed: 12/15/10 21:44 | | |
| 2-Fluorobiphenyl | 0.07593 | 97.8 | 45 - 105 | 9.452 | 9.464 | -0.0120 | +/-0.500 | |
| 2-Fluorophenol | 0.1519 | 92.5 | 35 - 105 | 5.187 | 5.184 | 0.0030 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07593 | 99.5 | 35 - 100 | 7.274 | 7.286 | -0.0120 | +/-0.500 | |
| Phenol-d6 | 0.1519 | 93.7 | 40 - 100 | 6.216 | 6.233 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 0.07593 | 143 | 30 - 125 | 14.064 | 14.071 | -0.0070 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1519 | 67.9 | 35 - 125 | 11.251 | 11.263 | -0.0120 | +/-0.500 | |
| **Matrix Spike (0L14029-MS1 ) mg/Kg dry** | | | | Lab File ID: 1200801B.D | | Analyzed: 12/15/10 22:14 | | |
| 2-Fluorobiphenyl | 0.07743 | 77.6 | 45 - 105 | 9.455 | 9.464 | -0.0090 | +/-0.500 | |
| 2-Fluorophenol | 0.1549 | 69.4 | 35 - 105 | 5.189 | 5.184 | 0.0050 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07743 | 81.6 | 35 - 100 | 7.276 | 7.286 | -0.0100 | +/-0.500 | |
| Phenol-d6 | 0.1549 | 75.4 | 40 - 100 | 6.219 | 6.233 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 0.07743 | 129 | 30 - 125 | 14.067 | 14.071 | -0.0040 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1549 | 83.3 | 35 - 125 | 11.249 | 11.263 | -0.0140 | +/-0.500 | |
| **Matrix Spike Dup (0L14029-MSD1 ) mg/Kg dry** | | | | Lab File ID: 1200801C.D | | Analyzed: 12/15/10 22:44 | | |
| 2-Fluorobiphenyl | 0.07743 | 79.5 | 45 - 105 | 9.456 | 9.464 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 0.1549 | 66.8 | 35 - 105 | 5.185 | 5.184 | 0.0010 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07743 | 74.4 | 35 - 100 | 7.272 | 7.286 | -0.0140 | +/-0.500 | |
| Phenol-d6 | 0.1549 | 71.8 | 40 - 100 | 6.219 | 6.233 | -0.0140 | +/-0.500 | |
| Terphenyl-d14 | 0.07743 | 128 | 30 - 125 | 14.067 | 14.071 | -0.0040 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1549 | 92.0 | 35 - 125 | 11.254 | 11.263 | -0.0090 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_009
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L36214
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L36214-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1s.D | | Analyzed: 12/20/10 17:10 | | |
| 2-Fluorobiphenyl | 50.00 | 122 | 80 - 120 | 9.186 | 9.186 | 0.0000 | +/-0.500 | * |
| 2-Fluorophenol | 100.0 | 110 | 80 - 120 | 4.916 | 4.916 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 160 | 80 - 120 | 7.012 | 7.012 | 0.0000 | +/-0.500 | * |
| Phenol-d6 | 100.0 | 104 | 80 - 120 | 5.964 | 5.964 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 98.1 | 80 - 120 | 13.783 | 13.783 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 115 | 80 - 120 | 10.97 | 10.97 | 0.0000 | +/-0.500 | |
| **LCS (0L14027-BS1 ) mg/Kg wet** | | | | Lab File ID: 1201409.D | | Analyzed: 12/20/10 19:26 | | |
| 2-Fluorobiphenyl | 0.06667 | 107 | 45 - 105 | 9.184 | 9.186 | -0.0020 | +/-0.500 | * |
| 2-Fluorophenol | 0.1333 | 89.6 | 35 - 105 | 4.928 | 4.916 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 0.06667 | 139 | 35 - 100 | 7.01 | 7.012 | -0.0020 | +/-0.500 | * |
| Phenol-d6 | 0.1333 | 91.9 | 40 - 100 | 5.962 | 5.964 | -0.0020 | +/-0.500 | |
| Terphenyl-d14 | 0.06667 | 94.1 | 30 - 125 | 13.781 | 13.783 | -0.0020 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1333 | 71.2 | 35 - 125 | 10.968 | 10.97 | -0.0020 | +/-0.500 | |
| **Blank (0L14027-BLK1 ) mg/Kg wet** | | | | Lab File ID: 1201408.D | | Analyzed: 12/20/10 19:56 | | |
| 2-Fluorobiphenyl | 0.06667 | 96.4 | 45 - 105 | 9.184 | 9.186 | -0.0020 | +/-0.500 | |
| 2-Fluorophenol | 0.1333 | 88.2 | 35 - 105 | 4.928 | 4.916 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 0.06667 | 110 | 35 - 100 | 7.01 | 7.012 | -0.0020 | +/-0.500 | * |
| Phenol-d6 | 0.1333 | 85.3 | 40 - 100 | 5.962 | 5.964 | -0.0020 | +/-0.500 | |
| Terphenyl-d14 | 0.06667 | 81.8 | 30 - 125 | 13.781 | 13.783 | -0.0020 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1333 | | 35 - 125 | | 10.97 | -10.9700 | +/-0.500 | * |
| **1011013-10 (1012008-10 ) mg/Kg dry** GKHMS-50-019-1010 | | | | Lab File ID: 1200810.D | | Analyzed: 12/21/10 02:33 | | |
| 2-Fluorobiphenyl | 0.07689 | 111 | 45 - 105 | 9.188 | 9.186 | 0.0020 | +/-0.500 | * |
| 2-Fluorophenol | 0.1538 | 67.4 | 35 - 105 | 4.927 | 4.916 | 0.0110 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07689 | 133 | 35 - 100 | 7.014 | 7.012 | 0.0020 | +/-0.500 | * |
| Phenol-d6 | 0.1538 | 94.3 | 40 - 100 | 5.966 | 5.964 | 0.0020 | +/-0.500 | |
| Terphenyl-d14 | 0.07689 | 108 | 30 - 125 | 13.78 | 13.783 | -0.0030 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1538 | 16.2 | 35 - 125 | 10.972 | 10.97 | 0.0020 | +/-0.500 | * |
| **1011013-11 (1012008-11 ) mg/Kg dry** GKHMS-50-021-1010 | | | | Lab File ID: 1200811D.D | | Analyzed: 12/21/10 03:03 | | |
| 2-Fluorobiphenyl | 0.07663 | | 45 - 105 | | 9.186 | -9.1860 | +/-0.500 | * |
| 2-Fluorophenol | 0.1533 | | 35 - 105 | | 4.916 | -4.9160 | +/-0.500 | * |
| Nitrobenzene-d5 | 0.07663 | | 35 - 100 | | 7.012 | -7.0120 | +/-0.500 | * |
| Phenol-d6 | 0.1533 | | 40 - 100 | | 5.964 | -5.9640 | +/-0.500 | * |
| Terphenyl-d14 | 0.07663 | | 30 - 125 | | 13.783 | -13.7830 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1533 | | 35 - 125 | | 10.97 | -10.9700 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011013-12 (1012008-12 ) mg/Kg dry** GKHMS-SO-022-1010 | | | | Lab File ID: 1200812D.D | | Analyzed: 12/21/10 03:34 | | |
| 2-Fluorobiphenyl | 0.07816 | | 45 - 105 | | 9.186 | -9.1860 | +/-0.500 | * |
| 2-Fluorophenol | 0.1563 | | 35 - 105 | | 4.916 | -4.9160 | +/-0.500 | * |
| Nitrobenzene-d5 | 0.07816 | | 35 - 100 | | 7.012 | -7.0120 | +/-0.500 | * |
| Phenol-d6 | 0.1563 | | 40 - 100 | | 5.964 | -5.9640 | +/-0.500 | * |
| Terphenyl-d14 | 0.07816 | | 30 - 125 | | 13.783 | -13.7830 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1563 | | 35 - 125 | | 10.97 | -10.9700 | +/-0.500 | * |
| **1011013-13 (1012008-13 ) mg/Kg dry** GKHMS-SO-023-1010 | | | | Lab File ID: 1200813D.D | | Analyzed: 12/21/10 04:04 | | |
| 2-Fluorobiphenyl | 0.07734 | | 45 - 105 | | 9.186 | -9.1860 | +/-0.500 | * |
| 2-Fluorophenol | 0.1547 | | 35 - 105 | | 4.916 | -4.9160 | +/-0.500 | * |
| Nitrobenzene-d5 | 0.07734 | | 35 - 100 | | 7.012 | -7.0120 | +/-0.500 | * |
| Phenol-d6 | 0.1547 | | 40 - 100 | | 5.964 | -5.9640 | +/-0.500 | * |
| Terphenyl-d14 | 0.07734 | | 30 - 125 | | 13.783 | -13.7830 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1547 | | 35 - 125 | | 10.97 | -10.9700 | +/-0.500 | * |
| **1011013-16 (1012008-16 ) mg/Kg dry** GKHMS-SO-030-1010 | | | | Lab File ID: 1200816.D | | Analyzed: 12/21/10 04:35 | | |
| 2-Fluorobiphenyl | 0.07584 | 94.5 | 45 - 105 | 9.185 | 9.186 | -0.0010 | +/-0.500 | |
| 2-Fluorophenol | 0.1517 | 84.9 | 35 - 105 | 4.929 | 4.916 | 0.0130 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07584 | 112 | 35 - 100 | 7.012 | 7.012 | 0.0000 | +/-0.500 | * |
| Phenol-d6 | 0.1517 | 97.8 | 40 - 100 | 5.968 | 5.964 | 0.0040 | +/-0.500 | |
| Terphenyl-d14 | 0.07584 | 129 | 30 - 125 | 13.782 | 13.783 | -0.0010 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1517 | 38.1 | 35 - 125 | 10.974 | 10.97 | 0.0040 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36307

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L36307-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV2.D | | Analyzed: 12/21/10 05:33 | | |
| 2-Fluorobiphenyl | 50.00 | 106 | 80 - 120 | 9.188 | 9.188 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 119 | 80 - 120 | 4.923 | 4.923 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 143 | 80 - 120 | 7.019 | 7.019 | 0.0000 | +/-0.500 | * |
| Phenol-d6 | 100.0 | 117 | 80 - 120 | 5.971 | 5.971 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 119 | 80 - 120 | 13.785 | 13.785 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 117 | 80 - 120 | 10.977 | 10.977 | 0.0000 | +/-0.500 | |
| **1011013-21 (1012008-21 ) mg/Kg dry** GKHMS-50-FD001-1010 | | | | Lab File ID: 1200821D.D | | Analyzed: 12/21/10 06:03 | | |
| 2-Fluorobiphenyl | 0.08292 | | 45 - 105 | | 9.188 | -9.1880 | +/-0.500 | * |
| 2-Fluorophenol | 0.1658 | | 35 - 105 | | 4.923 | -4.9230 | +/-0.500 | * |
| Nitrobenzene-d5 | 0.08292 | | 35 - 100 | | 7.019 | -7.0190 | +/-0.500 | * |
| Phenol-d6 | 0.1658 | | 40 - 100 | | 5.971 | -5.9710 | +/-0.500 | * |
| Terphenyl-d14 | 0.08292 | | 30 - 125 | | 13.785 | -13.7850 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 0.1658 | | 35 - 125 | | 10.977 | -10.9770 | +/-0.500 | * |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L14027 | Laboratory ID: | 0L14027-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 0.1667 | 0.1110 | 66.6 | 19 - 130 |
| Acetophenone | 0.1667 | 0.1663 | 99.8 | 35 - 110 |
| Atrazine | 0.1667 | 0.1714 | 103 | 55 - 105 |
| **Benzaldehyde** | **0.1667** | **0.333 U** | **0** | **10 - 160** |
| 1,1-Biphenyl | 0.1667 | 0.1700 | 102 | 45 - 110 |
| **4-Bromophenyl-phenylether** | **0.1667** | **0.2235** | **134** | **45 - 115** |
| Butylbenzylphthalate | 0.1667 | 0.1096 | 65.8 | 50 - 125 |
| Caprolactam | 0.1667 | 0.1241 | 74.5 | 50 - 110 |
| Carbazole | 0.1667 | 0.1432 | 85.9 | 45 - 115 |
| 4-Chloro-3-methylphenol | 0.5000 | 0.5135 | 103 | 45 - 115 |
| **4-Chloroaniline** | **0.1667** | **0.333 U** | **0** | **10 - 95** |
| **Bis(2-chloroethoxy)methane** | **0.1667** | **0.2103** | **126** | **45 - 110** |
| **Bis(2-chloroethyl)ether** | **0.1667** | **0.1849** | **111** | **40 - 105** |
| 2,2'-Oxybis-1-chloropropane | 0.1667 | 0.1524 | 91.4 | 20 - 115 |
| **2-Chloronaphthalene** | **0.1667** | **0.1787** | **107** | **45 - 105** |
| 2-Chlorophenol | 0.5000 | 0.4123 | 82.5 | 45 - 105 |
| **4-Chlorophenyl phenyl ether** | **0.1667** | **0.1860** | **112** | **45 - 110** |
| Dibenzofuran | 0.1667 | 0.1334 | 80.0 | 50 - 105 |
| Di-n-butylphthalate | 0.1667 | 0.1339 | 80.3 | 55 - 110 |
| 2,4-Dichlorophenol | 0.5000 | 0.5146 | 103 | 45 - 110 |
| Diethylphthalate | 0.1667 | 0.1332 | 79.9 | 50 - 115 |
| **2,4-Dimethylphenol** | **0.5000** | **0.5375** | **107** | **30 - 105** |
| **Dimethyl phthalate** | **0.1667** | **0.1915** | **115** | **50 - 110** |
| 4,6-Dinitro-2-methylphenol | 0.5000 | 0.4923 | 98.5 | 30 - 135 |
| 2,4-Dinitrophenol | 0.5000 | 0.4025 | 80.5 | 15 - 130 |
| 2,4-Dinitrotoluene | 0.1667 | 0.1452 | 87.1 | 50 - 115 |
| 2,6-Dinitrotoluene | 0.1667 | 0.1818 | 109 | 50 - 110 |
| Di-n-octylphthalate | 0.1667 | 0.1029 | 61.8 | 40 - 130 |
| Bis(2-ethylhexyl)phthalate | 0.1667 | 0.1173 | 70.4 | 45 - 125 |
| Hexachlorobenzene | 0.1667 | 0.1546 | 92.8 | 45 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L14027 | Laboratory ID: | 0L14027-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **Hexachlorobutadiene** | **0.1667** | **0.2651** | **159** | **30 - 110** |
| Hexachlorocyclopentadiene | 0.1667 | 0.09471 | 56.8 | 10 - 110 |
| Hexachloroethane | 0.1667 | 0.1599 | 96.0 | 35 - 110 |
| **Isophorone** | **0.1667** | **0.1956** | **117** | **45 - 110** |
| 2-Methylphenol | 0.5000 | 0.4757 | 95.1 | 40 - 105 |
| 4-Methylphenol | 1.000 | 0.5798 | 58.0 | 40 - 105 |
| Naphthalene | 0.1667 | 0.1533 | 92.0 | 40 - 105 |
| 4-Nitroaniline | 0.1667 | 0.1447 | 86.8 | 35 - 115 |
| 3-Nitroaniline | 0.1667 | 0.1671 | 100 | 25 - 110 |
| **2-Nitroaniline** | **0.1667** | **0.2477** | **149** | **45 - 120** |
| **Nitrobenzene** | **0.1667** | **0.2427** | **146** | **40 - 115** |
| 4-Nitrophenol | 0.5000 | 0.5460 | 109 | 15 - 140 |
| 2-Nitrophenol | 0.5000 | 0.4209 | 84.2 | 40 - 110 |
| **N-Nitrosodiphenylamine** | **0.1667** | **0.333 U** | **0** | **50 - 115** |
| **N-Nitroso-di-n-propylamine** | **0.1667** | **0.1956** | **117** | **40 - 115** |
| Pentachlorophenol | 0.5000 | 0.2785 | 55.7 | 25 - 120 |
| **Phenol** | **0.5000** | **0.5036** | **101** | **40 - 100** |
| **2,4,6-Trichlorophenol** | **0.5000** | **0.6307** | **126** | **45 - 110** |
| **2,4,5-Trichlorophenol** | **0.5000** | **0.5841** | **117** | **50 - 110** |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L14029 | Laboratory ID: | 0L14029-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 0.1667 | 0.1095 | 65.7 | 19 - 130 |
| Acetophenone | 0.1667 | 0.1519 | 91.2 | 35 - 110 |
| Atrazine | 0.1667 | 0.1474 | 88.5 | 55 - 105 |
| **Benzaldehyde** | **0.1667** | **0.333 U** | **0** | **10 - 160** |
| 1,1-Biphenyl | 0.1667 | 0.1374 | 82.4 | 45 - 110 |
| 4-Bromophenyl-phenylether | 0.1667 | 0.1614 | 96.8 | 45 - 115 |
| Butylbenzylphthalate | 0.1667 | 0.1556 | 93.4 | 50 - 125 |
| Caprolactam | 0.1667 | 0.1255 | 75.3 | 50 - 110 |
| Carbazole | 0.1667 | 0.1438 | 86.3 | 45 - 115 |
| 4-Chloro-3-methylphenol | 0.5000 | 0.5304 | 106 | 45 - 115 |
| **4-Chloroaniline** | **0.1667** | **0.333 U** | **0** | **10 - 95** |
| Bis(2-chloroethoxy)methane | 0.1667 | 0.1304 | 78.2 | 45 - 110 |
| Bis(2-chloroethyl)ether | 0.1667 | 0.1247 | 74.8 | 40 - 105 |
| 2,2'-Oxybis-1-chloropropane | 0.1667 | 0.1247 | 74.8 | 20 - 115 |
| 2-Chloronaphthalene | 0.1667 | 0.1537 | 92.2 | 45 - 105 |
| 2-Chlorophenol | 0.5000 | 0.4074 | 81.5 | 45 - 105 |
| 4-Chlorophenyl phenyl ether | 0.1667 | 0.1569 | 94.1 | 45 - 110 |
| Dibenzofuran | 0.1667 | 0.1597 | 95.8 | 50 - 105 |
| Di-n-butylphthalate | 0.1667 | 0.1819 | 109 | 55 - 110 |
| 2,4-Dichlorophenol | 0.5000 | 0.5066 | 101 | 45 - 110 |
| Diethylphthalate | 0.1667 | 0.1594 | 95.7 | 50 - 115 |
| 2,4-Dimethylphenol | 0.5000 | 0.4778 | 95.6 | 30 - 105 |
| Dimethyl phthalate | 0.1667 | 0.1659 | 99.5 | 50 - 110 |
| 4,6-Dinitro-2-methylphenol | 0.5000 | 0.4952 | 99.0 | 30 - 135 |
| **2,4-Dinitrophenol** | **0.5000** | **3.33 U** | **0** | **15 - 130** |
| 2,4-Dinitrotoluene | 0.1667 | 0.1658 | 99.5 | 50 - 115 |
| 2,6-Dinitrotoluene | 0.1667 | 0.1514 | 90.8 | 50 - 110 |
| Di-n-octylphthalate | 0.1667 | 0.1630 | 97.8 | 40 - 130 |
| Bis(2-ethylhexyl)phthalate | 0.1667 | 0.1647 | 98.8 | 45 - 125 |
| Hexachlorobenzene | 0.1667 | 0.1633 | 98.0 | 45 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L14029 | Laboratory ID: | 0L14029-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobutadiene | 0.1667 | 0.1738 | 104 | 30 - 110 |
| Hexachlorocyclopentadiene | 0.1667 | 0.09878 | 59.3 | 10 - 110 |
| Hexachloroethane | 0.1667 | 0.1487 | 89.2 | 35 - 110 |
| Isophorone | 0.1667 | 0.1330 | 79.8 | 45 - 110 |
| 2-Methylphenol | 0.5000 | 0.4281 | 85.6 | 40 - 105 |
| 4-Methylphenol | 1.000 | 0.5650 | 56.5 | 40 - 105 |
| Naphthalene | 0.1667 | 0.1431 | 85.9 | 40 - 105 |
| 4-Nitroaniline | 0.1667 | 0.1685 | 101 | 35 - 115 |
| 3-Nitroaniline | 0.1667 | 0.1268 | 76.1 | 25 - 110 |
| 2-Nitroaniline | 0.1667 | 0.1656 | 99.4 | 45 - 120 |
| Nitrobenzene | 0.1667 | 0.1529 | 91.7 | 40 - 115 |
| 4-Nitrophenol | 0.5000 | 0.4745 | 94.9 | 15 - 140 |
| 2-Nitrophenol | 0.5000 | 0.4075 | 81.5 | 40 - 110 |
| **N-Nitrosodiphenylamine** | **0.1667** | **0.333 U** | **0** | **50 - 115** |
| N-Nitroso-di-n-propylamine | 0.1667 | 0.1530 | 91.8 | 40 - 115 |
| Pentachlorophenol | 0.5000 | 0.2598 | 52.0 | 25 - 120 |
| Phenol | 0.5000 | 0.4054 | 81.1 | 40 - 100 |
| 2,4,6-Trichlorophenol | 0.5000 | 0.4154 | 83.1 | 45 - 110 |
| 2,4,5-Trichlorophenol | 0.5000 | 0.4620 | 92.4 | 50 - 110 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8270C**

**1011013-01**

GKHMS-SO-001-1010

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L14029

% Solids: 86.10

Source Sample Name: **1012008-01**

| ANALYTE | SPIKE ADDED (mg/Kg dry) | SAMPLE CONCENTRATION (mg/Kg dry) | MS CONCENTRATION (mg/Kg dry) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 0.1936 | ND | 0.1127 | 58.2 | | 19 - 130 |
| Acetophenone | 0.1936 | ND | 0.1555 | 80.3 | | 35 - 110 |
| Atrazine | 0.1936 | ND | 0.1859 | 96.0 | | 55 - 105 |
| Benzaldehyde | 0.1936 | ND | 0.387 U | 0 | * | 10 - 160 |
| 1,1-Biphenyl | 0.1936 | ND | 0.1480 | 76.5 | | 45 - 110 |
| 4-Bromophenyl-phenylether | 0.1936 | ND | 0.1940 | 100 | | 45 - 115 |
| Butylbenzylphthalate | 0.1936 | ND | 0.2359 | 122 | | 50 - 125 |
| Caprolactam | 0.1936 | ND | 0.1716 | 88.6 | | 50 - 110 |
| Carbazole | 0.1936 | ND | 0.1744 | 90.1 | | 45 - 115 |
| 4-Chloro-3-methylphenol | 0.5807 | ND | 0.6187 | 107 | | 45 - 115 |
| 4-Chloroaniline | 0.1936 | ND | 0.387 U | 0 | * | 10 - 95 |
| Bis(2-chloroethoxy)methane | 0.1936 | ND | 0.1399 | 72.3 | | 45 - 110 |
| Bis(2-chloroethyl)ether | 0.1936 | ND | 0.1248 | 64.5 | | 40 - 105 |
| 2,2'-Oxybis-1-chloropropane | 0.1936 | ND | 0.1302 | 67.3 | | 20 - 115 |
| 2-Chloronaphthalene | 0.1936 | ND | 0.1629 | 84.2 | | 45 - 105 |
| 2-Chlorophenol | 0.5807 | ND | 0.4106 | 70.7 | | 45 - 105 |
| 4-Chlorophenyl phenyl ether | 0.1936 | ND | 0.1899 | 98.1 | | 45 - 110 |
| Dibenzofuran | 0.1936 | ND | 0.1754 | 90.6 | | 50 - 105 |
| Di-n-butylphthalate | 0.1936 | ND | 0.3255 | 168 | * | 55 - 110 |
| 2,4-Dichlorophenol | 0.5807 | ND | 0.5570 | 95.9 | | 45 - 110 |
| Diethylphthalate | 0.1936 | ND | 0.1950 | 101 | | 50 - 115 |
| 2,4-Dimethylphenol | 0.5807 | ND | 0.5308 | 91.4 | | 30 - 105 |
| Dimethyl phthalate | 0.1936 | ND | 0.1902 | 98.2 | | 50 - 110 |
| 4,6-Dinitro-2-methylphenol | 0.5807 | ND | 0.4279 | 73.7 | | 30 - 135 |
| 2,4-Dinitrophenol | 0.5807 | ND | 3.87 U | 0 | * | 15 - 130 |
| 2,4-Dinitrotoluene | 0.1936 | ND | 0.1753 | 90.6 | | 50 - 115 |
| 2,6-Dinitrotoluene | 0.1936 | ND | 0.1603 | 82.8 | | 50 - 110 |
| Di-n-octylphthalate | 0.1936 | ND | 0.3928 | 203 | * | 40 - 130 |
| Bis(2-ethylhexyl)phthalate | 0.1936 | 0.05230 | 0.3444 | 151 | * | 45 - 125 |
| Hexachlorobenzene | 0.1936 | ND | 0.1904 | 98.4 | | 45 - 120 |
| Hexachlorobutadiene | 0.1936 | ND | 0.1832 | 94.7 | | 30 - 110 |
| Hexachlorocyclopentadiene | 0.1936 | ND | 0.387 U | 0 | * | 10 - 110 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## SW8270C

**1011013-01**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L14029

% Solids: 86.10

Source Sample Name: **1012008-01**

| ANALYTE | SPIKE ADDED (mg/Kg dry) | SAMPLE CONCENTRATION (mg/Kg dry) | MS CONCENTRATION (mg/Kg dry) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Hexachloroethane | 0.1936 | ND | 0.1495 | 77.2 | | 35 - 110 |
| Isophorone | 0.1936 | ND | 0.1382 | 71.4 | | 45 - 110 |
| 2-Methylphenol | 0.5807 | ND | 0.4608 | 79.4 | | 40 - 105 |
| 4-Methylphenol | 1.161 | ND | 0.6098 | 52.5 | | 40 - 105 |
| Naphthalene | 0.1936 | ND | 0.1539 | 79.5 | | 40 - 105 |
| 4-Nitroaniline | 0.1936 | ND | 0.1726 | 89.2 | | 35 - 115 |
| 3-Nitroaniline | 0.1936 | ND | 0.1361 | 70.3 | | 25 - 110 |
| 2-Nitroaniline | 0.1936 | ND | 0.1821 | 94.1 | | 45 - 120 |
| Nitrobenzene | 0.1936 | ND | 0.1508 | 77.9 | | 40 - 115 |
| 4-Nitrophenol | 0.5807 | ND | 0.5552 | 95.6 | | 15 - 140 |
| 2-Nitrophenol | 0.5807 | ND | 0.4560 | 78.5 | | 40 - 110 |
| N-Nitrosodiphenylamine | 0.1936 | ND | 0.387 U | 0 | * | 50 - 115 |
| N-Nitroso-di-n-propylamine | 0.1936 | ND | 0.1578 | 81.5 | | 40 - 115 |
| Pentachlorophenol | 0.5807 | ND | 0.3153 | 54.3 | | 25 - 120 |
| Phenol | 0.5807 | ND | 0.4171 | 71.8 | | 40 - 100 |
| 2,4,6-Trichlorophenol | 0.5807 | ND | 0.5277 | 90.9 | | 45 - 110 |
| 2,4,5-Trichlorophenol | 0.5807 | ND | 0.5468 | 94.2 | | 50 - 110 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## SW8270C

**1011013-01**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L14029

% Solids: 86.10

Source Sample Name: **1012008-01**

| ANALYTE | SPIKE ADDED (mg/Kg dry) | MSD CONCENTRATION (mg/Kg dry) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 0.1936 | 0.1029 | 53.1 | 9.15 | | 30 | 19 - 130 |
| Acetophenone | 0.1936 | 0.1437 | 74.2 | 7.85 | | 30 | 35 - 110 |
| Atrazine | 0.1936 | 0.1821 | 94.1 | 2.06 | | 30 | 55 - 105 |
| Benzaldehyde | 0.1936 | 0.387 U | 0 | | * | 30 | 10 - 160 |
| 1,1-Biphenyl | 0.1936 | 0.1466 | 75.7 | 1.01 | | 30 | 45 - 110 |
| 4-Bromophenyl-phenylether | 0.1936 | 0.2044 | 106 | 5.21 | | 30 | 45 - 115 |
| Butylbenzylphthalate | 0.1936 | 0.2365 | 122 | 0.254 | | 30 | 50 - 125 |
| Caprolactam | 0.1936 | 0.1799 | 92.9 | 4.74 | | 30 | 50 - 110 |
| Carbazole | 0.1936 | 0.1745 | 90.2 | 0.0866 | | 30 | 45 - 115 |
| 4-Chloro-3-methylphenol | 0.5807 | 0.6124 | 105 | 1.02 | | 30 | 45 - 115 |
| 4-Chloroaniline | 0.1936 | 0.387 U | 0 | | * | 30 | 10 - 95 |
| Bis(2-chloroethoxy)methane | 0.1936 | 0.1328 | 68.6 | 5.20 | | 30 | 45 - 110 |
| Bis(2-chloroethyl)ether | 0.1936 | 0.1249 | 64.5 | 0.0775 | | 30 | 40 - 105 |
| 2,2'-Oxybis-1-chloropropane | 0.1936 | 0.1132 | 58.5 | 14.0 | | 30 | 20 - 115 |
| 2-Chloronaphthalene | 0.1936 | 0.1682 | 86.9 | 3.20 | | 30 | 45 - 105 |
| 2-Chlorophenol | 0.5807 | 0.3867 | 66.6 | 6.00 | | 30 | 45 - 105 |
| 4-Chlorophenyl phenyl ether | 0.1936 | 0.1809 | 93.4 | 4.90 | | 30 | 45 - 110 |
| Dibenzofuran | 0.1936 | 0.1755 | 90.7 | 0.0645 | | 30 | 50 - 105 |
| Di-n-butylphthalate | 0.1936 | 0.2678 | 138 | 19.4 | * | 30 | 55 - 110 |
| 2,4-Dichlorophenol | 0.5807 | 0.5389 | 92.8 | 3.30 | | 30 | 45 - 110 |
| Diethylphthalate | 0.1936 | 0.2057 | 106 | 5.34 | | 30 | 50 - 115 |
| 2,4-Dimethylphenol | 0.5807 | 0.4941 | 85.1 | 7.15 | | 30 | 30 - 105 |
| Dimethyl phthalate | 0.1936 | 0.1894 | 97.8 | 0.394 | | 30 | 50 - 110 |
| 4,6-Dinitro-2-methylphenol | 0.5807 | 0.4456 | 76.7 | 4.06 | | 30 | 30 - 135 |
| 2,4-Dinitrophenol | 0.5807 | 3.87 U | 0 | | * | 30 | 15 - 130 |
| 2,4-Dinitrotoluene | 0.1936 | 0.1749 | 90.3 | 0.262 | | 30 | 50 - 115 |
| 2,6-Dinitrotoluene | 0.1936 | 0.1589 | 82.1 | 0.855 | | 30 | 50 - 110 |
| Di-n-octylphthalate | 0.1936 | 0.3450 | 178 | 12.9 | * | 30 | 40 - 130 |
| Bis(2-ethylhexyl)phthalate | 0.1936 | 0.3114 | 134 | 10.1 | * | 30 | 45 - 125 |
| Hexachlorobenzene | 0.1936 | 0.1909 | 98.6 | 0.272 | | 30 | 45 - 120 |
| Hexachlorobutadiene | 0.1936 | 0.1651 | 85.3 | 10.4 | | 30 | 30 - 110 |
| Hexachlorocyclopentadiene | 0.1936 | 0.07344 | 37.9 | | | 30 | 10 - 110 |
| Hexachloroethane | 0.1936 | 0.1389 | 71.8 | 7.29 | | 30 | 35 - 110 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## SW8270C

**1011013-01**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_009

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L14029

% Solids: 86.10

Source Sample Name: **1012008-01**

| ANALYTE | SPIKE ADDED (mg/Kg dry) | MSD CONCENTRATION (mg/Kg dry) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Isophorone | 0.1936 | 0.1382 | 71.4 | 0.0253 | | 30 | 45 - 110 |
| 2-Methylphenol | 0.5807 | 0.4463 | 76.8 | 3.21 | | 30 | 40 - 105 |
| 4-Methylphenol | 1.161 | 0.6011 | 51.8 | 1.43 | | 30 | 40 - 105 |
| Naphthalene | 0.1936 | 0.1397 | 72.2 | 9.69 | | 30 | 40 - 105 |
| 4-Nitroaniline | 0.1936 | 0.1689 | 87.3 | 2.16 | | 30 | 35 - 115 |
| 3-Nitroaniline | 0.1936 | 0.1273 | 65.8 | 6.64 | | 30 | 25 - 110 |
| 2-Nitroaniline | 0.1936 | 0.1876 | 96.9 | 2.99 | | 30 | 45 - 120 |
| Nitrobenzene | 0.1936 | 0.1384 | 71.5 | 8.61 | | 30 | 40 - 115 |
| 4-Nitrophenol | 0.5807 | 0.5799 | 99.9 | 4.34 | | 30 | 15 - 140 |
| 2-Nitrophenol | 0.5807 | 0.4274 | 73.6 | 6.47 | | 30 | 40 - 110 |
| N-Nitrosodiphenylamine | 0.1936 | 0.387 U | 0 | | * | 30 | 50 - 115 |
| N-Nitroso-di-n-propylamine | 0.1936 | 0.1563 | 80.7 | 0.959 | | 30 | 40 - 115 |
| Pentachlorophenol | 0.5807 | 0.3866 | 66.6 | 20.3 | | 30 | 25 - 120 |
| Phenol | 0.5807 | 0.4025 | 69.3 | 3.56 | | 30 | 40 - 100 |
| 2,4,6-Trichlorophenol | 0.5807 | 0.5490 | 94.5 | 3.96 | | 30 | 45 - 110 |
| 2,4,5-Trichlorophenol | 0.5807 | 0.5527 | 95.2 | 1.07 | | 30 | 50 - 110 |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35403

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35403-CCV1 )** | | | Lab File ID: SEQ-CCV1.D | | | Analyzed: 12/15/10 11:42 | | | |
| 1,4-Dichlorobenzene-d4 | 456511 | 6.642 | 520490 | 6.774 | 88 | 50 - 200 | -0.1320 | +/-0.50 | |
| Naphthalene-d8 | 1572603 | 8.147 | 1864250 | 8.284 | 84 | 50 - 200 | -0.1370 | +/-0.50 | |
| Acenaphthene-d10 | 877482 | 10.291 | 1011290 | 10.429 | 87 | 50 - 200 | -0.1380 | +/-0.50 | |
| Phenanthrene-d10 | 1461336 | 12.119 | 1690574 | 12.256 | 86 | 50 - 200 | -0.1370 | +/-0.50 | |
| Chrysene-d12 | 1282145 | 15.408 | 1331643 | 15.56 | 96 | 50 - 200 | -0.1520 | +/-0.50 | |
| Perylene-d12 | 1049873 | 17.245 | 1068595 | 17.426 | 98 | 50 - 200 | -0.1810 | +/-0.50 | |
| **LCS (0L14029-BS1 )** | | | Lab File ID: 1200823.D | | | Analyzed: 12/15/10 13:43 | | | |
| 1,4-Dichlorobenzene-d4 | 477479 | 6.642 | 456511 | 6.642 | 105 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1660776 | 8.143 | 1572603 | 8.147 | 106 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 916315 | 10.287 | 877482 | 10.291 | 104 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1520024 | 12.11 | 1461336 | 12.119 | 104 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1343272 | 15.404 | 1282145 | 15.408 | 105 | 50 - 200 | -0.0040 | +/-0.50 | |
| Perylene-d12 | 1158152 | 17.241 | 1049873 | 17.245 | 110 | 50 - 200 | -0.0040 | +/-0.50 | |
| **Blank (0L14029-BLK1 )** | | | Lab File ID: 1200822.D | | | Analyzed: 12/15/10 14:13 | | | |
| 1,4-Dichlorobenzene-d4 | 439793 | 6.638 | 456511 | 6.642 | 96 | 50 - 200 | -0.0040 | +/-0.50 | |
| Naphthalene-d8 | 1543900 | 8.143 | 1572603 | 8.147 | 98 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 834127 | 10.288 | 877482 | 10.291 | 95 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1246125 | 12.11 | 1461336 | 12.119 | 85 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 867104 | 15.4 | 1282145 | 15.408 | 68 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 688448 | 17.237 | 1049873 | 17.245 | 66 | 50 - 200 | -0.0080 | +/-0.50 | |
| **1011013-02 (1012008-02 )** | | | Lab File ID: 1200802.D | | | Analyzed: 12/15/10 14:43 | | | |
| 1,4-Dichlorobenzene-d4 | 458638 | 6.639 | 456511 | 6.642 | 100 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1609771 | 8.144 | 1572603 | 8.147 | 102 | 50 - 200 | -0.0030 | +/-0.50 | |
| Acenaphthene-d10 | 888013 | 10.284 | 877482 | 10.291 | 101 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1356808 | 12.112 | 1461336 | 12.119 | 93 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1017479 | 15.401 | 1282145 | 15.408 | 79 | 50 - 200 | -0.0070 | +/-0.50 | |
| Perylene-d12 | 849732 | 17.238 | 1049873 | 17.245 | 81 | 50 - 200 | -0.0070 | +/-0.50 | |
| **1011013-03 (1012008-03 )** | | | Lab File ID: 1200803.D | | | Analyzed: 12/15/10 15:13 | | | |
| 1,4-Dichlorobenzene-d4 | 464222 | 6.641 | 456511 | 6.642 | 102 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1648920 | 8.142 | 1572603 | 8.147 | 105 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 904520 | 10.286 | 877482 | 10.291 | 103 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1429347 | 12.109 | 1461336 | 12.119 | 98 | 50 - 200 | -0.0100 | +/-0.50 | |
| Chrysene-d12 | 1177379 | 15.398 | 1282145 | 15.408 | 92 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 1006287 | 17.24 | 1049873 | 17.245 | 96 | 50 - 200 | -0.0050 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_009 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35403 | Instrument: | MS-BNA3 |
| | | Calibration: | 0351002 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011013-04 (1012008-04 )** | | | Lab File ID: 1200804.D | | | Analyzed: 12/15/10 15:43 | | | |
| 1,4-Dichlorobenzene-d4 | 462392 | 6.642 | 456511 | 6.642 | 101 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1626158 | 8.142 | 1572603 | 8.147 | 103 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 881523 | 10.287 | 877482 | 10.291 | 100 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1356096 | 12.109 | 1461336 | 12.119 | 93 | 50 - 200 | -0.0100 | +/-0.50 | |
| Chrysene-d12 | 1044015 | 15.398 | 1282145 | 15.408 | 81 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 877970 | 17.235 | 1049873 | 17.245 | 84 | 50 - 200 | -0.0100 | +/-0.50 | |
| **1011013-05 (1012008-05 )** | | | Lab File ID: 1200805.D | | | Analyzed: 12/15/10 16:13 | | | |
| 1,4-Dichlorobenzene-d4 | 441447 | 6.641 | 456511 | 6.642 | 97 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1545278 | 8.146 | 1572603 | 8.147 | 98 | 50 - 200 | -0.0010 | +/-0.50 | |
| Acenaphthene-d10 | 859369 | 10.286 | 877482 | 10.291 | 98 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1328248 | 12.108 | 1461336 | 12.119 | 91 | 50 - 200 | -0.0110 | +/-0.50 | |
| Chrysene-d12 | 1107160 | 15.398 | 1282145 | 15.408 | 86 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 942061 | 17.239 | 1049873 | 17.245 | 90 | 50 - 200 | -0.0060 | +/-0.50 | |
| **1011013-06 (1012008-06 )** | | | Lab File ID: 1200806.D | | | Analyzed: 12/15/10 16:43 | | | |
| 1,4-Dichlorobenzene-d4 | 460471 | 6.64 | 456511 | 6.642 | 101 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1606118 | 8.145 | 1572603 | 8.147 | 102 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 879463 | 10.285 | 877482 | 10.291 | 100 | 50 - 200 | -0.0060 | +/-0.50 | |
| Phenanthrene-d10 | 1350540 | 12.108 | 1461336 | 12.119 | 92 | 50 - 200 | -0.0110 | +/-0.50 | |
| Chrysene-d12 | 1082362 | 15.397 | 1282145 | 15.408 | 84 | 50 - 200 | -0.0110 | +/-0.50 | |
| Perylene-d12 | 883873 | 17.239 | 1049873 | 17.245 | 84 | 50 - 200 | -0.0060 | +/-0.50 | |
| **1011013-07 (1012008-07 )** | | | Lab File ID: 1200807.D | | | Analyzed: 12/15/10 17:13 | | | |
| 1,4-Dichlorobenzene-d4 | 379524 | 6.641 | 456511 | 6.642 | 83 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1331182 | 8.141 | 1572603 | 8.147 | 85 | 50 - 200 | -0.0060 | +/-0.50 | |
| Acenaphthene-d10 | 732531 | 10.286 | 877482 | 10.291 | 83 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1120583 | 12.108 | 1461336 | 12.119 | 77 | 50 - 200 | -0.0110 | +/-0.50 | |
| Chrysene-d12 | 843992 | 15.397 | 1282145 | 15.408 | 66 | 50 - 200 | -0.0110 | +/-0.50 | |
| Perylene-d12 | 674420 | 17.234 | 1049873 | 17.245 | 64 | 50 - 200 | -0.0110 | +/-0.50 | |
| **1011013-08 (1012008-08 )** | | | Lab File ID: 1200808.D | | | Analyzed: 12/15/10 17:43 | | | |
| 1,4-Dichlorobenzene-d4 | 430929 | 6.642 | 456511 | 6.642 | 94 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1512102 | 8.142 | 1572603 | 8.147 | 96 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 826949 | 10.287 | 877482 | 10.291 | 94 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1273723 | 12.109 | 1461336 | 12.119 | 87 | 50 - 200 | -0.0100 | +/-0.50 | |
| Chrysene-d12 | 879663 | 15.399 | 1282145 | 15.408 | 69 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 613003 | 17.236 | 1049873 | 17.245 | 58 | 50 - 200 | -0.0090 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35403

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011013-14 (1012008-14 )** | | | Lab File ID: 1200814.D | | | Analyzed: 12/15/10 18:13 | | | |
| 1,4-Dichlorobenzene-d4 | 430815 | 6.641 | 456511 | 6.642 | 94 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1519135 | 8.141 | 1572603 | 8.147 | 97 | 50 - 200 | -0.0060 | +/-0.50 | |
| Acenaphthene-d10 | 828338 | 10.286 | 877482 | 10.291 | 94 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1309388 | 12.108 | 1461336 | 12.119 | 90 | 50 - 200 | -0.0110 | +/-0.50 | |
| Chrysene-d12 | 1045342 | 15.398 | 1282145 | 15.408 | 82 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 811262 | 17.234 | 1049873 | 17.245 | 77 | 50 - 200 | -0.0110 | +/-0.50 | |
| **1011013-15 (1012008-15 )** | | | Lab File ID: 1200815.D | | | Analyzed: 12/15/10 18:44 | | | |
| 1,4-Dichlorobenzene-d4 | 442811 | 6.638 | 456511 | 6.642 | 97 | 50 - 200 | -0.0040 | +/-0.50 | |
| Naphthalene-d8 | 1556466 | 8.143 | 1572603 | 8.147 | 99 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 841966 | 10.288 | 877482 | 10.291 | 96 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1296654 | 12.11 | 1461336 | 12.119 | 89 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 996513 | 15.4 | 1282145 | 15.408 | 78 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 759669 | 17.237 | 1049873 | 17.245 | 72 | 50 - 200 | -0.0080 | +/-0.50 | |
| **1011013-17 (1012008-17 )** | | | Lab File ID: 1200817.D | | | Analyzed: 12/15/10 19:14 | | | |
| 1,4-Dichlorobenzene-d4 | 473998 | 6.639 | 456511 | 6.642 | 104 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1652045 | 8.144 | 1572603 | 8.147 | 105 | 50 - 200 | -0.0030 | +/-0.50 | |
| Acenaphthene-d10 | 936069 | 10.289 | 877482 | 10.291 | 107 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 1508985 | 12.111 | 1461336 | 12.119 | 103 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1232565 | 15.4 | 1282145 | 15.408 | 96 | 50 - 200 | -0.0080 | +/-0.50 | |
| Perylene-d12 | 980037 | 17.237 | 1049873 | 17.245 | 93 | 50 - 200 | -0.0080 | +/-0.50 | |
| **1011013-18 (1012008-18 )** | | | Lab File ID: 1200818.D | | | Analyzed: 12/15/10 19:43 | | | |
| 1,4-Dichlorobenzene-d4 | 476215 | 6.639 | 456511 | 6.642 | 104 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1677087 | 8.144 | 1572603 | 8.147 | 107 | 50 - 200 | -0.0030 | +/-0.50 | |
| Acenaphthene-d10 | 946014 | 10.284 | 877482 | 10.291 | 108 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1477908 | 12.111 | 1461336 | 12.119 | 101 | 50 - 200 | -0.0080 | +/-0.50 | |
| Chrysene-d12 | 1190467 | 15.401 | 1282145 | 15.408 | 93 | 50 - 200 | -0.0070 | +/-0.50 | |
| Perylene-d12 | 879526 | 17.238 | 1049873 | 17.245 | 84 | 50 - 200 | -0.0070 | +/-0.50 | |
| **1011013-19 (1012008-19 )** | | | Lab File ID: 1200819.D | | | Analyzed: 12/15/10 20:13 | | | |
| 1,4-Dichlorobenzene-d4 | 532746 | 6.641 | 456511 | 6.642 | 117 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1859859 | 8.141 | 1572603 | 8.147 | 118 | 50 - 200 | -0.0060 | +/-0.50 | |
| Acenaphthene-d10 | 1038941 | 10.286 | 877482 | 10.291 | 118 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1619805 | 12.109 | 1461336 | 12.119 | 111 | 50 - 200 | -0.0100 | +/-0.50 | |
| Chrysene-d12 | 1250198 | 15.403 | 1282145 | 15.408 | 98 | 50 - 200 | -0.0050 | +/-0.50 | |
| Perylene-d12 | 910797 | 17.235 | 1049873 | 17.245 | 87 | 50 - 200 | -0.0100 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35403

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011013-20 (1012008-20 )** | | | Lab File ID: 1200820.D | | | Analyzed: 12/15/10 20:44 | | | |
| 1,4-Dichlorobenzene-d4 | 598987 | 6.638 | 456511 | 6.642 | 131 | 50 - 200 | -0.0040 | +/-0.50 | |
| Naphthalene-d8 | 2102691 | 8.143 | 1572603 | 8.147 | 134 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 1176262 | 10.288 | 877482 | 10.291 | 134 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1821296 | 12.11 | 1461336 | 12.119 | 125 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1510993 | 15.399 | 1282145 | 15.408 | 118 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 1180368 | 17.241 | 1049873 | 17.245 | 112 | 50 - 200 | -0.0040 | +/-0.50 | |
| **1011013-01 (1012008-01 )** | | | Lab File ID: 1200801.D | | | Analyzed: 12/15/10 21:14 | | | |
| 1,4-Dichlorobenzene-d4 | 473849 | 6.641 | 456511 | 6.642 | 104 | 50 - 200 | -0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1623018 | 8.141 | 1572603 | 8.147 | 103 | 50 - 200 | -0.0060 | +/-0.50 | |
| Acenaphthene-d10 | 905077 | 10.286 | 877482 | 10.291 | 103 | 50 - 200 | -0.0050 | +/-0.50 | |
| Phenanthrene-d10 | 1374626 | 12.108 | 1461336 | 12.119 | 94 | 50 - 200 | -0.0110 | +/-0.50 | |
| Chrysene-d12 | 957170 | 15.398 | 1282145 | 15.408 | 75 | 50 - 200 | -0.0100 | +/-0.50 | |
| Perylene-d12 | 558949 | 17.234 | 1049873 | 17.245 | 53 | 50 - 200 | -0.0110 | +/-0.50 | |
| **1011013-09 (1012008-09 )** 6KHMS-50-017-1010 | | | Lab File ID: 1200809.D | | | Analyzed: 12/15/10 21:44 | | | |
| 1,4-Dichlorobenzene-d4 | 362196 | 6.639 | 456511 | 6.642 | 79 | 50 - 200 | -0.0030 | +/-0.50 | |
| Naphthalene-d8 | 1297595 | 8.144 | 1572603 | 8.147 | 83 | 50 - 200 | -0.0030 | +/-0.50 | |
| Acenaphthene-d10 | 738103 | 10.284 | 877482 | 10.291 | 84 | 50 - 200 | -0.0070 | +/-0.50 | |
| Phenanthrene-d10 | 1168408 | 12.107 | 1461336 | 12.119 | 80 | 50 - 200 | -0.0120 | +/-0.50 | |
| Chrysene-d12 | 861697 | 15.396 | 1282145 | 15.408 | 67 | 50 - 200 | -0.0120 | +/-0.50 | |
| Perylene-d12 | 445040 | 17.233 | 1049873 | 17.245 | 42 | 50 - 200 | -0.0120 | +/-0.50 | * |
| **Matrix Spike (0L14029-MS1 )** | | | Lab File ID: 1200801B.D | | | Analyzed: 12/15/10 22:14 | | | |
| 1,4-Dichlorobenzene-d4 | 405099 | 6.642 | 456511 | 6.642 | 89 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1420196 | 8.142 | 1572603 | 8.147 | 90 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 808782 | 10.287 | 877482 | 10.291 | 92 | 50 - 200 | -0.0040 | +/-0.50 | |
| Phenanthrene-d10 | 1335615 | 12.109 | 1461336 | 12.119 | 91 | 50 - 200 | -0.0100 | +/-0.50 | |
| Chrysene-d12 | 980580 | 15.399 | 1282145 | 15.408 | 76 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 472082 | 17.236 | 1049873 | 17.245 | 45 | 50 - 200 | -0.0090 | +/-0.50 | * |
| **Matrix Spike Dup (0L14029-MSD1 )** | | | Lab File ID: 1200801C.D | | | Analyzed: 12/15/10 22:44 | | | |
| 1,4-Dichlorobenzene-d4 | 392996 | 6.638 | 456511 | 6.642 | 86 | 50 - 200 | -0.0040 | +/-0.50 | |
| Naphthalene-d8 | 1382566 | 8.143 | 1572603 | 8.147 | 88 | 50 - 200 | -0.0040 | +/-0.50 | |
| Acenaphthene-d10 | 772954 | 10.288 | 877482 | 10.291 | 88 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 1244807 | 12.11 | 1461336 | 12.119 | 85 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 876573 | 15.399 | 1282145 | 15.408 | 68 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 482540 | 17.236 | 1049873 | 17.245 | 46 | 50 - 200 | -0.0090 | +/-0.50 | * |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L36214-CCV1 )** | | | Lab File ID: SEQ-CCV1s.D | | | Analyzed: 12/20/10 17:10 | | | |
| 1,4-Dichlorobenzene-d4 | 459781 | 6.377 | 520490 | 6.774 | 88 | 50 - 200 | -0.3970 | +/-0.50 | |
| Naphthalene-d8 | 1386880 | 7.873 | 1864250 | 8.284 | 74 | 50 - 200 | -0.4110 | +/-0.50 | |
| Acenaphthene-d10 | 554089 | 10.008 | 1011290 | 10.429 | 55 | 50 - 200 | -0.4210 | +/-0.50 | |
| Phenanthrene-d10 | 737229 | 11.821 | 1690574 | 12.256 | 44 | 50 - 200 | -0.4350 | +/-0.50 | |
| Chrysene-d12 | 714666 | 15.086 | 1331643 | 15.56 | 54 | 50 - 200 | -0.4740 | +/-0.50 | |
| Perylene-d12 | 687516 | 16.865 | 1068595 | 17.426 | 64 | 50 - 200 | -0.5610 | +/-0.50 | |
| **LCS (0L14027-BS1 )** | | | Lab File ID: 1201409.D | | | Analyzed: 12/20/10 19:26 | | | |
| 1,4-Dichlorobenzene-d4 | 520802 | 6.375 | 459781 | 6.377 | 113 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1481609 | 7.871 | 1386880 | 7.873 | 107 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 549804 | 10.006 | 554089 | 10.008 | 99 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 640668 | 11.819 | 737229 | 11.821 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chrysene-d12 | 619332 | 15.084 | 714666 | 15.086 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Perylene-d12 | 601976 | 16.868 | 687516 | 16.865 | 88 | 50 - 200 | 0.0030 | +/-0.50 | |
| **Blank (0L14027-BLK1 )** | | | Lab File ID: 1201408.D | | | Analyzed: 12/20/10 19:56 | | | |
| 1,4-Dichlorobenzene-d4 | 404255 | 6.375 | 459781 | 6.377 | 88 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1229945 | 7.871 | 1386880 | 7.873 | 89 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 491767 | 10.006 | 554089 | 10.008 | 89 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 645047 | 11.819 | 737229 | 11.821 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chrysene-d12 | 618655 | 15.084 | 714666 | 15.086 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Perylene-d12 | 584194 | 16.863 | 687516 | 16.865 | 85 | 50 - 200 | -0.0020 | +/-0.50 | |
| **1011013-10 (1012008-10 )** | | | Lab File ID: 1200810.D | | | Analyzed: 12/21/10 02:33 | | | |
| 1,4-Dichlorobenzene-d4 | 624246 | 6.375 | 459781 | 6.377 | 136 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1909056 | 7.875 | 1386880 | 7.873 | 138 | 50 - 200 | 0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 745256 | 10.005 | 554089 | 10.008 | 135 | 50 - 200 | -0.0030 | +/-0.50 | |
| Phenanthrene-d10 | 748304 | 11.818 | 737229 | 11.821 | 102 | 50 - 200 | -0.0030 | +/-0.50 | |
| Chrysene-d12 | 649468 | 15.083 | 714666 | 15.086 | 91 | 50 - 200 | -0.0030 | +/-0.50 | |
| Perylene-d12 | 520472 | 16.867 | 687516 | 16.865 | 76 | 50 - 200 | 0.0020 | +/-0.50 | |
| **1011013-11 (1012008-11 )** | | | Lab File ID: 1200811D.D | | | Analyzed: 12/21/10 03:03 | | | |
| 1,4-Dichlorobenzene-d4 | 574746 | 6.378 | 459781 | 6.377 | 125 | 50 - 200 | 0.0010 | +/-0.50 | |
| Naphthalene-d8 | 1796142 | 7.873 | 1386880 | 7.873 | 130 | 50 - 200 | 0.0000 | +/-0.50 | |
| Acenaphthene-d10 | 714998 | 10.008 | 554089 | 10.008 | 129 | 50 - 200 | 0.0000 | +/-0.50 | |
| Phenanthrene-d10 | 775686 | 11.821 | 737229 | 11.821 | 105 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chrysene-d12 | 658797 | 15.086 | 714666 | 15.086 | 92 | 50 - 200 | 0.0000 | +/-0.50 | |
| Perylene-d12 | 532088 | 16.866 | 687516 | 16.865 | 77 | 50 - 200 | 0.0010 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011013-12 (1012008-12 )** | | | Lab File ID: 1200812D.D | | | Analyzed: 12/21/10 03:34 | | | |
| 1,4-Dichlorobenzene-d4 | 513263 | 6.377 | 459781 | 6.377 | 112 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1671347 | 7.873 | 1386880 | 7.873 | 121 | 50 - 200 | 0.0000 | +/-0.50 | |
| Acenaphthene-d10 | 709184 | 10.008 | 554089 | 10.008 | 128 | 50 - 200 | 0.0000 | +/-0.50 | |
| Phenanthrene-d10 | 780625 | 11.821 | 737229 | 11.821 | 106 | 50 - 200 | 0.0000 | +/-0.50 | |
| Chrysene-d12 | 623586 | 15.086 | 714666 | 15.086 | 87 | 50 - 200 | 0.0000 | +/-0.50 | |
| Perylene-d12 | 505138 | 16.87 | 687516 | 16.865 | 73 | 50 - 200 | 0.0050 | +/-0.50 | |
| **1011013-13 (1012008-13 )** | | | Lab File ID: 1200813D.D | | | Analyzed: 12/21/10 04:04 | | | |
| 1,4-Dichlorobenzene-d4 | 616636 | 6.377 | 459781 | 6.377 | 134 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 2037121 | 7.872 | 1386880 | 7.873 | 147 | 50 - 200 | -0.0010 | +/-0.50 | |
| Acenaphthene-d10 | 926574 | 10.007 | 554089 | 10.008 | 167 | 50 - 200 | -0.0010 | +/-0.50 | |
| Phenanthrene-d10 | 1091963 | 11.82 | 737229 | 11.821 | 148 | 50 - 200 | -0.0010 | +/-0.50 | |
| Chrysene-d12 | 748435 | 15.085 | 714666 | 15.086 | 105 | 50 - 200 | -0.0010 | +/-0.50 | |
| Perylene-d12 | 575960 | 16.87 | 687516 | 16.865 | 84 | 50 - 200 | 0.0050 | +/-0.50 | |
| **1011013-16 (1012008-16 )** | | | Lab File ID: 1200816.D | | | Analyzed: 12/21/10 04:35 | | | |
| 1,4-Dichlorobenzene-d4 | 602077 | 6.377 | 459781 | 6.377 | 131 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1983825 | 7.872 | 1386880 | 7.873 | 143 | 50 - 200 | -0.0010 | +/-0.50 | |
| Acenaphthene-d10 | 922762 | 10.008 | 554089 | 10.008 | 167 | 50 - 200 | 0.0000 | +/-0.50 | |
| Phenanthrene-d10 | 1098703 | 11.82 | 737229 | 11.821 | 149 | 50 - 200 | -0.0010 | +/-0.50 | |
| Chrysene-d12 | 703171 | 15.086 | 714666 | 15.086 | 98 | 50 - 200 | 0.0000 | +/-0.50 | |
| Perylene-d12 | 490495 | 16.865 | 687516 | 16.865 | 71 | 50 - 200 | 0.0000 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36307

SDG: CTOJM16KW_009
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L36307-CCV1 )** | | | Lab File ID: SEQ-CCV2.D | | | Analyzed: 12/21/10 05:33 | | | |
| 1,4-Dichlorobenzene-d4 | 530964 | 6.38 | 520490 | 6.774 | 102 | 50 - 200 | -0.3940 | +/-0.50 | |
| Naphthalene-d8 | 1763582 | 7.875 | 1864250 | 8.284 | 95 | 50 - 200 | -0.4090 | +/-0.50 | |
| Acenaphthene-d10 | 903165 | 10.01 | 1011290 | 10.429 | 89 | 50 - 200 | -0.4190 | +/-0.50 | |
| Phenanthrene-d10 | 1156136 | 11.823 | 1690574 | 12.256 | 68 | 50 - 200 | -0.4330 | +/-0.50 | |
| Chrysene-d12 | 719684 | 15.089 | 1331643 | 15.56 | 54 | 50 - 200 | -0.4710 | +/-0.50 | |
| Perylene-d12 | 496739 | 16.868 | 1068595 | 17.426 | 46 | 50 - 200 | -0.5580 | +/-0.50 | |
| **1011013-21 (1012008-21 )** | | | Lab File ID: 1200821D.D | | | Analyzed: 12/21/10 06:03 | | | |
| 1,4-Dichlorobenzene-d4 | 645369 | 6.378 | 530964 | 6.38 | 122 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 2098852 | 7.873 | 1763582 | 7.875 | 119 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 994954 | 10.008 | 903165 | 10.01 | 110 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 1113910 | 11.821 | 1156136 | 11.823 | 96 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chrysene-d12 | 687395 | 15.086 | 719684 | 15.089 | 96 | 50 - 200 | -0.0030 | +/-0.50 | |
| Perylene-d12 | 486393 | 16.87 | 496739 | 16.868 | 98 | 50 - 200 | 0.0020 | +/-0.50 | |

Data File: \\ELABNSH05\TARGET\chem\bna3.i\121510b3.b\SEQ-CCV1.D
Report Date: 18-Dec-2010 11:11

Internal Standard Reference

Laboratory Name

Data file : \\ELABNSH05\TARGET\chem\bna3.i\121510b3.b\SEQ-CCV1.D
Lab Smp Id: SEQ-CCV1 Client Smp ID: SEQ-CCV1
Inj Date : 15-DEC-2010 11:42 MS Autotune Date: 07-SEP-2010 04:[illegible]
Operator : MEC Inst ID: bna3.i
Smp Info : CCV50PPM;;;;;;10L0505
Misc Info : ;;;;;;ppbnax.sub;
Comment :
Method : \\ELABNSH05\TARGET\chem\bna3.i\121510b3.b\IXBN3.m
Meth Date : 18-Dec-2010 11:06 mcobb Quant Type: ISTD
Cal Date : 08-DEC-2010 03:20 Cal File: SEQ-CALK.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ppbnax.sub
Target Version: 4.04
Processing Host: TARGET09_VM

| | | | | | | | AMOUNTS | |
|---|---|---|---|---|---|---|---|---|
| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CAL-AMT (ng/ul) | ON COL (ng/ul) |
| * | 1 1,4-Dichlorobenzene-d4 | 152 | 6.642 | 6.642 | (1.000) | 456511 | 40.0000 | |
| S | 2 2 Fluorophenol | 112 | 5.184 | 5.184 | (0.781) | 1308744 | 100.000 | 74.59 |
| S | 3 Phenol-d6 | 99 | 6.233 | 6.233 | (0.938) | 1583512 | 100.000 | 84.49 |
| | 4 Pyridine | 79 | 3.684 | 3.684 | (0.555) | 656198 | 50.0000 | 41.73 |
| | 5 1,4-Dioxane | 88 | 3.309 | 3.309 | (0.498) | 273967 | 50.0000 | 41.22(M) |
| | 6 N-Nitroso di-methylamine | 42 | 3.655 | 3.655 | (0.550) | 466171 | 50.0000 | 57.80 |
| | 7 Aniline | 93 | 6.266 | 6.266 | (0.944) | 1004554 | 50.0000 | 46.33(Q) |
| | 10 Phenol | 94 | 6.247 | 6.247 | (0.941) | 874309 | 50.0000 | 51.36 |
| | 11 bis(2-Chloroethyl)ether | 93 | 6.334 | 6.334 | (0.954) | 618882 | 50.0000 | 41.63 |
| | 12 2-Chlorophenol | 128 | 6.406 | 6.406 | (0.965) | 750001 | 50.0000 | 49.77 |
| | 13 1,3-Dichlorobenzene | 146 | 6.579 | 6.579 | (0.991) | 872557 | 50.0000 | 49.12 |
| | 14 1,4-Dichlorobenzene | 146 | 6.661 | 6.661 | (1.003) | 891347 | 50.0000 | 49.11 |
| | 15 Benzyl alcohol | 108 | 6.800 | 6.800 | (1.024) | 444397 | 50.0000 | 48.17 |
| | 16 1,2-Dichlorobenzene | 146 | 6.843 | 6.843 | (1.030) | 827386 | 50.0000 | 48.39 |
| | 17 2-Mechylphenol | 108 | 6.935 | 6.935 | (1.044) | 617457 | 50.0000 | 47.51 |
| | 18 2,2'-Oxybis-1-chloropropane | 45 | 6.959 | 6.959 | (1.048) | 788053 | 50.0000 | 48.55(Q) |
| | 19 3-Methylphenol | 108 | 7.113 | 7.113 | (1.071) | 679712 | 50.0000 | 51.94 |
| | 20 4-Methylphenol | 108 | 7.113 | 7.113 | (1.071) | 679712 | 50.0000 | 51.94 |
| | 21 N-Nitroso-di-n-propylamine | 70 | 7.118 | 7.118 | (1.072) | 504511 | 50.0000 | 51.74 |
| | 22 Hexachloroethane | 117 | 7.243 | 7.243 | (1.090) | 356227 | 50.0000 | 53.46 |
| | 32 Benzaldehyde | 106 | 6.137 | 6.137 | (0.924) | 521816 | 50.0000 | 43.04 |
| * | 33 Naphthalene-d8 | 136 | 8.147 | 8.147 | (1.000) | 1572603 | 40.0000 | |
| S | 34 Nitrobenzene-d5 | 82 | 7.286 | 7.286 | (0.894) | 767632 | 50.0000 | 54.02 |
| | 35 Nitrobenzene | 77 | 7.310 | 7.310 | (0.897) | 759092 | 50.0000 | 52.32 |
| | 39 Isophorone | 82 | 7.598 | 7.598 | (0.933) | 1301184 | 50.0000 | 50.66 |
| | 40 2-Nitrophenol | 139 | 7.685 | 7.685 | (0.943) | 386982 | 50.0000 | 51.62 |

12/16
GLA
12/21/10

Data File: \\ELABNSH05\TARGET\chem\bna3.i\121510b3.b\SEQ-CCV1.D
Report Date: 18-Dec-2010 11:11

Internal Standard Reference

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT (ng/ul) | ON-COL (ng/ul) |
|---|---|---|---|---|---|---|---|---|
| 42 | 2,4-Dimethylphenol | 107 | 7.743 | 7.743 | (0.950) | 778562 | 50.0000 | 48.51 |
| 43 | Benzoic acid | 105 | 7.892 | 7.892 | (0.969) | 340723 | 50.0000 | 46.06 |
| 44 | bis(2-Chloroethoxy)methane | 93 | 7.849 | 7.849 | (0.963) | 724369 | 50.0000 | 48.89 |
| 47 | 2,4-Dichlorophenol | 162 | 7.983 | 7.983 | (0.980) | 607487 | 50.0000 | 47.35 |
| 49 | 2,6-Dichlorophenol | 162 | 8.252 | 8.252 | (1.013) | 626627 | 50.0000 | 48.15 |
| 50 | 1,2,4-Trichlorobenzene | 180 | 8.084 | 8.084 | (0.992) | 722447 | 50.0000 | 51.30 |
| 51 | Naphthalene | 128 | 8.176 | 8.176 | (1.004) | 2104033 | 50.0000 | 48.73 |
| 52 | 4-Chloroaniline | 127 | 8.233 | 8.233 | (1.011) | 845371 | 50.0000 | 51.75 |
| 53 | Hexachlorobutadiene | 225 | 8.339 | 8.339 | (1.024) | 427574 | 50.0000 | 47.31 |
| 54 | 4 Chloro-3-methylphenol | 107 | 8.834 | 8.834 | (1.084) | 657182 | 50.0000 | 55.87 |
| 55 | 2-Methylnaphthalene | 141 | 9.013 | 9.012 | (1.106) | 1189298 | 50.0000 | 51.64 |
| 56 | 1-Methylnaphthalene | 141 | 9.137 | 9.137 | (1.122) | 1242632 | 50.0000 | 51.36 |
| 57 | Acetophenone | 105 | 7.108 | 7.108 | (1.070) | 1034094 | 50.0000 | 52.45 |
| 67 | 1,2,4,5-Tetrachlorobenzene | 216 | 9.229 | 9.229 | (1.133) | 695566 | 50.0000 | 56.60 |
| 68 | Caprolactam | 113 | 8.676 | 8.676 | (1.065) | 204339 | 50.0000 | 52.83 |
| * 69 | Acenaphthene-d10 | 164 | 10.291 | 10.291 | (1.000) | 877482 | 40.0000 | |
| 70 | Hexachlorocyclopentadiene | 237 | 9.224 | 9.224 | (0.896) | 410536 | 50.0000 | 68.81 |
| 71 | 2,4,6-Trichlorophenol | 196 | 9.363 | 9.363 | (0.910) | 415250 | 50.0000 | 56.26 |
| 72 | 2,4,5-Trichlorophenol | 196 | 9.411 | 9.411 | (0.914) | 436750 | 50.0000 | 51.41 |
| 73 | 2-Chloronaphthalene | 162 | 9.609 | 9.609 | (0.934) | 1548100 | 50.0000 | 57.48 |
| $ 74 | 2-Fluorobiphenyl | 172 | 9.464 | 9.464 | (0.920) | 1566410 | 50.0000 | 48.96 |
| 75 | 2-Nitroaniline | 65 | 9.729 | 9.729 | (0.945) | 500345 | 50.0000 | 68.86 |
| 76 | Dimethylphthalate | 163 | 9.964 | 9.964 | (0.968) | 1546423 | 50.0000 | 51.82(M) |
| 77 | Acenaphthylene | 152 | 10.118 | 10.118 | (0.983) | 2159644 | 50.0000 | 50.05 |
| 78 | 2,6-Dinitrotoluene | 165 | 10.027 | 10.027 | (0.974) | 361717 | 50.0000 | 52.75 |
| 79 | 3-Nitroaniline | 138 | 10.234 | 10.234 | (0.994) | 350490 | 50.0000 | 52.56 |
| 80 | Acenaphthene | 153 | 10.335 | 10.335 | (1.004) | 1371537 | 50.0000 | 49.04 |
| 81 | 2,4-Dinitrophenol | 184 | 10.359 | 10.359 | (1.007) | 164059 | 50.0000 | 48.36 |
| 83 | 4-Nitrophenol | 65 | 10.445 | 10.445 | (1.015) | 256486 | 50.0000 | 51.65 |
| 84 | Dibenzofuran | 168 | 10.546 | 10.546 | (1.025) | 1880497 | 50.0000 | 50.45 |
| 85 | 2,4-Dinitrotoluene | 165 | 10.522 | 10.522 | (1.022) | 486667 | 50.0000 | 47.27 |
| 86 | Diethylphthalate | 149 | 10.825 | 10.825 | (1.052) | 1639276 | 50.0000 | 54.52 |
| 87 | 4-Chlorophenyl-phenylether | 204 | 10.960 | 10.960 | (1.065) | 770436 | 50.0000 | 54.13 |
| 88 | Fluorene | 166 | 10.965 | 10.965 | (1.065) | 1643760 | 50.0000 | 54.39 |
| 89 | 4-Nitroaniline | 138 | 10.984 | 10.984 | (1.067) | 337450 | 50.0000 | 61.02 |
| 96 | 2,3,4,6-Tetrachlorophenol | 232 | 10.700 | 10.700 | (1.040) | 351270 | 50.0000 | 55.78 |
| 100 | 1,1'-Biphenyl | 154 | 9.589 | 9.589 | (0.932) | 1773708 | 50.0000 | 49.08(M) |
| * 102 | Phenanthrene-d10 | 188 | 12.119 | 12.119 | (1.000) | 1461336 | 40.0000 | |
| 103 | 1,2-Diphenylhydrazine | 77 | 11.157 | 11.157 | (0.921) | 1429489 | 50.0000 | 47.53 |
| 104 | Carbazole | 167 | 12.402 | 12.402 | (1.023) | 1861066 | 50.0000 | 47.29 |
| 105 | 4,6-Dinitro-2-methylphenol | 198 | 11.027 | 11.027 | (0.910) | 262821 | 50.0000 | 51.94 |
| 106 | N-Nitrosodiphenylamine | 169 | 11.109 | 11.109 | (0.917) | 1346106 | 50.0000 | 49.57 |
| $ 107 | 2,4,6-Tribromophenol | 330 | 11.263 | 11.263 | (0.929) | 497808 | 100.000 | 117.5(A) |
| 108 | 4-Bromophenyl-phenylether | 248 | 11.561 | 11.561 | (0.954) | 452156 | 50.0000 | 51.65 |
| 109 | Hexachlorobenzene | 284 | 11.657 | 11.657 | (0.962) | 516536 | 50.0000 | 52.55 |
| 110 | Pentachlorophenol | 266 | 11.893 | 11.893 | (0.981) | 262576 | 50.0000 | 49.90 |
| 111 | Phenanthrene | 178 | 12.148 | 12.148 | (1.002) | 2145310 | 50.0000 | 48.68 |

Internal Standard Reference

Data File: \\ELABNSH05\TARGET\chem\bna3.i\121510b3.b\SEQ-CCV1.D
Report Date: 18-Dec-2010 11:11

| Compounds | QUANT SIC MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT (ng/ul) | ON COL (ng/ul) |
|---|---|---|---|---|---|---|---|
| 112 Anthracene | 178 | 12.210 | 12.210 | (1.008) | 2178740 | 50.0000 | [illegible] |
| 115 Di n-butylphthalate | 149 | 12.835 | 12.835 | (1.059) | 2611434 | 50.0000 | 56.10 |
| 116 Fluoranthene | 202 | 13.609 | 13.609 | (1.123) | 2214168 | 50.0000 | 51.85 |
| 129 Atrazine | 200 | 11.768 | 11.768 | (0.971) | 469630 | 50.0000 | [illegible] |
| * 132 Chrysene-d12 | 240 | 15.408 | 15.408 | (1.000) | 1282145 | 40.0000 | |
| 133 Benzidine | 184 | 13.763 | 13.763 | (0.893) | 930299 | 50.0000 | [illegible] |
| 134 Pyrene | 202 | 13.888 | 13.888 | (0.901) | 2191229 | 50.0000 | [illegible] |
| $ 135 Terphenyl-d14 | 244 | 14.071 | 14.071 | (0.913) | 1443628 | 50.0000 | 50.30 |
| 136 Butylbenzylphthalate | 149 | 14.677 | 14.677 | (0.953) | 1120216 | 50.0000 | [illegible] |
| 137 3,3'-Dichlorobenzidine | 252 | 15.355 | 15.355 | (0.997) | 541655 | 50.0000 | 43.52 |
| 138 Benzo(a)anthracene | 228 | 15.394 | 15.394 | (0.999) | 1959460 | 50.0000 | 51.22 |
| 139 Chrysene | 228 | 15.442 | 15.442 | (1.002) | 1809808 | 50.0000 | 46.13 |
| 140 Bis(2-ethylhexyl)phthalate | 149 | 15.418 | 15.418 | (1.001) | 1536785 | 50.0000 | 55.12 |
| * 154 Perylene-d12 | 264 | 17.245 | 17.245 | (1.000) | 1049873 | 40.0000 | |
| 155 Di n-octylphthalate | 149 | 16.230 | 16.230 | (0.941) | 2354533 | 50.0000 | 56.72 |
| 156 Benzo(b)fluoranthene | 252 | 16.754 | 16.754 | (0.972) | 1862576 | 50.0000 | 50.69 |
| 157 Benzo(k)fluoranthene | 252 | 16.788 | 16.788 | (0.974) | 1807342 | 50.0000 | 50.72 |
| 158 Benzo(a)pyrene | 252 | 17.173 | 17.173 | (0.996) | 1569268 | 50.0000 | 50.31 |
| 159 Indeno(1,2,3-cd)pyrene | 276 | 18.851 | 18.851 | (1.093) | 1386148 | 50.0000 | 50.44 |
| 160 Dibenz(a,h)anthracene | 278 | 18.865 | 18.865 | (1.094) | 1134207 | 50.0000 | 51.23 |
| 161 Benzo(g,h,i)perylene | 276 | 19.318 | 19.318 | (1.120) | 1061620 | 50.0000 | 46.63 |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 15, 2011**

**FROM:** **EDWARD SEDLMYER** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – SVOC**
**NAS KEY WEST, CTO JM16**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_010**

**SAMPLES:** 12 / Aqueous / SVOC

| | | |
|---|---|---|
| G01-MW-01-1010 | G01-MW-01A-1010 | G01-MW-02-1010 |
| G01-MW-03-1010 | G01-MW-04-1010 | G01-MW-06-1010 |
| G01-MW-07-1010 | G01-MW-08-1010 | G01-MW-09-1010 |
| G01-MW-10-1010 | G01-MW-12-1010 | GKHMS-GW-FD04-1010 |

1 / Soil / SVOC

GKHMS-SO-018-1010

2 / Soil / PEST / PCB

GKHMS-SO-FD001-1010 GKHMS-SO-FD002-1010

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_010 consisted of twelve (12) aqueous environmental samples and three (3) soil samples. The samples were analyzed for semi-volatile organics (SVOC), pesticides (PEST), and polychlorinated biphenyls (PCB) as indicated above. Three field duplicate pairs were associated with this SDG: G01-MW-08-1010 / GKHMS-GW-FD04-1010, GKHMS-SO-017-1010 (SDG 1011013) / GKHMS-SO-FD001-1010, and GKHMS-SO-031-1010 (SDG1011013) / GKHMS-SO-FD002-1010.

The samples were collected by Tetra Tech NUS on November 2, 4, 5, 6, and 7, 2010 and analyzed by Empirical Laboratories LLC upon transfer from Centauri Labs who performed the initial sample method extraction. The analyses were conducted in accordance with SW-846 Methods 8270C, 8081A, and 8082 analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

- Data Completeness
- Holding Times/Sample Preservation
- * GC/MS Instrument Tuning and System Performance
- Initial/Continuing Calibrations
- * Laboratory Method Blank Results
- Blank Spike/Blank Spike Duplicate Results
- * Internal Standard Recoveries
- Surrogate Recoveries
- * Compound Quantitation
- * Compound Identification

* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

SVOC

Samples G01-MW-06-1010, G01-MW-09-1010, and G01-MW-10-1010 exceeded the extraction to analysis hold time of 40 days by one day. All positive and non-detected results were qualified estimated, (J) and (UJ), respectively, unless the results were rejected due to a more severe noncompliance.

The surrogates 2-fluorobiphenyl and nitrobenzene-d5 had percent recoveries greater than the quality control limit for sample G01-MW-06-1010. The positive result for dibenzofuran was qualified as estimated (J) in sample G01-MW-06-1010. No action was taken on the nondetected results because the surrogate recoveries were high and do not affect the nondetected results.

The surrogate nitrobenzene-d5 had percent recoveries greater than the quality control limit for samples G01-MW-09-1010, G01-MW-10-1010, G01-MW-07-1010, G01-MW-12-1010, G01-MW-08-1010, and GKHMS-GW-FD04-1010. No action was taken on this basis as only one surrogate per fraction is outside of the quality control limit.

The surrogates 2-fluorobiphenyl and nitrobenzene-d5 had percent recoveries greater than the quality control limit for samples G01-MW-01-1010, G01-MW-03-1010, and G01-MW-04-1010. No action was taken on the nondetected results because the surrogate recoveries were high and do not affect the nondetected results.

The surrogates 2-fluorobiphenyl, nitrobenzene-d5, and terphenyl-d14 had percent recoveries greater than the quality control limit for sample G01-MW-02-1010. No action was taken on the nondetected results because the surrogate recoveries were high and do not affect the nondetected results.

The surrogates nitrobenzene-d5 had a high recovery and 2,4,6-tribromophenol had a low recovery outside of the quality control limit for sample G01-MW-01A-1010. No action was taken on the nondetected results because only one surrogate per fraction was outside of the quality control limit.

The surrogates 2-fluorobiphenyl, nitrobenzene-d5, and phenol-d6 had percent recoveries greater than the quality control limit and 2,4,6-tribromophenol had a zero percent recovery for sample GKHMS-SO-018-1010. The nondetected acid fraction compound results were rejected (UR).

The laboratory control sample (LCS) associated with preparation batch 0L14026 had zero percent recoveries for benzaldehyde, 4-chloroaniline, 2,4-dinitrophenol, 2-nitroaniline, and N-nitrosodiphenylamine. The nondetected results for the aforementioned compounds in samples G01-MW-06-1010, G01-MW-09-1010, and G01-MW-10-1010 have been rejected (UR).

The LCS associated with preparation batch 0L14027 affecting the soil sample had zero percent recoveries for benzaldehyde and 4-chloroaniline. The LCS percent recoveries for 4-bromophenyl-phenylether, bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, 2-chloronaphthalene, 4-chlorophenyl phenyl ether, 2,4-dimethylphenol, dimethyl phthalate, hexachlorobutadiene, isophorone, 2-nitroaniline, nitrobenzene, N-nitroso-di-n-propylamine, phenol, 2,4,6-trichlorophenol, and 2,4,5-trichlorophenol were greater than the quality control limit and the recovery for N-nitrosodiphenylamine was less than the quality control limit. The

nondetected results for benzaldehyde and 4-chloroaniline have been rejected (UR). The nondetected result for N-nitrosodiphenylamine was qualified as estimated (UJ). No action was taken on the other compounds because all results were nondetected and the recoveries were high.

The LCS associated with preparation batch 0L14028 had zero percent recoveries for benzaldehyde, 4-chloroaniline, 2,4-dinitrophenol, and N-nitrosodiphenylamine. The compounds 4-bromophenyl-phenylether, bis(2-chloroethoxy)methane, 2-chloronaphthalene, hexachlorobutadiene, 2-nitroaniline, nitrobenzene, and 2,4,6-trichlorophenol had high recoveries. The nondetected results for benzaldehyde, 4-chloroaniline, 2,4-dinitrophenol, and N-nitrosodiphenylamine in the affected aqueous samples have been rejected (UR). No action was taken on the nondetected results associated with the high recoveries.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for benzaldehyde, 2,2'-oxybis-1-chloropropane, hexachlorocyclopentadiene, and 2-nitroaniline for instrument MS-BNA3 on 12/14/10 @ 12:13. No action was taken on this basis because only QC samples were associated with this continuing calibration.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit for 3,3"-dichlorobenzidine, atrazine, benzaldehyde, 4-bromophenyl-phenylether, carbazole, 4-chloroaniline, bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, 2-chloronaphthalene, 4-chlorophenyl phenyl ether, 4,6-dintro-2-methylphenol, 2,6-dinitrotoluene, hexachlorobutadiene, isophorone, 3-nitroaniline, 2-nitroaniline, nitrobenzene, 4-nitrophenol, N-nitroso-di-n-propylamine, 2,4,6-trichlorophenol, and 2,4,5-trichlorophenol for instrument MS-BNA3 on 12/20/10 @ 17:10 affecting all samples. The non-detected results for the aforementioned compounds were qualified estimated, (UJ), unless rejected for a more severe noncompliance.

PEST

The surrogate percent recoveries for tetrachloro-m-xylene were greater than the quality control limit on both the primary and secondary columns and decachlorobiphenyl on the primary column for sample GKHMS-SO-FD001-1010. The positive results for sample GKHMS-SO-FD001-1010 were qualified as estimated (J).

The LCS associated with preparation batch 0L06022 had percent recoveries greater than the quality control limits for 4,4'-DDE, 4,4'-DDT, alpha-BHC, alpha-chlordane, beta-BHC, delta-BHC, dieldrin, endrin, gamma-BHC, gamma-chlordane, heptachlor, and heptachlor expoxide on the primary and secondary columns and 4,4'-DDD, aldrin, and endosulfan sulfate on the secondary column. The positive results for the aforementioned compounds were qualified as estimated (J). No action was taken on the nondetected compounds.

The matrix spike / matrix spike duplicate (MS/MSD) performed on sample GKHMS-SO-FD002-1010 had percent recoveries greater than the quality control limit for 4,4'-DDT, alpha-BHC, endrin, gamma-BHC, and heptachlor on both columns for both the MS and MSD. Several other compounds had high recoveries on either the primary or secondary column in either the MS or MSD. No action was taken on this basis because the positive result for beta-BHC had acceptable recoveries on the primary column for both the MS and MSD. All other compounds outside of criteria were nondetected and qualification was not necessary.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit on instrument GL-ECD3 on 12/10/10 @20:51 for delta-BHC on the secondary column. No action was taken on this basis because the results were all nondetected and the primary column had acceptable %Ds.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit on instrument GL-ECD3 on 12/10/10 @21:28 for toxaphene on the secondary column. No action was taken on

this basis because the results were all nondetected and the primary column had acceptable %Ds.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit on instrument GL-ECD3 on 12/11/10 @00:34 for alpha-BHC and delta-BHC on the secondary column. No action was taken on this basis because the results were all nondetected and the primary column had acceptable %Ds.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit on instrument GL-ECD3 on 12/11/10 @01:11 for toxaphene on the secondary column. No action was taken on this basis because the results were all nondetected and the primary column had acceptable %Ds.

The relative percent difference (RPD) between columns exceeded 40% for the following compounds. The positive results were reported as estimated, (J) for the compounds below:

| Sample | Compound | %D |
|---|---|---|
| GKHMS-SO-FD001-1010 | 4,4'-DDE | 85.0% |
| | alpha-Chlordane | 185% |
| | beta-BHC | 111% |
| | Dieldrin | 116% |
| | Endosulfan II | 79% |
| | gamma-Chlordane | 195% |
| | Heptachlor epoxide | 56% |
| | Methoxychlor | 149% |
| GKHMS-SO-FD002-1010 | beta-BHC | 52% |
| | Endosulfan II | 56% |

PCB

An LCS was not extracted for PCBs in this SDG. No qualification action was taken on this basis.

The surrogate percent recoveries for tetrachloro-m-xylene were greater than the quality control limit on both the primary and secondary columns and decachlorobiphenyl on the primary column for sample GKHMS-SO-FD001-1010. No action was taken on this basis because all the results were nondetected.

The continuing calibration verification percent difference (%D) was greater than 20% quality control limit on instrument GL-ECD3 on 12/11/10 @01:30 for Aroclor-1016 and Aroclor-1260 on the primary and secondary columns affecting all samples. The nondetected results in all samples have been qualified as estimated (UJ).

Additional Comments

The samples were initially sent to Centauri Labs for analysis but the laboratory closed prior to sample analysis completion. The laboratory extracted the samples for SVOC, PEST, and PCB prior to closure. The extracts were sent to Empirical Laboratories for the completion of the analyses. The samples were logged in to Empirical Laboratories using the Centauri Labs identifications instead of the sample identifications. The Form I results for this SDG have been manually edited to indicate the actually sample names.

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

**Executive Summary**

**Laboratory Performance:** Hold time noncompliance resulted in the qualification of results for three SVOC samples. Surrogate recovery noncompliances in the SVOC, PEST, and PCB fractions resulted in qualification of the data. Laboratory control sample recovery noncompliances resulted in the rejection or qualification of results in the SVOC and PEST fractions. An LCS was not performed for PCB fraction. Matrix spike noncompliances in the PEST fraction did not result in the qualification of data. SVOC and PCB continuing calibration verification %Ds which exceeded the quality control limits resulted in the qualification of results.

**Other Factors Affecting Data Quality:** Percent differences between column noncompliances resulted in the qualification of PEST results. Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), the site specific Sampling and Analysis Plan, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

Tetra Tech NUS
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

## Appendix A

Qualified Analytical Results

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | | | G01-MW-01A-1010 | | | G01-MW-02-1010 | | | G01-MW-03-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012013-01 | | | 1012014-01 | | | 1012013-02 | | | 1012014-02 | | |
| FRACTION: OS | SAMP_DATE | 11/5/2010 | | | 11/6/2010 | | | 11/5/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | U | | 0.39 | U | | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | U | | 0.85 | U | | 0.85 | U | | 0.85 | U | |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UJ | C | 0.5 | UJ | C | 0.5 | UJ | C | 0.5 | UJ | C |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UJ | C | 0.73 | UJ | C | 0.73 | UJ | C | 0.73 | UJ | C |
| 2,4-DICHLOROPHENOL | | 0.44 | U | | 0.44 | U | | 0.44 | U | | 0.44 | U | |
| 2,4-DIMETHYLPHENOL | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| 2,4-DINITROPHENOL | | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E |
| 2,4-DINITROTOLUENE | | 0.49 | U | | 0.49 | U | | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | | 0.65 | UJ | C | 0.65 | UJ | C | 0.65 | UJ | C | 0.65 | UJ | C |
| 2-CHLORONAPHTHALENE | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C |
| 2-CHLOROPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2-METHYLPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 2-NITROANILINE | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| 2-NITROPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C | 0.89 | UJ | C |
| 3-NITROANILINE | | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C | 1 | UJ | C |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C |
| 4-METHYLPHENOL | | 0.77 | U | | 0.77 | U | | 0.77 | U | | 0.77 | U | |
| 4-NITROANILINE | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| 4-NITROPHENOL | | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C | 5 | UJ | C |
| ACETOPHENONE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| ATRAZINE | | 0.69 | UJ | C | 0.69 | UJ | C | 0.69 | UJ | C | 0.69 | UJ | C |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | UJ | C | 0.45 | UJ | C | 0.45 | UJ | C | 0.45 | UJ | C |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| BUTYL BENZYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | | 0.69 | UJ | C | 0.69 | UJ | C | 0.69 | UJ | C | 0.69 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-04-1010 | | | G01-MW-06-1010 | | | G01-MW-07-1010 | | | G01-MW-08-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012013-03 | | | 1012011-01 | | | 1012014-03 | | | 1012014-06 | | |
| FRACTION: OS | SAMP_DATE | 11/5/2010 | | | 11/4/2010 | | | 11/6/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | 0.39 | U | | 0.39 | UJ | H | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | 0.85 | U | | 0.85 | UJ | H | 0.85 | U | | 0.85 | U | |
| 2,3,4,6-TETRACHLOROPHENOL | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2,4,5-TRICHLOROPHENOL | 0.5 | UJ | C | 0.5 | UJ | CH | 0.5 | UJ | C | 0.5 | UJ | C |
| 2,4,6-TRICHLOROPHENOL | 0.73 | UJ | C | 0.73 | UJ | CH | 0.73 | UJ | C | 0.73 | UJ | C |
| 2,4-DICHLOROPHENOL | 0.44 | U | | 0.44 | UJ | H | 0.44 | U | | 0.44 | U | |
| 2,4-DIMETHYLPHENOL | 5 | U | | 5 | UJ | H | 5 | U | | 5 | U | |
| 2,4-DINITROPHENOL | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E |
| 2,4-DINITROTOLUENE | 0.49 | U | | 0.49 | UJ | H | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | 0.65 | UJ | C | 0.65 | UJ | CH | 0.65 | UJ | C | 0.65 | UJ | C |
| 2-CHLORONAPHTHALENE | 1.25 | UJ | C | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| 2-CHLOROPHENOL | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2-METHYLPHENOL | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2-NITROANILINE | 5 | UJ | C | 5 | UR | E | 5 | UJ | C | 5 | UJ | C |
| 2-NITROPHENOL | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 3,3'-DICHLOROBENZIDINE | 0.89 | UJ | C | 0.89 | UJ | CH | 0.89 | UJ | C | 0.89 | UJ | C |
| 3-NITROANILINE | 1 | UJ | C | 1 | UJ | CH | 1 | UJ | C | 1 | UJ | C |
| 4,6-DINITRO-2-METHYLPHENOL | 5 | UJ | C | 5 | UJ | CH | 5 | UJ | C | 5 | UJ | C |
| 4-BROMOPHENYL PHENYL ETHER | 1.25 | UJ | C | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| 4-CHLORO-3-METHYLPHENOL | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 4-CHLOROANILINE | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | 1.25 | UJ | C | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| 4-METHYLPHENOL | 0.77 | U | | 0.77 | UJ | H | 0.77 | U | | 0.77 | U | |
| 4-NITROANILINE | 2 | U | | 2 | UJ | H | 2 | U | | 2 | U | |
| 4-NITROPHENOL | 5 | UJ | C | 5 | UJ | CH | 5 | UJ | C | 5 | UJ | C |
| ACETOPHENONE | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| ATRAZINE | 0.69 | UJ | C | 0.69 | UJ | CH | 0.69 | UJ | C | 0.69 | UJ | C |
| BENZALDEHYDE | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | 1.25 | UJ | C | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| BIS(2-CHLOROETHYL)ETHER | 0.45 | UJ | C | 0.45 | UJ | CH | 0.45 | UJ | C | 0.45 | UJ | C |
| BIS(2-ETHYLHEXYL)PHTHALATE | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| BUTYL BENZYL PHTHALATE | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | 0.69 | UJ | C | 0.69 | UJ | CH | 0.69 | UJ | C | 0.69 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-09-1010 | | | G01-MW-10-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012011-02 | | | 1012011-03 | | | 1012014-04 | | | 1012014-07 | | |
| FRACTION: OS | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/6/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | G01-MW-08-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 1,1-BIPHENYL | | 0.39 | UJ | H | 0.39 | UJ | H | 0.39 | U | | 0.39 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | | 0.85 | UJ | H | 0.85 | UJ | H | 0.85 | U | | 0.85 | U | |
| 2,3,4,6-TETRACHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2,4,5-TRICHLOROPHENOL | | 0.5 | UJ | CH | 0.5 | UJ | CH | 0.5 | UJ | C | 0.5 | UJ | C |
| 2,4,6-TRICHLOROPHENOL | | 0.73 | UJ | CH | 0.73 | UJ | CH | 0.73 | UJ | C | 0.73 | UJ | C |
| 2,4-DICHLOROPHENOL | | 0.44 | UJ | H | 0.44 | UJ | H | 0.44 | U | | 0.44 | U | |
| 2,4-DIMETHYLPHENOL | | 5 | UJ | H | 5 | UJ | H | 5 | U | | 5 | U | |
| 2,4-DINITROPHENOL | | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E | 12.5 | UR | E |
| 2,4-DINITROTOLUENE | | 0.49 | UJ | H | 0.49 | UJ | H | 0.49 | U | | 0.49 | U | |
| 2,6-DINITROTOLUENE | | 0.65 | UJ | CH | 0.65 | UJ | CH | 0.65 | UJ | C | 0.65 | UJ | C |
| 2-CHLORONAPHTHALENE | | 1.25 | UJ | CH | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| 2-CHLOROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 2-NITROANILINE | | 5 | UR | E | 5 | UR | E | 5 | UJ | C | 5 | UJ | C |
| 2-NITROPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 3,3'-DICHLOROBENZIDINE | | 0.89 | UJ | CH | 0.89 | UJ | CH | 0.89 | UJ | C | 0.89 | UJ | C |
| 3-NITROANILINE | | 1 | UJ | CH | 1 | UJ | CH | 1 | UJ | C | 1 | UJ | C |
| 4,6-DINITRO-2-METHYLPHENOL | | 5 | UJ | CH | 5 | UJ | CH | 5 | UJ | C | 5 | UJ | C |
| 4-BROMOPHENYL PHENYL ETHER | | 1.25 | UJ | CH | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| 4-CHLORO-3-METHYLPHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| 4-CHLOROANILINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | | 1.25 | UJ | CH | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| 4-METHYLPHENOL | | 0.77 | UJ | H | 0.77 | UJ | H | 0.77 | U | | 0.77 | U | |
| 4-NITROANILINE | | 2 | UJ | H | 2 | UJ | H | 2 | U | | 2 | U | |
| 4-NITROPHENOL | | 5 | UJ | CH | 5 | UJ | CH | 5 | UJ | C | 5 | UJ | C |
| ACETOPHENONE | | 1.25 | UJ | H | 1.25 | UJ | H | 2.58 | J | P | 1.25 | U | |
| ATRAZINE | | 0.69 | UJ | CH | 0.69 | UJ | CH | 0.69 | UJ | C | 0.69 | UJ | C |
| BENZALDEHYDE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | | 1.25 | UJ | CH | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| BIS(2-CHLOROETHYL)ETHER | | 0.45 | UJ | CH | 0.45 | UJ | CH | 0.45 | UJ | C | 0.45 | UJ | C |
| BIS(2-ETHYLHEXYL)PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| BUTYL BENZYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| CAPROLACTAM | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| CARBAZOLE | | 0.69 | UJ | CH | 0.69 | UJ | CH | 0.69 | UJ | C | 0.69 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | | | G01-MW-01A-1010 | | | G01-MW-02-1010 | | | G01-MW-03-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012013-01 | | | 1012014-01 | | | 1012013-02 | | | 1012014-02 | | |
| FRACTION: OS | SAMP_DATE | 11/5/2010 | | | 11/6/2010 | | | 11/5/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| DI-N-OCTYL PHTHALATE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | U | | 0.47 | U | | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | UJ | C | 0.93 | UJ | C | 0.93 | UJ | C | 0.93 | UJ | C |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | U | | 0.89 | U | | 0.89 | U | | 0.89 | U | |
| HEXACHLOROETHANE | | 0.46 | U | | 0.46 | U | | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C | 1.25 | UJ | C |
| NAPHTHALENE | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |
| NITROBENZENE | | 0.62 | UJ | C | 0.62 | UJ | C | 0.62 | UJ | C | 0.62 | UJ | C |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | UJ | C | 0.9 | UJ | C | 0.9 | UJ | C | 0.9 | UJ | C |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| PHENOL | | 1.25 | U | | 1.25 | U | | 1.25 | U | | 1.25 | U | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-04-1010 | | | G01-MW-06-1010 | | | G01-MW-07-1010 | | | G01-MW-08-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012013-03 | | | 1012011-01 | | | 1012014-03 | | | 1012014-06 | | |
| FRACTION: OS | SAMP_DATE | 11/5/2010 | | | 11/4/2010 | | | 11/6/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | U | | 1.61 | J | HR | 1.25 | U | | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| DI-N-OCTYL PHTHALATE | | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | U | | 0.47 | UJ | H | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | UJ | C | 0.93 | UJ | CH | 0.93 | UJ | C | 0.93 | UJ | C |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | U | | 0.89 | UJ | H | 0.89 | U | | 0.89 | U | |
| HEXACHLOROETHANE | | 0.46 | U | | 0.46 | UJ | H | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | UJ | C | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| NAPHTHALENE | | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 14 | | |
| NITROBENZENE | | 0.62 | UJ | C | 0.62 | UJ | CH | 0.62 | UJ | C | 0.62 | UJ | C |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | UJ | C | 0.9 | UJ | CH | 0.9 | UJ | C | 0.9 | UJ | C |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | U | | 1 | UJ | H | 1 | U | | 1 | U | |
| PHENOL | | 1.25 | U | | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-09-1010 | | | G01-MW-10-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012011-02 | | | 1012011-03 | | | 1012014-04 | | | 1012014-07 | | |
| FRACTION: OS | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | | 11/6/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | G01-MW-08-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 1.25 | UJ | H | 1.25 | UJ | H | 2.31 | J | P | 1.25 | U | |
| DIETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| DIMETHYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| DI-N-BUTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| DI-N-OCTYL PHTHALATE | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |
| HEXACHLOROBENZENE | | 0.47 | UJ | H | 0.47 | UJ | H | 0.47 | U | | 0.47 | U | |
| HEXACHLOROBUTADIENE | | 0.93 | UJ | CH | 0.93 | UJ | CH | 0.93 | UJ | C | 0.93 | UJ | C |
| HEXACHLOROCYCLOPENTADIENE | | 0.89 | UJ | H | 0.89 | UJ | H | 0.89 | U | | 0.89 | U | |
| HEXACHLOROETHANE | | 0.46 | UJ | H | 0.46 | UJ | H | 0.46 | U | | 0.46 | U | |
| ISOPHORONE | | 1.25 | UJ | CH | 1.25 | UJ | CH | 1.25 | UJ | C | 1.25 | UJ | C |
| NAPHTHALENE | | 2.78 | J | H | 1.25 | UJ | H | 1.25 | U | | 13.4 | | |
| NITROBENZENE | | 0.62 | UJ | CH | 0.62 | UJ | CH | 0.62 | UJ | C | 0.62 | UJ | C |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.9 | UJ | CH | 0.9 | UJ | CH | 0.9 | UJ | C | 0.9 | UJ | C |
| N-NITROSODIPHENYLAMINE | | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E | 1.25 | UR | E |
| PENTACHLOROPHENOL | | 1 | UJ | H | 1 | UJ | H | 1 | U | | 1 | U | |
| PHENOL | | 1.25 | UJ | H | 1.25 | UJ | H | 1.25 | U | | 1.25 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-018-1010 |
|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012009-01 |
| FRACTION: OS | SAMP_DATE | 11/2/2010 |
| MEDIA: SOIL | QC_TYPE | NM |
| | UNITS | MG/KG |
| | PCT_SOLIDS | 86.0 |
| | DUP_OF | |

| PARAMETER | RESULT | VQL | QLCD |
|---|---|---|---|
| 1,1-BIPHENYL | 0.0969 | U | |
| 1,2,4,5-TETRACHLOROBENZENE | 0.116 | U | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | 0.0593 | U | |
| 2,3,4,6-TETRACHLOROPHENOL | 0.116 | UR | R |
| 2,4,5-TRICHLOROPHENOL | 0.0969 | UR | R |
| 2,4,6-TRICHLOROPHENOL | 0.0407 | UR | R |
| 2,4-DICHLOROPHENOL | 0.0969 | UR | R |
| 2,4-DIMETHYLPHENOL | 0.387 | UR | R |
| 2,4-DINITROPHENOL | 0.151 | UR | R |
| 2,4-DINITROTOLUENE | 0.0279 | U | |
| 2,6-DINITROTOLUENE | 0.0442 | UJ | C |
| 2-CHLORONAPHTHALENE | 0.0969 | UJ | C |
| 2-CHLOROPHENOL | 0.0969 | UR | R |
| 2-METHYLPHENOL | 0.387 | UR | R |
| 2-NITROANILINE | 0.0372 | UJ | C |
| 2-NITROPHENOL | 0.0969 | UR | R |
| 3,3'-DICHLOROBENZIDINE | 0.036 | UJ | C |
| 3-NITROANILINE | 0.0547 | UJ | C |
| 4,6-DINITRO-2-METHYLPHENOL | 0.0256 | UR | R |
| 4-BROMOPHENYL PHENYL ETHER | 0.0969 | UJ | C |
| 4-CHLORO-3-METHYLPHENOL | 0.0969 | UR | R |
| 4-CHLOROANILINE | 0.0969 | UR | E |
| 4-CHLOROPHENYL PHENYL ETHER | 0.0969 | UJ | C |
| 4-METHYLPHENOL | 0.0969 | UR | R |
| 4-NITROANILINE | 0.116 | U | |
| 4-NITROPHENOL | 0.387 | UR | R |
| ACETOPHENONE | 0.0969 | U | |
| ATRAZINE | 0.0326 | UJ | C |
| BENZALDEHYDE | 0.0969 | UR | E |
| BIS(2-CHLOROETHOXY)METHANE | 0.0969 | UJ | C |
| BIS(2-CHLOROETHYL)ETHER | 0.0477 | UJ | C |
| BIS(2-ETHYLHEXYL)PHTHALATE | 0.0419 | U | |
| BUTYL BENZYL PHTHALATE | 0.0969 | U | |
| CAPROLACTAM | 0.0969 | U | |
| CARBAZOLE | 0.0419 | UJ | C |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-018-1010 | | |
|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012009-01 | | |
| FRACTION: OS | SAMP_DATE | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | |
| | UNITS | MG/KG | | |
| | PCT_SOLIDS | 86.0 | | |
| | DUP_OF | | | |
| PARAMETER | | RESULT | VQL | QLCD |
| DIBENZOFURAN | | 0.0969 | U | |
| DIETHYL PHTHALATE | | 0.0969 | U | |
| DIMETHYL PHTHALATE | | 0.0969 | U | |
| DI-N-BUTYL PHTHALATE | | 0.0969 | U | |
| DI-N-OCTYL PHTHALATE | | 0.0969 | U | |
| HEXACHLOROBENZENE | | 0.0407 | U | |
| HEXACHLOROBUTADIENE | | 0.0384 | UJ | C |
| HEXACHLOROCYCLOPENTADIENE | | 0.0709 | U | |
| HEXACHLOROETHANE | | 0.0453 | U | |
| ISOPHORONE | | 0.0969 | UJ | C |
| NAPHTHALENE | | 0.0372 | U | |
| NITROBENZENE | | 0.0395 | UJ | C |
| N-NITROSO-DI-N-PROPYLAMINE | | 0.064 | UJ | C |
| N-NITROSODIPHENYLAMINE | | 0.0969 | U | |
| PENTACHLOROPHENOL | | 0.0395 | UR | R |
| PHENOL | | 0.0969 | UR | R |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD001-1010 | | | GKHMS-SO-FD002-1010 | | |
|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_010 | LAB_ID | 1012009-03 | | | 1012009-02 | | |
| FRACTION: PEST/PCB | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | |
| | UNITS | UG/KG | | | UG/KG | | |
| | PCT_SOLIDS | 91.0 | | | 90.7 | | |
| | DUP_OF | GKHMS-SO-017-1010 | | | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| 4,4'-DDD | | 0.187 | U | | 0.187 | U | |
| 4,4'-DDE | | 2.35 | J | ERU | 0.187 | U | |
| 4,4'-DDT | | 1.03 | J | ER | 0.187 | U | |
| ALDRIN | | 0.121 | U | | 0.121 | U | |
| ALPHA-BHC | | 0.291 | J | EPR | 0.121 | U | |
| ALPHA-CHLORDANE | | 0.393 | J | EPRU | 0.121 | U | |
| AROCLOR-1016 | | 4.62 | UJ | C | 4.62 | UJ | C |
| AROCLOR-1221 | | 4.62 | UJ | C | 4.62 | UJ | C |
| AROCLOR-1232 | | 4.62 | UJ | C | 4.62 | UJ | C |
| AROCLOR-1242 | | 4.62 | UJ | C | 4.62 | UJ | C |
| AROCLOR-1248 | | 4.62 | UJ | C | 4.62 | UJ | C |
| AROCLOR-1254 | | 4.62 | UJ | C | 4.62 | UJ | C |
| AROCLOR-1260 | | 4.62 | UJ | C | 4.62 | UJ | C |
| BETA-BHC | | 0.774 | J | ERU | 0.973 | J | U |
| DELTA-BHC | | 0.121 | U | | 0.121 | U | |
| DIELDRIN | | 0.235 | J | EPRU | 0.187 | U | |
| ENDOSULFAN I | | 0.121 | U | | 0.121 | U | |
| ENDOSULFAN II | | 0.739 | J | RU | 0.674 | J | PU |
| ENDOSULFAN SULFATE | | 2.56 | J | ER | 0.187 | U | |
| ENDRIN | | 0.187 | U | | 0.187 | U | |
| ENDRIN ALDEHYDE | | 0.187 | U | | 0.187 | U | |
| ENDRIN KETONE | | 0.187 | U | | 0.187 | U | |
| GAMMA-BHC (LINDANE) | | 0.121 | U | | 0.121 | U | |
| GAMMA-CHLORDANE | | 0.148 | J | EPRU | 0.121 | U | |
| HEPTACHLOR | | 0.239 | J | EPR | 0.121 | U | |
| HEPTACHLOR EPOXIDE | | 0.319 | J | EPRU | 0.121 | U | |
| METHOXYCHLOR | | 0.258 | J | EPR | 0.121 | U | |
| TOXAPHENE | | 12.1 | UJ | C | 12.1 | UJ | C |

## Appendix B

Results as Reported by the Laboratory

# ANALYSIS DATA SHEET

1011022-01

B01-MW-01-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012013-01 File ID: 1201301.D

Sampled: 11/05/10 11:40 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 21:27

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X, S U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | S, Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | Q, X U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011022-01

GOI-MW-01-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012013-01 File ID: 1201301.D

Sampled: 11/05/10 11:40 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 21:27

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q, S U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | S U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 2.447 | 122 | 50 - 110 | *X |
| 2-Fluorophenol | 4.000 | 1.797 | 44.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.592 | 130 | 40 - 110 | * |
| Phenol-d6 | 4.000 | 1.055 | 26.4 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.095 | 105 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 2.738 | 68.5 | 40 - 125 | S |

# ANALYSIS DATA SHEET

1011026-01

G01-MW-01A-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-01 File ID: 1201401.D

Sampled: 11/06/10 10:31 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 22:58

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | X, Q U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | X, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011026-01

GOI-MW-01A-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-01 File ID: 1201401.D

Sampled: 11/06/10 10:31 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 22:58

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 2.027 | 101 | 50 - 110 | X |
| 2-Fluorophenol | 4.000 | 3.138 | 78.5 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.302 | 115 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 3.184 | 79.6 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.616 | 80.8 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 1.250 | 31.3 | 40 - 125 | * |

# ANALYSIS DATA SHEET

1011022-02

B01-MW-02-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012013-02 File ID: 1201302.D

Sampled: 11/05/10 10:35 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 21:57

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | X, Q U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011022-02

GOI-MW-02-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012013-02 File ID: 1201302.D

Sampled: 11/05/10 10:35 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 21:57

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q, X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 3.571 | 179 | 50 - 110 | *X |
| 2-Fluorophenol | 4.000 | 3.190 | 79.8 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 4.050 | 202 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 3.113 | 77.8 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 3.022 | 151 | 50 - 135 | * |
| 2,4,6-Tribromophenol | 4.000 | 1.999 | 50.0 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011026-02

GOI-MW-03-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-02 File ID: 1201402.D

Sampled: 11/06/10 10:01 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 23:29

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011026-02

B61-MW-03-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-02 File ID: 1201402.D

Sampled: 11/06/10 10:01 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 23:29

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 2.256 | 113 | 50 - 110 | *X |
| 2-Fluorophenol | 4.000 | 3.718 | 92.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.374 | 119 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 3.615 | 90.4 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.756 | 87.8 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 2.020 | 50.5 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011022-03

B01-MW-04-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012013-03 File ID: 1201303.D

Sampled: 11/05/10 09:28 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 22:27

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011022-03

GOI-MW-024-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012013-03 File ID: 1201303.D

Sampled: 11/05/10 09:28 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 22:27

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | X, Q U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 3.459 | 173 | 50 - 110 | *X |
| 2-Fluorophenol | 4.000 | 3.196 | 79.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 3.785 | 189 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 2.798 | 70.0 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.628 | 131 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 5.006 | 125 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011015-01

G01-MW-6L-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012011-01 File ID: 1201101.D

Sampled: 11/04/10 13:45 Prepared: 11/09/10 08:20 Analyzed: 12/20/10 17:56

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H1 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H1, X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, H1, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H1 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H1, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H1 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H1, Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, H1, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H1, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H1, X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H1 U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, H1 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H1, X U |
| 132-64-9 | Dibenzofuran | 1.61 | 1.25 | 2.50 | 5.00 | H1 I |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y, H1 U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H1 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H1 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H1, X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q, H1 U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H1 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | Q, X, H1 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H1 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H1, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H1 U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H1 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H1, X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H1 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H1 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H1 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H1, Y U |

# ANALYSIS DATA SHEET

1011015-01

GOI-MW-06-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012011-01 File ID: 1201101.D

Sampled: 11/04/10 13:45 Prepared: 11/09/10 08:20 Analyzed: 12/20/10 17:56

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X, H1 U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H1, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H1, X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H1, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H1, X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H1 U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q, H1 U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H1, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, H1 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X, H1 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 2.235 | 112 | 50 - 110 | *X, H1 |
| 2-Fluorophenol | 4.000 | 3.769 | 94.2 | 20 - 110 | H1 |
| Nitrobenzene-d5 | 2.000 | 2.871 | 144 | 40 - 110 | *H1, X |
| Phenol-d6 | 4.000 | 3.890 | 97.2 | 10 - 110 | H1 |
| Terphenyl-d14 | 2.000 | 2.012 | 101 | 50 - 135 | H1 |
| 2,4,6-Tribromophenol | 4.000 | 4.520 | 113 | 40 - 125 | H1 |

# ANALYSIS DATA SHEET

1011026-03

G01-MW-07-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-03 File ID: 1201403.D

Sampled: 11/06/10 11:38 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 23:59

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | X, Q U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | X, Q U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | X, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011026-03

GOI-MW-07-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-03 File ID: 1201403.D

Sampled: 11/06/10 11:38 Prepared: 11/12/10 09:30 Analyzed: 12/20/10 23:59

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | X, Q U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.939 | 96.9 | 50 - 110 | X |
| 2-Fluorophenol | 4.000 | 3.565 | 89.1 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.369 | 118 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 3.488 | 87.2 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.812 | 90.6 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 4.384 | 110 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011026-06

Q01-MW-08-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-06 File ID: 1201406.D

Sampled: 11/07/10 11:15 Prepared: 11/12/10 09:30 Analyzed: 12/21/10 01:00

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | X, Q U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | 14.0 | 1.25 | 2.50 | 5.00 | |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011026-06

GOI-MW-08-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-06 File ID: 1201406.D

Sampled: 11/07/10 11:15 Prepared: 11/12/10 09:30 Analyzed: 12/21/10 01:00

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.891 | 94.5 | 50 - 110 | X |
| 2-Fluorophenol | 4.000 | 3.666 | 91.7 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.409 | 120 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 3.730 | 93.3 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.880 | 94.0 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 4.063 | 102 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011015-02

B01-MW-09-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012011-02 File ID: 1201102.D

Sampled: 11/04/10 12:25 Prepared: 11/09/10 08:20 Analyzed: 12/20/10 18:26

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H1 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H1, X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H1, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H1 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H1, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H1 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H1, Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H1, Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H1, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H1, X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H1 U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, H1 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H1, X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H1 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H1, Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H1 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H1 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H1, X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H1, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H1 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X, H1 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H1 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H1, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H1 U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H1 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H1, X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H1 U |
| 91-20-3 | Naphthalene | 2.78 | 1.25 | 2.50 | 5.00 | H1 I |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H1 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H1, Y U |

# ANALYSIS DATA SHEET

1011015-02

GOI-MW-09-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012011-02 File ID: 1201102.D

Sampled: 11/04/10 12:25 Prepared: 11/09/10 08:20 Analyzed: 12/20/10 18:26

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H1, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H1, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H1, X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | H1, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H1, Q U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H1 U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H1, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H1, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, H1 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X, H1 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.892 | 94.6 | 50 - 110 | H1, X |
| 2-Fluorophenol | 4.000 | 3.507 | 87.7 | 20 - 110 | H1 |
| Nitrobenzene-d5 | 2.000 | 2.571 | 129 | 40 - 110 | *H1, X |
| Phenol-d6 | 4.000 | 3.451 | 86.3 | 10 - 110 | H1 |
| Terphenyl-d14 | 2.000 | 1.983 | 99.2 | 50 - 135 | H1 |
| 2,4,6-Tribromophenol | 4.000 | 4.196 | 105 | 40 - 125 | H1 |

# ANALYSIS DATA SHEET

1011015-03

G01-MW-10-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012011-03 File ID: 1201103.D

Sampled: 11/04/10 11:10 Prepared: 11/09/10 08:20 Analyzed: 12/20/10 18:56

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | H1 U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | H1, X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | H1, Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | H1 U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | H1, X U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | H1 U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | H1, Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | H1, Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | H1, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | H1, X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | H1 U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, H1 U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | H1, X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | H1 U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | H1, Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | H1 U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | H1 U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | H1, X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | H1, Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | H1 U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X, H1 U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | H1 U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | H1 U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | H1, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | H1 U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | H1 U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | H1, X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | H1 U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | H1 U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | H1 U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | H1, Y U |

# ANALYSIS DATA SHEET

1011015-03

SB1-MW-10-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012011-03 File ID: 1201103.D

Sampled: 11/04/10 11:10 Prepared: 11/09/10 08:20 Analyzed: 12/20/10 18:56

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14026 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | H1, Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | H1, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | H1, X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q, H1 U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | H1, X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | H1 U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | H1 U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | H1, Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | H1, Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, H1 U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X, H1 U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 2.165 | 108 | 50 - 110 | H1, X |
| 2-Fluorophenol | 4.000 | 3.480 | 87.0 | 20 - 110 | H1 |
| Nitrobenzene-d5 | 2.000 | 2.493 | 125 | 40 - 110 | *H1, X |
| Phenol-d6 | 4.000 | 3.423 | 85.6 | 10 - 110 | H1 |
| Terphenyl-d14 | 2.000 | 1.768 | 88.4 | 50 - 135 | H1 |
| 2,4,6-Tribromophenol | 4.000 | 3.655 | 91.4 | 40 - 125 | H1 |

# ANALYSIS DATA SHEET

1011026-04

GOI-MW-12-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-04 File ID: 1201404.D

Sampled: 11/06/10 12:32 Prepared: 11/12/10 09:30 Analyzed: 12/21/10 00:30

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | 2.58 | 1.25 | 2.50 | 5.00 | I |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | X, Q U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | Q, X U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | 2.31 | 1.25 | 2.50 | 5.00 | I |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011026-04

BG1-MW-12-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-04 File ID: 1201404.D

Sampled: 11/06/10 12:32 Prepared: 11/12/10 09:30 Analyzed: 12/21/10 00:30

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | X, Q U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | X, Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.719 | 85.9 | 50 - 110 | X |
| 2-Fluorophenol | 4.000 | 3.406 | 85.1 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.360 | 118 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 3.547 | 88.7 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.231 | 112 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 4.156 | 104 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011026-07

GKHMS-GW-FD04-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-07 File ID: 1201407.D

Sampled: 11/07/10 00:00 Prepared: 11/12/10 09:30 Analyzed: 12/21/10 01:31

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | X, Q U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | Q, X U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | 13.4 | 1.25 | 2.50 | 5.00 | |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |

# ANALYSIS DATA SHEET

1011026-07

SKHMS-GW-FD04-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Water Laboratory ID: 1012014-07 File ID: 1201407.D

Sampled: 11/07/10 00:00 Prepared: 11/12/10 09:30 Analyzed: 12/21/10 01:31

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q, X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.922 | 96.1 | 50 - 110 | X |
| 2-Fluorophenol | 4.000 | 3.468 | 86.7 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.541 | 127 | 40 - 110 | *X |
| Phenol-d6 | 4.000 | 3.479 | 87.0 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.975 | 98.8 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 4.311 | 108 | 40 - 125 | |

# ANALYSIS DATA SHEET

1011014-01

GK HMS-50-018-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012009-01 File ID: 1200901.D

Sampled: 11/02/10 11:40 Prepared: 11/11/10 11:55 Analyzed: 12/21/10 02:02

Solids: 86.00 Preparation: EXT_3546 Dilution: 1

Batch: 0L14027 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0360 | 0.194 | 0.387 | Y U |
| 98-86-2 | Acetophenone | | 0.0969 | 0.194 | 0.387 | U |
| 1912-24-9 | Atrazine | | 0.0326 | 0.194 | 0.387 | X U |
| 100-52-7 | Benzaldehyde | | 0.0969 | 0.194 | 0.387 | Q, X U |
| 92-52-4 | 1,1-Biphenyl | | 0.0969 | 0.194 | 0.387 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0969 | 0.194 | 0.387 | Q, X U |
| 85-68-7 | Butylbenzylphthalate | | 0.0969 | 0.194 | 0.387 | U |
| 105-60-2 | Caprolactam | | 0.0969 | 0.194 | 0.387 | U |
| 86-74-8 | Carbazole | | 0.0419 | 0.194 | 0.387 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0969 | 0.194 | 0.387 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0969 | 0.194 | 0.387 | Y, Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0969 | 0.194 | 0.387 | X, Q U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0477 | 0.194 | 0.387 | X, Q U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0593 | 0.194 | 0.387 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0969 | 0.194 | 0.387 | Q, X U |
| 95-57-8 | 2-Chlorophenol | | 0.0969 | 0.194 | 0.387 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0969 | 0.194 | 0.387 | Q, X U |
| 132-64-9 | Dibenzofuran | | 0.0969 | 0.194 | 0.387 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0969 | 0.194 | 0.387 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0969 | 0.194 | 0.387 | U |
| 84-66-2 | Diethylphthalate | | 0.0969 | 0.194 | 0.387 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.387 | 0.776 | 1.55 | Q U |
| 131-11-3 | Dimethyl phthalate | | 0.0969 | 0.194 | 0.387 | Q U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0256 | 1.94 | 3.87 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.151 | 1.94 | 3.87 | U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0279 | 0.194 | 0.387 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0442 | 0.194 | 0.387 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.0969 | 0.194 | 0.387 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0419 | 0.194 | 0.387 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0407 | 0.194 | 0.387 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0384 | 0.194 | 0.387 | X, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0709 | 0.194 | 0.387 | U |
| 67-72-1 | Hexachloroethane | | 0.0453 | 0.194 | 0.387 | U |
| 78-59-1 | Isophorone | | 0.0969 | 0.194 | 0.387 | X, Q U |
| 95-48-7 | 2-Methylphenol | | 0.387 | 0.776 | 1.55 | U |
| 106-44-5 | 4-Methylphenol | | 0.0969 | 0.194 | 0.387 | U |
| 91-20-3 | Naphthalene | | 0.0372 | 0.194 | 0.387 | U |
| 100-01-6 | 4-Nitroaniline | | 0.116 | 0.776 | 1.55 | U |
| 99-09-2 | 3-Nitroaniline | | 0.0547 | 0.776 | 1.55 | Y U |

# ANALYSIS DATA SHEET

1011014-01

GKMS-SO-018-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012009-01 File ID: 1200901.D

Sampled: 11/02/10 11:40 Prepared: 11/11/10 11:55 Analyzed: 12/21/10 02:02

Solids: 86.00 Preparation: EXT_3546 Dilution: 1

Batch: 0L14027 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (mg/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 88-74-4 | 2-Nitroaniline | | 0.0372 | 0.776 | 1.55 | Q, X U |
| 98-95-3 | Nitrobenzene | | 0.0395 | 0.194 | 0.387 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 0.387 | 0.776 | 1.55 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.0969 | 0.194 | 0.387 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0969 | 0.194 | 0.387 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0640 | 0.194 | 0.387 | Q, X U |
| 87-86-5 | Pentachlorophenol | | 0.0395 | 0.776 | 1.55 | U |
| 108-95-2 | Phenol | | 0.0969 | 0.194 | 0.387 | Q U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.116 | 0.194 | 0.387 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.116 | 0.194 | 0.387 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0407 | 0.194 | 0.387 | Q, X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0969 | 0.194 | 0.387 | Q, X U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg dry) | CONC (mg/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.07752 | 0.08386 | 108 | 45 - 105 | *X |
| 2-Fluorophenol | 0.1550 | 0.1541 | 99.4 | 35 - 105 | |
| Nitrobenzene-d5 | 0.07752 | 0.1120 | 144 | 35 - 100 | *X |
| Phenol-d6 | 0.1550 | 0.1592 | 103 | 40 - 100 | * |
| Terphenyl-d14 | 0.07752 | 0.08218 | 106 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1550 | ND | | 35 - 125 | * |

# ANALYSIS DATA SHEET

1011008-02

GKHMS-SO-FD001-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012009-03 File ID: 042F4201.D

Sampled: 11/02/10 00:00 Prepared: 11/10/10 11:40 Analyzed: 12/11/10 00:15

Solids: 91.00 Preparation: EXT_3546 Dilution: 1

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg dry | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | 2.35 | 0.187 | 0.374 | 0.736 | PO |
| 72-54-8 | 4,4'-DDD [2C] | | 0.187 | 0.374 | 0.736 | U |
| 50-29-3 | 4,4'-DDT [2C] | 1.03 | 0.187 | 0.374 | 0.736 | O |
| 309-00-2 | Aldrin | | 0.121 | 0.374 | 0.736 | U |
| 319-84-6 | alpha-BHC | 0.291 | 0.121 | 0.374 | 0.736 | JO |
| 5103-71-9 | alpha-Chlordane | 0.393 | 0.121 | 0.374 | 0.736 | JPO, M |
| 319-85-7 | beta-BHC | 0.774 | 0.121 | 0.374 | 0.736 | PM, O |
| 319-86-8 | delta-BHC | | 0.121 | 0.374 | 0.736 | UO |
| 60-57-1 | Dieldrin | 0.235 | 0.187 | 0.374 | 0.736 | JPM, O |
| 959-98-8 | Endosulfan I | | 0.121 | 0.374 | 0.736 | U |
| 33213-65-9 | Endosulfan II [2C] | 0.739 | 0.187 | 0.374 | 0.736 | P |
| 1031-07-8 | Endosulfan sulfate | 2.56 | 0.187 | 0.374 | 0.736 | |
| 72-20-8 | Endrin | | 0.187 | 0.374 | 0.736 | UO |
| 7421-93-4 | Endrin aldehyde | | 0.187 | 0.374 | 0.736 | U |
| 53494-70-5 | Endrin ketone [2C] | | 0.187 | 0.374 | 0.736 | U |
| 58-89-9 | gamma-BHC (Lindane) [2C] | | 0.121 | 0.374 | 0.736 | UO |
| 5103-74-2 | gamma-Chlordane [2C] | 0.148 | 0.121 | 0.374 | 0.736 | JPO, M |
| 76-44-8 | Heptachlor [2C] | 0.239 | 0.121 | 0.374 | 0.736 | JO |
| 1024-57-3 | Heptachlor epoxide | 0.319 | 0.121 | 0.374 | 0.736 | JPO |
| 72-43-5 | Methoxychlor [2C] | 0.258 | 0.121 | 0.374 | 0.736 | JPM |
| 8001-35-2 | Toxaphene | | 12.1 | 24.2 | 36.3 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg dry) | CONC (ug/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 7.326 | 10.86 | 148 | 70 - 125 | * |
| Tetrachloro-m-xylene [2C] | 7.326 | 10.82 | 148 | 70 - 125 | * |
| Decachlorobiphenyl | 7.326 | 9.967 | 136 | 55 - 130 | * |
| Decachlorobiphenyl [2C] | 7.326 | 9.015 | 123 | 55 - 130 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011008-01

GKHMS-SO-FD002-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012009-02 File ID: 039R3901.D

Sampled: 11/02/10 00:00 Prepared: 11/10/10 11:40 Analyzed: 12/10/10 23:20

Solids: 90.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg dry | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE [2C] | | 0.187 | 0.374 | 0.737 | UQ |
| 72-54-8 | 4,4'-DDD | | 0.187 | 0.374 | 0.737 | U |
| 50-29-3 | 4,4'-DDT | | 0.187 | 0.374 | 0.737 | UQ, N |
| 309-00-2 | Aldrin | | 0.121 | 0.374 | 0.737 | U |
| 319-84-6 | alpha-BHC | | 0.121 | 0.374 | 0.737 | UQ, N |
| 5103-71-9 | alpha-Chlordane | | 0.121 | 0.374 | 0.737 | UQ |
| 319-85-7 | beta-BHC [2C] | 0.973 | 0.121 | 0.374 | 0.737 | PQ, N |
| 319-86-8 | delta-BHC | | 0.121 | 0.374 | 0.737 | UQ |
| 60-57-1 | Dieldrin | | 0.187 | 0.374 | 0.737 | UQ |
| 959-98-8 | Endosulfan I [2C] | | 0.121 | 0.374 | 0.737 | U |
| 33213-65-9 | Endosulfan II | 0.674 | 0.187 | 0.374 | 0.737 | JP |
| 1031-07-8 | Endosulfan sulfate | | 0.187 | 0.374 | 0.737 | U |
| 72-20-8 | Endrin | | 0.187 | 0.374 | 0.737 | UQ, N |
| 7421-93-4 | Endrin aldehyde | | 0.187 | 0.374 | 0.737 | U |
| 53494-70-5 | Endrin ketone [2C] | | 0.187 | 0.374 | 0.737 | U |
| 58-89-9 | gamma-BHC (Lindane) [2C] | | 0.121 | 0.374 | 0.737 | UQ, N |
| 5103-74-2 | gamma-Chlordane [2C] | | 0.121 | 0.374 | 0.737 | UQ |
| 76-44-8 | Heptachlor | | 0.121 | 0.374 | 0.737 | UN, Q |
| 1024-57-3 | Heptachlor epoxide | | 0.121 | 0.374 | 0.737 | UQ, N |
| 72-43-5 | Methoxychlor | | 0.121 | 0.374 | 0.737 | U |
| 8001-35-2 | Toxaphene | | 12.1 | 24.2 | 36.3 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg dry) | CONC (ug/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 7.336 | 6.482 | 88.4 | 70 - 125 | |
| Tetrachloro-m-xylene [2C] | 7.336 | 7.593 | 104 | 70 - 125 | |
| Decachlorobiphenyl | 7.336 | 6.737 | 91.8 | 55 - 130 | |
| Decachlorobiphenyl [2C] | 7.336 | 7.415 | 101 | 55 - 130 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011008-02

SKHMS-SO-FD001-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012009-03 File ID: 042F4201.D

Sampled: 11/02/10 00:00 Prepared: 11/10/10 11:40 Analyzed: 12/11/10 00:15

Solids: 91.00 Preparation: EXT_3546 Dilution: 1

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg dry) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 4.62 | 9.15 | 18.7 | UX |
| 11104-28-2 | Aroclor-1221 | | 4.62 | 9.15 | 18.7 | U |
| 11141-16-5 | Aroclor-1232 | | 4.62 | 9.15 | 18.7 | U |
| 53469-21-9 | Aroclor-1242 | | 4.62 | 9.15 | 18.7 | U |
| 12672-29-6 | Aroclor-1248 | | 4.62 | 9.15 | 18.7 | U |
| 11097-69-1 | Aroclor-1254 | | 4.62 | 9.15 | 18.7 | U |
| 11096-82-5 | Aroclor-1260 | | 4.62 | 9.15 | 18.7 | UX |
| 37324-23-5 | Aroclor-1262 | | 4.62 | 9.15 | 18.7 | U |
| 11100-14-4 | Aroclor-1268 | | 4.62 | 9.15 | 18.7 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg dry) | CONC (ug/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 7.326 | 10.86 | 148 | 70 - 125 | * |
| Tetrachloro-m-xylene [2C] | 7.326 | 10.82 | 148 | 70 - 125 | * |
| Decachlorobiphenyl | 7.326 | 9.967 | 136 | 60 - 125 | * |
| Decachlorobiphenyl [2C] | 7.326 | 9.015 | 123 | 60 - 125 | |

* Values outside of QC limits

# ANALYSIS DATA SHEET

1011008-01

GKHMS-SO-FD002-1010

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Solid Laboratory ID: 1012009-02 File ID: 039F3901.D

Sampled: 11/02/10 00:00 Prepared: 11/10/10 11:40 Analyzed: 12/10/10 23:20

Solids: 90.70 Preparation: EXT_3546 Dilution: 1

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg dry | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 4.62 | 9.17 | 18.7 | UX |
| 11104-28-2 | Aroclor-1221 | | 4.62 | 9.17 | 18.7 | U |
| 11141-16-5 | Aroclor-1232 | | 4.62 | 9.17 | 18.7 | U |
| 53469-21-9 | Aroclor-1242 | | 4.62 | 9.17 | 18.7 | U |
| 12672-29-6 | Aroclor-1248 | | 4.62 | 9.17 | 18.7 | U |
| 11097-69-1 | Aroclor-1254 | | 4.62 | 9.17 | 18.7 | U |
| 11096-82-5 | Aroclor-1260 | | 4.62 | 9.17 | 18.7 | UX |
| 37324-23-5 | Aroclor-1262 | | 4.62 | 9.17 | 18.7 | U |
| 11100-14-4 | Aroclor-1268 | | 4.62 | 9.17 | 18.7 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg dry) | CONC (ug/Kg dry) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 7.336 | 6.482 | 88.4 | 70 - 125 | |
| Tetrachloro-m-xylene [2C] | 7.336 | 7.593 | 104 | 70 - 125 | |
| Decachlorobiphenyl | 7.336 | 6.737 | 91.8 | 60 - 125 | |
| Decachlorobiphenyl [2C] | 7.336 | 7.415 | 101 | 60 - 125 | |

* Values outside of QC limits

**Appendix C**

Support Documentation

HOLDTIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | MG/KG | GKHMS-SO-018-1010 | 1012009-01 | SUR | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | MG/KG | GKHMS-SO-018-1010 | 1012009-01 | NM | 11/02/2010 | 11/11/2010 | 12/21/2010 | 9 | 40 | 49 |
| OS | UG/L | G01-MW-02-1010 | 1012013-02 | SUR | 11/05/2010 | 11/12/2010 | 12/20/2010 | 7 | 38 | 45 |
| OS | UG/L | G01-MW-07-1010 | 1012014-03 | NM | 11/06/2010 | 11/12/2010 | 12/20/2010 | 6 | 38 | 44 |
| OS | UG/L | G01-MW-06-1010 | 1012011-01 | SUR | 11/04/2010 | 11/09/2010 | 12/20/2010 | 5 | 41 | 46 |
| OS | UG/L | G01-MW-06-1010 | 1012011-01 | NM | 11/04/2010 | 11/09/2010 | 12/20/2010 | 5 | 41 | 46 |
| OS | UG/L | G01-MW-04-1010 | 1012013-03 | SUR | 11/05/2010 | 11/12/2010 | 12/20/2010 | 7 | 38 | 45 |
| OS | UG/L | G01-MW-04-1010 | 1012013-03 | NM | 11/05/2010 | 11/12/2010 | 12/20/2010 | 7 | 38 | 45 |
| OS | UG/L | G01-MW-08-1010 | 1012014-06 | NM | 11/07/2010 | 11/12/2010 | 12/21/2010 | 5 | 39 | 44 |
| OS | UG/L | G01-MW-03-1010 | 1012014-02 | NM | 11/06/2010 | 11/12/2010 | 12/20/2010 | 6 | 38 | 44 |
| OS | UG/L | G01-MW-08-1010 | 1012014-06 | SUR | 11/07/2010 | 11/12/2010 | 12/21/2010 | 5 | 39 | 44 |
| OS | UG/L | G01-MW-02-1010 | 1012013-02 | NM | 11/05/2010 | 11/12/2010 | 12/20/2010 | 7 | 38 | 45 |
| OS | UG/L | G01-MW-01A-1010 | 1012014-01 | SUR | 11/06/2010 | 11/12/2010 | 12/20/2010 | 6 | 38 | 44 |
| OS | UG/L | G01-MW-01A-1010 | 1012014-01 | NM | 11/06/2010 | 11/12/2010 | 12/20/2010 | 6 | 38 | 44 |
| OS | UG/L | G01-MW-01-1010 | 1012013-01 | SUR | 11/05/2010 | 11/12/2010 | 12/20/2010 | 7 | 38 | 45 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| OS | UG/L | G01-MW-01-1010 | 1012013-01 | NM | 11/05/2010 | 11/12/2010 | 12/20/2010 | 7 | 38 | 45 |
| OS | UG/L | G01-MW-03-1010 | 1012014-02 | SUR | 11/06/2010 | 11/12/2010 | 12/20/2010 | 6 | 38 | 44 |
| OS | UG/L | GKHMS-GW-FD04-1010 | 1012014-07 | NM | 11/07/2010 | 11/12/2010 | 12/21/2010 | 5 | 39 | 44 |
| OS | UG/L | G01-MW-07-1010 | 1012014-03 | SUR | 11/06/2010 | 11/12/2010 | 12/20/2010 | 6 | 38 | 44 |
| OS | UG/L | GKHMS-GW-FD04-1010 | 1012014-07 | SUR | 11/07/2010 | 11/12/2010 | 12/21/2010 | 5 | 39 | 44 |
| OS | UG/L | G01-MW-12-1010 | 1012014-04 | SUR | 11/06/2010 | 11/12/2010 | 12/21/2010 | 6 | 39 | 45 |
| OS | UG/L | G01-MW-12-1010 | 1012014-04 | NM | 11/06/2010 | 11/12/2010 | 12/21/2010 | 6 | 39 | 45 |
| OS | UG/L | G01-MW-10-1010 | 1012011-03 | SUR | 11/04/2010 | 11/09/2010 | 12/20/2010 | 5 | 41 | 46 |
| OS | UG/L | G01-MW-10-1010 | 1012011-03 | NM | 11/04/2010 | 11/09/2010 | 12/20/2010 | 5 | 41 | 46 |
| OS | UG/L | G01-MW-09-1010 | 1012011-02 | SUR | 11/04/2010 | 11/09/2010 | 12/20/2010 | 5 | 41 | 46 |
| OS | UG/L | G01-MW-09-1010 | 1012011-02 | NM | 11/04/2010 | 11/09/2010 | 12/20/2010 | 5 | 41 | 46 |
| PCB | UG/KG | GKHMS-SO-FD001-1010 | 1012009-03 | SUR | 11/02/2010 | 11/10/2010 | 12/11/2010 | 8 | 31 | 39 |
| PCB | UG/KG | GKHMS-SO-FD002-1010 | 1012009-02 | NM | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |
| PCB | UG/KG | GKHMS-SO-FD002-1010 | 1012009-02 | SUR | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |
| PCB | UG/KG | GKHMS-SO-FD001-1010 | 1012009-03 | NM | 11/02/2010 | 11/10/2010 | 12/11/2010 | 8 | 31 | 39 |
| PEST | UG/KG | GKHMS-SO-FD002-1010 | 1012009-02 | SUR | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |
| PEST | UG/KG | GKHMS-SO-FD001-1010 | 1012009-03 | NM | 11/02/2010 | 11/10/2010 | 12/11/2010 | 8 | 31 | 39 |
| PEST | UG/KG | GKHMS-SO-FD001-1010 | 1012009-03 | SUR | 11/02/2010 | 11/10/2010 | 12/11/2010 | 8 | 31 | 39 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| PEST | UG/KG | GKHMS-SO-FD002-1010 | 1012009-02 | NM | 11/02/2010 | 11/10/2010 | 12/10/2010 | 8 | 30 | 38 |

*ANALYTICAL SUMMARY DATA PACKAGE*
SDG # CTOJM16KW_010

**PROJECT NAME:** CTOJM16 KEY WEST 2010
**PROJECT LOCATION:** KEY WEST, FLORIDA

**SUBMITTAL TO:**
Tobrena Skeen
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

**SUBMITTAL BY:**
Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (615)846-5426

**LABORATORY CONTACT PERSON:**
Project Manager: Kim Kostzer
Tel (615)345-1115
Fax (615)846-5426
Email: kkostzer@empirlabs.com

Original Report Date: January 3, 2011
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 224

**THIS DOCUMENT MEETS DoD QSM 4.1 STANDARDS**

*The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.*

## Sample Delivery Group Case Narrative

**Receipt Information**
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

NOTE: The results in the attached file reflect extracts received from another laboratory with disorganized incomplete documentation. All efforts have been made to provide the most complete package possible.

No sample volume was received for SW6010C, SW7470A, SW7471A, SW8082A or SW8081A. Samples 1011008-01 and -02 were received after the initial shipment for SW8081A and SW8082A and we did not receive documentation for these samples. The extracts were analyzed and results can be found in the report for SW8081A and SW8082A analysis for samples 1011008-01 and -02. Sample 1011026-05 was not received for SW8270.

**Changes to the Revision**
This is an original submittal of the final report package.

**Analytical Information**
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

**Chromatographic Flags for Manual Integration:**
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

**SW8270C:**
Samples 1012011-01, -02 and -03 were analyzed after the EPA recommended holding time for SW8270C.
The surrogate 2,4,6-Tribromophenol did not recover in 0L14026-BLK1, 0L14027-BLK1, 0L14028-BLK1 and in sample 1012009-06 and recovered with a low bias in 1012014-01. The surrogate 2-Fluorobiphenyl exceeded criteria with a positive bias in samples 1012011-01, 0L14027-BS1, 0L14028-BS1, 1012013-01, -02, -03, 1012014-02 and 1012009-01. The surrogate Nitrobenzene-d5 exceeded criteria with a positive bias in 1012011-01, -02, -03, 0L14027-BLK1, -BS1, 0L14029-BS1, 0L14027-BLK1, -BS1, 0L14028-BLK1, -BS1, 1012013-01, -02, -03, 1012014-01, -02, -03, -04, -06, -07,07 and 1012009-01. The surrogate Terphenyl-d14 exceeded criteria with a positive bias in 1012013-02. Samples were not able to be re-extracted since the extracts were received from another laboratory.

The continuing calibration verifications exceeded criteria in 0L35513-CCV1 with a negative bias for Benzaldehyde and 2,2'-Oxybis-1-chloropropane and with a positive bias for Hexachlorocyclopentadiene and 2-Nitroaniline and in 0L32614-CCV1 with a negative bias for 3,3'-Dichlorobenzidine, Carbazole and 3-Nitroaniline and with a positive bias for Atrazine, Benzaldehyde, 4-Bromophenyl-phenylether, 4-Chloroaniline, Bis(2-chloroethoxy)methane, Bis(2-chloroethyl)ether, 2-Chloronaphthalene, 4-Chlorophenyl phenyl ether, 4,6-Dinitro-2-methyphenol, 2,6-Dinitrotoluene, Hexachlorobutadiene, Isophorone, 2-Nitroaniline, Nitrobenzene, 4-Nitrophenol, N-nitroso-di-n-propylamine, 2,4,6-Trichlorophenol, 2,4,5-Trichlorophenol, 2-Fluorobiphenyl and Nitrobenzene-d5.

The batch spike associated to batch 0L14026 exceeded criteria with no recovery for Benzaldehyde, 4-Chloraniline, 2,4-Dinitrophenol, 2-Nitroaniline, N-nitrosodiphenylamine, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol. The batch spike associated to batch 0L14027 exceeded criteria with no recovery for Benzaldehyde, 4-Chloroaniline and N-nitrosodiphenylamine, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol and with a positive bias for 4-Bromophenyl-phenyl ether, Bis(2-chloroethoxy)methane, Bis(2-chloroethyl)ether, 2-Chloronaphthalene, 4-Chlorophenyl phenylether, 2,4-Dimethylphenol, Dimethyl phthalate, Hexachlorobutadiene, Isophorone, 2-Nitroaniline, Nitrobenzene, N-nitroso-di-n-propylamine, Phenol, 2,4,6-Trichlorophenol and 2,4,5-Trichlorophenol. The batch spike associated to batch 0L14028 exceeded criteria with no recovery for Benzaldehyde, 4-Bromophenyl-phenyl ether, 4-Chloroaniline, Bis(2-chloroethoxy)methane, 2-Chloronaphthalene, 2,4-Dinitrophenol, Hexachlorobutadiene, 2-Nitroaniline, Nitrobenzene, N-nitrosdiphenylamine, 2,4,6-Trichlorophenol, 1,2,4,5-Tetrachlorobenzene and 2,3,4,6-Tetrachlorophenol. The samples were not able to be re-extracted since the extracts were received from another laboratory.

The internal standards Phenanthrene-d10, Chrysene-d12 and Perylene-d12 exceeded criteria in 0L14028-BLK1. The internal standards Phenanthrene-d10 and Chrysene-d12 exceeded criteria in 1012013-01. Compounds associated to Perylene-d12 are qualified

with an S.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8081A:**
The surrogate Decachlorobiphenyl exceeded criteria on column 1 for sample 1012009-03 and on column 2 in 0L06022-BS1. The surrogate Tetrachloro-m-xylene exceeded criteria with a positive bias on both columns in sample 1012009-03 and on column 2 in 0L06022-BS1.

The batch spike associated to batch 0L060ss exceeded criteria with a positive bias on both columns for 4,4'-DDE, 4,4'-DDT, Alpha-BHC, Alpha-Chlordane, Beta-BHC, Delta-BHC, Dieldrin, Endrin, Gamma-BHC, Gamma-Chlordane, Heptachlor and Heptachlor Epoxide and with a positive bias on column 2 for 4,4'-DDD, Aldrin and Endosulfan Sulfate.

The matrix spikes associated to sample 1012009-02 exceeded criteria with a positive bias on column 2 for 4,4'-DDE, Beta-BHC, Delta-BHC, Endosulfan Sulfate and Methoxychlor, on column 1 with a positive bias for Alpha-Chlordane and Dieldrin and on both columns for 4,4'-DDT, Alpha-BHC, Endrin, Gamma-BHC, Heptachlor and Heptachlor Epoxide.

The continuing calibration verifications exceeded criteria in 0L35009-CCV4 with a positive bias on column 2 for Delta-BHC, in 0L35009-CCV8 and –CCVD with a positive bias on column 2 for Toxaphene and in 0L35009-CCVB with a positive bias on column 2 for Alpha-BHC and Delta-BHC.

No additional anomalies or deviations are noted and the data is properly qualified.

**SW8082A:**
The surrogate Decachlorobiphenyl exceeded criteria on column 1 for sample 1012009-03. The surrogate Tetrachloro-m-xylene exceeded criteria with a positive bias on both columns in sample 1012009-03.

No PCB batch spike or matrix spikes were received from the extraction laboratory.

The continuing calibration verifications exceeded criteria in 0L35009-CCVE with a positive bias on both columns for Aroclor-1016 and Aroclor-1260 and in 0L35009-CCVF with a positive bias on both columns for Aroclor-1242.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

## Analytical Report Terms and Qualifiers

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

***:** An exceeding quality control criteria is associated with the reported result.

**B:** The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1:** The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J**: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N**: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

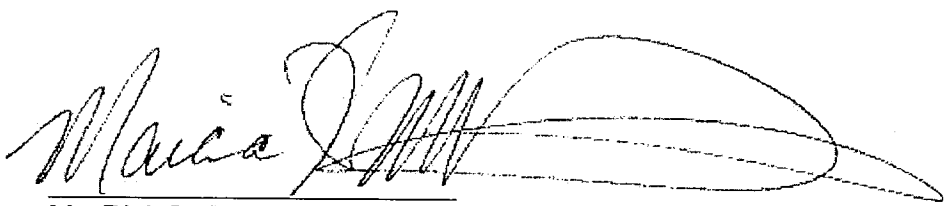
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011014**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011014-01** | **Solid** | **Sampled: 11/02/10 11:40** | 1012009-01 |
| Mercury, Total 7471B | | 11/30/10 11:40 | |
| 8270D LL SVOC TCL | | 11/16/10 11:40 | PLUS SIMs PAHs |
| 8081A Pesticides | | 11/16/10 11:40 | |
| 6010C Full | | 05/01/11 11:40 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/18/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| | | | |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 10/2009 Number of Coolers: 1 of 1

Client: Centauri Labs Project: —

Date/Time Received: 12/1/10 08:11 Date cooler(s) opened:

Opened By (print): Will Schutt (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9680

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | Yes | (No) | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in: 12/1/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schutt (Initial) WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | No | (N/A) |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | Yes | (No) | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

No metals volume rec'd
No Pest volume rec'd

CENTAURI LABS

WORK ORDER

1011015

Approved

Printed: 11/5/2010 11:08:37AM

*Due Date: 11/19/10 00:00 (14 day TAT)*

*Date Received: 11/05/10 09:40*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

Organic Extractions holding times are 7 days for water AND SOIL!!!

| Analysis | Expires | Comments |
|---|---|---|
| 1011015-01 GKHMS-GW-006-1010 [Water] Sampled 11/04/10 13:45 Eastern | | |
| 8081B Pesticides | 11/11/10 13:45 | |
| 8082 PCBs | 11/11/10 13:45 | |
| 8260B LL VOA | 11/18/10 13:45 | |
| 8270D LL SVOC TCL | 11/11/10 13:45 | PLUS SIM PAHs |
| Mercury, Total 7470A | 12/02/10 13:45 | |
| 6020A QSM TAL | 05/03/11 13:45 | |
| 1011015-02 GKHMS-GW-09-1010 [Water] Sampled 11/04/10 12:25 Eastern | | |
| Mercury, Total 7470A | 12/02/10 12:25 | |
| 6020A QSM TAL | 05/03/11 12:25 | |
| 8081B Pesticides | 11/11/10 12:25 | |
| 8082 PCBs | 11/11/10 12:25 | |
| 8260B LL VOA | 11/18/10 12:25 | |
| 8270D LL SVOC TCL | 11/11/10 12:25 | PLUS SIM PAHs |
| 1011015-03 GKHMS-GW-10-1010 [Water] Sampled 11/04/10 11:10 Eastern | | |
| 8081B Pesticides | 11/11/10 11:10 | |
| 8082 PCBs | 11/11/10 11:10 | |
| 8260B LL VOA | 11/18/10 11:10 | |
| 8270D LL SVOC TCL | 11/11/10 11:10 | PLUS SIM PAHs |
| Mercury, Total 7470A | 12/02/10 11:10 | |
| 6020A QSM TAL | 05/03/11 11:10 | |
| 1011015-04 GKHMS-TB-04 [Water] Sampled 11/04/10 00:00 Eastern | | |
| Mercury, Total 7470A | 12/02/10 00:00 | |
| 6020A QSM TAL | 05/03/11 00:00 | |
| 8081B Pesticides | 11/11/10 00:00 | |
| 8082 PCBs | 11/11/10 00:00 | |
| 8260B LL VOA | 11/18/10 00:00 | |
| 8270D LL SVOC TCL | 11/11/10 00:00 | PLUS SIM PAHs |

Reviewed By

11/5/10
Date

CENTAURI LABS™

WORK ORDER

1011015

Approved

Printed: 11/5/2010 11:08:37AM

*Due Date: 11/19/10 00:00 (14 day TAT)*

*Date Received: 11/05/10 09:40*

Container Locations

| | |
|---|---|
| 32oz Am | WG-4 |
| 32oz HDPE w/ HNO3 | WB-1 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11/5/10
Date

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-10

WO# 101015

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Centauri Labs**<br>**7210 Corporate Court**<br>**Fredrick, MD 21703** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Chino Ortiz**<br>**301-694-5310** |

| Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8260B** | G01-MW-06 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8720D/8270DSIM** | G01-MW-06 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8082A** | G01-MW-06 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 8081B** | G01-MW-06 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-06-1010 | 13:45 | **SW846 6020A** | G01-MW-06 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8260B** | G01-MW-09 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8720D/8270DSIM** | G01-MW-09 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8082A** | G01-MW-09 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 8081B** | G01-MW-09 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-09-1010 | 12:25 | **SW846 6020A** | G01-MW-09 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8260B** | G01-MW-10 | GW | VOCs (low level analysis) | 4°C/HCL | 3 | Glass - Clear | 40ml vials | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8720D/8270DSIM** | G01-MW-10 | GW | SVOCs (low level) and SIM PAHs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8082A** | G01-MW-10 | GW | PCBs | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 8081B** | G01-MW-10 | GW | Pesticides | 4°C | 2 | Glass - Amber | 1L | |
| 11/04/2010 | G01-MW-10-1010 | 11:10 | **SW846 6020A** | G01-MW-10 | GW | Metals | 4°C/HNO3 | 1 | Plastic - PE | 1L | |
| 11/04/2010 | GKHMS-TB-04 | 00:00 | **SW846 8260B** | QC | AQ | VOCs (low level analysis) | 4°C/HCL | 1 | Glass - Clear | 40ml vials | Trip Blank |

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/04/2010 | 15:13 | **Federal Express** | 11/04/2010 | 16:13 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |



CTOJM16KW_010 Summ Package

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: 11/5/11 | Time: 0940 |

Comments:

WO# 1011015



15

CTOJM16KW_010 Summ Package

# FedEx. US Airbill

Express

FedEx Tracking Number 8726 1894 2982

0200 Form ID No

**FedEx Retrieval Copy**

**1 From**

Date 11/4/10 Sender's FedEx Account Number 169301328

Sender's Name GARY BRAGANZA Phone 561 302-4157

Company TETRA TECH

Address 1901 S. CONGRESS AVE STE 270 Dept/Floor/Suite/Room

City BOYNTON BEACH State FL ZIP 33426

**2 Your Internal Billing Reference** 112602607

**3 To**

Recipient's Name RECEIVING Phone 240 575-1174

Company CENTAURI LABS

Address 7210 CORPORATE CT Dept/Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address 110
Use this line for the HOLD location address or for continuation of your shipping address.

City FREDERICK State MD ZIP 21703

01 ☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8726 1894 2982

**4a Express Package Service** * To most locations. *Packages up to 150 lbs.*

01 ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

06 ☐ FedEx First Overnight — Earliest next business morning delivery to select locations.*

03 ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**4b Express Freight Service** ** To most locations. *Packages over 150 lbs.*

70 ☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.

80 ☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

83 ☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

**5 Packaging** * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* Includes FedEx Small Pak and FedEx Large Pak. 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

**6 Special Handling and Delivery Signature Options**

03 ☐ **SATURDAY DELIVERY**

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

**Does this shipment contain dangerous goods?** One box must be checked.

☒ No 04 ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. 06 ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

**7 Payment** *Bill to:*

1 ☒ Sender Acct. No. in Section 1 will be billed. Enter FedEx Acct. No. or Credit Card No. below. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check Obtain recip. Acct. No. ☐

[redacted]

Total Packages 3 Total Weight 1.0 lbs. Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

606

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fedex.com 1.800.GoFedEx 1.800.463.3339

fedex.com 1.800.GoFedEx 1.800.463.3339

8270 only

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011022**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011022-01** | **Water** | **Sampled:11/05/10 11:40** | 1012013-01 |
| 6020A Full | | 05/04/11 11:40 | |
| 8081A Pesticides | | 11/12/10 11:40 | |
| 8082 PCBs | | 11/12/10 11:40 | |
| 8270D LL SVOC TCL | | 11/12/10 11:40 | PLUS SIMs PAHs |
| Mercury, Total 7470A | | 12/03/10 11:40 | |
| 6010C Full | | 05/04/11 11:40 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011022-02** | **Water** | **Sampled:11/05/10 10:35** | -02 |
| 8082 PCBs | | 11/12/10 10:35 | |
| 6010C Full | | 05/04/11 10:35 | |
| 8081A Pesticides | | 11/12/10 10:35 | |
| 8270D LL SVOC TCL | | 11/12/10 10:35 | PLUS SIMs PAHs |
| Mercury, Total 7470A | | 12/03/10 10:35 | |
| 6020A Full | | 05/04/11 10:35 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011022-03** | **Water** | **Sampled:11/05/10 09:28** | -03 |
| Mercury, Total 7470A | | 12/03/10 09:28 | |
| 6010C Full | | 05/04/11 09:28 | |
| 6020A Full | | 05/04/11 09:28 | |
| 8081A Pesticides | | 11/12/10 09:28 | |
| 8082 PCBs | | 11/12/10 09:28 | |
| 8270D LL SVOC TCL | | 11/12/10 09:28 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KW | 11/30 | | 12/1/10 08:11 |
| Released By | Date | Received By | Date |

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011022**

---

***Carrier:*** _____ ***Airbill No.:*** _____

***Report Due:*** 11/20/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

KVanWyck@centaurilabs.com
240-575-1199

2.3°C

| | | | | |
|---|---|---|---|---|
| KW | 11/30 | | 12/1/10 | 08:11 |
| Released By | Date | Received By | Date | |
| | | | | |
| Released By | Date | Received By | Date | |

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 101203 Number of Coolers: 1 of 1

Client: Centauri Labs Project: —

Date/Time Received: 12/1/10 08:11 Date cooler(s) opened: 12/1/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9680

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? | Yes | (No) | N/A |
| 8. If required, was enough ice present in the cooler(s)? | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in: 12/1/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? | Yes | No | (N/A) |
| 16. Was residual chlorine present in any applicable sample containers? | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? | Yes | (No) | N/A |
| 18. Was headspace present in any included VOA vials? | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

No pest or PCB volume rec'd!
No Metals rec'd!
Rec'd BLK & ~~BES~~ not on COC. Tassed as -04-205

8270 only

# SUBCONTRACT ORDER

**Centauri Labs, LLC**

**1011026**

**SENDING LABORATORY:**

Centauri Labs, LLC
7210 Corporate Court
Frederick, MD 21703
Phone: 301.694.5310
Fax: 301.620.0731
Project Manager: Chino Ortiz

**RECEIVING LABORATORY:**

EMPERICAL LABS
621 MAINSTREAM DR SUITE 270
NASHVILLE, TN 37228
Phone :(615) 345-1115
Fax: (000) 000-0000

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011026-01** | **Water** | **Sampled:11/06/10 10:31** | 1012004-01 |
| 8081A Pesticides | | 11/13/10 10:31 | |
| 8082 PCBs | | 11/13/10 10:31 | |
| 8270D LL SVOC TCL | | 11/13/10 10:31 | PLUS SIMs PAHs |
| Mercury, Total 7470A | | 12/04/10 10:31 | |
| 6020A Full | | 05/05/11 10:31 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-02** | **Water** | **Sampled:11/06/10 10:01** | -02 |
| 8082 PCBs | | 11/13/10 10:01 | |
| 8270D LL SVOC TCL | | 11/13/10 10:01 | PLUS SIMs PAHs |
| 8081A Pesticides | | 11/13/10 10:01 | |
| 6020A Full | | 05/05/11 10:01 | |
| Mercury, Total 7470A | | 12/04/10 10:01 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-03** | **Water** | **Sampled:11/06/10 11:38** | -03 |
| 6020A Full | | 05/05/11 11:38 | |
| 8081A Pesticides | | 11/13/10 11:38 | |
| 8082 PCBs | | 11/13/10 11:38 | |
| 8270D LL SVOC TCL | | 11/13/10 11:38 | PLUS SIMs PAHs |
| Mercury, Total 7470A | | 12/04/10 11:38 | |
| *Containers Supplied:* | | | |

2.3°C

| Released By | Date | Received By | Date |
|---|---|---|---|
| KVW | 11/30 | [signature] | 12/1/10 08:11 |
| | | | |
| Released By | Date | Received By | Date |

8270 onW

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011026**

| Analysis | | Expires | Comments |
|---|---|---|---|
| **Sample ID: 1011026-04** | **Water** | **Sampled:11/06/10 12:32** | 1012014-04 |
| 8082 PCBs | | 11/13/10 12:32 | |
| 8081A Pesticides | | 11/13/10 12:32 | |
| 8270D LL SVOC TCL | | 11/13/10 12:32 | PLUS SIMs PAHs |
| Mercury, Total 7470A | | 12/04/10 12:32 | |
| 6020A Full | | 05/05/11 12:32 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-05** | **Water** | **Sampled:11/07/10 09:35** | -05 |
| 6020A Full | | 05/06/11 09:35 | |
| 8081A Pesticides | | 11/14/10 09:35 | |
| 8082 PCBs | | 11/14/10 09:35 | |
| 8270D LL SVOC TCL | | 11/14/10 09:35 | PLUS SIMs PAHs |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-06** | **Water** | **Sampled:11/07/10 11:15** | -06 |
| 6020A Full | | 05/06/11 11:15 | |
| Mercury, Total 7470A | | 12/05/10 11:15 | |
| 8270D LL SVOC TCL | | 11/14/10 11:15 | |
| 8081A Pesticides | | 11/14/10 11:15 | |
| 8082 PCBs | | 11/14/10 11:15 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011026-07** | **Water** | **Sampled:11/07/10 00:00** | -07 |
| Mercury, Total 7470A | | 12/05/10 00:00 | |
| 6020A Full | | 05/06/11 00:00 | |
| 8081A Pesticides | | 11/14/10 00:00 | |
| 8082 PCBs | | 11/14/10 00:00 | |
| 8270D LL SVOC TCL | | 11/14/10 00:00 | |
| *Containers Supplied:* | | | |

***Carrier:*** _____ ***Airbill No.:*** _____ 2.3°C

***Report Due:*** 11/23/10 00:00 ***Send Report Attn:*** _____

***Condition upon receipt:*** _____

***Comments:*** _____

11/30 KW

Released By Date Received By Date

Released By Date Received By Date 12/1/10 08:11

**EMPIRICAL LABORATORIES**
**COOLER RECEIPT FORM**

LIMS Number: 101204 Number of Coolers: 1 of 1

Client: Centauri Labs Project: —

Date/Time Received: 12/1/10 08:11 Date cooler(s) opened: 12/1/10

Opened By (print): Will Schwab (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9680

2. Were custody seals on outside of cooler(s)? ..... Yes (No)

How many: — Seal date: — Seal Initials: —

| | | | |
|---|---|---|---|
| 3. Were custody seals unbroken and intact at the date and time of arrival? ..... | Yes | No | (N/A) |
| 4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... | (Yes) | No | N/A |
| 5. Were custody papers filled out properly (ink, signed, etc.)? ..... | (Yes) | No | N/A |
| 6. Did you sign custody papers in the appropriate place for acceptance? ..... | (Yes) | No | N/A |
| 7. Was project identifiable from custody papers? ..... | Yes | (No) | N/A |
| 8. If required, was enough ice present in the cooler(s)? ..... | (Yes) | No | N/A |

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in: 12/1/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

| | | | |
|---|---|---|---|
| 10. Were all bottle lids intact and sealed tightly? ..... | (Yes) | No | N/A |
| 11. Did all bottles arrive unbroken? ..... | (Yes) | No | N/A |
| 12. Was all required bottle label information complete? ..... | (Yes) | No | N/A |
| 13. Did all bottle labels agree with custody papers? ..... | (Yes) | No | N/A |
| 14. Were correct containers used for the analyses indicated? ..... | (Yes) | No | N/A |
| 15. Were preservative levels correct in all applicable sample containers? ..... | Yes | No | (N/A) |
| 16. Was residual chlorine present in any applicable sample containers? ..... | Yes | No | (N/A) |
| 17. Was sufficient amount of sample sent for the analyses required? ..... | Yes | (No) | N/A |
| 18. Was headspace present in any included VOA vials? ..... | Yes | No | (N/A) |

If Non-Conformance issues were present, list by sample ID: _____

no metals, PCB, & Pest volume rec'd

Rec'd triple volume for 101026-05

rec'd 101008 - BLK + LCS not on COC Tagged as -08 → 09

WORK ORDER

**1012009**

Printed: 12/29/2010 1:27:36PM

# Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/22/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 12/01/2010 08:11
Date Logged In 12/01/2010 11:45

Samples Received at: **2.3°C**
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012009-01 1011014-01 [Solid] Sampled 11/02/2010 11:40 Eastern** | | | | | **Sample is an extract!!** |
| SM2540B | 12/17/2010 14:00 | 15 | 11/09/2010 10:40 | | |
| SW8270C | 12/17/2010 14:00 | 15 | 11/16/2010 10:40 | client list | see client list |
| **1012009-02 1011008-01 [Solid] Sampled 11/02/2010 00:00 Eastern** | | | | | **MS/MSD. Sample is an extract!!** |
| SM2540B | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | For SGC_PCB8082A_3546 in batch 0L06022 |
| SW8081A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | MS/MSD. Sample is an extract!! |
| SW8082A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | MS/MSD. Sample is an extract!! |



CTOJM16KW_010 Summ Package

WORK ORDER

**1012009**

Printed: 12/29/2010 1:27:36PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012009-03 1011008-02 [Solid] Sampled 11/02/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SM2540B | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | For SGC_PCB8082A_3546 in batch 0L06022 |
| SW8081A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | Sample is an extract!! |
| SW8082A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | Sample is an extract!! |
| **1012009-04 1011008-BLK [Solid] Sampled 11/02/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SM2540B | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | For SGC_PCB8082A_3546 in batch 0L06022 |
| SW8081A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | Sample is an extract!! |
| SW8082A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | Sample is an extract!! |
| **1012009-05 1011008-BKS1 [Solid] Sampled 11/02/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SM2540B | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | For SGC_PCB8082A_3546 in batch 0L06022 |
| SW8081A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | Sample is an extract!! |
| SW8082A | 12/17/2010 14:00 | 15 | 11/15/2010 23:00 | | Sample is an extract!! |

WORK ORDER

**1012011**

Printed: 12/29/2010 1:28:04PM

# Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/22/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 12/01/2010 08:11
Date Logged In 12/01/2010 11:55

Samples Received at: 2.3°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012011-01 1011015-01 [Water] Sampled 11/04/2010 13:45 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/11/2010 12:45 | client list | see client list |
| **1012011-02 1011015-02 [Water] Sampled 11/04/2010 12:25 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/11/2010 11:25 | client list | see client list |
| **1012011-03 1011015-03 [Water] Sampled 11/04/2010 11:10 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/11/2010 10:10 | client list | see client list |

WORK ORDER

**1012013**

Printed: 12/29/2010 1:28:33PM

# Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/22/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 12/01/2010 08:11
Date Logged In 12/01/2010 12:06

Samples Received at: 2.3°C
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012013-01 1011022-01 [Water] Sampled 11/05/2010 11:40 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/12/2010 10:40 | client list | see client list |
| **1012013-02 1011022-02 [Water] Sampled 11/05/2010 10:35 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/12/2010 09:35 | client list | see client list |
| **1012013-03 1011022-03 [Water] Sampled 11/05/2010 09:28 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/12/2010 08:28 | client list | see client list |
| **1012013-04 1011022-BLK [Water] Sampled 11/05/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/11/2010 23:00 | client list | see client list |

WORK ORDER

1012013

Printed: 12/29/2010 1:28:33PM

## Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010

Project Manager: Kim Kostzer
Project Number: CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012013-05 1011022-BKS [Water] Sampled 11/05/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/11/2010 23:00 | client list | see client list |

WORK ORDER

**1012014**

Printed: 12/29/2010 1:29:17PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

**Report To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

**Invoice To:**
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 12/22/2010 16:00 (15 day TAT)
Received By: William Schwab
Logged In By: William Schwab

Date Received: 12/01/2010 08:11
Date Logged In 12/01/2010 12:13

Samples Received at: **2.3°C**
Custody Seals No Received On Ice Yes
Containers Intact Yes
COC/Labels Agree Yes
Preservation Confir Yes

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012014-01 1011026-01 [Water] Sampled 11/06/2010 10:31 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/13/2010 09:31 | client list | see client list |
| **1012014-02 1011026-02 [Water] Sampled 11/06/2010 10:01 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/13/2010 09:01 | client list | see client list |
| **1012014-03 1011026-03 [Water] Sampled 11/06/2010 11:38 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/13/2010 10:38 | client list | see client list |
| **1012014-04 1011026-04 [Water] Sampled 11/06/2010 12:32 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/13/2010 11:32 | client list | see client list |

WORK ORDER

**1012014**

Printed: 12/29/2010 1:29:17PM

## Empirical Laboratories, LLC

**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010

**Project Manager:** Kim Kostzer
**Project Number:** CTOJM16 Key West 2010

| Analysis | Due | TAT | Expires | Version | Comments |
|---|---|---|---|---|---|
| **1012014-05 1011026-05 [Water] Sampled 11/07/2010 09:35 Eastern** | | | | | **MS/MSD. Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/14/2010 08:35 | client list | see client list |
| **1012014-06 1011026-06 [Water] Sampled 11/07/2010 11:15 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/14/2010 10:15 | client list | see client list |
| **1012014-07 1011026-07 [Water] Sampled 11/07/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/13/2010 23:00 | client list | see client list |
| **1012014-08 1011008-BLK [Solid] Sampled 11/07/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/20/2010 23:00 | | see client list |
| **1012014-09 1011008-BKS [Solid] Sampled 11/07/2010 00:00 Eastern** | | | | | **Sample is an extract!!** |
| SW8270C | 12/17/2010 14:00 | 15 | 11/20/2010 23:00 | | see client list |

# Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: CTOJM16 Key West 2010
SDG #: CTOJM16KW_010
MATRIX: Water

QC LEVEL: EDD/IVQSM
Report Due: 12/22/2010
Client Sample Count: 18

| Sample Type | Sampled | Received | Lab ID | Client ID | SW8270C |
|---|---|---|---|---|---|
| Client Sample | 11/2/2010 | 12/1/2010 | 1012009-01 | 1011014-01 | Sample is an extract!! |
| Client Sample | 11/4/2010 | 12/1/2010 | 1012011-01 | 1011015-01 | Sample is an extract!! |
| Client Sample | 11/4/2010 | 12/1/2010 | 1012011-02 | 1011015-02 | Sample is an extract!! |
| Client Sample | 11/4/2010 | 12/1/2010 | 1012011-03 | 1011015-03 | Sample is an extract!! |
| Client Sample | 11/5/2010 | 12/1/2010 | 1012013-01 | 1011022-01 | Sample is an extract!! |
| Client Sample | 11/5/2010 | 12/1/2010 | 1012013-02 | 1011022-02 | Sample is an extract!! |
| Client Sample | 11/5/2010 | 12/1/2010 | 1012013-03 | 1011022-03 | Sample is an extract!! |
| Client Sample | 11/5/2010 | 12/1/2010 | 1012013-04 | 1011022-BLK | Sample is an extract!! |
| Client Sample | 11/5/2010 | 12/1/2010 | 1012013-05 | 1011022-BKS | Sample is an extract!! |
| Client Sample | 11/6/2010 | 12/1/2010 | 1012014-01 | 1011026-01 | Sample is an extract!! |
| Client Sample | 11/6/2010 | 12/1/2010 | 1012014-02 | 1011026-02 | Sample is an extract!! |
| Client Sample | 11/6/2010 | 12/1/2010 | 1012014-03 | 1011026-03 | Sample is an extract!! |
| Client Sample | 11/6/2010 | 12/1/2010 | 1012014-04 | 1011026-04 | Sample is an extract!! |
| Client Sample | 11/7/2010 | 12/1/2010 | 1012014-05 | 1011026-05 | MS/MSD. Sample is an extract!! |
| Client Sample | 11/7/2010 | 12/1/2010 | 1012014-06 | 1011026-06 | Sample is an extract!! |
| Client Sample | 11/7/2010 | 12/1/2010 | 1012014-07 | 1011026-07 | Sample is an extract!! |
| Client Sample | 11/7/2010 | 12/1/2010 | 1012014-08 | 1011008-BLK | Sample is an extract!! |
| Client Sample | 11/7/2010 | 12/1/2010 | 1012014-09 | 1011008-BKS | Sample is an extract!! |

# Data for SW8270C Forms

# HOLDING TIME SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011014-01 | 11/02/10 11:40 | 12/01/10 08:11 | 11/11/10 11:55 | 9.05 | 14.00 | 12/21/10 02:02 | 39.59 | 40.00 | |
| 1011015-01 | 11/04/10 13:45 | 12/01/10 08:11 | 11/09/10 08:20 | 4.82 | 7.00 | 12/20/10 17:56 | 41.40 | 40.00 | * |
| 1011015-02 | 11/04/10 12:25 | 12/01/10 08:11 | 11/09/10 08:20 | 4.87 | 7.00 | 12/20/10 18:26 | 41.42 | 40.00 | * |
| 1011015-03 | 11/04/10 11:10 | 12/01/10 08:11 | 11/09/10 08:20 | 4.92 | 7.00 | 12/20/10 18:56 | 41.44 | 40.00 | * |
| 1011022-01 | 11/05/10 11:40 | 12/01/10 08:11 | 11/12/10 09:30 | 6.95 | 7.00 | 12/20/10 21:27 | 38.50 | 40.00 | |
| 1011022-02 | 11/05/10 10:35 | 12/01/10 08:11 | 11/12/10 09:30 | 7.00 | 7.00 | 12/20/10 21:57 | 38.52 | 40.00 | |
| 1011022-03 | 11/05/10 09:28 | 12/01/10 08:11 | 11/12/10 09:30 | 7.04 | 7.00 | 12/20/10 22:27 | 38.54 | 40.00 | |
| 1011026-01 | 11/06/10 10:31 | 12/01/10 08:11 | 11/12/10 09:30 | 6.00 | 7.00 | 12/20/10 22:58 | 38.56 | 40.00 | |
| 1011026-02 | 11/06/10 10:01 | 12/01/10 08:11 | 11/12/10 09:30 | 6.02 | 7.00 | 12/20/10 23:29 | 38.58 | 40.00 | |
| 1011026-03 | 11/06/10 11:38 | 12/01/10 08:11 | 11/12/10 09:30 | 5.95 | 7.00 | 12/20/10 23:59 | 38.60 | 40.00 | |
| 1011026-04 | 11/06/10 12:32 | 12/01/10 08:11 | 11/12/10 09:30 | 5.92 | 7.00 | 12/21/10 00:30 | 38.63 | 40.00 | |
| 1011026-06 | 11/07/10 11:15 | 12/01/10 08:11 | 11/12/10 09:30 | 4.97 | 7.00 | 12/21/10 01:00 | 38.65 | 40.00 | |
| 1011026-07 | 11/07/10 00:00 | 12/01/10 08:11 | 11/12/10 09:30 | 5.48 | 7.00 | 12/21/10 01:31 | 38.67 | 40.00 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35113

SDG: CTOJM16KW_010
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35113-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1.D | | Analyzed: 12/14/10 12:13 | | |
| 2-Fluorobiphenyl | 50.00 | 94.8 | 80 - 120 | 9.5 | 9.5 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 100.0 | 94.3 | 80 - 120 | 5.22 | 5.22 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 104 | 80 - 120 | 7.321 | 7.321 | 0.0000 | +/-0.500 | |
| Phenol-d6 | 100.0 | 94.4 | 80 - 120 | 6.268 | 6.268 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 98.0 | 80 - 120 | 14.111 | 14.111 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 117 | 80 - 120 | 11.298 | 11.298 | 0.0000 | +/-0.500 | |
| **LCS (0L14026-BS1 ) ug/L** | | | | Lab File ID: 1200710.D | | Analyzed: 12/14/10 19:50 | | |
| 2-Fluorobiphenyl | 2.000 | 81.4 | 50 - 110 | 9.492 | 9.5 | -0.0080 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 72.7 | 20 - 110 | 5.232 | 5.22 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 90.3 | 40 - 110 | 7.314 | 7.321 | -0.0070 | +/-0.500 | |
| Phenol-d6 | 4.000 | 74.8 | 10 - 110 | 6.251 | 6.268 | -0.0170 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 106 | 50 - 135 | 14.104 | 14.111 | -0.0070 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 72.9 | 40 - 125 | 11.286 | 11.298 | -0.0120 | +/-0.500 | |
| **Blank (0L14026-BLK1 ) ug/L** | | | | Lab File ID: 1200709.D | | Analyzed: 12/14/10 20:20 | | |
| 2-Fluorobiphenyl | 2.000 | 76.1 | 50 - 110 | 9.49 | 9.5 | -0.0100 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 66.9 | 20 - 110 | 5.23 | 5.22 | 0.0100 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 81.6 | 40 - 110 | 7.312 | 7.321 | -0.0090 | +/-0.500 | |
| Phenol-d6 | 4.000 | 62.6 | 10 - 110 | 6.249 | 6.268 | -0.0190 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 101 | 50 - 135 | 14.102 | 14.111 | -0.0090 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 11.298 | -11.2980 | +/-0.500 | * |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L36214
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L36214-CCV1 ) ug/mL** | | | | Lab File ID: SEQ-CCV1s.D | | Analyzed: 12/20/10 17:10 | | |
| 2-Fluorobiphenyl | 50.00 | 122 | 80 - 120 | 9.186 | 9.186 | 0.0000 | +/-0.500 | * |
| 2-Fluorophenol | 100.0 | 110 | 80 - 120 | 4.916 | 4.916 | 0.0000 | +/-0.500 | |
| Nitrobenzene-d5 | 50.00 | 160 | 80 - 120 | 7.012 | 7.012 | 0.0000 | +/-0.500 | * |
| Phenol-d6 | 100.0 | 104 | 80 - 120 | 5.964 | 5.964 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 50.00 | 98.1 | 80 - 120 | 13.783 | 13.783 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 100.0 | 115 | 80 - 120 | 10.97 | 10.97 | 0.0000 | +/-0.500 | |
| **1011015-01 (1012011-01 ) ug/L** GOI-MW-06-1010 | | | | Lab File ID: 1201101.D | | Analyzed: 12/20/10 17:56 | | |
| 2-Fluorobiphenyl | 2.000 | 112 | 50 - 110 | 9.184 | 9.186 | -0.0020 | +/-0.500 | * |
| 2-Fluorophenol | 4.000 | 94.2 | 20 - 110 | 4.928 | 4.916 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 144 | 40 - 110 | 7.01 | 7.012 | -0.0020 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 97.2 | 10 - 110 | 5.962 | 5.964 | -0.0020 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 101 | 50 - 135 | 13.786 | 13.783 | 0.0030 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 113 | 40 - 125 | 10.972 | 10.97 | 0.0020 | +/-0.500 | |
| **1011015-02 (1012011-02 ) ug/L** GOI-MW-09-1010 | | | | Lab File ID: 1201102.D | | Analyzed: 12/20/10 18:26 | | |
| 2-Fluorobiphenyl | 2.000 | 94.6 | 50 - 110 | 9.187 | 9.186 | 0.0010 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 87.7 | 20 - 110 | 4.931 | 4.916 | 0.0150 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 129 | 40 - 110 | 7.013 | 7.012 | 0.0010 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 86.3 | 10 - 110 | 5.965 | 5.964 | 0.0010 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 99.2 | 50 - 135 | 13.784 | 13.783 | 0.0010 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 105 | 40 - 125 | 10.971 | 10.97 | 0.0010 | +/-0.500 | |
| **1011015-03 (1012011-03 ) ug/L** GOI-MW-10-1010 | | | | Lab File ID: 1201103.D | | Analyzed: 12/20/10 18:56 | | |
| 2-Fluorobiphenyl | 2.000 | 108 | 50 - 110 | 9.185 | 9.186 | -0.0010 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 87.0 | 20 - 110 | 4.934 | 4.916 | 0.0180 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 125 | 40 - 110 | 7.007 | 7.012 | -0.0050 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 85.6 | 10 - 110 | 5.963 | 5.964 | -0.0010 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 88.4 | 50 - 135 | 13.783 | 13.783 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 91.4 | 40 - 125 | 10.969 | 10.97 | -0.0010 | +/-0.500 | |
| **LCS (0L14027-BS1 ) mg/Kg wet** | | | | Lab File ID: 1201409.D | | Analyzed: 12/20/10 19:26 | | |
| 2-Fluorobiphenyl | 0.06667 | 107 | 45 - 105 | 9.184 | 9.186 | -0.0020 | +/-0.500 | * |
| 2-Fluorophenol | 0.1333 | 89.6 | 35 - 105 | 4.928 | 4.916 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 0.06667 | 139 | 35 - 100 | 7.01 | 7.012 | -0.0020 | +/-0.500 | * |
| Phenol-d6 | 0.1333 | 91.9 | 40 - 100 | 5.962 | 5.964 | -0.0020 | +/-0.500 | |
| Terphenyl-d14 | 0.06667 | 94.1 | 30 - 125 | 13.781 | 13.783 | -0.0020 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1333 | 71.2 | 35 - 125 | 10.968 | 10.97 | -0.0020 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L36214
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Blank (0L14027-BLK1 ) mg/Kg wet** | | | | Lab File ID: 1201408.D | | Analyzed: 12/20/10 19:56 | | |
| 2-Fluorobiphenyl | 0.06667 | 96.4 | 45 - 105 | 9.184 | 9.186 | -0.0020 | +/-0.500 | |
| 2-Fluorophenol | 0.1333 | 88.2 | 35 - 105 | 4.928 | 4.916 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 0.06667 | 110 | 35 - 100 | 7.01 | 7.012 | -0.0020 | +/-0.500 | * |
| Phenol-d6 | 0.1333 | 85.3 | 40 - 100 | 5.962 | 5.964 | -0.0020 | +/-0.500 | |
| Terphenyl-d14 | 0.06667 | 81.8 | 30 - 125 | 13.781 | 13.783 | -0.0020 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1333 | | 35 - 125 | | 10.97 | -10.9700 | +/-0.500 | * |
| **LCS (0L14028-BS1 ) ug/L** | | | | Lab File ID: 1201305.D | | Analyzed: 12/20/10 20:27 | | |
| 2-Fluorobiphenyl | 2.000 | 121 | 50 - 110 | 9.186 | 9.186 | 0.0000 | +/-0.500 | * |
| 2-Fluorophenol | 4.000 | 90.0 | 20 - 110 | 4.93 | 4.916 | 0.0140 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 139 | 40 - 110 | 7.012 | 7.012 | 0.0000 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 93.6 | 10 - 110 | 5.964 | 5.964 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 101 | 50 - 135 | 13.778 | 13.783 | -0.0050 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 80.9 | 40 - 125 | 10.97 | 10.97 | 0.0000 | +/-0.500 | |
| **Blank (0L14028-BLK1 ) ug/L** | | | | Lab File ID: 1201304.D | | Analyzed: 12/20/10 20:57 | | |
| 2-Fluorobiphenyl | 2.000 | 108 | 50 - 110 | 9.184 | 9.186 | -0.0020 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 76.2 | 20 - 110 | 4.928 | 4.916 | 0.0120 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 117 | 40 - 110 | 7.01 | 7.012 | -0.0020 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 78.3 | 10 - 110 | 5.962 | 5.964 | -0.0020 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 82.1 | 50 - 135 | 13.781 | 13.783 | -0.0020 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | | 40 - 125 | | 10.97 | -10.9700 | +/-0.500 | * |
| **1011022-01 (1012013-01 ) ug/L** GOI-MW-01-1010 | | | | Lab File ID: 1201301.D | | Analyzed: 12/20/10 21:27 | | |
| 2-Fluorobiphenyl | 2.000 | 122 | 50 - 110 | 9.186 | 9.186 | 0.0000 | +/-0.500 | * |
| 2-Fluorophenol | 4.000 | 44.9 | 20 - 110 | 4.926 | 4.916 | 0.0100 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 130 | 40 - 110 | 7.013 | 7.012 | 0.0010 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 26.4 | 10 - 110 | 5.964 | 5.964 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 105 | 50 - 135 | 13.783 | 13.783 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 68.5 | 40 - 125 | 10.965 | 10.97 | -0.0050 | +/-0.500 | |
| **1011022-02 (1012013-02 ) ug/L** GOI-MW-02-1010 | | | | Lab File ID: 1201302.D | | Analyzed: 12/20/10 21:57 | | |
| 2-Fluorobiphenyl | 2.000 | 179 | 50 - 110 | 9.185 | 9.186 | -0.0010 | +/-0.500 | * |
| 2-Fluorophenol | 4.000 | 79.8 | 20 - 110 | 4.929 | 4.916 | 0.0130 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 202 | 40 - 110 | 7.012 | 7.012 | 0.0000 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 77.8 | 10 - 110 | 5.963 | 5.964 | -0.0010 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 151 | 50 - 135 | 13.782 | 13.783 | -0.0010 | +/-0.500 | * |
| 2,4,6-Tribromophenol | 4.000 | 50.0 | 40 - 125 | 10.974 | 10.97 | 0.0040 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_010
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011022-03 (1012013-03 ) ug/L** GW-MW-04-1010 | | | | Lab File ID: 1201303.D | | Analyzed: 12/20/10 22:27 | | |
| 2-Fluorobiphenyl | 2.000 | 173 | 50 - 110 | 9.188 | 9.186 | 0.0020 | +/-0.500 | * |
| 2-Fluorophenol | 4.000 | 79.9 | 20 - 110 | 4.927 | 4.916 | 0.0110 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 189 | 40 - 110 | 7.014 | 7.012 | 0.0020 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 70.0 | 10 - 110 | 5.961 | 5.964 | -0.0030 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 131 | 50 - 135 | 13.78 | 13.783 | -0.0030 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 125 | 40 - 125 | 10.972 | 10.97 | 0.0020 | +/-0.500 | |
| **1011026-01 (1012014-01 ) ug/L** GW-MW-01A-1010 | | | | Lab File ID: 1201401.D | | Analyzed: 12/20/10 22:58 | | |
| 2-Fluorobiphenyl | 2.000 | 101 | 50 - 110 | 9.185 | 9.186 | -0.0010 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 78.5 | 20 - 110 | 4.929 | 4.916 | 0.0130 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 115 | 40 - 110 | 7.011 | 7.012 | -0.0010 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 79.6 | 10 - 110 | 5.963 | 5.964 | -0.0010 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 80.8 | 50 - 135 | 13.782 | 13.783 | -0.0010 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 31.3 | 40 - 125 | 10.964 | 10.97 | -0.0060 | +/-0.500 | * |
| **1011026-02 (1012014-02 ) ug/L** GW-MW-03-1010 | | | | Lab File ID: 1201402.D | | Analyzed: 12/20/10 23:29 | | |
| 2-Fluorobiphenyl | 2.000 | 113 | 50 - 110 | 9.186 | 9.186 | 0.0000 | +/-0.500 | * |
| 2-Fluorophenol | 4.000 | 92.9 | 20 - 110 | 4.93 | 4.916 | 0.0140 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 119 | 40 - 110 | 7.008 | 7.012 | -0.0040 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 90.4 | 10 - 110 | 5.964 | 5.964 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 87.8 | 50 - 135 | 13.783 | 13.783 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 50.5 | 40 - 125 | 10.97 | 10.97 | 0.0000 | +/-0.500 | |
| **1011026-03 (1012014-03 ) ug/L** GW-MW-07-1010 | | | | Lab File ID: 1201403.D | | Analyzed: 12/20/10 23:59 | | |
| 2-Fluorobiphenyl | 2.000 | 96.9 | 50 - 110 | 9.186 | 9.186 | 0.0000 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 89.1 | 20 - 110 | 4.93 | 4.916 | 0.0140 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 118 | 40 - 110 | 7.012 | 7.012 | 0.0000 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 87.2 | 10 - 110 | 5.964 | 5.964 | 0.0000 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 90.6 | 50 - 135 | 13.783 | 13.783 | 0.0000 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 110 | 40 - 125 | 10.97 | 10.97 | 0.0000 | +/-0.500 | |
| **1011026-04 (1012014-04 ) ug/L** GW-MW-12-1010 | | | | Lab File ID: 1201404.D | | Analyzed: 12/21/10 00:30 | | |
| 2-Fluorobiphenyl | 2.000 | 85.9 | 50 - 110 | 9.188 | 9.186 | 0.0020 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 85.1 | 20 - 110 | 4.932 | 4.916 | 0.0160 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 118 | 40 - 110 | 7.01 | 7.012 | -0.0020 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 88.7 | 10 - 110 | 5.966 | 5.964 | 0.0020 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 112 | 50 - 135 | 13.785 | 13.783 | 0.0020 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 104 | 40 - 125 | 10.972 | 10.97 | 0.0020 | +/-0.500 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_010
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011026-06 (1012014-06 ) ug/L** GKMW-08-1010 | | | | Lab File ID: 1201406.D | | Analyzed: 12/21/10 01:00 | | |
| 2-Fluorobiphenyl | 2.000 | 94.5 | 50 - 110 | 9.188 | 9.186 | 0.0020 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 91.7 | 20 - 110 | 4.932 | 4.916 | 0.0160 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 120 | 40 - 110 | 7.015 | 7.012 | 0.0030 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 93.3 | 10 - 110 | 5.966 | 5.964 | 0.0020 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 94.0 | 50 - 135 | 13.78 | 13.783 | -0.0030 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 102 | 40 - 125 | 10.972 | 10.97 | 0.0020 | +/-0.500 | |
| **1011026-07 (1012014-07 ) ug/L** GKHMS-GW-FD04-1010 | | | | Lab File ID: 1201407.D | | Analyzed: 12/21/10 01:31 | | |
| 2-Fluorobiphenyl | 2.000 | 96.1 | 50 - 110 | 9.187 | 9.186 | 0.0010 | +/-0.500 | |
| 2-Fluorophenol | 4.000 | 86.7 | 20 - 110 | 4.931 | 4.916 | 0.0150 | +/-0.500 | |
| Nitrobenzene-d5 | 2.000 | 127 | 40 - 110 | 7.009 | 7.012 | -0.0030 | +/-0.500 | * |
| Phenol-d6 | 4.000 | 87.0 | 10 - 110 | 5.965 | 5.964 | 0.0010 | +/-0.500 | |
| Terphenyl-d14 | 2.000 | 98.8 | 50 - 135 | 13.779 | 13.783 | -0.0040 | +/-0.500 | |
| 2,4,6-Tribromophenol | 4.000 | 108 | 40 - 125 | 10.966 | 10.97 | -0.0040 | +/-0.500 | |
| **1011014-01 (1012009-01 ) mg/Kg dry** GKHMS-SO-018-1010 | | | | Lab File ID: 1200901.D | | Analyzed: 12/21/10 02:02 | | |
| 2-Fluorobiphenyl | 0.07752 | 108 | 45 - 105 | 9.187 | 9.186 | 0.0010 | +/-0.500 | * |
| 2-Fluorophenol | 0.1550 | 99.4 | 35 - 105 | 4.931 | 4.916 | 0.0150 | +/-0.500 | |
| Nitrobenzene-d5 | 0.07752 | 144 | 35 - 100 | 7.009 | 7.012 | -0.0030 | +/-0.500 | * |
| Phenol-d6 | 0.1550 | 103 | 40 - 100 | 5.965 | 5.964 | 0.0010 | +/-0.500 | * |
| Terphenyl-d14 | 0.07752 | 106 | 30 - 125 | 13.779 | 13.783 | -0.0040 | +/-0.500 | |
| 2,4,6-Tribromophenol | 0.1550 | | 35 - 125 | | 10.97 | -10.9700 | +/-0.500 | * |

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L14026 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14026-BLK1 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| LCS | 0L14026-BS1 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011015-01 | 1012011-01 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011015-02 | 1012011-02 | 11/09/10 08:20 | 1,000.00 | 1.00 |
| 1011015-03 | 1012011-03 | 11/09/10 08:20 | 1,000.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14026-BLK1 File ID: 1200709.D

Sampled: Prepared: Analyzed: 12/14/10 20:20

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | Y U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | X U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | U |
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | Q, X U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14026-BLK1 File ID: 1200709.D

Sampled: Prepared: Analyzed: 12/14/10 20:20

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14026 Sequence: 0L35113 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 1.522 | 76.1 | 50 - 110 | |
| 2-Fluorophenol | 4.000 | 2.674 | 66.9 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 1.633 | 81.6 | 40 - 110 | |
| Phenol-d6 | 4.000 | 2.503 | 62.6 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 2.018 | 101 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14026 | Laboratory ID: | 0L14026-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Acetophenone | 5.000 | 4.140 | 82.8 | 50 - 110 |
| Atrazine | 5.000 | 4.397 | 87.9 | 70 - 115 |
| **Benzaldehyde** | **5.000** | **5.00 U** | **0** | **10 - 180** |
| 1,1-Biphenyl | 5.000 | 4.098 | 82.0 | 50 - 110 |
| 4-Bromophenyl-phenylether | 5.000 | 4.968 | 99.4 | 50 - 115 |
| Butylbenzylphthalate | 5.000 | 4.692 | 93.8 | 45 - 115 |
| Caprolactam | 5.000 | 3.434 | 68.7 | 20 - 110 |
| Carbazole | 5.000 | 4.161 | 83.2 | 50 - 115 |
| 4-Chloro-3-methylphenol | 15.00 | 14.81 | 98.7 | 45 - 110 |
| **4-Chloroaniline** | **5.000** | **5.00 U** | **0** | **15 - 110** |
| Bis(2-chloroethoxy)methane | 5.000 | 4.024 | 80.5 | 45 - 105 |
| Bis(2-chloroethyl)ether | 5.000 | 3.668 | 73.4 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 3.599 | 72.0 | 25 - 130 |
| 2-Chloronaphthalene | 5.000 | 4.492 | 89.8 | 50 - 105 |
| 2-Chlorophenol | 15.00 | 11.47 | 76.5 | 35 - 105 |
| 4-Chlorophenyl phenyl ether | 5.000 | 4.534 | 90.7 | 50 - 110 |
| Dibenzofuran | 5.000 | 4.353 | 87.1 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 4.986 | 99.7 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 3.397 | 67.9 | 20 - 110 |
| 2,4-Dichlorophenol | 15.00 | 14.17 | 94.5 | 40 - 110 |
| Diethylphthalate | 5.000 | 4.746 | 94.9 | 40 - 120 |
| 2,4-Dimethylphenol | 15.00 | 13.82 | 92.2 | 30 - 110 |
| Dimethyl phthalate | 5.000 | 4.704 | 94.1 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 12.01 | 80.1 | 40 - 130 |
| **2,4-Dinitrophenol** | **15.00** | **50.0 U** | **0** | **15 - 140** |
| 2,4-Dinitrotoluene | 5.000 | 4.498 | 90.0 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 4.348 | 87.0 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 5.207 | 104 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 4.797 | 95.9 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 4.784 | 95.7 | 50 - 110 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14026 | Laboratory ID: | 0L14026-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Hexachlorobutadiene | 5.000 | 5.237 | 105 | 25 - 105 |
| Hexachlorocyclopentadiene | 5.000 | 2.038 | 40.8 | 10 - 110 |
| Hexachloroethane | 5.000 | 4.435 | 88.7 | 30 - 95 |
| Isophorone | 5.000 | 3.951 | 79.0 | 50 - 110 |
| 2-Methylphenol | 15.00 | 11.85 | 79.0 | 40 - 110 |
| 4-Methylphenol | 30.00 | 15.64 | 52.1 | 30 - 110 |
| Naphthalene | 5.000 | 4.372 | 87.4 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 4.413 | 88.3 | 35 - 120 |
| 3-Nitroaniline | 5.000 | 3.531 | 70.6 | 20 - 125 |
| **2-Nitroaniline** | **5.000** | **20.0 U** | **0** | **50 - 115** |
| Nitrobenzene | 5.000 | 4.370 | 87.4 | 30 - 110 |
| 4-Nitrophenol | 15.00 | 12.90 | 86.0 | 0 - 125 |
| 2-Nitrophenol | 15.00 | 11.93 | 79.5 | 40 - 115 |
| **N-Nitrosodiphenylamine** | **5.000** | **5.00 U** | **0** | **50 - 110** |
| N-Nitroso-di-n-propylamine | 5.000 | 4.206 | 84.1 | 35 - 130 |
| Pentachlorophenol | 15.00 | 8.299 | 55.3 | 40 - 115 |
| Phenol | 15.00 | 11.13 | 74.2 | 0 - 115 |
| 2,4,6-Trichlorophenol | 15.00 | 12.77 | 85.1 | 50 - 115 |
| 2,4,5-Trichlorophenol | 15.00 | 13.22 | 88.1 | 50 - 110 |

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L14027 Batch Matrix: Solid Preparation: EXT_3546

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14027-BLK1 | 11/11/10 11:55 | 30.00 | 1.00 |
| LCS | 0L14027-BS1 | 11/11/10 11:55 | 30.00 | 1.00 |
| 1011014-01 | 1012009-01 | 11/11/10 11:55 | 30.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14027-BLK1 File ID: 1201408.D

Sampled: Prepared: Analyzed: 12/20/10 19:56

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L14027 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | ONC. (mg/Kg we | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.0310 | 0.167 | 0.330 | Y U |
| 98-86-2 | Acetophenone | | 0.0410 | 0.167 | 0.330 | U |
| 1912-24-9 | Atrazine | | 0.0280 | 0.167 | 0.330 | X U |
| 100-52-7 | Benzaldehyde | | 0.0550 | 0.167 | 0.330 | X, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.0290 | 0.167 | 0.330 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 0.0260 | 0.167 | 0.330 | X, Q U |
| 85-68-7 | Butylbenzylphthalate | | 0.0300 | 0.167 | 0.330 | U |
| 105-60-2 | Caprolactam | | 0.0670 | 0.167 | 0.330 | U |
| 86-74-8 | Carbazole | | 0.0360 | 0.167 | 0.330 | Y U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 0.0280 | 0.167 | 0.330 | U |
| 106-47-8 | 4-Chloroaniline | | 0.0480 | 0.167 | 0.330 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 0.0310 | 0.167 | 0.330 | X, Q U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.0410 | 0.167 | 0.330 | Q, X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.0510 | 0.167 | 0.330 | U |
| 91-58-7 | 2-Chloronaphthalene | | 0.0320 | 0.167 | 0.330 | Q, X U |
| 95-57-8 | 2-Chlorophenol | | 0.0410 | 0.167 | 0.330 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 0.0310 | 0.167 | 0.330 | Q, X U |
| 132-64-9 | Dibenzofuran | | 0.0240 | 0.167 | 0.330 | U |
| 84-74-2 | Di-n-butylphthalate | | 0.0300 | 0.167 | 0.330 | U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.0190 | 0.167 | 0.330 | U |
| 84-66-2 | Diethylphthalate | | 0.0340 | 0.167 | 0.330 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 0.0210 | 0.667 | 1.30 | Q U |
| 131-11-3 | Dimethyl phthalate | | 0.0300 | 0.167 | 0.330 | Q U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 0.0220 | 1.67 | 3.30 | X U |
| 51-28-5 | 2,4-Dinitrophenol | | 0.130 | 1.67 | 3.30 | U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.0240 | 0.167 | 0.330 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.0380 | 0.167 | 0.330 | X U |
| 117-84-0 | Di-n-octylphthalate | | 0.0270 | 0.167 | 0.330 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 0.0360 | 0.167 | 0.330 | U |
| 118-74-1 | Hexachlorobenzene | | 0.0350 | 0.167 | 0.330 | U |
| 87-68-3 | Hexachlorobutadiene | | 0.0330 | 0.167 | 0.330 | X, Q U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.0610 | 0.167 | 0.330 | U |
| 67-72-1 | Hexachloroethane | | 0.0390 | 0.167 | 0.330 | U |
| 78-59-1 | Isophorone | | 0.0280 | 0.167 | 0.330 | X, Q U |
| 95-48-7 | 2-Methylphenol | | 0.0390 | 0.667 | 0.330 | U |
| 106-44-5 | 4-Methylphenol | | 0.0260 | 0.167 | 0.330 | U |
| 91-20-3 | Naphthalene | | 0.0320 | 0.167 | 0.330 | U |
| 100-01-6 | 4-Nitroaniline | | 0.100 | 0.667 | 1.30 | U |
| 99-09-2 | 3-Nitroaniline | | 0.0470 | 0.667 | 1.30 | Y U |
| 88-74-4 | 2-Nitroaniline | | 0.0320 | 0.667 | 1.30 | Q, X U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14027-BLK1 File ID: 1201408.D

Sampled: Prepared: Analyzed: 12/20/10 19:56

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L14027 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | ONC. (mg/Kg we | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.0340 | 0.167 | 0.330 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 0.0810 | 0.667 | 1.30 | X U |
| 88-75-5 | 2-Nitrophenol | | 0.0220 | 0.167 | 0.330 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 0.0320 | 0.167 | 0.330 | Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.0550 | 0.167 | 0.330 | Q, X U |
| 87-86-5 | Pentachlorophenol | | 0.0340 | 0.667 | 1.30 | U |
| 108-95-2 | Phenol | | 0.0360 | 0.167 | 0.330 | Q U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 0.100 | 0.167 | 0.330 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 0.100 | 0.167 | 0.330 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.0350 | 0.167 | 0.330 | X, Q U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.0270 | 0.167 | 0.330 | X, Q U |

| SYSTEM MONITORING COMPOUND | ADDED (mg/Kg wet) | CONC (mg/Kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.06667 | 0.06426 | 96.4 | 45 - 105 | X |
| 2-Fluorophenol | 0.1333 | 0.1177 | 88.2 | 35 - 105 | |
| Nitrobenzene-d5 | 0.06667 | 0.07307 | 110 | 35 - 100 | X |
| Phenol-d6 | 0.1333 | 0.1138 | 85.3 | 40 - 100 | |
| Terphenyl-d14 | 0.06667 | 0.05452 | 81.8 | 30 - 125 | |
| 2,4,6-Tribromophenol | 0.1333 | ND | | 35 - 125 | |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L14027 | Laboratory ID: | 0L14027-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | 0.1667 | 0.1110 | 66.6 | 19 - 130 |
| Acetophenone | 0.1667 | 0.1663 | 99.8 | 35 - 110 |
| Atrazine | 0.1667 | 0.1714 | 103 | 55 - 105 |
| **Benzaldehyde** | **0.1667** | **0.330 U** | **0** | **10 - 160** |
| 1,1-Biphenyl | 0.1667 | 0.1700 | 102 | 45 - 110 |
| **4-Bromophenyl-phenylether** | **0.1667** | **0.2235** | **134** | **45 - 115** |
| Butylbenzylphthalate | 0.1667 | 0.1096 | 65.8 | 50 - 125 |
| Caprolactam | 0.1667 | 0.1241 | 74.5 | 50 - 110 |
| Carbazole | 0.1667 | 0.1432 | 85.9 | 45 - 115 |
| 4-Chloro-3-methylphenol | 0.5000 | 0.5135 | 103 | 45 - 115 |
| **4-Chloroaniline** | **0.1667** | **0.330 U** | **0** | **10 - 95** |
| **Bis(2-chloroethoxy)methane** | **0.1667** | **0.2103** | **126** | **45 - 110** |
| **Bis(2-chloroethyl)ether** | **0.1667** | **0.1849** | **111** | **40 - 105** |
| 2,2'-Oxybis-1-chloropropane | 0.1667 | 0.1524 | 91.4 | 20 - 115 |
| **2-Chloronaphthalene** | **0.1667** | **0.1787** | **107** | **45 - 105** |
| 2-Chlorophenol | 0.5000 | 0.4123 | 82.5 | 45 - 105 |
| **4-Chlorophenyl phenyl ether** | **0.1667** | **0.1860** | **112** | **45 - 110** |
| Dibenzofuran | 0.1667 | 0.1334 | 80.0 | 50 - 105 |
| Di-n-butylphthalate | 0.1667 | 0.1339 | 80.3 | 55 - 110 |
| 2,4-Dichlorophenol | 0.5000 | 0.5146 | 103 | 45 - 110 |
| Diethylphthalate | 0.1667 | 0.1332 | 79.9 | 50 - 115 |
| **2,4-Dimethylphenol** | **0.5000** | **0.5375** | **107** | **30 - 105** |
| **Dimethyl phthalate** | **0.1667** | **0.1915** | **115** | **50 - 110** |
| 4,6-Dinitro-2-methylphenol | 0.5000 | 0.4923 | 98.5 | 30 - 135 |
| 2,4-Dinitrophenol | 0.5000 | 0.4025 | 80.5 | 15 - 130 |
| 2,4-Dinitrotoluene | 0.1667 | 0.1452 | 87.1 | 50 - 115 |
| 2,6-Dinitrotoluene | 0.1667 | 0.1818 | 109 | 50 - 110 |
| Di-n-octylphthalate | 0.1667 | 0.1029 | 61.8 | 40 - 130 |
| Bis(2-ethylhexyl)phthalate | 0.1667 | 0.1173 | 70.4 | 45 - 125 |
| Hexachlorobenzene | 0.1667 | 0.1546 | 92.8 | 45 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L14027 | Laboratory ID: | 0L14027-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 1 mL |

| ANALYTE | SPIKE ADDED (mg/Kg wet) | LCS CONCENTRATION (mg/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **Hexachlorobutadiene** | **0.1667** | **0.2651** | **159** | **30 - 110** |
| Hexachlorocyclopentadiene | 0.1667 | 0.09471 | 56.8 | 10 - 110 |
| Hexachloroethane | 0.1667 | 0.1599 | 96.0 | 35 - 110 |
| **Isophorone** | **0.1667** | **0.1956** | **117** | **45 - 110** |
| 2-Methylphenol | 0.5000 | 0.4757 | 95.1 | 40 - 105 |
| 4-Methylphenol | 1.000 | 0.5798 | 58.0 | 40 - 105 |
| Naphthalene | 0.1667 | 0.1533 | 92.0 | 40 - 105 |
| 4-Nitroaniline | 0.1667 | 0.1447 | 86.8 | 35 - 115 |
| 3-Nitroaniline | 0.1667 | 0.1671 | 100 | 25 - 110 |
| **2-Nitroaniline** | **0.1667** | **0.2477** | **149** | **45 - 120** |
| **Nitrobenzene** | **0.1667** | **0.2427** | **146** | **40 - 115** |
| 4-Nitrophenol | 0.5000 | 0.5460 | 109 | 15 - 140 |
| 2-Nitrophenol | 0.5000 | 0.4209 | 84.2 | 40 - 110 |
| **N-Nitrosodiphenylamine** | **0.1667** | **0.03546** | **21.3** | **50 - 115** |
| **N-Nitroso-di-n-propylamine** | **0.1667** | **0.1956** | **117** | **40 - 115** |
| Pentachlorophenol | 0.5000 | 0.2785 | 55.7 | 25 - 120 |
| **Phenol** | **0.5000** | **0.5036** | **101** | **40 - 100** |
| **2,4,6-Trichlorophenol** | **0.5000** | **0.6307** | **126** | **45 - 110** |
| **2,4,5-Trichlorophenol** | **0.5000** | **0.5841** | **117** | **50 - 110** |

# PREPARATION BATCH SUMMARY

## SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L14028 Batch Matrix: Water Preparation: EXT_3510

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L14028-BLK1 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| LCS | 0L14028-BS1 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011022-01 | 1012013-01 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011022-02 | 1012013-02 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011022-03 | 1012013-03 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011026-01 | 1012014-01 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011026-02 | 1012014-02 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011026-03 | 1012014-03 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011026-04 | 1012014-04 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011026-06 | 1012014-06 | 11/12/10 09:30 | 1,000.00 | 1.00 |
| 1011026-07 | 1012014-07 | 11/12/10 09:30 | 1,000.00 | 1.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14028-BLK1 File ID: 1201304.D

Sampled: Prepared: Analyzed: 12/20/10 20:57

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-86-2 | Acetophenone | | 1.25 | 2.50 | 5.00 | U |
| 1912-24-9 | Atrazine | | 0.690 | 2.50 | 5.00 | S, X U |
| 100-52-7 | Benzaldehyde | | 1.25 | 2.50 | 5.00 | Y, Q U |
| 92-52-4 | 1,1-Biphenyl | | 0.390 | 2.50 | 5.00 | U |
| 101-55-3 | 4-Bromophenyl-phenylether | | 1.25 | 2.50 | 5.00 | X, Q, S U |
| 85-68-7 | Butylbenzylphthalate | | 1.25 | 2.50 | 5.00 | S U |
| 105-60-2 | Caprolactam | | 1.25 | 2.50 | 5.00 | U |
| 86-74-8 | Carbazole | | 0.690 | 2.50 | 5.00 | Y, S U |
| 59-50-7 | 4-Chloro-3-methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-47-8 | 4-Chloroaniline | | 1.25 | 2.50 | 5.00 | Q, Y U |
| 111-91-1 | Bis(2-chloroethoxy)methane | | 1.25 | 2.50 | 5.00 | X, Q U |
| 111-44-4 | Bis(2-chloroethyl)ether | | 0.450 | 2.50 | 5.00 | X U |
| 108-60-1 | 2,2'-Oxybis-1-chloropropane | | 0.850 | 2.50 | 5.00 | U |
| 91-58-7 | 2-Chloronaphthalene | | 1.25 | 2.50 | 5.00 | X, Q U |
| 95-57-8 | 2-Chlorophenol | | 1.25 | 2.50 | 5.00 | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether | | 1.25 | 2.50 | 5.00 | X U |
| 132-64-9 | Dibenzofuran | | 1.25 | 2.50 | 5.00 | U |
| 84-74-2 | Di-n-butylphthalate | | 1.25 | 2.50 | 5.00 | S U |
| 91-94-1 | 3,3'-Dichlorobenzidine | | 0.890 | 2.50 | 5.00 | S, Y U |
| 120-83-2 | 2,4-Dichlorophenol | | 0.440 | 2.50 | 5.00 | U |
| 84-66-2 | Diethylphthalate | | 1.25 | 2.50 | 5.00 | U |
| 105-67-9 | 2,4-Dimethylphenol | | 5.00 | 10.0 | 20.0 | U |
| 131-11-3 | Dimethyl phthalate | | 1.25 | 2.50 | 5.00 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | | 5.00 | 10.0 | 20.0 | S, X U |
| 51-28-5 | 2,4-Dinitrophenol | | 12.5 | 25.0 | 50.0 | Q U |
| 121-14-2 | 2,4-Dinitrotoluene | | 0.490 | 2.50 | 5.00 | U |
| 606-20-2 | 2,6-Dinitrotoluene | | 0.650 | 2.50 | 5.00 | X U |
| 117-84-0 | Di-n-octylphthalate | | 1.25 | 2.50 | 5.00 | S U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | | 1.25 | 2.50 | 5.00 | S U |
| 118-74-1 | Hexachlorobenzene | | 0.470 | 2.50 | 5.00 | S U |
| 87-68-3 | Hexachlorobutadiene | | 0.930 | 2.50 | 5.00 | Q, X U |
| 77-47-4 | Hexachlorocyclopentadiene | | 0.890 | 2.50 | 5.00 | U |
| 67-72-1 | Hexachloroethane | | 0.460 | 2.50 | 5.00 | U |
| 78-59-1 | Isophorone | | 1.25 | 2.50 | 5.00 | X U |
| 95-48-7 | 2-Methylphenol | | 1.25 | 2.50 | 5.00 | U |
| 106-44-5 | 4-Methylphenol | | 0.770 | 2.50 | 5.00 | U |
| 91-20-3 | Naphthalene | | 1.25 | 2.50 | 5.00 | U |
| 100-01-6 | 4-Nitroaniline | | 2.00 | 10.0 | 20.0 | U |
| 99-09-2 | 3-Nitroaniline | | 1.00 | 10.0 | 20.0 | Y U |
| 88-74-4 | 2-Nitroaniline | | 5.00 | 10.0 | 20.0 | X, Q U |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L14028-BLK1 File ID: 1201304.D

Sampled: Prepared: Analyzed: 12/20/10 20:57

Solids: Preparation: EXT_3510 Dilution:

Batch: 0L14028 Sequence: 0L36214 Calibration: 0351002 Instrument: MS-BNA3

| CAS NO. | COMPOUND | CONC. (ug/L) | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 98-95-3 | Nitrobenzene | | 0.620 | 2.50 | 5.00 | Q, X U |
| 100-02-7 | 4-Nitrophenol | | 5.00 | 10.0 | 20.0 | X U |
| 88-75-5 | 2-Nitrophenol | | 1.25 | 2.50 | 5.00 | U |
| 86-30-6 | N-Nitrosodiphenylamine | | 1.25 | 2.50 | 5.00 | S, Q U |
| 621-64-7 | N-Nitroso-di-n-propylamine | | 0.900 | 2.50 | 5.00 | X U |
| 87-86-5 | Pentachlorophenol | | 1.00 | 10.0 | 20.0 | S U |
| 108-95-2 | Phenol | | 1.25 | 2.50 | 5.00 | U |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | 1.25 | 2.50 | 5.00 | Q U |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | | 1.25 | 2.50 | 5.00 | Q U |
| 88-06-2 | 2,4,6-Trichlorophenol | | 0.730 | 2.50 | 5.00 | Q, X U |
| 95-95-4 | 2,4,5-Trichlorophenol | | 0.500 | 2.50 | 5.00 | X U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/L) | CONC (ug/L) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 2.000 | 2.166 | 108 | 50 - 110 | X |
| 2-Fluorophenol | 4.000 | 3.048 | 76.2 | 20 - 110 | |
| Nitrobenzene-d5 | 2.000 | 2.332 | 117 | 40 - 110 | X |
| Phenol-d6 | 4.000 | 3.133 | 78.3 | 10 - 110 | |
| Terphenyl-d14 | 2.000 | 1.641 | 82.1 | 50 - 135 | |
| 2,4,6-Tribromophenol | 4.000 | 0.000 | | 40 - 125 | S |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14028 | Laboratory ID: | 0L14028-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Acetophenone | 5.000 | 4.660 | 93.2 | 50 - 110 |
| Atrazine | 5.000 | 5.734 | 115 | 70 - 115 |
| **Benzaldehyde** | **5.000** | **5.00 U** | **0** | **10 - 180** |
| 1,1-Biphenyl | 5.000 | 5.418 | 108 | 50 - 110 |
| **4-Bromophenyl-phenylether** | **5.000** | **8.070** | **161** | **50 - 115** |
| Butylbenzylphthalate | 5.000 | 2.664 | 53.3 | 45 - 115 |
| Caprolactam | 5.000 | 3.181 | 63.6 | 20 - 110 |
| Carbazole | 5.000 | 4.013 | 80.3 | 50 - 115 |
| 4-Chloro-3-methylphenol | 15.00 | 13.12 | 87.5 | 45 - 110 |
| **4-Chloroaniline** | **5.000** | **5.00 U** | **0** | **15 - 110** |
| **Bis(2-chloroethoxy)methane** | **5.000** | **6.024** | **120** | **45 - 105** |
| Bis(2-chloroethyl)ether | 5.000 | 5.482 | 110 | 35 - 110 |
| 2,2'-Oxybis-1-chloropropane | 5.000 | 4.327 | 86.5 | 25 - 130 |
| **2-Chloronaphthalene** | **5.000** | **5.418** | **108** | **50 - 105** |
| 2-Chlorophenol | 15.00 | 11.50 | 76.7 | 35 - 105 |
| 4-Chlorophenyl phenyl ether | 5.000 | 5.430 | 109 | 50 - 110 |
| Dibenzofuran | 5.000 | 3.759 | 75.2 | 55 - 105 |
| Di-n-butylphthalate | 5.000 | 3.582 | 71.6 | 55 - 115 |
| 3,3'-Dichlorobenzidine | 5.000 | 3.223 | 64.5 | 20 - 110 |
| 2,4-Dichlorophenol | 15.00 | 14.10 | 94.0 | 40 - 110 |
| Diethylphthalate | 5.000 | 3.489 | 69.8 | 40 - 120 |
| 2,4-Dimethylphenol | 15.00 | 14.75 | 98.3 | 30 - 110 |
| Dimethyl phthalate | 5.000 | 5.619 | 112 | 25 - 125 |
| 4,6-Dinitro-2-methylphenol | 15.00 | 13.00 | 86.7 | 40 - 130 |
| **2,4-Dinitrophenol** | **15.00** | **50.0 U** | **0** | **15 - 140** |
| 2,4-Dinitrotoluene | 5.000 | 3.954 | 79.1 | 50 - 120 |
| 2,6-Dinitrotoluene | 5.000 | 4.576 | 91.5 | 50 - 115 |
| Di-n-octylphthalate | 5.000 | 2.535 | 50.7 | 35 - 135 |
| Bis(2-ethylhexyl)phthalate | 5.000 | 2.869 | 57.4 | 40 - 125 |
| Hexachlorobenzene | 5.000 | 4.812 | 96.2 | 50 - 110 |

# LCS / LCS DUPLICATE RECOVERY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L14028 | Laboratory ID: | 0L14028-BS1 |
| Preparation: | EXT_3510 | Initial/Final: | 1000 mL / 1 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **Hexachlorobutadiene** | **5.000** | **7.504** | **150** | **25 - 105** |
| Hexachlorocyclopentadiene | 5.000 | 2.735 | 54.7 | 10 - 110 |
| Hexachloroethane | 5.000 | 4.098 | 82.0 | 30 - 95 |
| Isophorone | 5.000 | 5.442 | 109 | 50 - 110 |
| 2-Methylphenol | 15.00 | 13.05 | 87.0 | 40 - 110 |
| 4-Methylphenol | 30.00 | 16.58 | 55.3 | 30 - 110 |
| Naphthalene | 5.000 | 4.494 | 89.9 | 40 - 100 |
| 4-Nitroaniline | 5.000 | 5.280 | 106 | 35 - 120 |
| 3-Nitroaniline | 5.000 | 4.143 | 82.9 | 20 - 125 |
| **2-Nitroaniline** | **5.000** | **7.129** | **143** | **50 - 115** |
| **Nitrobenzene** | **5.000** | **6.853** | **137** | **30 - 110** |
| 4-Nitrophenol | 15.00 | 15.23 | 102 | 0 - 125 |
| 2-Nitrophenol | 15.00 | 10.10 | 67.3 | 40 - 115 |
| **N-Nitrosodiphenylamine** | **5.000** | **5.00 U** | **0** | **50 - 110** |
| N-Nitroso-di-n-propylamine | 5.000 | 5.350 | 107 | 35 - 130 |
| Pentachlorophenol | 15.00 | 6.522 | 43.5 | 40 - 115 |
| Phenol | 15.00 | 14.22 | 94.8 | 0 - 115 |
| **2,4,6-Trichlorophenol** | **15.00** | **17.35** | **116** | **50 - 115** |
| 2,4,5-Trichlorophenol | 15.00 | 15.98 | 107 | 50 - 110 |

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35109 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35109-TUN1 | SEQ-TUN1.D | 12/07/10 17:31 |
| Cal Standard | 0L35109-CAL1 | SEQ-CAL1.D | 12/07/10 17:58 |
| Cal Standard | 0L35109-CAL2 | SEQ-CAL2.D | 12/07/10 18:29 |
| Cal Standard | 0L35109-CAL3 | SEQ-CAL3.D | 12/07/10 18:59 |
| Cal Standard | 0L35109-CAL4 | SEQ-CAL4.D | 12/07/10 19:29 |
| Cal Standard | 0L35109-CAL5 | SEQ-CAL5.D | 12/07/10 19:59 |
| Cal Standard | 0L35109-CAL6 | SEQ-CAL6.D | 12/07/10 20:29 |
| Cal Standard | 0L35109-CAL7 | SEQ-CAL7.D | 12/07/10 20:59 |
| Cal Standard | 0L35109-CAL9 | SEQ-CAL9.D | 12/07/10 21:58 |
| Cal Standard | 0L35109-CALA | SEQ-CALA.D | 12/07/10 22:28 |
| Cal Standard | 0L35109-CALB | SEQ-CALB.D | 12/07/10 22:57 |
| Cal Standard | 0L35109-CALC | SEQ-CALC.D | 12/07/10 23:27 |
| Cal Standard | 0L35109-CALD | SEQ-CALD.D | 12/07/10 23:56 |
| Cal Standard | 0L35109-CALE | SEQ-CALE.D | 12/08/10 00:25 |
| Cal Standard | 0L35109-CALF | SEQ-CALF.D | 12/08/10 00:54 |
| Cal Standard | 0L35109-CALG | SEQ-CALG.D | 12/08/10 01:23 |
| Cal Standard | 0L35109-CALH | SEQ-CALH.D | 12/08/10 01:52 |
| Cal Standard | 0L35109-CALJ | SEQ-CALJ.D | 12/08/10 02:51 |
| Cal Standard | 0L35109-CALK | SEQ-CALK.D | 12/08/10 03:20 |
| MS Tune | 0L35109-TUN2 | SEQ-TUN2.D | 12/08/10 03:49 |
| Initial Cal Check | 0L35109-ICV3 | SEQ-ICV3.D | 12/08/10 10:01 |
| Initial Cal Check | 0L35109-ICV4 | SEQ-ICV4.D | 12/08/10 10:31 |
| Initial Cal Check | 0L35109-ICV5 | SEQ-ICV5.D | 12/08/10 11:04 |
| Initial Cal Check | 0L35109-ICV7 | SEQ-ICV7.D | 12/08/10 12:04 |
| Initial Cal Check | 0L35109-ICVA | SEQ-ICVA.D | 12/08/10 14:09 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/07/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 17:31 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 44.4 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 47.6 | PASS |
| 70 | Less than 2% of 69 | 0.454 | PASS |
| 127 | 40 - 60% of 198 | 57.6 | PASS |
| 197 | Less than 1% of 198 | 0.468 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.79 | PASS |
| 275 | 10 - 30% of 198 | 25.5 | PASS |
| 365 | 1 - 200% of 198 | 3.23 | PASS |
| 441 | 0.001 - 100% of 443 | 77 | PASS |
| 442 | 40 - 200% of 198 | 77 | PASS |
| 443 | 17 - 23% of 442 | 20.1 | PASS |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN2.D | Injection Date: | 12/08/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 03:49 |
| Sequence: | 0L35109 | Lab Sample ID: | 0L35109-TUN2 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 46.1 | PASS |
| 68 | Less than 2% of 69 | 0.759 | PASS |
| 69 | Less than 200% of 198 | 46.1 | PASS |
| 70 | Less than 2% of 69 | 0.512 | PASS |
| 127 | 40 - 60% of 198 | 57.3 | PASS |
| 197 | Less than 1% of 198 | 0.26 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 7.25 | PASS |
| 275 | 10 - 30% of 198 | 24.8 | PASS |
| 365 | 1 - 200% of 198 | 3.45 | PASS |
| 441 | 0.001 - 100% of 443 | 73.2 | PASS |
| 442 | 40 - 200% of 198 | 81 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 1 | 1.374103 | 2 | 1.315472 | 5 | 1.294825 | 10 | 1.297991 | 20 | 1.275653 | 40 | 1.264744 |
| Acenaphthylene | 1 | 1.977639 | 2 | 1.856101 | 5 | 2.054718 | 10 | 2.034701 | 20 | 2.004486 | 40 | 2.016175 |
| Acetophenone | | | | | | | | | | | | |
| Aniline | 1 | 1.893837 | 2 | 1.776582 | 5 | 1.860449 | 10 | 1.905373 | 20 | 1.96982 | 40 | 1.974599 |
| Anthracene | 1 | 1.152616 | 2 | 1.06955 | 5 | 1.199769 | 10 | 1.197299 | 20 | 1.226635 | 40 | 1.202224 |
| Atrazine | | | | | | | | | | | | |
| Benzaldehyde | | | | | | | | | | | | |
| Benzidine | | | | | | | | | | | | |
| Benzo(a)anthracene | 1 | 1.176974 | 2 | 1.111061 | 5 | 1.144412 | 10 | 1.151915 | 20 | 1.206273 | 40 | 1.273851 |
| Benzo(a)pyrene | 1 | 0.8141702 | 2 | 0.8979174 | 5 | 1.012763 | 10 | 1.07342 | 20 | 1.117703 | 40 | 1.177321 |
| Benzo(b)fluoranthene | 1 | 1.125665 | 2 | 0.9776505 | 5 | 1.090132 | 10 | 1.171102 | 20 | 1.29305 | 40 | 1.2449 |
| Benzo(g,h,i)perylene | 1 | 0.8361077 | 2 | 0.7984972 | 5 | 0.8140256 | 10 | 0.9111468 | 20 | 0.7364742 | 40 | 0.9464765 |
| Benzoic acid | 1 | | 2 | | 5 | ~~4.781063E-02~~ | 10 | 0.0826069 | 20 | 0.1115828 | 40 | 0.1730795 |
| Benzo(k)fluoranthene | 1 | 1.14576 | 2 | 1.154252 | 5 | 1.251529 | 10 | 1.234315 | 20 | 1.330375 | 40 | 1.295232 |
| Benzyl alcohol | 1 | 0.6727378 | 2 | 0.6959354 | 5 | 0.772278 | 10 | 0.795494 | 20 | 0.8202954 | 40 | 0.8572062 |
| 1,1-Biphenyl | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | 1 | 0.2518511 | 2 | 0.2324228 | 5 | 0.2437731 | 10 | 0.256832 | 20 | 0.2460901 | 40 | 0.2374707 |
| Butylbenzylphthalate | 1 | ~~0.4313315~~ | 2 | ~~0.4213914~~ | 5 | 0.5348313 | 10 | 0.6014097 | 20 | 0.6750239 | 40 | 0.7266313 |
| Caprolactam | | | | | | | | | | | | |
| Carbazole | 1 | 1.01038 | 2 | 0.9970601 | 5 | 1.12402 | 10 | 1.080297 | 20 | 1.103171 | 40 | 1.03857 |
| 4-Chloro-3-methylphenol | 1 | ~~0.2181994~~ | 2 | 0.1973558 | 5 | 0.2555061 | 10 | 0.2703475 | 20 | 0.2869397 | 40 | 0.3103583 |
| 4-Chloroaniline | 1 | 0.4024068 | 2 | 0.3901094 | 5 | 0.4361041 | 10 | 0.428376 | 20 | 0.4378298 | 40 | 0.4407009 |
| Bis(2-chloroethoxy)methane | 1 | 0.4428005 | 2 | 0.3937843 | 5 | 0.4134067 | 10 | 0.4132365 | 20 | 0.4016128 | 40 | 0.4006352 |
| Bis(2-chloroethyl)ether | 1 | 1.305395 | 2 | 1.271392 | 5 | 1.279374 | 10 | 1.244134 | 20 | 1.24794 | 40 | 1.248168 |
| 2,2'-Oxybis-1-chloropropane | 1 | 1.965289 | 2 | 1.793817 | 5 | 1.845471 | 10 | 1.811628 | 20 | 1.795887 | 40 | 1.79747 |
| 2-Chloronaphthalene | 1 | 1.301941 | 2 | 1.234577 | 5 | 1.261078 | 10 | 1.265583 | 20 | 1.232031 | 40 | 1.224941 |
| 2-Chlorophenol | 1 | 1.214973 | 2 | 1.209461 | 5 | 1.305111 | 10 | 1.33217 | 20 | 1.378026 | 40 | 1.389739 |
| 4-Chlorophenyl phenyl ether | 1 | 0.7071653 | 2 | 0.6593299 | 5 | 0.6773879 | 10 | 0.6525344 | 20 | 0.636283 | 40 | 0.641452 |
| Chrysene | 1 | 1.306708 | 2 | 1.164201 | 5 | 1.238881 | 10 | 1.248779 | 20 | 1.219789 | 40 | 1.261333 |
| Dibenz(a,h)anthracene | 1 | 0.7512715 | 2 | 0.654872 | 5 | 0.7969043 | 10 | 0.8919851 | 20 | 0.7541061 | 40 | 0.941626 |
| Dibenzofuran | 1 | 1.871373 | 2 | 1.740989 | 5 | 1.77835 | 10 | 1.705143 | 20 | 1.70834 | 40 | 1.703961 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 1 | 1.082426 | 2 | 1.046644 | 5 | 1.297638 | 10 | 1.304534 | 20 | 1.412773 | 40 | 1.396991 |
| 1,4-Dichlorobenzene | 1 | 1.763261 | 2 | 1.615997 | 5 | 1.634718 | 10 | 1.593686 | 20 | 1.585729 | 40 | 1.569702 |
| 1,3-Dichlorobenzene | 1 | 1.712108 | 2 | 1.509974 | 5 | 1.605202 | 10 | 1.591847 | 20 | 1.585144 | 40 | 1.527454 |
| 1,2-Dichlorobenzene | 1 | 1.614674 | 2 | 1.490364 | 5 | 1.546689 | 10 | 1.516537 | 20 | 1.510281 | 40 | 1.482237 |
| 3,3'-Dichlorobenzidine | | | | | | | | | | | | |
| 2,6-Dichlorophenol | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 1 | 0.2193633 | 2 | 0.2189929 | 5 | 0.2564872 | 10 | 0.2777847 | 20 | 0.2877571 | 40 | 0.2934208 |
| Diethylphthalate | 1 | 1.305598 | 2 | 1.272227 | 5 | 1.418943 | 10 | 1.386613 | 20 | 1.419902 | 40 | 1.434097 |
| 2,4-Dimethylphenol | 1 | 0.3408463 | 2 | 0.315261 | 5 | 0.3594693 | 10 | 0.3685544 | 20 | 0.370695 | 40 | 0.3730775 |
| Dimethyl phthalate | 1 | | 2 | 1.3603 | 5 | 1.387939 | 10 | 1.399916 | 20 | 1.384977 | 40 | 1.382422 |
| 4,6-Dinitro-2-methylphenol | 1 | | 2 | | 5 | 5.314518E-02 | 10 | 8.603549E-02 | 20 | 0.1020477 | 40 | 0.1278111 |
| 2,4-Dinitrophenol | 1 | | 2 | | 5 | ~~4.447398E-02~~ | 10 | 6.358993E-02 | 20 | 8.773021E-02 | 40 | 0.1367475 |
| 2,4-Dinitrotoluene | 1 | | 2 | 0.2696124 | 5 | 0.3483922 | 10 | 0.3796104 | 20 | 0.3959347 | 40 | 0.432168 |
| 2,6-Dinitrotoluene | 1 | | 2 | 0.2748954 | 5 | 0.2969673 | 10 | 0.3157389 | 20 | 0.320917 | 40 | 0.3377335 |
| Di-n-octylphthalate | 1 | ~~0.777665~~ | 2 | ~~0.7972759~~ | 5 | ~~1.157303~~ | 10 | 1.226168 | 20 | 1.667762 | 40 | 1.640777 |
| 1,4-Dioxane | | | | | | | | | | | | |
| 1,2-Diphenylhydrazine | 1 | 0.8633715 | 2 | 0.7922832 | 5 | 0.851889 | 10 | 0.902869 | 20 | 0.8523618 | 40 | 0.8367419 |
| Bis(2-ethylhexyl)phthalate | 1 | ~~0.5629525~~ | 2 | 0.623236 | 5 | 0.7692422 | 10 | 0.8261352 | 20 | 0.9295948 | 40 | 0.9699243 |
| Fluoranthene | 1 | 1.010262 | 2 | 1.050371 | 5 | 1.174781 | 10 | 1.087186 | 20 | 1.202634 | 40 | 1.216382 |
| Fluorene | 1 | 1.417605 | 2 | 1.334531 | 5 | 1.437789 | 10 | 1.382289 | 20 | 1.384069 | 40 | 1.391212 |
| 2-Fluorobiphenyl | 1 | 1.529612 | 2 | 1.450802 | 5 | 1.515443 | 10 | 1.491745 | 20 | 1.421812 | 40 | 1.419088 |
| 2-Fluorophenol | 2 | 1.169393 | 4 | 1.036011 | 10 | 1.183087 | 20 | 1.188432 | 40 | 1.218105 | 80 | 1.194993 |
| Hexachlorobenzene | 1 | 0.2870931 | 2 | 0.2718521 | 5 | 0.2738817 | 10 | 0.2758146 | 20 | 0.2709715 | 40 | 0.2670496 |
| Hexachlorobutadiene | 1 | 0.1996622 | 2 | 0.1865372 | 5 | 0.1967719 | 10 | 0.1932208 | 20 | 0.1899233 | 40 | 0.1887931 |
| Hexachlorocyclopentadiene | 1 | ~~0.166607~~ | 2 | ~~0.1547457~~ | 5 | ~~0.2130315~~ | 10 | 0.2250949 | 20 | 0.2330708 | 40 | 0.2880169 |
| Hexachloroethane | 1 | 0.6451315 | 2 | 0.5286661 | 5 | 0.5787438 | 10 | 0.5669407 | 20 | 0.5836949 | 40 | 0.5978446 |
| Indeno(1,2,3-cd)pyrene | 1 | 0.9439524 | 2 | 0.8985737 | 5 | 0.9919689 | 10 | 1.096168 | 20 | 0.9191515 | 40 | 1.154267 |
| Isophorone | 1 | 0.6213175 | 2 | 0.5968757 | 5 | 0.655194 | 10 | 0.6761772 | 20 | 0.6705981 | 40 | 0.6772569 |
| 1-Methylnaphthalene | 1 | 0.6465797 | 2 | 0.6184212 | 5 | 0.6369707 | 10 | 0.6319121 | 20 | 0.6193783 | 40 | 0.6184568 |
| 2-Methylnaphthalene | 1 | 0.6007326 | 2 | 0.5838361 | 5 | 0.6129738 | 10 | 0.6049021 | 20 | 0.6013921 | 40 | 0.6039252 |
| 2-Methylphenol | 1 | 1.026084 | 2 | 1.011589 | 5 | 1.14484 | 10 | 1.136228 | 20 | 1.174352 | 40 | 1.20347 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| 4-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| Naphthalene | 1 | 1.247118 | 2 | 1.106848 | 5 | 1.148925 | 10 | 1.133299 | 20 | 1.11088 | 40 | 1.079891 |
| 4-Nitroaniline | 1 | ~~0.1637579~~ | 2 | 0.2187884 | 5 | 0.2653623 | 10 | 0.2143523 | 20 | 0.2396615 | 40 | 0.2459712 |
| 3-Nitroaniline | 1 | 0.2521217 | 2 | 0.2314275 | 5 | 0.306698 | 10 | 0.2972167 | 20 | 0.3176403 | 40 | 0.3340046 |
| 2-Nitroaniline | 1 | ~~0.2346445~~ | 2 | 0.2444902 | 5 | 0.300972 | 10 | 0.329205 | 20 | 0.3393918 | 40 | 0.3674347 |
| Nitrobenzene | 1 | 0.3854216 | 2 | 0.3471099 | 5 | 0.3691849 | 10 | 0.3758157 | 20 | 0.3757619 | 40 | 0.3756076 |
| Nitrobenzene-d5 | 1 | 0.352723 | 2 | 0.3219239 | 5 | 0.3538833 | 10 | 0.3730289 | 20 | 0.3752849 | 40 | 0.3765852 |
| 4-Nitrophenol | 1 | | 2 | | 5 | 0.1331172 | 10 | 0.1539397 | 20 | 0.1740912 | 40 | 0.215041 |
| 2-Nitrophenol | 1 | ~~0.129178~~ | 2 | ~~0.1163139~~ | 5 | 0.1485732 | 10 | 0.17082 | 20 | 0.1803181 | 40 | 0.1943955 |
| N-Nitrosodimethylamine | 1 | 0.7647097 | 2 | 0.661789 | 5 | 0.6967903 | 10 | 0.688223 | 20 | 0.7105897 | 40 | 0.7218412 |
| N-Nitrosodiphenylamine | 1 | 0.7364883 | 2 | 0.7242688 | 5 | 0.7675569 | 10 | 0.8277756 | 20 | 0.7829048 | 40 | 0.7552249 |
| N-Nitroso-di-n-propylamine | 1 | 0.8476763 | 2 | 0.7771541 | 5 | 0.853617 | 10 | 0.8701614 | 20 | 0.8776069 | 40 | 0.8946144 |
| Pentachlorophenol | 1 | | 2 | | 5 | 5.778394E-02 | 10 | 8.270825E-02 | 20 | 0.1099003 | 40 | 0.1367365 |
| Phenanthrene | 1 | 1.342498 | 2 | 1.263175 | 5 | 1.243815 | 10 | 1.236225 | 20 | 1.217743 | 40 | 1.191144 |
| Phenol | 1 | 1.490667 | 2 | 1.31629 | 5 | 1.525052 | 10 | 1.523419 | 20 | 1.537998 | 40 | 1.5435 |
| Phenol-d6 | 2 | 1.404785 | 4 | 1.320014 | 10 | 1.47159 | 20 | 1.488608 | 40 | 1.497926 | 80 | 1.486483 |
| Pyrene | 1 | 1.333765 | 2 | 1.276026 | 5 | 1.300614 | 10 | 1.457668 | 20 | 1.450879 | 40 | 1.446398 |
| Pyridine | 1 | 1.454129 | 2 | 1.255486 | 5 | 1.344622 | 10 | 1.386362 | 20 | 1.421998 | 40 | 1.414011 |
| Terphenyl-d14 | 1 | 0.8692116 | 2 | 0.8169587 | 5 | 0.8477459 | 10 | 0.9168767 | 20 | 0.9257567 | 40 | 0.924241 |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | | | | | | |
| 2,3,4,6-Tetrachlorophenol | 1 | | 2 | | 5 | 0.225384 | 10 | 0.248152 | 20 | 0.2704891 | 40 | 0.311669 |
| 2,4,6-Tribromophenol | 2 | | 4 | ~~7.386201E-02~~ | 10 | 0.0957204 | 20 | 0.1146915 | 40 | 0.1142205 | 80 | 0.1204485 |
| 1,2,4-Trichlorobenzene | 1 | 0.3839343 | 2 | 0.374162 | 5 | 0.3658839 | 10 | 0.3641081 | 20 | 0.3579797 | 40 | 0.3484484 |
| 2,4,6-Trichlorophenol | 1 | ~~0.2252043~~ | 2 | 0.2345706 | 5 | 0.3036388 | 10 | 0.3406874 | 20 | 0.3510972 | 40 | 0.380565 |
| 2,4,5-Trichlorophenol | 1 | 0.2421286 | 2 | 0.2367774 | 5 | 0.2965186 | 10 | 0.340473 | 20 | 0.3434994 | 40 | 0.3869717 |
| 3,3'-Dichlorobenzidine | | | | | | | | | | | | |
| Acenaphthene | 1 | 1.374103 | 2 | 1.315472 | 5 | 1.294825 | 10 | 1.297991 | 20 | 1.275653 | 40 | 1.264744 |
| Acenaphthylene | 1 | 1.977639 | 2 | 1.856101 | 5 | 2.054718 | 10 | 2.034701 | 20 | 2.004486 | 40 | 2.016175 |
| Acetophenone | | | | | | | | | | | | |
| Aniline | 1 | 1.893837 | 2 | 1.776582 | 5 | 1.860449 | 10 | 1.905373 | 20 | 1.96982 | 40 | 1.974599 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Anthracene | 1 | 1.152616 | 2 | 1.06955 | 5 | 1.199769 | 10 | 1.197299 | 20 | 1.226635 | 40 | 1.202224 |
| Atrazine | | | | | | | | | | | | |
| Benzaldehyde | | | | | | | | | | | | |
| Benzidine | | | | | | | | | | | | |
| Benzo(a)anthracene | 1 | 1.176974 | 2 | 1.111061 | 5 | 1.144412 | 10 | 1.151915 | 20 | 1.206273 | 40 | 1.273851 |
| Benzo(a)pyrene | 1 | 0.8141702 | 2 | 0.8979174 | 5 | 1.012763 | 10 | 1.07342 | 20 | 1.117703 | 40 | 1.177321 |
| Benzo(b)fluoranthene | 1 | 1.125665 | 2 | 0.9776505 | 5 | 1.090132 | 10 | 1.171102 | 20 | 1.29305 | 40 | 1.2449 |
| Benzo(g,h,i)perylene | 1 | 0.8361077 | 2 | 0.7984972 | 5 | 0.8140256 | 10 | 0.9111468 | 20 | 0.7364742 | 40 | 0.9464765 |
| Benzoic acid | 1 | | 2 | | 5 | ~~4.781063E-02~~ | 10 | 0.0826069 | 20 | 0.1115828 | 40 | 0.1730795 |
| Benzo(k)fluoranthene | 1 | 1.14576 | 2 | 1.154252 | 5 | 1.251529 | 10 | 1.234315 | 20 | 1.330375 | 40 | 1.295232 |
| Benzyl alcohol | 1 | 0.6727378 | 2 | 0.6959354 | 5 | 0.772278 | 10 | 0.795494 | 20 | 0.8202954 | 40 | 0.8572062 |
| 1,1-Biphenyl | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | 1 | 0.2518511 | 2 | 0.2324228 | 5 | 0.2437731 | 10 | 0.256832 | 20 | 0.2460901 | 40 | 0.2374707 |
| Butylbenzylphthalate | 1 | ~~0.4212315~~ | 2 | ~~0.4213914~~ | 5 | 0.5348313 | 10 | 0.6014097 | 20 | 0.6750239 | 40 | 0.7266313 |
| Caprolactam | | | | | | | | | | | | |
| Carbazole | 1 | 1.01038 | 2 | 0.9970601 | 5 | 1.12402 | 10 | 1.080297 | 20 | 1.103171 | 40 | 1.03857 |
| 4-Chloro-3-methylphenol | 1 | ~~0.2181994~~ | 2 | 0.1973558 | 5 | 0.2555061 | 10 | 0.2703475 | 20 | 0.2869397 | 40 | 0.3103583 |
| 4-Chloroaniline | 1 | 0.4024068 | 2 | 0.3901094 | 5 | 0.4361041 | 10 | 0.428376 | 20 | 0.4378298 | 40 | 0.4407009 |
| Bis(2-chloroethoxy)methane | 1 | 0.4428005 | 2 | 0.3937843 | 5 | 0.4134067 | 10 | 0.4132365 | 20 | 0.4016128 | 40 | 0.4006352 |
| Bis(2-chloroethyl)ether | 1 | 1.305395 | 2 | 1.271392 | 5 | 1.279374 | 10 | 1.244134 | 20 | 1.24794 | 40 | 1.248168 |
| 2,2'-Oxybis-1-chloropropane | 1 | 1.965289 | 2 | 1.793817 | 5 | 1.845471 | 10 | 1.811628 | 20 | 1.795887 | 40 | 1.79747 |
| 2-Chloronaphthalene | 1 | 1.301941 | 2 | 1.234577 | 5 | 1.261078 | 10 | 1.265583 | 20 | 1.232031 | 40 | 1.224941 |
| 2-Chlorophenol | 1 | 1.214973 | 2 | 1.209461 | 5 | 1.305111 | 10 | 1.33217 | 20 | 1.378026 | 40 | 1.389739 |
| 4-Chlorophenyl phenyl ether | 1 | 0.7071653 | 2 | 0.6593299 | 5 | 0.6773879 | 10 | 0.6525344 | 20 | 0.636283 | 40 | 0.641452 |
| Chrysene | 1 | 1.306708 | 2 | 1.164201 | 5 | 1.238881 | 10 | 1.248779 | 20 | 1.219789 | 40 | 1.261333 |
| Dibenz(a,h)anthracene | 1 | 0.7512715 | 2 | 0.654872 | 5 | 0.7969043 | 10 | 0.8919851 | 20 | 0.7541061 | 40 | 0.941626 |
| Dibenzofuran | 1 | 1.871373 | 2 | 1.740989 | 5 | 1.77835 | 10 | 1.705143 | 20 | 1.70834 | 40 | 1.703961 |
| Di-n-butylphthalate | 1 | 1.082426 | 2 | 1.046644 | 5 | 1.297638 | 10 | 1.304534 | 20 | 1.412773 | 40 | 1.396991 |
| 1,4-Dichlorobenzene | 1 | 1.763261 | 2 | 1.615997 | 5 | 1.634718 | 10 | 1.593686 | 20 | 1.585729 | 40 | 1.569702 |
| 1,3-Dichlorobenzene | 1 | 1.712108 | 2 | 1.509974 | 5 | 1.605202 | 10 | 1.591847 | 20 | 1.585144 | 40 | 1.527454 |
| 1,2-Dichlorobenzene | 1 | 1.614674 | 2 | 1.490364 | 5 | 1.546689 | 10 | 1.516537 | 20 | 1.510281 | 40 | 1.482237 |

# INITIAL CALIBRATION DATA

## SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0351002

Matrix: Water

SDG: CTOJM16KW_010

Project: CTOJM16 Key West 2010

Instrument: MS-BNA3

Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 2,6-Dichlorophenol | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 1 | 0.2193633 | 2 | 0.2189929 | 5 | 0.2564872 | 10 | 0.2777847 | 20 | 0.2877571 | 40 | 0.2934208 |
| Diethylphthalate | 1 | 1.305598 | 2 | 1.272227 | 5 | 1.418943 | 10 | 1.386613 | 20 | 1.419902 | 40 | 1.434097 |
| 2,4-Dimethylphenol | 1 | 0.3408463 | 2 | 0.315261 | 5 | 0.3594693 | 10 | 0.3685544 | 20 | 0.370695 | 40 | 0.3730775 |
| Dimethyl phthalate | 1 | | 2 | 1.3603 | 5 | 1.387939 | 10 | 1.399916 | 20 | 1.384977 | 40 | 1.382422 |
| 4,6-Dinitro-2-methylphenol | 1 | | 2 | | 5 | 5.314518E-02 | 10 | 8.603549E-02 | 20 | 0.1020477 | 40 | 0.1278111 |
| 2,4-Dinitrophenol | 1 | | 2 | | 5 | ~~4.447398E-02~~ | 10 | 6.358993E-02 | 20 | 8.773021E-02 | 40 | 0.1367475 |
| 2,4-Dinitrotoluene | 1 | | 2 | 0.2696124 | 5 | 0.3483922 | 10 | 0.3796104 | 20 | 0.3959347 | 40 | 0.432168 |
| 2,6-Dinitrotoluene | 1 | | 2 | 0.2748954 | 5 | 0.2969673 | 10 | 0.3157389 | 20 | 0.320917 | 40 | 0.3377335 |
| Di-n-octylphthalate | 1 | ~~0.777665~~ | 2 | ~~0.7972759~~ | 5 | ~~1.157303~~ | 10 | 1.226168 | 20 | 1.667762 | 40 | 1.640777 |
| 1,4-Dioxane | | | | | | | | | | | | |
| 1,2-Diphenylhydrazine | 1 | 0.8633715 | 2 | 0.7922832 | 5 | 0.851889 | 10 | 0.902869 | 20 | 0.8523618 | 40 | 0.8367419 |
| Bis(2-ethylhexyl)phthalate | 1 | ~~0.5629525~~ | 2 | 0.623236 | 5 | 0.7692422 | 10 | 0.8261352 | 20 | 0.9295948 | 40 | 0.9699243 |
| Fluoranthene | 1 | 1.010262 | 2 | 1.050371 | 5 | 1.174781 | 10 | 1.087186 | 20 | 1.202634 | 40 | 1.216382 |
| Fluorene | 1 | 1.417605 | 2 | 1.334531 | 5 | 1.437789 | 10 | 1.382289 | 20 | 1.384069 | 40 | 1.391212 |
| 2-Fluorobiphenyl | 1 | 1.529612 | 2 | 1.450802 | 5 | 1.515443 | 10 | 1.491745 | 20 | 1.421812 | 40 | 1.419088 |
| 2-Fluorophenol | 2 | 1.169393 | 4 | 1.036011 | 10 | 1.183087 | 20 | 1.188432 | 40 | 1.218105 | 80 | 1.194993 |
| Hexachlorobenzene | 1 | 0.2870931 | 2 | 0.2718521 | 5 | 0.2738817 | 10 | 0.2758146 | 20 | 0.2709715 | 40 | 0.2670496 |
| Hexachlorobutadiene | 1 | 0.1996622 | 2 | 0.1865372 | 5 | 0.1967719 | 10 | 0.1932208 | 20 | 0.1899233 | 40 | 0.1887931 |
| Hexachlorocyclopentadiene | 1 | ~~0.166607~~ | 2 | ~~0.1547457~~ | 5 | ~~0.2130315~~ | 10 | 0.2250949 | 20 | 0.2330708 | 40 | 0.2880169 |
| Hexachloroethane | 1 | 0.6451315 | 2 | 0.5286661 | 5 | 0.5787438 | 10 | 0.5669407 | 20 | 0.5836949 | 40 | 0.5978446 |
| Indeno(1,2,3-cd)pyrene | 1 | 0.9439524 | 2 | 0.8985737 | 5 | 0.9919689 | 10 | 1.096168 | 20 | 0.9191515 | 40 | 1.154267 |
| Isophorone | 1 | 0.6213175 | 2 | 0.5968757 | 5 | 0.655194 | 10 | 0.6761772 | 20 | 0.6705981 | 40 | 0.6772569 |
| 1-Methylnaphthalene | 1 | 0.6465797 | 2 | 0.6184212 | 5 | 0.6369707 | 10 | 0.6319121 | 20 | 0.6193783 | 40 | 0.6184568 |
| 2-Methylnaphthalene | 1 | 0.6007326 | 2 | 0.5838361 | 5 | 0.6129738 | 10 | 0.6049021 | 20 | 0.6013921 | 40 | 0.6039252 |
| 2-Methylphenol | 1 | 1.026084 | 2 | 1.011589 | 5 | 1.14484 | 10 | 1.136228 | 20 | 1.174352 | 40 | 1.20347 |
| 3-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| 4-Methylphenol | 1 | 1.025789 | 2 | 1.061762 | 5 | 1.129465 | 10 | 1.179577 | 20 | 1.199753 | 40 | 1.223609 |
| Naphthalene | 1 | 1.247118 | 2 | 1.106848 | 5 | 1.148925 | 10 | 1.133299 | 20 | 1.11088 | 40 | 1.079891 |
| 4-Nitroaniline | 1 | ~~0.1637579~~ | 2 | 0.2187884 | 5 | 0.2653623 | 10 | 0.2143523 | 20 | 0.2396615 | 40 | 0.2459712 |
| 3-Nitroaniline | 1 | 0.2521217 | 2 | 0.2314275 | 5 | 0.3066698 | 10 | 0.2972167 | 20 | 0.3176403 | 40 | 0.3340046 |

# INITIAL CALIBRATION DATA

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0351002 | Instrument: | MS-BNA3 |
| Matrix: | Water | Calibration Date: | 12/7/2010 5:31:41PM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 2-Nitroaniline | 1 | ~~0.2346415~~ | 2 | 0.2444902 | 5 | 0.300972 | 10 | 0.329205 | 20 | 0.3393918 | 40 | 0.3674347 |
| Nitrobenzene | 1 | 0.3854216 | 2 | 0.3471099 | 5 | 0.3691849 | 10 | 0.3758157 | 20 | 0.3757619 | 40 | 0.3756076 |
| Nitrobenzene-d5 | 1 | 0.352723 | 2 | 0.3219239 | 5 | 0.3538833 | 10 | 0.3730289 | 20 | 0.3752849 | 40 | 0.3765852 |
| 4-Nitrophenol | 1 | | 2 | | 5 | 0.1331172 | 10 | 0.1539397 | 20 | 0.1740912 | 40 | 0.215041 |
| 2-Nitrophenol | 1 | ~~0.129178~~ | 2 | ~~0.1163139~~ | 5 | 0.1485732 | 10 | 0.17082 | 20 | 0.1803181 | 40 | 0.1943955 |
| N-Nitrosodimethylamine | 1 | 0.7647097 | 2 | 0.661789 | 5 | 0.6967903 | 10 | 0.688223 | 20 | 0.7105897 | 40 | 0.7218412 |
| N-Nitrosodiphenylamine | 1 | 0.7364883 | 2 | 0.7242688 | 5 | 0.7675569 | 10 | 0.8277756 | 20 | 0.7829048 | 40 | 0.7552249 |
| N-Nitroso-di-n-propylamine | 1 | 0.8476763 | 2 | 0.7771541 | 5 | 0.853617 | 10 | 0.8701614 | 20 | 0.8776069 | 40 | 0.8946144 |
| Pentachlorophenol | 1 | | 2 | | 5 | 5.778394E-02 | 10 | 8.270825E-02 | 20 | 0.1099003 | 40 | 0.1367365 |
| Phenanthrene | 1 | 1.342498 | 2 | 1.263175 | 5 | 1.243815 | 10 | 1.236225 | 20 | 1.217743 | 40 | 1.191144 |
| Phenol | 1 | 1.490667 | 2 | 1.31629 | 5 | 1.525052 | 10 | 1.523419 | 20 | 1.537998 | 40 | 1.5435 |
| Phenol-d6 | 2 | 1.404785 | 4 | 1.320014 | 10 | 1.47159 | 20 | 1.488608 | 40 | 1.497926 | 80 | 1.486483 |
| Pyrene | 1 | 1.333765 | 2 | 1.276026 | 5 | 1.300614 | 10 | 1.457668 | 20 | 1.450879 | 40 | 1.446398 |
| Pyridine | 1 | 1.454129 | 2 | 1.255486 | 5 | 1.344622 | 10 | 1.386362 | 20 | 1.421998 | 40 | 1.414011 |
| Terphenyl-d14 | 1 | 0.8692116 | 2 | 0.8169587 | 5 | 0.8477459 | 10 | 0.9168767 | 20 | 0.9257567 | 40 | 0.924241 |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | | | | | | |
| 2,3,4,6-Tetrachlorophenol | 1 | | 2 | | 5 | 0.225384 | 10 | 0.248152 | 20 | 0.2704891 | 40 | 0.311669 |
| 2,4,6-Tribromophenol | 2 | | 4 | ~~7.386201E-02~~ | 10 | 0.0957204 | 20 | 0.1146915 | 40 | 0.1142205 | 80 | 0.1204485 |
| 1,2,4-Trichlorobenzene | 1 | 0.3839343 | 2 | 0.374162 | 5 | 0.3658839 | 10 | 0.3641081 | 20 | 0.3579797 | 40 | 0.3484484 |
| 2,4,6-Trichlorophenol | 1 | ~~0.2252043~~ | 2 | 0.2345706 | 5 | 0.3036388 | 10 | 0.3406874 | 20 | 0.3510972 | 40 | 0.380565 |
| 2,4,5-Trichlorophenol | 1 | 0.2421286 | 2 | 0.2367774 | 5 | 0.2965186 | 10 | 0.340473 | 20 | 0.3434994 | 40 | 0.3869717 |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | 50 | 1.238488 | 80 | 1.19577 | 100 | 1.16933 | | | | | | |
| Acenaphthylene | 50 | 1.97121 | 80 | 1.884909 | 100 | 1.831805 | | | | | | |
| Acetophenone | | | | | | | 1 | 1.733387 | 2 | 1.611126 | 5 | 1.755035 |
| Aniline | 50 | 1.948951 | 80 | 1.907822 | 100 | 1.862631 | | | | | | |
| Anthracene | 50 | 1.178258 | 80 | 1.127398 | 100 | 1.098018 | | | | | | |
| Atrazine | | | | | | | 1 | 0.1680055 | 2 | 0.213903 | 5 | 0.2370567 |
| Benzaldehyde | | | | | | | 1 | 1.068138 | 2 | 1.056947 | 5 | 1.110207 |
| Benzidine | | | | | | | 1 | | 2 | ~~0.3685161~~ | 5 | 0.5108731 |
| Benzo(a)anthracene | 50 | 1.249589 | 80 | 1.222044 | 100 | 1.204762 | | | | | | |
| Benzo(a)pyrene | 50 | 1.167092 | 80 | 1.14047 | 100 | 1.155787 | | | | | | |
| Benzo(b)fluoranthene | 50 | 1.275165 | 80 | 1.224665 | 100 | 1.333177 | | | | | | |
| Benzo(g,h,i)perylene | 50 | 0.9771522 | 80 | 0.9672074 | 100 | 0.8194906 | | | | | | |
| Benzoic acid | 50 | 0.1965843 | 80 | 0.2128701 | 100 | 0.2236522 | | | | | | |
| Benzo(k)fluoranthene | 50 | 1.252373 | 80 | 1.210115 | 100 | ~~1.293734~~ | | | | | | |
| Benzyl alcohol | 50 | 0.8433992 | 80 | 0.8408955 | 100 | 0.828434 | | | | | | |
| 1,1-Biphenyl | | | | | | | 1 | 1.729905 | 2 | 1.761782 | 5 | 1.778887 |
| 4-Bromophenyl-phenylether | 50 | 0.236109 | 80 | 0.2297848 | 100 | 0.222073 | | | | | | |
| Butylbenzylphthalate | 50 | 0.7153074 | 80 | 0.6926723 | 100 | 0.7158573 | | | | | | |
| Caprolactam | | | | | | | 1 | ~~6.332556E-02~~ | 2 | ~~6.355997E-02~~ | 5 | 8.324675E-02 |
| Carbazole | 50 | 1.01202 | 80 | 0.9766254 | 100 | 0.9601454 | | | | | | |
| 4-Chloro-3-methylphenol | 50 | 0.3070247 | 80 | 0.3059882 | 100 | 0.2999465 | | | | | | |
| 4-Chloroaniline | 50 | 0.4323715 | 80 | 0.4259841 | 100 | 0.4193021 | | | | | | |
| Bis(2-chloroethoxy)methane | 50 | 0.3916945 | 80 | 0.3836585 | 100 | 0.3728562 | | | | | | |
| Bis(2-chloroethyl)ether | 50 | 1.226619 | 80 | 1.198521 | 100 | 1.165071 | | | | | | |
| 2,2'-Oxybis-1-chloropropane | 50 | 1.757395 | 80 | 1.690954 | 100 | 1.662549 | | | | | | |
| 2-Chloronaphthalene | 50 | 1.199244 | 80 | 1.160444 | 100 | 1.130907 | | | | | | |
| 2-Chlorophenol | 50 | 1.373857 | 80 | 1.348389 | 100 | 1.332618 | | | | | | |
| 4-Chlorophenyl phenyl ether | 50 | 0.6356375 | 80 | 0.6158727 | 100 | 0.608712 | | | | | | |
| Chrysene | 50 | 1.226559 | 80 | 1.182619 | 100 | 1.165941 | | | | | | |
| Dibenz(a,h)anthracene | 50 | 0.969048 | 80 | 0.9854922 | 100 | 0.8468877 | | | | | | |
| Dibenzofuran | 50 | 1.658712 | 80 | 1.596439 | 100 | 1.558825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | 50 | 1.391006 | 80 | 1.287289 | 100 | 1.247621 | | | | | | |
| 1,4-Dichlorobenzene | 50 | 1.556736 | 80 | 1.509165 | 100 | 1.484188 | | | | | | |
| 1,3-Dichlorobenzene | 50 | 1.520602 | 80 | 1.482944 | 100 | 1.474431 | | | | | | |
| 1,2-Dichlorobenzene | 50 | 1.473125 | 80 | 1.433567 | 100 | 1.416697 | | | | | | |
| 3,3'-Dichlorobenzidine | | | | | | | 1 | ~~0.2115697~~ | 2 | ~~0.2588051~~ | 5 | 0.3243157 |
| 2,6-Dichlorophenol | | | | | | | 1 | 0.2370254 | 2 | 0.2189698 | 5 | 0.2517737 |
| 2,4-Dichlorophenol | 50 | 0.2969539 | 80 | 0.2962102 | 100 | 0.2908114 | | | | | | |
| Diethylphthalate | 50 | 1.416848 | 80 | 1.369631 | 100 | 1.357585 | | | | | | |
| 2,4-Dimethylphenol | 50 | 0.3684433 | 80 | 0.3608579 | 100 | 0.3537564 | | | | | | |
| Dimethyl phthalate | 50 | 1.359098 | 80 | 1.310816 | 100 | 1.297145 | | | | | | |
| 4,6-Dinitro-2-methylphenol | 50 | 0.1401067 | 80 | 0.1437955 | 100 | 0.1460562 | | | | | | |
| 2,4-Dinitrophenol | 50 | 0.159813 | 80 | 0.1664924 | 100 | 0.1758471 | | | | | | |
| 2,4-Dinitrotoluene | 50 | 0.4298704 | 80 | 0.422104 | 100 | 0.421059 | | | | | | |
| 2,6-Dinitrotoluene | 50 | 0.330395 | 80 | 0.3281434 | 100 | 0.3247883 | | | | | | |
| Di-n-octylphthalate | 50 | 1.621448 | 80 | 1.518511 | 100 | 1.815061 | | | | | | |
| 1,4-Dioxane | | | | | | | 1 | 0.5750144 | 2 | 0.6155307 | 5 | 0.5975798 |
| 1,2-Diphenylhydrazine | 50 | 0.8174537 | 80 | 0.7756974 | 100 | 0.7472643 | | | | | | |
| Bis(2-ethylhexyl)phthalate | 50 | 0.9644317 | 80 | 0.9327127 | 100 | 0.9433765 | | | | | | |
| Fluoranthene | 50 | 1.200663 | 80 | 1.145228 | 100 | 1.117971 | | | | | | |
| Fluorene | 50 | 1.371696 | 80 | 1.3477 | 100 | 1.331747 | | | | | | |
| 2-Fluorobiphenyl | 50 | 1.380741 | 80 | 1.342227 | 100 | 1.31122 | | | | | | |
| 2-Fluorophenol | 100 | 1.184307 | 160 | 1.150476 | 200 | 1.143049 | | | | | | |
| Hexachlorobenzene | 50 | 0.2611324 | 80 | 0.2528165 | 100 | 0.2469684 | | | | | | |
| Hexachlorobutadiene | 50 | 0.1898094 | 80 | 0.1823152 | 100 | 0.1809221 | | | | | | |
| Hexachlorocyclopentadiene | 50 | 0.3205142 | 80 | 0.2672985 | 100 | 0.2978232 | | | | | | |
| Hexachloroethane | 50 | 0.5928387 | 80 | 0.5834398 | 100 | 0.5785441 | | | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 1.184644 | 80 | 1.201734 | 100 | 1.031961 | | | | | | |
| Isophorone | 50 | 0.6693467 | 80 | 0.6606669 | 100 | 0.651883 | | | | | | |
| 1-Methylnaphthalene | 50 | 0.6110108 | 80 | 0.5887133 | 100 | 0.578354 | | | | | | |
| 2-Methylnaphthalene | 50 | 0.5899842 | 80 | 0.5725228 | 100 | 0.5640864 | | | | | | |
| 2-Methylphenol | 50 | 1.174288 | 80 | 1.161528 | 100 | 1.130825 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| 4-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| Naphthalene | 50 | 1.062289 | 80 | 1.009165 | 100 | 0.9853361 | | | | | | |
| 4-Nitroaniline | 50 | 0.245583 | 80 | 0.2713623 | 100 | 0.2926737 | | | | | | |
| 3-Nitroaniline | 50 | 0.3328151 | 80 | 0.3335098 | 100 | 0.3302451 | | | | | | |
| 2-Nitroaniline | 50 | 0.3604391 | 80 | 0.3575911 | 100 | 0.3502726 | | | | | | |
| Nitrobenzene | 50 | 0.3742193 | 80 | 0.3632219 | 100 | 0.3548228 | | | | | | |
| Nitrobenzene-d5 | 50 | 0.3716804 | 80 | 0.3677033 | 100 | 0.3602605 | | | | | | |
| 4-Nitrophenol | 50 | 0.2302537 | 80 | 0.2312482 | 100 | 0.237925 | | | | | | |
| 2-Nitrophenol | 50 | 0.1987571 | 80 | 0.1969275 | 100 | 0.1952942 | | | | | | |
| N-Nitrosodimethylamine | 50 | 0.7179275 | 80 | 0.699562 | 100 | 0.6988776 | | | | | | |
| N-Nitrosodiphenylamine | 50 | 0.734013 | 80 | 0.7049383 | 100 | 0.6836085 | | | | | | |
| N-Nitroso-di-n-propylamine | 50 | 0.8590022 | 80 | 0.8618547 | 100 | 0.8482223 | | | | | | |
| Pentachlorophenol | 50 | 0.1477524 | 80 | 0.152323 | 100 | 0.1493187 | | | | | | |
| Phenanthrene | 50 | 1.165403 | 80 | 1.107075 | 100 | 1.089032 | | | | | | |
| Phenol | 50 | 1.515388 | 80 | 1.487162 | 100 | 1.485453 | | | | | | |
| Phenol-d6 | 100 | 1.444334 | 160 | 1.417009 | 200 | 1.38417 | | | | | | |
| Pyrene | 50 | 1.376348 | 80 | 1.350116 | 100 | 1.429147 | | | | | | |
| Pyridine | 50 | 1.386096 | 80 | 1.382983 | 100 | 1.355936 | | | | | | |
| Terphenyl-d14 | 50 | 0.8866 | 80 | 0.8605814 | 100 | 0.9157647 | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | 1 | 0.3530087 | 2 | 0.3195873 | 5 | 0.3252684 |
| 2,3,4,6-Tetrachlorophenol | 50 | 0.3149583 | 80 | 0.3195705 | 100 | 0.3193177 | | | | | | |
| 2,4,6-Tribromophenol | 100 | 0.1236089 | 160 | 0.1225882 | 200 | 0.120418 | | | | | | |
| 1,2,4-Trichlorobenzene | 50 | 0.3509992 | 80 | 0.3419386 | 100 | 0.3363453 | | | | | | |
| 2,4,6-Trichlorophenol | 50 | 0.3746937 | 80 | 0.3778514 | 100 | 0.3769771 | | | | | | |
| 2,4,5-Trichlorophenol | 50 | 0.3892628 | 80 | 0.399019 | 100 | 0.3860452 | | | | | | |
| 3,3'-Dichlorobenzidine | | | | | | | 1 | ~~0.2115697~~ | 2 | ~~0.2588051~~ | 5 | 0.3243157 |
| Acenaphthene | 50 | 1.238488 | 80 | 1.19577 | 100 | 1.16933 | | | | | | |
| Acenaphthylene | 50 | 1.97121 | 80 | 1.884909 | 100 | 1.831805 | | | | | | |
| Acetophenone | | | | | | | 1 | 1.733387 | 2 | 1.611126 | 5 | 1.755035 |
| Aniline | 50 | 1.948951 | 80 | 1.907822 | 100 | 1.862631 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Anthracene | 50 | 1.178258 | 80 | 1.127398 | 100 | 1.098018 | | | | | | |
| Atrazine | | | | | | | 1 | 0.1680055 | 2 | 0.213903 | 5 | 0.2370567 |
| Benzaldehyde | | | | | | | 1 | 1.068138 | 2 | 1.056947 | 5 | 1.110207 |
| Benzidine | | | | | | | 1 | | 2 | ~~0.3685161~~ | 5 | 0.5108731 |
| Benzo(a)anthracene | 50 | 1.249589 | 80 | 1.222044 | 100 | 1.204762 | | | | | | |
| Benzo(a)pyrene | 50 | 1.167092 | 80 | 1.14047 | 100 | 1.155787 | | | | | | |
| Benzo(b)fluoranthene | 50 | 1.275165 | 80 | 1.224665 | 100 | 1.333177 | | | | | | |
| Benzo(g,h,i)perylene | 50 | 0.9771522 | 80 | 0.9672074 | 100 | 0.8194906 | | | | | | |
| Benzoic acid | 50 | 0.1965843 | 80 | 0.2128701 | 100 | 0.2236522 | | | | | | |
| Benzo(k)fluoranthene | 50 | 1.252373 | 80 | 1.210115 | 100 | ~~1.293734~~ | | | | | | |
| Benzyl alcohol | 50 | 0.8433992 | 80 | 0.8408955 | 100 | 0.828434 | | | | | | |
| 1,1-Biphenyl | | | | | | | 1 | 1.729905 | 2 | 1.761782 | 5 | 1.778887 |
| 4-Bromophenyl-phenylether | 50 | 0.236109 | 80 | 0.2297848 | 100 | 0.222073 | | | | | | |
| Butylbenzylphthalate | 50 | 0.7153074 | 80 | 0.6926723 | 100 | 0.7158573 | | | | | | |
| Caprolactam | | | | | | | 1 | ~~6.332556E-02~~ | 2 | ~~6.355997E-02~~ | 5 | 8.324675E-02 |
| Carbazole | 50 | 1.01202 | 80 | 0.9766254 | 100 | 0.9601454 | | | | | | |
| 4-Chloro-3-methylphenol | 50 | 0.3070247 | 80 | 0.3059882 | 100 | 0.2999465 | | | | | | |
| 4-Chloroaniline | 50 | 0.4323715 | 80 | 0.4259841 | 100 | 0.4193021 | | | | | | |
| Bis(2-chloroethoxy)methane | 50 | 0.3916945 | 80 | 0.3836585 | 100 | 0.3728562 | | | | | | |
| Bis(2-chloroethyl)ether | 50 | 1.226619 | 80 | 1.198521 | 100 | 1.165071 | | | | | | |
| 2,2'-Oxybis-1-chloropropane | 50 | 1.757395 | 80 | 1.690954 | 100 | 1.662549 | | | | | | |
| 2-Chloronaphthalene | 50 | 1.199244 | 80 | 1.160444 | 100 | 1.130907 | | | | | | |
| 2-Chlorophenol | 50 | 1.373857 | 80 | 1.348389 | 100 | 1.332618 | | | | | | |
| 4-Chlorophenyl phenyl ether | 50 | 0.6356375 | 80 | 0.6158727 | 100 | 0.608712 | | | | | | |
| Chrysene | 50 | 1.226559 | 80 | 1.182619 | 100 | 1.165941 | | | | | | |
| Dibenz(a,h)anthracene | 50 | 0.969048 | 80 | 0.9854922 | 100 | 0.8468877 | | | | | | |
| Dibenzofuran | 50 | 1.658712 | 80 | 1.596439 | 100 | 1.558825 | | | | | | |
| Di-n-butylphthalate | 50 | 1.391006 | 80 | 1.287289 | 100 | 1.247621 | | | | | | |
| 1,4-Dichlorobenzene | 50 | 1.556736 | 80 | 1.509165 | 100 | 1.484188 | | | | | | |
| 1,3-Dichlorobenzene | 50 | 1.520602 | 80 | 1.482944 | 100 | 1.474431 | | | | | | |
| 1,2-Dichlorobenzene | 50 | 1.473125 | 80 | 1.433567 | 100 | 1.416697 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 2,6-Dichlorophenol | | | | | | | 1 | 0.2370254 | 2 | 0.2189698 | 5 | 0.2517737 |
| 2,4-Dichlorophenol | 50 | 0.2969539 | 80 | 0.2962102 | 100 | 0.2908114 | | | | | | |
| Diethylphthalate | 50 | 1.416848 | 80 | 1.369631 | 100 | 1.357585 | | | | | | |
| 2,4-Dimethylphenol | 50 | 0.3684433 | 80 | 0.3608579 | 100 | 0.3537564 | | | | | | |
| Dimethyl phthalate | 50 | 1.359098 | 80 | 1.310816 | 100 | 1.297145 | | | | | | |
| 4,6-Dinitro-2-methylphenol | 50 | 0.1401067 | 80 | 0.1437955 | 100 | 0.1460562 | | | | | | |
| 2,4-Dinitrophenol | 50 | 0.159813 | 80 | 0.1664924 | 100 | 0.1758471 | | | | | | |
| 2,4-Dinitrotoluene | 50 | 0.4298704 | 80 | 0.422104 | 100 | 0.421059 | | | | | | |
| 2,6-Dinitrotoluene | 50 | 0.330395 | 80 | 0.3281434 | 100 | 0.3247883 | | | | | | |
| Di-n-octylphthalate | 50 | 1.621448 | 80 | 1.518511 | 100 | 1.815061 | | | | | | |
| 1,4-Dioxane | | | | | | | 1 | 0.5750144 | 2 | 0.6155307 | 5 | 0.5975798 |
| 1,2-Diphenylhydrazine | 50 | 0.8174537 | 80 | 0.7756974 | 100 | 0.7472643 | | | | | | |
| Bis(2-ethylhexyl)phthalate | 50 | 0.9644317 | 80 | 0.9327127 | 100 | 0.9433765 | | | | | | |
| Fluoranthene | 50 | 1.200663 | 80 | 1.145228 | 100 | 1.117971 | | | | | | |
| Fluorene | 50 | 1.371696 | 80 | 1.3477 | 100 | 1.331747 | | | | | | |
| 2-Fluorobiphenyl | 50 | 1.380741 | 80 | 1.342227 | 100 | 1.31122 | | | | | | |
| 2-Fluorophenol | 100 | 1.184307 | 160 | 1.150476 | 200 | 1.143049 | | | | | | |
| Hexachlorobenzene | 50 | 0.2611324 | 80 | 0.2528165 | 100 | 0.2469684 | | | | | | |
| Hexachlorobutadiene | 50 | 0.1898094 | 80 | 0.1823152 | 100 | 0.1809221 | | | | | | |
| Hexachlorocyclopentadiene | 50 | 0.3205142 | 80 | 0.2672985 | 100 | 0.2978232 | | | | | | |
| Hexachloroethane | 50 | 0.5928387 | 80 | 0.5834398 | 100 | 0.5785441 | | | | | | |
| Indeno(1,2,3-cd)pyrene | 50 | 1.184644 | 80 | 1.201734 | 100 | 1.031961 | | | | | | |
| Isophorone | 50 | 0.6693467 | 80 | 0.6606669 | 100 | 0.651883 | | | | | | |
| 1-Methylnaphthalene | 50 | 0.6110108 | 80 | 0.5887133 | 100 | 0.578354 | | | | | | |
| 2-Methylnaphthalene | 50 | 0.5899842 | 80 | 0.5725228 | 100 | 0.5640864 | | | | | | |
| 2-Methylphenol | 50 | 1.174288 | 80 | 1.161528 | 100 | 1.130825 | | | | | | |
| 3-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| 4-Methylphenol | 50 | 1.180593 | 80 | 1.174014 | 100 | 1.145808 | | | | | | |
| Naphthalene | 50 | 1.062289 | 80 | 1.009165 | 100 | 0.9853361 | | | | | | |
| 4-Nitroaniline | 50 | 0.245583 | 80 | 0.2713623 | 100 | 0.2926737 | | | | | | |
| 3-Nitroaniline | 50 | 0.3328151 | 80 | 0.3335098 | 100 | 0.3302451 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 2-Nitroaniline | 50 | 0.3604391 | 80 | 0.3575911 | 100 | 0.3502726 | | | | | | |
| Nitrobenzene | 50 | 0.3742193 | 80 | 0.3632219 | 100 | 0.3548228 | | | | | | |
| Nitrobenzene-d5 | 50 | 0.3716804 | 80 | 0.3677033 | 100 | 0.3602605 | | | | | | |
| 4-Nitrophenol | 50 | 0.2302537 | 80 | 0.2312482 | 100 | 0.237925 | | | | | | |
| 2-Nitrophenol | 50 | 0.1987571 | 80 | 0.1969275 | 100 | 0.1952942 | | | | | | |
| N-Nitrosodimethylamine | 50 | 0.7179275 | 80 | 0.699562 | 100 | 0.6988776 | | | | | | |
| N-Nitrosodiphenylamine | 50 | 0.734013 | 80 | 0.7049383 | 100 | 0.6836085 | | | | | | |
| N-Nitroso-di-n-propylamine | 50 | 0.8590022 | 80 | 0.8618547 | 100 | 0.8482223 | | | | | | |
| Pentachlorophenol | 50 | 0.1477524 | 80 | 0.152323 | 100 | 0.1493187 | | | | | | |
| Phenanthrene | 50 | 1.165403 | 80 | 1.107075 | 100 | 1.089032 | | | | | | |
| Phenol | 50 | 1.515388 | 80 | 1.487162 | 100 | 1.485453 | | | | | | |
| Phenol-d6 | 100 | 1.444334 | 160 | 1.417009 | 200 | 1.38417 | | | | | | |
| Pyrene | 50 | 1.376348 | 80 | 1.350116 | 100 | 1.429147 | | | | | | |
| Pyridine | 50 | 1.386096 | 80 | 1.382983 | 100 | 1.355936 | | | | | | |
| Terphenyl-d14 | 50 | 0.8866 | 80 | 0.8605814 | 100 | 0.9157647 | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | | | | | | | 1 | 0.3530087 | 2 | 0.3195873 | 5 | 0.3252684 |
| 2,3,4,6-Tetrachlorophenol | 50 | 0.3149583 | 80 | 0.3195705 | 100 | 0.3193177 | | | | | | |
| 2,4,6-Tribromophenol | 100 | 0.1236089 | 160 | 0.1225882 | 200 | 0.120418 | | | | | | |
| 1,2,4-Trichlorobenzene | 50 | 0.3509992 | 80 | 0.3419386 | 100 | 0.3363453 | | | | | | |
| 2,4,6-Trichlorophenol | 50 | 0.3746937 | 80 | 0.3778514 | 100 | 0.3769771 | | | | | | |
| 2,4,5-Trichlorophenol | 50 | 0.3892628 | 80 | 0.399019 | 100 | 0.3860452 | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Acenaphthene | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | |
| Acetophenone | 10 | 1.704303 | 20 | 1.801178 | 40 | 1.795701 | 50 | 1.710426 | 80 | 1.718945 | 100 | 1.59967 |
| Aniline | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | |
| Atrazine | 10 | 0.2348484 | 20 | 0.2490883 | 40 | 0.2501657 | 50 | 0.2413828 | 80 | 0.2398009 | 100 | 0.2294713 |
| Benzaldehyde | 10 | 1.071349 | 20 | 1.114882 | 40 | 1.084654 | 50 | 1.035449 | 80 | 1.026022 | 100 | 0.9476697 |
| Benzidine | 10 | 0.5256135 | 20 | 0.6359201 | 40 | 0.7009071 | 50 | 0.7077408 | 80 | 0.7108148 | 100 | 0.6669063 |
| Benzo(a)anthracene | | | | | | | | | | | | |
| Benzo(a)pyrene | | | | | | | | | | | | |
| Benzo(b)fluoranthene | | | | | | | | | | | | |
| Benzo(g,h,i)perylene | | | | | | | | | | | | |
| Benzoic acid | | | | | | | | | | | | |
| Benzo(k)fluoranthene | | | | | | | | | | | | |
| Benzyl alcohol | | | | | | | | | | | | |
| 1,1-Biphenyl | 10 | 1.698813 | 20 | 1.690111 | 40 | 1.617949 | 50 | 1.584418 | 80 | 1.52658 | 100 | 1.43873 |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | |
| Caprolactam | 10 | 7.727893E-02 | 20 | 9.873525E-02 | 40 | 0.1074636 | 50 | 0.1070435 | 80 | 0.1101464 | 100 | 0.1047554 |
| Carbazole | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | | | | | | | | | | |
| 4-Chloroaniline | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | | | | | | | | | | | | |
| 2,2'-Oxybis-1-chloropropane | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | | | | | | | | | | | | |
| Dibenzofuran | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Di-n-butylphthalate | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 10 | 0.3330745 | 20 | 0.3900825 | 40 | 0.4220677 | 50 | 0.4388195 | 80 | 0.42004 | 100 | 0.4023442 |
| 2,6-Dichlorophenol | 10 | 0.2406157 | 20 | 0.2739896 | 40 | 0.2837769 | 50 | 0.2807297 | 80 | 0.2789585 | 100 | 0.2685961 |
| 2,4-Dichlorophenol | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | |
| Dimethyl phthalate | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | | | | | | | | | | |
| 2,4-Dinitrophenol | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | |
| Di-n-octylphthalate | | | | | | | | | | | | |
| 1,4-Dioxane | 10 | 0.6181946 | 20 | 0.5750216 | 40 | 0.597864 | 50 | 0.5649718 | 80 | 0.5618798 | 100 | 0.5357223 |
| 1,2-Diphenylhydrazine | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | |
| 2-Fluorobiphenyl | | | | | | | | | | | | |
| 2-Fluorophenol | | | | | | | | | | | | |
| Hexachlorobenzene | | | | | | | | | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | | | | | | | | | | | | |
| Hexachloroethane | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | | | | | | | | | | | | |
| Isophorone | | | | | | | | | | | | |
| 1-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 3-Methylphenol | | | | | | | | | | | | |
| 4-Methylphenol | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | |
| 4-Nitroaniline | | | | | | | | | | | | |
| 3-Nitroaniline | | | | | | | | | | | | |
| 2-Nitroaniline | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | |
| Nitrobenzene-d5 | | | | | | | | | | | | |
| 4-Nitrophenol | | | | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | |
| N-Nitrosodimethylamine | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | |
| N-Nitroso-di-n-propylamine | | | | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | |
| Phenol | | | | | | | | | | | | |
| Phenol-d6 | | | | | | | | | | | | |
| Pyrene | | | | | | | | | | | | |
| Pyridine | | | | | | | | | | | | |
| Terphenyl-d14 | | | | | | | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | 10 | 0.3142966 | 20 | 0.3196447 | 40 | 0.3170485 | 50 | 0.3100616 | 80 | 0.3033013 | 100 | 0.2910487 |
| 2,3,4,6-Tetrachlorophenol | | | | | | | | | | | | |
| 2,4,6-Tribromophenol | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 10 | 0.3330745 | 20 | 0.3900825 | 40 | 0.4220677 | 50 | 0.4388195 | 80 | 0.42004 | 100 | 0.4023442 |
| Acenaphthene | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | |
| Acetophenone | 10 | 1.704303 | 20 | 1.801178 | 40 | 1.795701 | 50 | 1.710426 | 80 | 1.718945 | 100 | 1.59967 |
| Aniline | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| Anthracene | | | | | | | | | | | | |
| Atrazine | 10 | 0.2348484 | 20 | 0.2490883 | 40 | 0.2501657 | 50 | 0.2413828 | 80 | 0.2398009 | 100 | 0.2294713 |
| Benzaldehyde | 10 | 1.071349 | 20 | 1.114882 | 40 | 1.084654 | 50 | 1.035449 | 80 | 1.026022 | 100 | 0.9476697 |
| Benzidine | 10 | 0.5256135 | 20 | 0.6359201 | 40 | 0.7009071 | 50 | 0.7077408 | 80 | 0.7108148 | 100 | 0.6669063 |
| Benzo(a)anthracene | | | | | | | | | | | | |
| Benzo(a)pyrene | | | | | | | | | | | | |
| Benzo(b)fluoranthene | | | | | | | | | | | | |
| Benzo(g,h,i)perylene | | | | | | | | | | | | |
| Benzoic acid | | | | | | | | | | | | |
| Benzo(k)fluoranthene | | | | | | | | | | | | |
| Benzyl alcohol | | | | | | | | | | | | |
| 1,1-Biphenyl | 10 | 1.698813 | 20 | 1.690111 | 40 | 1.617949 | 50 | 1.584418 | 80 | 1.52658 | 100 | 1.43873 |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | |
| Caprolactam | 10 | 7.727893E-02 | 20 | 9.873525E-02 | 40 | 0.1074636 | 50 | 0.1070435 | 80 | 0.1101464 | 100 | 0.1047554 |
| Carbazole | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | | | | | | | | | | | | |
| 4-Chloroaniline | | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | | | | | | | | | | | | |
| Bis(2-chloroethyl)ether | | | | | | | | | | | | |
| 2,2'-Oxybis-1-chloropropane | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | | | | | | | | | | | | |
| Dibenzofuran | | | | | | | | | | | | |
| Di-n-butylphthalate | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 2,6-Dichlorophenol | 10 | 0.2406157 | 20 | 0.2739896 | 40 | 0.2837769 | 50 | 0.2807297 | 80 | 0.2789585 | 100 | 0.2685961 |
| 2,4-Dichlorophenol | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | |
| Dimethyl phthalate | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | | | | | | | | | | | | |
| 2,4-Dinitrophenol | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | |
| Di-n-octylphthalate | | | | | | | | | | | | |
| 1,4-Dioxane | 10 | 0.6181946 | 20 | 0.5750216 | 40 | 0.597864 | 50 | 0.5649718 | 80 | 0.5618798 | 100 | 0.5357223 |
| 1,2-Diphenylhydrazine | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | |
| 2-Fluorobiphenyl | | | | | | | | | | | | |
| 2-Fluorophenol | | | | | | | | | | | | |
| Hexachlorobenzene | | | | | | | | | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | | | | | | | | | | | | |
| Hexachloroethane | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | | | | | | | | | | | | |
| Isophorone | | | | | | | | | | | | |
| 1-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | |
| 3-Methylphenol | | | | | | | | | | | | |
| 4-Methylphenol | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | |
| 4-Nitroaniline | | | | | | | | | | | | |
| 3-Nitroaniline | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF | ug/mL | RF |
| 2-Nitroaniline | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | |
| Nitrobenzene-d5 | | | | | | | | | | | | |
| 4-Nitrophenol | | | | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | |
| N-Nitrosodimethylamine | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | |
| N-Nitroso-di-n-propylamine | | | | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | |
| Phenol | | | | | | | | | | | | |
| Phenol-d6 | | | | | | | | | | | | |
| Pyrene | | | | | | | | | | | | |
| Pyridine | | | | | | | | | | | | |
| Terphenyl-d14 | | | | | | | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | 10 | 0.3142966 | 20 | 0.3196447 | 40 | 0.3170485 | 50 | 0.3100616 | 80 | 0.3033013 | 100 | 0.2910487 |
| 2,3,4,6-Tetrachlorophenol | | | | | | | | | | | | |
| 2,4,6-Tribromophenol | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 1.269597 | 4.903152 | 10.465 | 4.763744E-02 | | | CCC (30) | |
| Acenaphthylene | 1.959083 | 4.154041 | 10.24944 | 4.133794E-02 | | | 15 | |
| Acetophenone | 1.714419 | 4.130585 | 7.227222 | 3.094706E-02 | | | 15 | |
| Aniline | 1.900007 | 3.284542 | 6.390556 | 8.799762E-02 | | | 15 | |
| Anthracene | 1.161307 | 4.582293 | 12.34144 | 4.433106E-02 | | | 15 | |
| Atrazine | 0.2293025 | 11.08458 | 11.88522 | 5.410601E-02 | | | 15 | |
| Benzaldehyde | 1.057258 | 4.80575 | 6.264667 | 2.697619E-02 | | | 15 | |
| Benzidine | 0.6369679 | 13.40551 | 13.89371 | 2.662737E-02 | | | 15 | |
| Benzo(a)anthracene | 1.193431 | 4.385626 | 15.53889 | 2.902238E-02 | | | 15 | |
| Benzo(a)pyrene | 1.061849 | 12.15633 | 17.34322 | 4.821226E-02 | | | CCC (30) | |
| Benzo(b)fluoranthene | 1.192834 | 9.469779 | 16.90622 | 0.0364467 | | | 15 | |
| Benzo(g,h,i)perylene | 0.8673976 | 9.832135 | 19.57289 | 8.613339E-02 | | | 15 | |
| Benzoic acid | 0.1667293 | 34.36929 | 7.9865 | 0.5465472 | 0.9972413 | | 0.995 | |
| Benzo(k)fluoranthene | 1.234244 | 5.160575 | 16.9405 | 4.784776E-02 | | | 15 | |
| Benzyl alcohol | 0.7918529 | 8.384648 | 6.922 | 7.858658E-02 | | | 15 | |
| 1,1-Biphenyl | 1.647464 | 6.941428 | 9.711111 | 3.672288E-02 | | | 15 | |
| 4-Bromophenyl-phenylether | 0.2396007 | 4.615409 | 11.69178 | 3.160712E-02 | | | 15 | |
| Butylbenzylphthalate | 0.6659619 | 10.75201 | 14.81629 | 1.927271E-02 | | | 15 | |
| Caprolactam | 0.0983814 | 13.1947 | 8.739 | 0.1800642 | | | 15 | |
| Carbazole | 1.033588 | 5.537093 | 12.53067 | 4.187015E-02 | | | 15 | |
| 4-Chloro-3-methylphenol | 0.2791833 | 13.73393 | 8.943625 | 3.777953E-02 | | | CCC (30) | |
| 4-Chloroaniline | 0.4236872 | 4.041706 | 8.357222 | 5.579471E-02 | | | 15 | |
| Bis(2-chloroethoxy)methane | 0.4015206 | 5.043312 | 7.969778 | 4.750625E-02 | | | 15 | |
| Bis(2-chloroethyl)ether | 1.242957 | 3.412662 | 6.456667 | 9.612344E-02 | | | 15 | |
| 2,2'-Oxybis-1-chloropropane | 1.791162 | 4.894321 | 7.083555 | 4.525434E-02 | | | 15 | |
| 2-Chloronaphthalene | 1.223416 | 4.351312 | 9.738445 | 4.355056E-02 | | | 15 | |
| 2-Chlorophenol | 1.320483 | 5.059863 | 6.533111 | 6.571699E-02 | | | 15 | |
| 4-Chlorophenyl phenyl ether | 0.6482639 | 4.698305 | 11.09078 | 0.034051 | | | 15 | |
| Chrysene | 1.223868 | 3.849079 | 15.58856 | 3.824456E-02 | | | 15 | |
| Dibenz(a,h)anthracene | 0.843577 | 13.39613 | 19.10544 | 0.064455 | | | 15 | |
| Dibenzofuran | 1.702459 | 5.478968 | 10.67456 | 4.805089E-02 | | | 15 | |
| Di-n-butylphthalate | 1.274102 | 10.33933 | 12.96089 | 3.198878E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 1.590354 | 5.068212 | 6.791 | 3.285709E-02 | | | CCC (30) | |
| 1,3-Dichlorobenzene | 1.556634 | 4.82334 | 6.712111 | 3.840334E-02 | | | 15 | |
| 1,2-Dichlorobenzene | 1.498241 | 3.960279 | 6.972778 | 3.854247E-02 | | | 15 | |
| 3,3'-Dichlorobenzidine | 0.3901063 | 11.47408 | 15.49443 | 2.260094E-02 | | | 15 | |
| 2,6-Dichlorophenol | 0.2593817 | 8.91257 | 8.374111 | 1.822758E-02 | | | 15 | |
| 2,4-Dichlorophenol | 0.2708646 | 11.75671 | 8.104445 | 7.489039E-02 | | | CCC (30) | |
| Diethylphthalate | 1.375716 | 4.066081 | 10.94922 | 7.018966E-02 | | | 15 | |
| 2,4-Dimethylphenol | 0.3567735 | 5.191635 | 7.862444 | 7.425377E-02 | | | 15 | |
| Dimethyl phthalate | 1.360327 | 2.760394 | 10.08487 | 0.1018539 | | | 15 | |
| 4,6-Dinitro-2-methylphenol | 0.1141426 | 30.80017 | 11.15414 | 8.948876E-02 | 0.9987724 | | 0.995 | |
| 2,4-Dinitrophenol | 0.1317034 | 34.87347 | 10.48617 | 6.439793E-02 | 0.9970944 | | SPCC (0.05) | |
| 2,4-Dinitrotoluene | 0.3873439 | 14.36567 | 10.647 | 8.872293E-02 | | | 15 | |
| 2,6-Dinitrotoluene | 0.3161974 | 6.525335 | 10.15025 | 8.086076E-02 | | | 15 | |
| Di-n-octylphthalate | 1.581621 | 12.56055 | 16.37467 | 1.584676E-02 | | | CCC (30) | |
| 1,4-Dioxane | 0.5824199 | 4.647384 | 3.461222 | 6.378529E-02 | | | 15 | |
| 1,2-Diphenylhydrazine | 0.8266591 | 5.85195 | 11.28589 | 4.479164E-02 | | | 15 | |
| Bis(2-ethylhexyl)phthalate | 0.8698317 | 14.06275 | 15.55788 | 2.160886E-02 | | | 15 | |
| Fluoranthene | 1.133942 | 6.426527 | 13.74544 | 3.010434E-02 | | | CCC (30) | |
| Fluorene | 1.377626 | 2.611998 | 11.09611 | 4.668763E-02 | | | 15 | |
| 2-Fluorobiphenyl | 1.429188 | 5.299247 | 9.590445 | 4.316615E-02 | | | 15 | |
| 2-Fluorophenol | 1.163095 | 4.537913 | 5.309444 | 4.883207E-02 | | | 15 | |
| Hexachlorobenzene | 0.2675089 | 4.583392 | 11.79278 | 3.935515E-02 | | | 15 | |
| Hexachlorobutadiene | 0.1897728 | 3.248719 | 8.468444 | 2.541857E-02 | | | CCC (30) | |
| Hexachlorocyclopentadiene | 0.2719697 | 13.77204 | 9.354667 | 0.0244126 | | | SPCC (0.05) | |
| Hexachloroethane | 0.5839827 | 5.21415 | 7.374556 | 2.041353E-02 | | | 15 | |
| Indeno(1,2,3-cd)pyrene | 1.046936 | 11.15244 | 19.08733 | 6.484222E-02 | | | 15 | |
| Isophorone | 0.6532573 | 4.164348 | 7.718667 | 0.1211494 | | | 15 | |
| 1-Methylnaphthalene | 0.6166441 | 3.550294 | 9.265111 | 3.593918E-02 | | | 15 | |
| 2-Methylnaphthalene | 0.5927061 | 2.758044 | 9.143334 | 3.771168E-02 | | | 15 | |
| 2-Methylphenol | 1.129245 | 5.890276 | 7.051444 | 5.962201E-02 | | | 15 | |
| 3-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |
| 4-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | 1.098195 | 7.090559 | 8.304222 | 3.938283E-02 | | | 15 | |
| 4-Nitroaniline | 0.2492193 | 10.6119 | 11.10488 | 0.1012271 | | | 15 | |
| 3-Nitroaniline | 0.3039612 | 12.46666 | 10.355 | 8.761057E-02 | | | 15 | |
| 2-Nitroaniline | 0.3312246 | 12.35964 | 9.851625 | 5.605301E-02 | | | 15 | |
| Nitrobenzene | 0.3690184 | 3.243848 | 7.433 | 8.670105E-02 | | | 15 | |
| Nitrobenzene-d5 | 0.3614526 | 4.787386 | 7.410333 | 7.322044E-02 | | | 15 | |
| 4-Nitrophenol | 0.1965166 | 21.52661 | 10.55771 | 9.363783E-02 | 0.9988059 | | SPCC (0.05) | |
| 2-Nitrophenol | 0.1835837 | 10.09707 | 7.816143 | 0.0460575 | | | CCC (30) | |
| N-Nitrosodimethylamine | 0.7067011 | 3.972251 | 3.796889 | 0.112963 | | | 15 | |
| N-Nitrosodiphenylamine | 0.7463088 | 5.779425 | 11.23333 | 6.231948E-02 | | | CCC (30) | |
| N-Nitroso-di-n-propylamine | 0.8544344 | 3.82209 | 7.235111 | 0.132911 | | | SPCC (0.05) | |
| Pentachlorophenol | 0.1195033 | 31.15399 | 12.02443 | 2.565489E-02 | 0.9986727 | | CCC (30) | * |
| Phenanthrene | 1.206234 | 6.535522 | 12.27844 | 3.596534E-02 | | | 15 | |
| Phenol | 1.491659 | 4.640746 | 6.357889 | 0.1599589 | | | CCC (30) | |
| Phenol-d6 | 1.434991 | 4.1192 | 6.341889 | 0.1499449 | | | 15 | |
| Pyrene | 1.380107 | 4.996263 | 14.02522 | 3.880092E-02 | | | 15 | |
| Pyridine | 1.377958 | 4.121152 | 3.838111 | 8.916254E-02 | | | 15 | |
| Terphenyl-d14 | 0.8848596 | 4.382233 | 14.21 | 0.0194432 | | | 15 | |
| 1,2,4,5-Tetrachlorobenzene | 0.3170295 | 5.342813 | 9.355222 | 3.483054E-02 | | | 15 | |
| 2,3,4,6-Tetrachlorophenol | 0.2870772 | 13.54627 | 10.82871 | 2.564344E-02 | | | 15 | |
| 2,4,6-Tribromophenol | 0.1159566 | 8.307173 | 11.39514 | 4.977028E-02 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.3581999 | 4.302402 | 8.212111 | 0.0416875 | | | 15 | |
| 2,4,6-Trichlorophenol | 0.3425101 | 14.8708 | 9.487875 | 3.202461E-02 | | | CCC (30) | |
| 2,4,5-Trichlorophenol | 0.3356329 | 18.90298 | 9.529444 | 3.382823E-02 | 0.9992251 | | 0.995 | |
| 3,3'-Dichlorobenzidine | 0.3901063 | 11.47408 | 15.49443 | 2.260094E-02 | | | 15 | |
| Acenaphthene | 1.269597 | 4.903152 | 10.465 | 4.763744E-02 | | | CCC (30) | |
| Acenaphthylene | 1.959083 | 4.154041 | 10.24944 | 4.133794E-02 | | | 15 | |
| Acetophenone | 1.714419 | 4.130585 | 7.227222 | 3.094706E-02 | | | 15 | |
| Aniline | 1.900007 | 3.284542 | 6.390556 | 8.799762E-02 | | | 15 | |
| Anthracene | 1.161307 | 4.582293 | 12.34144 | 4.433106E-02 | | | 15 | |
| Atrazine | 0.2293025 | 11.08458 | 11.88522 | 5.410601E-02 | | | 15 | |
| Benzaldehyde | 1.057258 | 4.80575 | 6.264667 | 2.697619E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0351002 | Instrument: | MS-BNA3 |
| Matrix: | Water | Calibration Date: | 12/7/2010 5:31:41PM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Benzidine | 0.6369679 | 13.40551 | 13.89371 | 2.662737E-02 | | | 15 | |
| Benzo(a)anthracene | 1.193431 | 4.385626 | 15.53889 | 2.902238E-02 | | | 15 | |
| Benzo(a)pyrene | 1.061849 | 12.15633 | 17.34322 | 4.821226E-02 | | | CCC (30) | |
| Benzo(b)fluoranthene | 1.192834 | 9.469779 | 16.90622 | 0.0364467 | | | 15 | |
| Benzo(g,h,i)perylene | 0.8673976 | 9.832135 | 19.57289 | 8.613339E-02 | | | 15 | |
| Benzoic acid | 0.1667293 | 34.36929 | 7.9865 | 0.5465472 | 0.9972413 | | 0.995 | |
| Benzo(k)fluoranthene | 1.234244 | 5.160575 | 16.9405 | 4.784776E-02 | | | 15 | |
| Benzyl alcohol | 0.7918529 | 8.384648 | 6.922 | 7.858658E-02 | | | 15 | |
| 1,1-Biphenyl | 1.647464 | 6.941428 | 9.711111 | 3.672288E-02 | | | 15 | |
| 4-Bromophenyl-phenylether | 0.2396007 | 4.615409 | 11.69178 | 3.160712E-02 | | | 15 | |
| Butylbenzylphthalate | 0.6659619 | 10.75201 | 14.81629 | 1.927271E-02 | | | 15 | |
| Caprolactam | 0.0983814 | 13.1947 | 8.739 | 0.1800642 | | | 15 | |
| Carbazole | 1.033588 | 5.537093 | 12.53067 | 4.187015E-02 | | | 15 | |
| 4-Chloro-3-methylphenol | 0.2791833 | 13.73393 | 8.943625 | 3.777953E-02 | | | CCC (30) | |
| 4-Chloroaniline | 0.4236872 | 4.041706 | 8.357222 | 5.579471E-02 | | | 15 | |
| Bis(2-chloroethoxy)methane | 0.4015206 | 5.043312 | 7.969778 | 4.750625E-02 | | | 15 | |
| Bis(2-chloroethyl)ether | 1.242957 | 3.412662 | 6.456667 | 9.612344E-02 | | | 15 | |
| 2,2'-Oxybis-1-chloropropane | 1.791162 | 4.894321 | 7.083555 | 4.525434E-02 | | | 15 | |
| 2-Chloronaphthalene | 1.223416 | 4.351312 | 9.738445 | 4.355056E-02 | | | 15 | |
| 2-Chlorophenol | 1.320483 | 5.059863 | 6.533111 | 6.571699E-02 | | | 15 | |
| 4-Chlorophenyl phenyl ether | 0.6482639 | 4.698305 | 11.09078 | 0.034051 | | | 15 | |
| Chrysene | 1.223868 | 3.849079 | 15.58856 | 3.824456E-02 | | | 15 | |
| Dibenz(a,h)anthracene | 0.843577 | 13.39613 | 19.10544 | 0.064455 | | | 15 | |
| Dibenzofuran | 1.702459 | 5.478968 | 10.67456 | 4.805089E-02 | | | 15 | |
| Di-n-butylphthalate | 1.274102 | 10.33933 | 12.96089 | 3.198878E-02 | | | 15 | |
| 1,4-Dichlorobenzene | 1.590354 | 5.068212 | 6.791 | 3.285709E-02 | | | CCC (30) | |
| 1,3-Dichlorobenzene | 1.556634 | 4.82334 | 6.712111 | 3.840334E-02 | | | 15 | |
| 1,2-Dichlorobenzene | 1.498241 | 3.960279 | 6.972778 | 3.854247E-02 | | | 15 | |
| 2,6-Dichlorophenol | 0.2593817 | 8.91257 | 8.374111 | 1.822758E-02 | | | 15 | |
| 2,4-Dichlorophenol | 0.2708646 | 11.75671 | 8.104445 | 7.489039E-02 | | | CCC (30) | |
| Diethylphthalate | 1.375716 | 4.066081 | 10.94922 | 7.018966E-02 | | | 15 | |
| 2,4-Dimethylphenol | 0.3567735 | 5.191635 | 7.862444 | 7.425377E-02 | | | 15 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0351002 | Instrument: | MS-BNA3 |
| Matrix: | Water | Calibration Date: | 12/7/2010 5:31:41PM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Dimethyl phthalate | 1.360327 | 2.760394 | 10.08487 | 0.1018539 | | | 15 | |
| 4,6-Dinitro-2-methylphenol | 0.1141426 | 30.80017 | 11.15414 | 8.948876E-02 | 0.9987724 | | 0.995 | |
| 2,4-Dinitrophenol | 0.1317034 | 34.87347 | 10.48617 | 6.439793E-02 | 0.9970944 | | SPCC (0.05) | |
| 2,4-Dinitrotoluene | 0.3873439 | 14.36567 | 10.647 | 8.872293E-02 | | | 15 | |
| 2,6-Dinitrotoluene | 0.3161974 | 6.525335 | 10.15025 | 8.086076E-02 | | | 15 | |
| Di-n-octylphthalate | 1.581621 | 12.56055 | 16.37467 | 1.584676E-02 | | | CCC (30) | |
| 1,4-Dioxane | 0.5824199 | 4.647384 | 3.461222 | 6.378529E-02 | | | 15 | |
| 1,2-Diphenylhydrazine | 0.8266591 | 5.85195 | 11.28589 | 4.479164E-02 | | | 15 | |
| Bis(2-ethylhexyl)phthalate | 0.8698317 | 14.06275 | 15.55788 | 2.160886E-02 | | | 15 | |
| Fluoranthene | 1.133942 | 6.426527 | 13.74544 | 3.010434E-02 | | | CCC (30) | |
| Fluorene | 1.377626 | 2.611998 | 11.09611 | 4.668763E-02 | | | 15 | |
| 2-Fluorobiphenyl | 1.429188 | 5.299247 | 9.590445 | 4.316615E-02 | | | 15 | |
| 2-Fluorophenol | 1.163095 | 4.537913 | 5.309444 | 4.883207E-02 | | | 15 | |
| Hexachlorobenzene | 0.2675089 | 4.583392 | 11.79278 | 3.935515E-02 | | | 15 | |
| Hexachlorobutadiene | 0.1897728 | 3.248719 | 8.468444 | 2.541857E-02 | | | CCC (30) | |
| Hexachlorocyclopentadiene | 0.2719697 | 13.77204 | 9.354667 | 0.0244126 | | | SPCC (0.05) | |
| Hexachloroethane | 0.5839827 | 5.21415 | 7.374556 | 2.041353E-02 | | | 15 | |
| Indeno(1,2,3-cd)pyrene | 1.046936 | 11.15244 | 19.08733 | 6.484222E-02 | | | 15 | |
| Isophorone | 0.6532573 | 4.164348 | 7.718667 | 0.1211494 | | | 15 | |
| 1-Methylnaphthalene | 0.6166441 | 3.550294 | 9.265111 | 3.593918E-02 | | | 15 | |
| 2-Methylnaphthalene | 0.5927061 | 2.758044 | 9.143334 | 3.771168E-02 | | | 15 | |
| 2-Methylphenol | 1.129245 | 5.890276 | 7.051444 | 5.962201E-02 | | | 15 | |
| 3-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |
| 4-Methylphenol | 1.146708 | 5.671519 | 7.231 | 8.935357E-02 | | | 15 | |
| Naphthalene | 1.098195 | 7.090559 | 8.304222 | 3.938283E-02 | | | 15 | |
| 4-Nitroaniline | 0.2492193 | 10.6119 | 11.10488 | 0.1012271 | | | 15 | |
| 3-Nitroaniline | 0.3039612 | 12.46666 | 10.355 | 8.761057E-02 | | | 15 | |
| 2-Nitroaniline | 0.3312246 | 12.35964 | 9.851625 | 5.605301E-02 | | | 15 | |
| Nitrobenzene | 0.3690184 | 3.243848 | 7.433 | 8.670105E-02 | | | 15 | |
| Nitrobenzene-d5 | 0.3614526 | 4.787386 | 7.410333 | 7.322044E-02 | | | 15 | |
| 4-Nitrophenol | 0.1965166 | 21.52661 | 10.55771 | 9.363783E-02 | 0.9988059 | | SPCC (0.05) | |
| 2-Nitrophenol | 0.1835837 | 10.09707 | 7.816143 | 0.0460575 | | | CCC (30) | |

# INITIAL CALIBRATION DATA (Continued)

## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0351002
Instrument: MS-BNA3
Matrix: Water
Calibration Date: 12/7/2010 5:31:41PM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | 0.7067011 | 3.972251 | 3.796889 | 0.112963 | | | 15 | |
| N-Nitrosodiphenylamine | 0.7463088 | 5.779425 | 11.23333 | 6.231948E-02 | | | CCC (30) | |
| N-Nitroso-di-n-propylamine | 0.8544344 | 3.82209 | 7.235111 | 0.132911 | | | SPCC (0.05) | |
| Pentachlorophenol | 0.1195033 | 31.15399 | 12.02443 | 2.565489E-02 | 0.9986727 | | CCC (30) | * |
| Phenanthrene | 1.206234 | 6.535522 | 12.27844 | 3.596534E-02 | | | 15 | |
| Phenol | 1.491659 | 4.640746 | 6.357889 | 0.1599589 | | | CCC (30) | |
| Phenol-d6 | 1.434991 | 4.1192 | 6.341889 | 0.1499449 | | | 15 | |
| Pyrene | 1.380107 | 4.996263 | 14.02522 | 3.880092E-02 | | | 15 | |
| Pyridine | 1.377958 | 4.121152 | 3.838111 | 8.916254E-02 | | | 15 | |
| Terphenyl-d14 | 0.8848596 | 4.382233 | 14.21 | 0.0194432 | | | 15 | |
| 1,2,4,5-Tetrachlorobenzene | 0.3170295 | 5.342813 | 9.355222 | 3.483054E-02 | | | 15 | |
| 2,3,4,6-Tetrachlorophenol | 0.2870772 | 13.54627 | 10.82871 | 2.564344E-02 | | | 15 | |
| 2,4,6-Tribromophenol | 0.1159566 | 8.307173 | 11.39514 | 4.977028E-02 | | | 15 | |
| 1,2,4-Trichlorobenzene | 0.3581999 | 4.302402 | 8.212111 | 0.0416875 | | | 15 | |
| 2,4,6-Trichlorophenol | 0.3425101 | 14.8708 | 9.487875 | 3.202461E-02 | | | CCC (30) | |
| 2,4,5-Trichlorophenol | 0.3356329 | 18.90298 | 9.529444 | 3.382823E-02 | 0.9992251 | | 0.995 | |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV3.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV3 | Injection Time: | 10:01 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Benzaldehyde | A | 50.00 | 47.93 | 1.057258 | 1.013398 | | -4.1 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV4.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV4 | Injection Time: | 10:31 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 3,3'-Dichlorobenzidine | A | 50.00 | 47.61 | 0.3901063 | 0.3714708 | | -4.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV5.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV5 | Injection Time: | 11:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Acetophenone | A | 50.00 | 48.49 | 1.714419 | 1.662733 | | -3.0 | 20 |
| Atrazine | A | 50.00 | 49.51 | 0.2293025 | 0.2270669 | | -1.0 | 20 |
| 1,1-Biphenyl | A | 50.00 | 46.63 | 1.647464 | 1.536423 | | -6.7 | 20 |
| Caprolactam | A | 50.00 | 52.93 | 0.0983814 | 0.1041517 | | 5.9 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 46.99 | 0.3170295 | 0.2979379 | | -6.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICV7.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICV7 | Injection Time: | 12:04 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| N-Nitrosodiphenylamine | A | 50.00 | 51.34 | 0.7463088 | 0.7662808 | | 2.7 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 43.50 | 0.2870772 | 0.249777 | | -13.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Acenaphthene | A | 50.00 | 48.33 | 1.269597 | 1.227305 | | -3.3 | 20 |
| Acenaphthylene | A | 50.00 | 47.94 | 1.959083 | 1.878372 | | -4.1 | 20 |
| Aniline | A | 50.00 | 43.35 | 1.900007 | 1.647303 | | -13.3 | 20 |
| Anthracene | A | 50.00 | 49.70 | 1.161307 | 1.154454 | | -0.6 | 20 |
| Benzo(a)anthracene | A | 50.00 | 51.73 | 1.193431 | 1.234753 | | 3.5 | 20 |
| Benzo(a)pyrene | A | 50.00 | 54.18 | 1.061849 | 1.150628 | | 8.4 | 20 |
| Benzo(b)fluoranthene | A | 50.00 | 53.94 | 1.192834 | 1.286829 | | 7.9 | 20 |
| Benzo(g,h,i)perylene | A | 50.00 | 46.56 | 0.8673976 | 0.8077015 | | -6.9 | 20 |
| Benzoic acid | L | 50.00 | 42.82 | 0.1667293 | 0.1623225 | | -14.4 | 20 |
| Benzo(k)fluoranthene | A | 50.00 | 57.08 | 1.234244 | 1.408992 | | 14.2 | 20 |
| Benzyl alcohol | A | 50.00 | 55.30 | 0.7918529 | 0.8757332 | | 10.6 | 20 |
| 4-Bromophenyl-phenylether | A | 50.00 | 51.04 | 0.2396007 | 0.2446022 | | 2.1 | 20 |
| Butylbenzylphthalate | A | 50.00 | 54.90 | 0.6659619 | 0.731176 | | 9.8 | 20 |
| Carbazole | A | 50.00 | 44.33 | 1.033588 | 0.9164384 | | -11.3 | 20 |
| 4-Chloro-3-methylphenol | A | 50.00 | 51.74 | 0.2791833 | 0.2888752 | | 3.5 | 20 |
| 4-Chloroaniline | A | 50.00 | 50.74 | 0.4236872 | 0.4299877 | | 1.5 | 20 |
| Bis(2-chloroethoxy)methane | A | 50.00 | 49.55 | 0.4015206 | 0.397907 | | -0.9 | 20 |
| Bis(2-chloroethyl)ether | A | 50.00 | 49.26 | 1.242957 | 1.224652 | | -1.5 | 20 |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 49.35 | 1.791162 | 1.767772 | | -1.3 | 20 |
| 2-Chloronaphthalene | A | 50.00 | 49.94 | 1.223416 | 1.222017 | | -0.1 | 20 |
| 2-Chlorophenol | A | 50.00 | 50.72 | 1.320483 | 1.339391 | | 1.4 | 20 |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 48.94 | 0.6482639 | 0.6345678 | | -2.1 | 20 |
| Chrysene | A | 50.00 | 49.36 | 1.223868 | 1.208138 | | -1.3 | 20 |
| Dibenz(a,h)anthracene | A | 50.00 | 50.32 | 0.843577 | 0.8489566 | | 0.6 | 20 |
| Dibenzofuran | A | 50.00 | 52.29 | 1.702459 | 1.780513 | | 4.6 | 20 |
| Di-n-butylphthalate | A | 50.00 | 53.56 | 1.274102 | 1.364881 | | 7.1 | 20 |
| 1,4-Dichlorobenzene | A | 50.00 | 49.69 | 1.590354 | 1.580612 | | -0.6 | 20 |
| 1,3-Dichlorobenzene | A | 50.00 | 49.85 | 1.556634 | 1.55207 | | -0.3 | 20 |
| 1,2-Dichlorobenzene | A | 50.00 | 49.47 | 1.498241 | 1.482359 | | -1.1 | 20 |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 2,4-Dichlorophenol | A | 50.00 | 53.23 | 0.2708646 | 0.2883479 | | 6.5 | 20 |
| Diethylphthalate | A | 50.00 | 50.07 | 1.375716 | 1.37777 | | 0.1 | 20 |
| 2,4-Dimethylphenol | A | 50.00 | 45.98 | 0.3567735 | 0.3280623 | | -8.0 | 20 |
| Dimethyl phthalate | A | 50.00 | 50.41 | 1.360327 | 1.371495 | | 0.8 | 20 |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 43.80 | 0.1141426 | 0.118963 | | -12.4 | 20 |
| 2,4-Dinitrophenol | L | 50.00 | 41.03 | 0.1317034 | 0.1214933 | 0.05 | -17.9 | 20 |
| 2,4-Dinitrotoluene | A | 50.00 | 54.89 | 0.3873439 | 0.4252053 | | 9.8 | 20 |
| 2,6-Dinitrotoluene | A | 50.00 | 50.97 | 0.3161974 | 0.3223188 | | 1.9 | 20 |
| Di-n-octylphthalate | A | 50.00 | 52.54 | 1.581621 | 1.662112 | | 5.1 | 20 |
| 1,2-Diphenylhydrazine | A | 50.00 | 48.33 | 0.8266591 | 0.7990352 | | -3.3 | 20 |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 54.27 | 0.8698317 | 0.944141 | | 8.5 | 20 |
| Fluoranthene | A | 50.00 | 50.76 | 1.133942 | 1.151228 | | 1.5 | 20 |
| Fluorene | A | 50.00 | 48.95 | 1.377626 | 1.348629 | | -2.1 | 20 |
| Hexachlorobenzene | A | 50.00 | 48.64 | 0.2675089 | 0.2602515 | | -2.7 | 20 |
| Hexachlorobutadiene | A | 50.00 | 50.27 | 0.1897728 | 0.1907933 | | 0.5 | 20 |
| Hexachlorocyclopentadiene | A | 50.00 | 47.27 | 0.2719697 | 0.2571016 | 0.05 | -5.5 | 20 |
| Hexachloroethane | A | 50.00 | 51.17 | 0.5839827 | 0.5976224 | | 2.3 | 20 |
| Indeno(1,2,3-cd)pyrene | A | 50.00 | 48.59 | 1.046936 | 1.017476 | | -2.8 | 20 |
| Isophorone | A | 50.00 | 49.58 | 0.6532573 | 0.6477211 | | -0.8 | 20 |
| 1-Methylnaphthalene | A | 50.00 | 45.59 | 0.6166441 | 0.5622964 | | -8.8 | 20 |
| 2-Methylnaphthalene | A | 50.00 | 54.46 | 0.5927061 | 0.6455636 | | 8.9 | 20 |
| 2-Methylphenol | A | 50.00 | 50.79 | 1.129245 | 1.147068 | | 1.6 | 20 |
| 3-Methylphenol | A | 50.00 | 46.61 | 1.146708 | 1.068856 | | -6.8 | 20 |
| 4-Methylphenol | A | 50.00 | 46.61 | 1.146708 | 1.068856 | | -6.8 | 20 |
| Naphthalene | A | 50.00 | 47.81 | 1.098195 | 1.050188 | | -4.4 | 20 |
| 4-Nitroaniline | A | 50.00 | 48.63 | 0.2492193 | 0.2423702 | | -2.7 | 20 |
| 3-Nitroaniline | A | 50.00 | 54.97 | 0.3039612 | 0.3341951 | | 9.9 | 20 |
| 2-Nitroaniline | A | 50.00 | 58.93 | 0.3312246 | 0.3904014 | | 17.9 | 20 |
| Nitrobenzene | A | 50.00 | 50.66 | 0.3690184 | 0.3738603 | | 1.3 | 20 |

# INITIAL CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-ICVA.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35109 | Injection Date: | 12/08/10 |
| Lab Sample ID: | 0L35109-ICVA | Injection Time: | 14:09 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4-Nitrophenol | L | 50.00 | 45.62 | 0.1965166 | 0.2046322 | 0.05 | -8.8 | 20 |
| 2-Nitrophenol | A | 50.00 | 50.69 | 0.1835837 | 0.1861302 | | 1.4 | 20 |
| N-Nitrosodimethylamine | A | 50.00 | 52.13 | 0.7067011 | 0.7367744 | | 4.3 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 51.06 | 0.8544344 | 0.872589 | 0.05 | 2.1 | 20 |
| Pentachlorophenol | L | 50.00 | 47.55 | 0.1195033 | 0.1362715 | | -4.9 | 20 |
| Phenanthrene | A | 50.00 | 47.67 | 1.206234 | 1.150107 | | -4.7 | 20 |
| Phenol | A | 50.00 | 49.32 | 1.491659 | 1.471449 | | -1.4 | 20 |
| Pyrene | A | 50.00 | 52.81 | 1.380107 | 1.457745 | | 5.6 | 20 |
| Pyridine | A | 50.00 | 50.27 | 1.377958 | 1.385265 | | 0.5 | 20 |
| 1,2,4-Trichlorobenzene | A | 50.00 | 46.30 | 0.3581999 | 0.3316742 | | -7.4 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 52.15 | 0.3425101 | 0.3572326 | | 4.3 | 20 |
| 2,4,5-Trichlorophenol | L | 50.00 | 48.75 | 0.3356329 | 0.3771646 | | -2.5 | 20 |
| 2-Fluorobiphenyl | A | 50.00 | 48.29 | 1.429188 | 1.380386 | | -3.4 | 20 |
| 2-Fluorophenol | A | 100.0 | 101.4 | 1.163095 | 1.179091 | | 1.4 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 50.95 | 0.3614526 | 0.3682965 | | 1.9 | 20 |
| Phenol-d6 | A | 100.0 | 97.70 | 1.434991 | 1.402014 | | -2.3 | 20 |
| Terphenyl-d14 | A | 50.00 | 52.29 | 0.8848596 | 0.925348 | | 4.6 | 20 |
| 2,4,6-Tribromophenol | A | 100.0 | 97.03 | 0.1159566 | 0.1125125 | | -3.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L35113 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L35113-TUN1 | SEQ-TUN1.D | 12/14/10 11:46 |
| Calibration Check | 0L35113-CCV1 | SEQ-CCV1.D | 12/14/10 12:13 |
| LCS | 0L14026-BS1 | 1200710.D | 12/14/10 19:50 |
| Blank | 0L14026-BLK1 | 1200709.D | 12/14/10 20:20 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/14/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 11:46 |
| Sequence: | 0L35113 | Lab Sample ID: | 0L35113-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 42 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 44.2 | PASS |
| 70 | Less than 2% of 69 | 0.732 | PASS |
| 127 | 40 - 60% of 198 | 55.7 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 6.15 | PASS |
| 275 | 10 - 30% of 198 | 28.6 | PASS |
| 365 | 1 - 200% of 198 | 3.8 | PASS |
| 441 | 0.001 - 100% of 443 | 76.3 | PASS |
| 442 | 40 - 200% of 198 | 94.5 | PASS |
| 443 | 17 - 23% of 442 | 19.4 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35113 | Injection Date: | 12/14/10 |
| Lab Sample ID: | 0L35113-CCV1 | Injection Time: | 12:13 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Acetophenone | A | 50.00 | 53.14 | 1.714419 | 1.822018 | | 6.3 | 20 | |
| Atrazine | A | 50.00 | 46.65 | 0.2293025 | 0.2139502 | | -6.7 | 20 | |
| Benzaldehyde | A | 50.00 | 32.44 | 1.057258 | 0.6859922 | | -35.1 | 20 | * |
| 1,1-Biphenyl | A | 50.00 | 47.27 | 1.647464 | 1.557432 | | -5.5 | 20 | |
| 4-Bromophenyl-phenylether | A | 50.00 | 49.49 | 0.2396007 | 0.2371434 | | -1.0 | 20 | |
| Butylbenzylphthalate | A | 50.00 | 50.63 | 0.6659619 | 0.6743513 | | 1.3 | 20 | |
| Caprolactam | A | 50.00 | 54.19 | 0.0983814 | 0.1066196 | | 8.4 | 20 | |
| Carbazole | A | 50.00 | 46.87 | 1.033588 | 0.9689839 | | -6.3 | 20 | |
| 4-Chloro-3-methylphenol | A | 50.00 | 59.05 | 0.2791833 | 0.3296942 | | 18.1 | 20 | |
| 4-Chloroaniline | A | 50.00 | 49.73 | 0.4236872 | 0.4214111 | | -0.5 | 20 | |
| Bis(2-chloroethoxy)methane | A | 50.00 | 44.75 | 0.4015206 | 0.3593649 | | -10.5 | 20 | |
| Bis(2-chloroethyl)ether | A | 50.00 | 43.33 | 1.242957 | 1.077259 | | -13.3 | 20 | |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 37.73 | 1.791162 | 1.351536 | | -24.5 | 20 | * |
| 2-Chloronaphthalene | A | 50.00 | 58.14 | 1.223416 | 1.422578 | | 16.3 | 20 | |
| 2-Chlorophenol | A | 50.00 | 48.55 | 1.320483 | 1.282151 | | -2.9 | 20 | |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 52.84 | 0.6482639 | 0.6850298 | | 5.7 | 20 | |
| Dibenzofuran | A | 50.00 | 48.58 | 1.702459 | 1.654037 | | -2.8 | 20 | |
| Di-n-butylphthalate | A | 50.00 | 54.38 | 1.274102 | 1.385739 | | 8.8 | 20 | |
| 3,3'-Dichlorobenzidine | A | 50.00 | 41.63 | 0.3901063 | 0.324795 | | -16.7 | 20 | |
| 2,4-Dichlorophenol | A | 50.00 | 56.56 | 0.2708646 | 0.3063902 | | 13.1 | 20 | |
| Diethylphthalate | A | 50.00 | 54.00 | 1.375716 | 1.485794 | | 8.0 | 20 | |
| 2,4-Dimethylphenol | A | 50.00 | 54.87 | 0.3567735 | 0.3915274 | | 9.7 | 20 | |
| Dimethyl phthalate | A | 50.00 | 50.17 | 1.360327 | 1.364883 | | 0.3 | 20 | |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 51.49 | 0.1141426 | 0.1425049 | | 3.0 | 20 | |
| 2,4-Dinitrophenol | L | 50.00 | 50.21 | 0.1317034 | 0.1566432 | 0.05 | 0.4 | 20 | |
| 2,4-Dinitrotoluene | A | 50.00 | 56.97 | 0.3873439 | 0.4413545 | | 13.9 | 20 | |
| 2,6-Dinitrotoluene | A | 50.00 | 50.90 | 0.3161974 | 0.3218858 | | 1.8 | 20 | |
| Di-n-octylphthalate | A | 50.00 | 55.74 | 1.581621 | 1.763167 | | 11.5 | 20 | |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 53.34 | 0.8698317 | 0.9278777 | | 6.7 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L35113 | Injection Date: | 12/14/10 |
| Lab Sample ID: | 0L35113-CCV1 | Injection Time: | 12:13 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Hexachlorobenzene | A | 50.00 | 50.19 | 0.2675089 | 0.2685345 | | 0.4 | 20 | |
| Hexachlorobutadiene | A | 50.00 | 56.39 | 0.1897728 | 0.2140403 | | 12.8 | 20 | |
| Hexachlorocyclopentadiene | A | 50.00 | 63.47 | 0.2719697 | 0.345236 | 0.05 | 26.9 | 20 | * |
| Hexachloroethane | A | 50.00 | 51.61 | 0.5839827 | 0.6028103 | | 3.2 | 20 | |
| Isophorone | A | 50.00 | 49.67 | 0.6532573 | 0.648962 | | -0.7 | 20 | |
| 2-Methylphenol | A | 50.00 | 47.70 | 1.129245 | 1.077234 | | -4.6 | 20 | |
| 4-Methylphenol | A | 50.00 | 50.76 | 1.146708 | 1.164237 | | 1.5 | 20 | |
| Naphthalene | A | 50.00 | 47.91 | 1.098195 | 1.052203 | | -4.2 | 20 | |
| 4-Nitroaniline | A | 50.00 | 58.93 | 0.2492193 | 0.2937526 | | 17.9 | 20 | |
| 3-Nitroaniline | A | 50.00 | 50.30 | 0.3039612 | 0.3057815 | | 0.6 | 20 | |
| 2-Nitroaniline | A | 50.00 | 66.08 | 0.3312246 | 0.4377693 | | 32.2 | 20 | * |
| Nitrobenzene | A | 50.00 | 51.58 | 0.3690184 | 0.3807127 | | 3.2 | 20 | |
| 4-Nitrophenol | L | 50.00 | 51.58 | 0.1965166 | 0.2339281 | 0.05 | 3.2 | 20 | |
| 2-Nitrophenol | A | 50.00 | 53.58 | 0.1835837 | 0.1967238 | | 7.2 | 20 | |
| N-Nitrosodiphenylamine | A | 50.00 | 47.12 | 0.7463088 | 0.7032661 | | -5.8 | 20 | |
| N-Nitroso-di-n-propylamine | A | 50.00 | 50.66 | 0.8544344 | 0.8656725 | 0.05 | 1.3 | 20 | |
| Pentachlorophenol | L | 50.00 | 51.39 | 0.1195033 | 0.1484578 | | 2.8 | 20 | |
| Phenol | A | 50.00 | 50.02 | 1.491659 | 1.492229 | | 0.04 | 20 | |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 55.18 | 0.3170295 | 0.3498989 | | 10.4 | 20 | |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 56.69 | 0.2870772 | 0.3254866 | | 13.4 | 20 | |
| 2,4,6-Trichlorophenol | A | 50.00 | 54.24 | 0.3425101 | 0.3715868 | | 8.5 | 20 | |
| 2,4,5-Trichlorophenol | L | 50.00 | 50.62 | 0.3356329 | 0.3919241 | | 1.2 | 20 | |
| 2-Fluorobiphenyl | A | 50.00 | 47.42 | 1.429188 | 1.355371 | | -5.2 | 20 | |
| 2-Fluorophenol | A | 100.0 | 94.28 | 1.163095 | 1.096621 | | -5.7 | 20 | |
| Nitrobenzene-d5 | A | 50.00 | 52.23 | 0.3614526 | 0.3775685 | | 4.5 | 20 | |
| Phenol-d6 | A | 100.0 | 94.42 | 1.434991 | 1.354914 | | -5.6 | 20 | |
| Terphenyl-d14 | A | 50.00 | 49.00 | 0.8848596 | 0.8672051 | | -2.0 | 20 | |
| 2,4,6-Tribromophenol | A | 100.0 | 116.9 | 0.1159566 | 0.1355296 | | 16.9 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# ANALYSIS SEQUENCE SUMMARY

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L36214 | Instrument: | MS-BNA3 |
| Calibration: | 0351002 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| MS Tune | 0L36214-TUN1 | SEQ-TUN1.D | 12/20/10 16:44 |
| Calibration Check | 0L36214-CCV1 | SEQ-CCV1s.D | 12/20/10 17:10 |
| 1011015-01 | 1012011-01 | 1201101.D | 12/20/10 17:56 |
| 1011015-02 | 1012011-02 | 1201102.D | 12/20/10 18:26 |
| 1011015-03 | 1012011-03 | 1201103.D | 12/20/10 18:56 |
| LCS | 0L14027-BS1 | 1201409.D | 12/20/10 19:26 |
| Blank | 0L14027-BLK1 | 1201408.D | 12/20/10 19:56 |
| LCS | 0L14028-BS1 | 1201305.D | 12/20/10 20:27 |
| Blank | 0L14028-BLK1 | 1201304.D | 12/20/10 20:57 |
| 1011022-01 | 1012013-01 | 1201301.D | 12/20/10 21:27 |
| 1011022-02 | 1012013-02 | 1201302.D | 12/20/10 21:57 |
| 1011022-03 | 1012013-03 | 1201303.D | 12/20/10 22:27 |
| 1011026-01 | 1012014-01 | 1201401.D | 12/20/10 22:58 |
| 1011026-02 | 1012014-02 | 1201402.D | 12/20/10 23:29 |
| 1011026-03 | 1012014-03 | 1201403.D | 12/20/10 23:59 |
| 1011026-04 | 1012014-04 | 1201404.D | 12/21/10 00:30 |
| 1011026-06 | 1012014-06 | 1201406.D | 12/21/10 01:00 |
| 1011026-07 | 1012014-07 | 1201407.D | 12/21/10 01:31 |
| 1011014-01 | 1012009-01 | 1200901.D | 12/21/10 02:02 |

# MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Lab File ID: | SEQ-TUN1.D | Injection Date: | 12/20/10 |
| Instrument ID: | MS-BNA3 | Injection Time: | 16:44 |
| Sequence: | 0L36214 | Lab Sample ID: | 0L36214-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 51 | 30 - 60% of 198 | 33.8 | PASS |
| 68 | Less than 2% of 69 | 0 | PASS |
| 69 | Less than 200% of 198 | 39.4 | PASS |
| 70 | Less than 2% of 69 | 0.566 | PASS |
| 127 | 40 - 60% of 198 | 49.8 | PASS |
| 197 | Less than 1% of 198 | 0 | PASS |
| 198 | Base peak, 100% relative abundance | 100 | PASS |
| 199 | 5 - 9% of 198 | 7.64 | PASS |
| 275 | 10 - 30% of 198 | 22.7 | PASS |
| 365 | 1 - 200% of 198 | 3.26 | PASS |
| 441 | 0.001 - 100% of 443 | 71.7 | PASS |
| 442 | 40 - 200% of 198 | 57 | PASS |
| 443 | 17 - 23% of 442 | 19.7 | PASS |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1s.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L36214 | Injection Date: | 12/20/10 |
| Lab Sample ID: | 0L36214-CCV1 | Injection Time: | 17:10 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 3,3'-Dichlorobenzidine | A | 50.00 | 37.12 | 0.3901063 | 0.2896268 | | -25.8 | 20 * |
| Acetophenone | A | 50.00 | 59.57 | 1.714419 | 2.042461 | | 19.1 | 20 |
| Atrazine | A | 50.00 | 65.12 | 0.2293025 | 0.2986665 | | 30.2 | 20 * |
| Benzaldehyde | A | 50.00 | 62.75 | 1.057258 | 1.326837 | | 25.5 | 20 * |
| 1,1-Biphenyl | A | 50.00 | 57.55 | 1.647464 | 1.896131 | | 15.1 | 20 |
| 4-Bromophenyl-phenylether | A | 50.00 | 66.01 | 0.2396007 | 0.3163066 | | 32.0 | 20 * |
| Butylbenzylphthalate | A | 50.00 | 48.69 | 0.6659619 | 0.6485491 | | -2.6 | 20 |
| Caprolactam | A | 50.00 | 58.52 | 0.0983814 | 0.1151436 | | 17.0 | 20 |
| Carbazole | A | 50.00 | 33.13 | 1.033588 | 0.6849096 | | -33.7 | 20 * |
| 4-Chloro-3-methylphenol | A | 50.00 | 55.56 | 0.2791833 | 0.3102025 | | 11.1 | 20 |
| 4-Chloroaniline | A | 50.00 | 39.19 | 0.4236872 | 0.332057 | | -21.6 | 20 * |
| Bis(2-chloroethoxy)methane | A | 50.00 | 65.75 | 0.4015206 | 0.527977 | | 31.5 | 20 * |
| Bis(2-chloroethyl)ether | A | 50.00 | 64.67 | 1.242957 | 1.607684 | | 29.3 | 20 * |
| 2,2'-Oxybis-1-chloropropane | A | 50.00 | 45.29 | 1.791162 | 1.622433 | | -9.4 | 20 |
| 2-Chloronaphthalene | A | 50.00 | 63.86 | 1.223416 | 1.562689 | | 27.7 | 20 * |
| 2-Chlorophenol | A | 50.00 | 48.38 | 1.320483 | 1.2778 | | -3.2 | 20 |
| 4-Chlorophenyl phenyl ether | A | 50.00 | 61.86 | 0.6482639 | 0.8019694 | | 23.7 | 20 * |
| Dibenzofuran | A | 50.00 | 43.88 | 1.702459 | 1.4942 | | -12.2 | 20 |
| Di-n-butylphthalate | A | 50.00 | 53.88 | 1.274102 | 1.3729 | | 7.8 | 20 |
| 1,4-Dichlorobenzene | A | 50.00 | 50.80 | 1.590354 | 1.615828 | | 1.6 | 20 |
| 2,4-Dichlorophenol | A | 50.00 | 55.45 | 0.2708646 | 0.3003853 | | 10.9 | 20 |
| Diethylphthalate | A | 50.00 | 48.39 | 1.375716 | 1.331468 | | -3.2 | 20 |
| 2,4-Dimethylphenol | A | 50.00 | 53.53 | 0.3567735 | 0.3819416 | | 7.1 | 20 |
| Dimethyl phthalate | A | 50.00 | 59.98 | 1.360327 | 1.632011 | | 20.0 | 20 |
| 4,6-Dinitro-2-methylphenol | L | 50.00 | 60.49 | 0.1141426 | 0.1700714 | | 21.0 | 20 * |
| 2,4-Dinitrophenol | L | 50.00 | 46.56 | 0.1317034 | 0.1426789 | 0.05 | -6.9 | 20 |
| 2,4-Dinitrotoluene | A | 50.00 | 59.75 | 0.3873439 | 0.4629076 | | 19.5 | 20 |
| 2,6-Dinitrotoluene | A | 50.00 | 69.29 | 0.3161974 | 0.4382155 | | 38.6 | 20 * |
| Di-n-octylphthalate | A | 50.00 | 49.16 | 1.581621 | 1.554907 | | -1.7 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1s.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L36214 | Injection Date: | 12/20/10 |
| Lab Sample ID: | 0L36214-CCV1 | Injection Time: | 17:10 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Bis(2-ethylhexyl)phthalate | A | 50.00 | 50.52 | 0.8698317 | 0.8788329 | | 1.0 | 20 |
| Hexachlorobenzene | A | 50.00 | 49.98 | 0.2675089 | 0.2674295 | | -0.03 | 20 |
| Hexachlorobutadiene | A | 50.00 | 76.62 | 0.1897728 | 0.2908254 | | 53.2 | 20 * |
| Hexachlorocyclopentadiene | A | 50.00 | 56.87 | 0.2719697 | 0.3093554 | 0.05 | 13.7 | 20 |
| Hexachloroethane | A | 50.00 | 52.92 | 0.5839827 | 0.6180438 | | 5.8 | 20 |
| Isophorone | A | 50.00 | 67.19 | 0.6532573 | 0.8778028 | | 34.4 | 20 * |
| 1-Methylnaphthalene | A | 50.00 | 40.14 | 0.6166441 | 0.4950531 | | -19.7 | 20 |
| 2-Methylphenol | A | 50.00 | 50.44 | 1.129245 | 1.139243 | | 0.9 | 20 |
| 4-Methylphenol | A | 50.00 | 48.30 | 1.146708 | 1.107701 | | -3.4 | 20 |
| Naphthalene | A | 50.00 | 49.13 | 1.098195 | 1.079192 | | -1.7 | 20 |
| 4-Nitroaniline | A | 50.00 | 56.54 | 0.2492193 | 0.2818219 | | 13.1 | 20 |
| 3-Nitroaniline | A | 50.00 | 31.94 | 0.3039612 | 0.1941493 | | -36.1 | 20 * |
| 2-Nitroaniline | A | 50.00 | 105.9 | 0.3312246 | 0.7018078 | | 112 | 20 * |
| Nitrobenzene | A | 50.00 | 79.69 | 0.3690184 | 0.5881195 | | 59.4 | 20 * |
| 4-Nitrophenol | L | 50.00 | 66.79 | 0.1965166 | 0.3087533 | 0.05 | 33.6 | 20 * |
| 2-Nitrophenol | A | 50.00 | 49.88 | 0.1835837 | 0.1831518 | | -0.2 | 20 |
| N-Nitrosodiphenylamine | A | 50.00 | 59.64 | 0.7463088 | 0.8901712 | | 19.3 | 20 |
| N-Nitroso-di-n-propylamine | A | 50.00 | 64.72 | 0.8544344 | 1.106008 | 0.05 | 29.4 | 20 * |
| Pentachlorophenol | L | 50.00 | 48.59 | 0.1195033 | 0.1395854 | | -2.8 | 20 |
| Phenol | A | 50.00 | 59.33 | 1.491659 | 1.770109 | | 18.7 | 20 |
| 1,2,4,5-Tetrachlorobenzene | A | 50.00 | 52.92 | 0.3170295 | 0.335548 | | 5.8 | 20 |
| 2,3,4,6-Tetrachlorophenol | A | 50.00 | 53.70 | 0.2870772 | 0.3083534 | | 7.4 | 20 |
| 2,4,6-Trichlorophenol | A | 50.00 | 69.30 | 0.3425101 | 0.4747454 | | 38.6 | 20 * |
| 2,4,5-Trichlorophenol | L | 50.00 | 60.61 | 0.3356329 | 0.4711027 | | 21.2 | 20 * |
| 2-Fluorobiphenyl | A | 50.00 | 61.10 | 1.429188 | 1.746398 | | 22.2 | 20 * |
| 2-Fluorophenol | A | 100.0 | 110.1 | 1.163095 | 1.280172 | | 10.1 | 20 |
| Nitrobenzene-d5 | A | 50.00 | 79.83 | 0.3614526 | 0.5771302 | | 59.7 | 20 * |
| Phenol-d6 | A | 100.0 | 103.9 | 1.434991 | 1.490434 | | 3.9 | 20 |
| Terphenyl-d14 | A | 50.00 | 49.05 | 0.8848596 | 0.8679971 | | -1.9 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | MS-BNA3 | Calibration: | 0351002 |
| Lab File ID: | SEQ-CCV1s.D | Calibration Date: | 12/07/10 17:31 |
| Sequence: | 0L36214 | Injection Date: | 12/20/10 |
| Lab Sample ID: | 0L36214-CCV1 | Injection Time: | 17:10 |

| | | CONC. (ug/mL) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 2,4,6-Tribromophenol | A | 100.0 | 115.0 | 0.1159566 | 0.133386 | | 15.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35113
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35113-CCV1 )** | | | Lab File ID: SEQ-CCV1.D | | | Analyzed: 12/14/10 12:13 | | | |
| 1,4-Dichlorobenzene-d4 | 488058 | 6.677 | 520490 | 6.774 | 94 | 50 - 200 | -0.0970 | +/-0.50 | |
| Naphthalene-d8 | 1693550 | 8.187 | 1864250 | 8.284 | 91 | 50 - 200 | -0.0970 | +/-0.50 | |
| Acenaphthene-d10 | 975787 | 10.332 | 1011290 | 10.429 | 96 | 50 - 200 | -0.0970 | +/-0.50 | |
| Phenanthrene-d10 | 1652418 | 12.154 | 1690574 | 12.256 | 98 | 50 - 200 | -0.1020 | +/-0.50 | |
| Chrysene-d12 | 1476924 | 15.448 | 1331643 | 15.56 | 111 | 50 - 200 | -0.1120 | +/-0.50 | |
| Perylene-d12 | 1191026 | 17.29 | 1068595 | 17.426 | 111 | 50 - 200 | -0.1360 | +/-0.50 | |
| **LCS (0L14026-BS1 )** | | | Lab File ID: 1200710.D | | | Analyzed: 12/14/10 19:50 | | | |
| 1,4-Dichlorobenzene-d4 | 532065 | 6.679 | 488058 | 6.677 | 109 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1770146 | 8.179 | 1693550 | 8.187 | 105 | 50 - 200 | -0.0080 | +/-0.50 | |
| Acenaphthene-d10 | 978872 | 10.324 | 975787 | 10.332 | 100 | 50 - 200 | -0.0080 | +/-0.50 | |
| Phenanthrene-d10 | 1533222 | 12.147 | 1652418 | 12.154 | 93 | 50 - 200 | -0.0070 | +/-0.50 | |
| Chrysene-d12 | 1237617 | 15.441 | 1476924 | 15.448 | 84 | 50 - 200 | -0.0070 | +/-0.50 | |
| Perylene-d12 | 919602 | 17.282 | 1191026 | 17.29 | 77 | 50 - 200 | -0.0080 | +/-0.50 | |
| **Blank (0L14026-BLK1 )** | | | Lab File ID: 1200709.D | | | Analyzed: 12/14/10 20:20 | | | |
| 1,4-Dichlorobenzene-d4 | 557453 | 6.677 | 488058 | 6.677 | 114 | 50 - 200 | 0.0000 | +/-0.50 | |
| Naphthalene-d8 | 1922307 | 8.182 | 1693550 | 8.187 | 114 | 50 - 200 | -0.0050 | +/-0.50 | |
| Acenaphthene-d10 | 1062415 | 10.322 | 975787 | 10.332 | 109 | 50 - 200 | -0.0100 | +/-0.50 | |
| Phenanthrene-d10 | 1666171 | 12.145 | 1652418 | 12.154 | 101 | 50 - 200 | -0.0090 | +/-0.50 | |
| Chrysene-d12 | 1282339 | 15.439 | 1476924 | 15.448 | 87 | 50 - 200 | -0.0090 | +/-0.50 | |
| Perylene-d12 | 982185 | 17.285 | 1191026 | 17.29 | 82 | 50 - 200 | -0.0050 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_010
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L36214-CCV1 )** | | | Lab File ID: SEQ-CCV1s.D | | | Analyzed: 12/20/10 17:10 | | | |
| 1,4-Dichlorobenzene-d4 | 459781 | 6.377 | 520490 | 6.774 | 88 | 50 - 200 | -0.3970 | +/-0.50 | |
| Naphthalene-d8 | 1386880 | 7.873 | 1864250 | 8.284 | 74 | 50 - 200 | -0.4110 | +/-0.50 | |
| Acenaphthene-d10 | 554089 | 10.008 | 1011290 | 10.429 | 55 | 50 - 200 | -0.4210 | +/-0.50 | |
| Phenanthrene-d10 | 737229 | 11.821 | 1690574 | 12.256 | 44 | 50 - 200 | -0.4350 | +/-0.50 | |
| Chrysene-d12 | 714666 | 15.086 | 1331643 | 15.56 | 54 | 50 - 200 | -0.4740 | +/-0.50 | |
| Perylene-d12 | 687516 | 16.865 | 1068595 | 17.426 | 64 | 50 - 200 | -0.5610 | +/-0.50 | |
| **1011015-01 (1012011-01 )** | | | Lab File ID: 1201101.D | | | Analyzed: 12/20/10 17:56 | | | |
| 1,4-Dichlorobenzene-d4 | 471930 | 6.375 | 520490 | 6.774 | 91 | 50 - 200 | -0.3990 | +/-0.50 | |
| Naphthalene-d8 | 1385343 | 7.871 | 1864250 | 8.284 | 74 | 50 - 200 | -0.4130 | +/-0.50 | |
| Acenaphthene-d10 | 523106 | 10.006 | 1011290 | 10.429 | 52 | 50 - 200 | -0.4230 | +/-0.50 | |
| Phenanthrene-d10 | 654291 | 11.824 | 1690574 | 12.256 | 39 | 50 - 200 | -0.4320 | +/-0.50 | |
| Chrysene-d12 | 674962 | 15.089 | 1331643 | 15.56 | 51 | 50 - 200 | -0.4710 | +/-0.50 | |
| Perylene-d12 | 665034 | 16.868 | 1068595 | 17.426 | 62 | 50 - 200 | -0.5580 | +/-0.50 | |
| **1011015-02 (1012011-02 )** | | | Lab File ID: 1201102.D | | | Analyzed: 12/20/10 18:26 | | | |
| 1,4-Dichlorobenzene-d4 | 464358 | 6.373 | 520490 | 6.774 | 89 | 50 - 200 | -0.4010 | +/-0.50 | |
| Naphthalene-d8 | 1336826 | 7.874 | 1864250 | 8.284 | 72 | 50 - 200 | -0.4100 | +/-0.50 | |
| Acenaphthene-d10 | 508523 | 10.004 | 1011290 | 10.429 | 50 | 50 - 200 | -0.4250 | +/-0.50 | |
| Phenanthrene-d10 | 659565 | 11.822 | 1690574 | 12.256 | 39 | 50 - 200 | -0.4340 | +/-0.50 | |
| Chrysene-d12 | 666444 | 15.087 | 1331643 | 15.56 | 50 | 50 - 200 | -0.4730 | +/-0.50 | |
| Perylene-d12 | 643352 | 16.866 | 1068595 | 17.426 | 60 | 50 - 200 | -0.5600 | +/-0.50 | |
| **1011015-03 (1012011-03 )** | | | Lab File ID: 1201103.D | | | Analyzed: 12/20/10 18:56 | | | |
| 1,4-Dichlorobenzene-d4 | 420577 | 6.377 | 520490 | 6.774 | 81 | 50 - 200 | -0.3970 | +/-0.50 | |
| Naphthalene-d8 | 1210193 | 7.873 | 1864250 | 8.284 | 65 | 50 - 200 | -0.4110 | +/-0.50 | |
| Acenaphthene-d10 | 419890 | 10.008 | 1011290 | 10.429 | 42 | 50 - 200 | -0.4210 | +/-0.50 | |
| Phenanthrene-d10 | 491108 | 11.821 | 1690574 | 12.256 | 29 | 50 - 200 | -0.4350 | +/-0.50 | |
| Chrysene-d12 | 505700 | 15.081 | 1331643 | 15.56 | 38 | 50 - 200 | -0.4790 | +/-0.50 | |
| Perylene-d12 | 515740 | 16.865 | 1068595 | 17.426 | 48 | 50 - 200 | -0.5610 | +/-0.50 | |
| **LCS (0L14027-BS1 )** | | | Lab File ID: 1201409.D | | | Analyzed: 12/20/10 19:26 | | | |
| 1,4-Dichlorobenzene-d4 | 520802 | 6.375 | 459781 | 6.377 | 113 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1481609 | 7.871 | 1386880 | 7.873 | 107 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 549804 | 10.006 | 554089 | 10.008 | 99 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 640668 | 11.819 | 737229 | 11.821 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chrysene-d12 | 619332 | 15.084 | 714666 | 15.086 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Perylene-d12 | 601976 | 16.868 | 687516 | 16.865 | 88 | 50 - 200 | 0.0030 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_010
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **Blank (0L14027-BLK1 )** | | | Lab File ID: 1201408.D | | | Analyzed: 12/20/10 19:56 | | | |
| 1,4-Dichlorobenzene-d4 | 404255 | 6.375 | 459781 | 6.377 | 88 | 50 - 200 | -0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1229945 | 7.871 | 1386880 | 7.873 | 89 | 50 - 200 | -0.0020 | +/-0.50 | |
| Acenaphthene-d10 | 491767 | 10.006 | 554089 | 10.008 | 89 | 50 - 200 | -0.0020 | +/-0.50 | |
| Phenanthrene-d10 | 645047 | 11.819 | 737229 | 11.821 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Chrysene-d12 | 618655 | 15.084 | 714666 | 15.086 | 87 | 50 - 200 | -0.0020 | +/-0.50 | |
| Perylene-d12 | 584194 | 16.863 | 687516 | 16.865 | 85 | 50 - 200 | -0.0020 | +/-0.50 | |
| **LCS (0L14028-BS1 )** | | | Lab File ID: 1201305.D | | | Analyzed: 12/20/10 20:27 | | | |
| 1,4-Dichlorobenzene-d4 | 405695 | 6.377 | 520490 | 6.774 | 78 | 50 - 200 | -0.3970 | +/-0.50 | |
| Naphthalene-d8 | 1159433 | 7.873 | 1864250 | 8.284 | 62 | 50 - 200 | -0.4110 | +/-0.50 | |
| Acenaphthene-d10 | 395539 | 10.003 | 1011290 | 10.429 | 39 | 50 - 200 | -0.4260 | +/-0.50 | |
| Phenanthrene-d10 | 408691 | 11.821 | 1690574 | 12.256 | 24 | 50 - 200 | -0.4350 | +/-0.50 | |
| Chrysene-d12 | 374474 | 15.081 | 1331643 | 15.56 | 28 | 50 - 200 | -0.4790 | +/-0.50 | |
| Perylene-d12 | 389254 | 16.865 | 1068595 | 17.426 | 36 | 50 - 200 | -0.5610 | +/-0.50 | |
| **Blank (0L14028-BLK1 )** | | | Lab File ID: 1201304.D | | | Analyzed: 12/20/10 20:57 | | | |
| 1,4-Dichlorobenzene-d4 | 376842 | 6.375 | 520490 | 6.774 | 72 | 50 - 200 | -0.3990 | +/-0.50 | |
| Naphthalene-d8 | 1031870 | 7.871 | 1864250 | 8.284 | 55 | 50 - 200 | -0.4130 | +/-0.50 | |
| Acenaphthene-d10 | 357783 | 10.006 | 1011290 | 10.429 | 35 | 50 - 200 | -0.4230 | +/-0.50 | |
| Phenanthrene-d10 | 356809 | 11.819 | 1690574 | 12.256 | 21 | 50 - 200 | -0.4370 | +/-0.50 | |
| Chrysene-d12 | 313443 | 15.084 | 1331643 | 15.56 | 24 | 50 - 200 | -0.4760 | +/-0.50 | |
| Perylene-d12 | 319537 | 16.863 | 1068595 | 17.426 | 30 | 50 - 200 | -0.5630 | +/-0.50 | |
| **1011022-01 (1012013-01 )** | | | Lab File ID: 1201301.D | | | Analyzed: 12/20/10 21:27 | | | |
| 1,4-Dichlorobenzene-d4 | 387300 | 6.378 | 520490 | 6.774 | 74 | 50 - 200 | -0.3960 | +/-0.50 | |
| Naphthalene-d8 | 1116758 | 7.873 | 1864250 | 8.284 | 60 | 50 - 200 | -0.4110 | +/-0.50 | |
| Acenaphthene-d10 | 374175 | 10.004 | 1011290 | 10.429 | 37 | 50 - 200 | -0.4250 | +/-0.50 | |
| Phenanthrene-d10 | 352100 | 11.817 | 1690574 | 12.256 | 21 | 50 - 200 | -0.4390 | +/-0.50 | |
| Chrysene-d12 | 347382 | 15.082 | 1331643 | 15.56 | 26 | 50 - 200 | -0.4780 | +/-0.50 | |
| Perylene-d12 | 377860 | 16.866 | 1068595 | 17.426 | 35 | 50 - 200 | -0.5600 | +/-0.50 | |
| **1011022-02 (1012013-02 )** | | | Lab File ID: 1201302.D | | | Analyzed: 12/20/10 21:57 | | | |
| 1,4-Dichlorobenzene-d4 | 454230 | 6.377 | 520490 | 6.774 | 87 | 50 - 200 | -0.3970 | +/-0.50 | |
| Naphthalene-d8 | 1351774 | 7.872 | 1864250 | 8.284 | 73 | 50 - 200 | -0.4120 | +/-0.50 | |
| Acenaphthene-d10 | 477811 | 10.007 | 1011290 | 10.429 | 47 | 50 - 200 | -0.4220 | +/-0.50 | |
| Phenanthrene-d10 | 543823 | 11.82 | 1690574 | 12.256 | 32 | 50 - 200 | -0.4360 | +/-0.50 | |
| Chrysene-d12 | 585785 | 15.086 | 1331643 | 15.56 | 44 | 50 - 200 | -0.4740 | +/-0.50 | |
| Perylene-d12 | 575146 | 16.865 | 1068595 | 17.426 | 54 | 50 - 200 | -0.5610 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L36214 | Instrument: | MS-BNA3 |
| | | Calibration: | 0351002 |

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011022-03 (1012013-03 )** | | | Lab File ID: 1201303.D | | | Analyzed: 12/20/10 22:27 | | | |
| 1,4-Dichlorobenzene-d4 | 417400 | 6.375 | 520490 | 6.774 | 80 | 50 - 200 | -0.3990 | +/-0.50 | |
| Naphthalene-d8 | 1247279 | 7.875 | 1864250 | 8.284 | 67 | 50 - 200 | -0.4090 | +/-0.50 | |
| Acenaphthene-d10 | 419161 | 10.005 | 1011290 | 10.429 | 41 | 50 - 200 | -0.4240 | +/-0.50 | |
| Phenanthrene-d10 | 394503 | 11.818 | 1690574 | 12.256 | 23 | 50 - 200 | -0.4380 | +/-0.50 | |
| Chrysene-d12 | 375420 | 15.083 | 1331643 | 15.56 | 28 | 50 - 200 | -0.4770 | +/-0.50 | |
| Perylene-d12 | 403827 | 16.868 | 1068595 | 17.426 | 38 | 50 - 200 | -0.5580 | +/-0.50 | |
| **1011026-01 (1012014-01 )** | | | Lab File ID: 1201401.D | | | Analyzed: 12/20/10 22:58 | | | |
| 1,4-Dichlorobenzene-d4 | 439629 | 6.376 | 520490 | 6.774 | 84 | 50 - 200 | -0.3980 | +/-0.50 | |
| Naphthalene-d8 | 1265552 | 7.872 | 1864250 | 8.284 | 68 | 50 - 200 | -0.4120 | +/-0.50 | |
| Acenaphthene-d10 | 438659 | 10.007 | 1011290 | 10.429 | 43 | 50 - 200 | -0.4220 | +/-0.50 | |
| Phenanthrene-d10 | 490373 | 11.82 | 1690574 | 12.256 | 29 | 50 - 200 | -0.4360 | +/-0.50 | |
| Chrysene-d12 | 524984 | 15.085 | 1331643 | 15.56 | 39 | 50 - 200 | -0.4750 | +/-0.50 | |
| Perylene-d12 | 523718 | 16.864 | 1068595 | 17.426 | 49 | 50 - 200 | -0.5620 | +/-0.50 | |
| **1011026-02 (1012014-02 )** | | | Lab File ID: 1201402.D | | | Analyzed: 12/20/10 23:29 | | | |
| 1,4-Dichlorobenzene-d4 | 411714 | 6.378 | 520490 | 6.774 | 79 | 50 - 200 | -0.3960 | +/-0.50 | |
| Naphthalene-d8 | 1235021 | 7.873 | 1864250 | 8.284 | 66 | 50 - 200 | -0.4110 | +/-0.50 | |
| Acenaphthene-d10 | 437217 | 10.008 | 1011290 | 10.429 | 43 | 50 - 200 | -0.4210 | +/-0.50 | |
| Phenanthrene-d10 | 445773 | 11.821 | 1690574 | 12.256 | 26 | 50 - 200 | -0.4350 | +/-0.50 | |
| Chrysene-d12 | 485897 | 15.082 | 1331643 | 15.56 | 36 | 50 - 200 | -0.4780 | +/-0.50 | |
| Perylene-d12 | 480717 | 16.866 | 1068595 | 17.426 | 45 | 50 - 200 | -0.5600 | +/-0.50 | |
| **1011026-03 (1012014-03 )** | | | Lab File ID: 1201403.D | | | Analyzed: 12/20/10 23:59 | | | |
| 1,4-Dichlorobenzene-d4 | 430856 | 6.377 | 520490 | 6.774 | 83 | 50 - 200 | -0.3970 | +/-0.50 | |
| Naphthalene-d8 | 1273442 | 7.873 | 1864250 | 8.284 | 68 | 50 - 200 | -0.4110 | +/-0.50 | |
| Acenaphthene-d10 | 472061 | 10.008 | 1011290 | 10.429 | 47 | 50 - 200 | -0.4210 | +/-0.50 | |
| Phenanthrene-d10 | 488925 | 11.821 | 1690574 | 12.256 | 29 | 50 - 200 | -0.4350 | +/-0.50 | |
| Chrysene-d12 | 442112 | 15.081 | 1331643 | 15.56 | 33 | 50 - 200 | -0.4790 | +/-0.50 | |
| Perylene-d12 | 425381 | 16.865 | 1068595 | 17.426 | 40 | 50 - 200 | -0.5610 | +/-0.50 | |
| **1011026-04 (1012014-04 )** | | | Lab File ID: 1201404.D | | | Analyzed: 12/21/10 00:30 | | | |
| 1,4-Dichlorobenzene-d4 | 691112 | 6.375 | 520490 | 6.774 | 133 | 50 - 200 | -0.3990 | +/-0.50 | |
| Naphthalene-d8 | 2078966 | 7.875 | 1864250 | 8.284 | 112 | 50 - 200 | -0.4090 | +/-0.50 | |
| Acenaphthene-d10 | 827516 | 10.01 | 1011290 | 10.429 | 82 | 50 - 200 | -0.4190 | +/-0.50 | |
| Phenanthrene-d10 | 992098 | 11.823 | 1690574 | 12.256 | 59 | 50 - 200 | -0.4330 | +/-0.50 | |
| Chrysene-d12 | 794116 | 15.088 | 1331643 | 15.56 | 60 | 50 - 200 | -0.4720 | +/-0.50 | |
| Perylene-d12 | 691782 | 16.868 | 1068595 | 17.426 | 65 | 50 - 200 | -0.5580 | +/-0.50 | |

# INTERNAL STANDARD AREA AND RT SUMMARY
## SW8270C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L36214

SDG: CTOJM16KW_010
Project: CTOJM16 Key West 2010
Instrument: MS-BNA3
Calibration: 0351002

| Internal Standard | Response | RT | Reference Response | Reference RT | Area % | Area % Limits | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| **1011026-06 (1012014-06 )** | | | Lab File ID: 1201406.D | | | Analyzed: 12/21/10 01:00 | | | |
| 1,4-Dichlorobenzene-d4 | 790506 | 6.38 | 520490 | 6.774 | 152 | 50 - 200 | -0.3940 | +/-0.50 | |
| Naphthalene-d8 | 2277303 | 7.875 | 1864250 | 8.284 | 122 | 50 - 200 | -0.4090 | +/-0.50 | |
| Acenaphthene-d10 | 905388 | 10.006 | 1011290 | 10.429 | 90 | 50 - 200 | -0.4230 | +/-0.50 | |
| Phenanthrene-d10 | 1031993 | 11.823 | 1690574 | 12.256 | 61 | 50 - 200 | -0.4330 | +/-0.50 | |
| Chrysene-d12 | 900790 | 15.084 | 1331643 | 15.56 | 68 | 50 - 200 | -0.4760 | +/-0.50 | |
| Perylene-d12 | 858309 | 16.868 | 1068595 | 17.426 | 80 | 50 - 200 | -0.5580 | +/-0.50 | |
| **1011026-07 (1012014-07 )** | | | Lab File ID: 1201407.D | | | Analyzed: 12/21/10 01:31 | | | |
| 1,4-Dichlorobenzene-d4 | 526277 | 6.379 | 520490 | 6.774 | 101 | 50 - 200 | -0.3950 | +/-0.50 | |
| Naphthalene-d8 | 1530097 | 7.874 | 1864250 | 8.284 | 82 | 50 - 200 | -0.4100 | +/-0.50 | |
| Acenaphthene-d10 | 582626 | 10.004 | 1011290 | 10.429 | 58 | 50 - 200 | -0.4250 | +/-0.50 | |
| Phenanthrene-d10 | 622085 | 11.822 | 1690574 | 12.256 | 37 | 50 - 200 | -0.4340 | +/-0.50 | |
| Chrysene-d12 | 516114 | 15.083 | 1331643 | 15.56 | 39 | 50 - 200 | -0.4770 | +/-0.50 | |
| Perylene-d12 | 494788 | 16.867 | 1068595 | 17.426 | 46 | 50 - 200 | -0.5590 | +/-0.50 | |
| **1011014-01 (1012009-01 )** | | | Lab File ID: 1200901.D | | | Analyzed: 12/21/10 02:02 | | | |
| 1,4-Dichlorobenzene-d4 | 658825 | 6.379 | 459781 | 6.377 | 143 | 50 - 200 | 0.0020 | +/-0.50 | |
| Naphthalene-d8 | 1997353 | 7.874 | 1386880 | 7.873 | 144 | 50 - 200 | 0.0010 | +/-0.50 | |
| Acenaphthene-d10 | 795525 | 10.009 | 554089 | 10.008 | 144 | 50 - 200 | 0.0010 | +/-0.50 | |
| Phenanthrene-d10 | 948130 | 11.822 | 737229 | 11.821 | 129 | 50 - 200 | 0.0010 | +/-0.50 | |
| Chrysene-d12 | 822896 | 15.083 | 714666 | 15.086 | 115 | 50 - 200 | -0.0030 | +/-0.50 | |
| Perylene-d12 | 736599 | 16.867 | 687516 | 16.865 | 107 | 50 - 200 | 0.0020 | +/-0.50 | |

# HOLDING TIME SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011008-01 | 11/02/10 00:00 | 12/01/10 08:11 | 11/10/10 11:40 | 8.53 | 14.00 | 12/10/10 23:20 | 30.49 | 40.00 | |
| 1011008-02 | 11/02/10 00:00 | 12/01/10 08:11 | 11/10/10 11:40 | 8.53 | 14.00 | 12/11/10 00:15 | 30.52 | 40.00 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV1 ) ug/L** | | | | Lab File ID: 003F0301.D | | Analyzed: 12/10/10 12:06 | | |
| Tetrachloro-m-xylene | 100.0 | 90.4 | 80 - 120 | 5.122 | 5.122 | 0.0000 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 97.2 | 80 - 120 | 4.319 | 4.319 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 86.5 | 80 - 120 | 11.227 | 11.227 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 91.8 | 80 - 120 | 9.651 | 9.651 | 0.0000 | +/-0.030 | |
| **Calibration Check (0L35009-CCV6 ) ug/L** | | | | Lab File ID: 031F3101.D | | Analyzed: 12/10/10 20:51 | | |
| Tetrachloro-m-xylene | 100.0 | 94.6 | 80 - 120 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 100 | 80 - 120 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 93.8 | 80 - 120 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 101 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Blank (0L06022-BLK1 ) ug/Kg wet** | | | | Lab File ID: 036F3601.D | | Analyzed: 12/10/10 22:24 | | |
| Tetrachloro-m-xylene | 6.667 | 104 | 70 - 125 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 125 | 70 - 125 | 4.314 | 4.319 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl | 6.667 | 104 | 55 - 130 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 6.667 | 124 | 55 - 130 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **LCS (0L06022-BS1 ) ug/Kg wet** | | | | Lab File ID: 037F3701.D | | Analyzed: 12/10/10 22:43 | | |
| Tetrachloro-m-xylene | 6.667 | 125 | 70 - 125 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 135 | 70 - 125 | 4.315 | 4.319 | -0.0040 | +/-0.030 | * |
| Decachlorobiphenyl | 6.667 | 115 | 55 - 130 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 6.667 | 135 | 55 - 130 | 9.647 | 9.651 | -0.0040 | +/-0.030 | * |
| **1011008-01 (1012009-02 ) ug/Kg dry** | | | | Lab File ID: 039F3901.D | | Analyzed: 12/10/10 23:20 | | |
| Tetrachloro-m-xylene | 7.336 | 88.4 | 70 - 125 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 7.336 | 104 | 70 - 125 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 7.336 | 91.8 | 55 - 130 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 7.336 | 101 | 55 - 130 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Matrix Spike (0L06022-MS1 ) ug/Kg dry** | | | | Lab File ID: 040F4001.D | | Analyzed: 12/10/10 23:38 | | |
| Tetrachloro-m-xylene | 7.340 | 107 | 70 - 125 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 7.340 | 117 | 70 - 125 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 7.340 | 101 | 55 - 130 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 7.340 | 113 | 55 - 130 | 9.646 | 9.651 | -0.0050 | +/-0.030 | |
| **Matrix Spike Dup (0L06022-MSD1 ) ug/Kg dry** | | | | Lab File ID: 041F4101.D | | Analyzed: 12/10/10 23:57 | | |
| Tetrachloro-m-xylene | 7.350 | 110 | 70 - 125 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 7.350 | 118 | 70 - 125 | 4.314 | 4.319 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl | 7.350 | 102 | 55 - 130 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 7.350 | 110 | 55 - 130 | 9.648 | 9.651 | -0.0030 | +/-0.030 | |

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 0L35009

SDG: CTOJM16KW_010
Project: CTOJM16 Key West 2010
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **1011008-02 (1012009-03 ) ug/Kg dry** | | | | Lab File ID: 042F4201.D | | Analyzed: 12/11/10 00:15 | | |
| Tetrachloro-m-xylene | 7.326 | 148 | 70 - 125 | 5.117 | 5.122 | -0.0050 | +/-0.030 | * |
| Tetrachloro-m-xylene [2C] | 7.326 | 148 | 70 - 125 | 4.312 | 4.319 | -0.0070 | +/-0.030 | * |
| Decachlorobiphenyl | 7.326 | 136 | 55 - 130 | 11.221 | 11.227 | -0.0060 | +/-0.030 | * |
| Decachlorobiphenyl [2C] | 7.326 | 123 | 55 - 130 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Calibration Check (0L35009-CCVB ) ug/L** | | | | Lab File ID: 043F4301.D | | Analyzed: 12/11/10 00:34 | | |
| Tetrachloro-m-xylene | 100.0 | 94.4 | 80 - 120 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 102 | 80 - 120 | 4.316 | 4.319 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 90.5 | 80 - 120 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 92.8 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Performance Mix | 0L35009-PEM1 | 002R0201.D | 12/10/10 11:47 |
| Performance Mix | 0L35009-PEM1 | 002F0201.D | 12/10/10 11:47 |
| Calibration Check | 0L35009-CCV1 | 003R0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV1 | 003F0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV3 | 005R0501.D | 12/10/10 12:44 |
| Calibration Check | 0L35009-CCV3 | 005F0501.D | 12/10/10 12:44 |
| Performance Mix | 0L35009-PEM2 | 008F0801.D | 12/10/10 13:40 |
| Performance Mix | 0L35009-PEM2 | 008R0801.D | 12/10/10 13:40 |
| Calibration Check | 0L35009-CCV6 | 031R3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV6 | 031F3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV8 | 033R3301.D | 12/10/10 21:28 |
| Calibration Check | 0L35009-CCV8 | 033F3301.D | 12/10/10 21:28 |
| Blank | 0L06022-BLK1 | 036R3601.D | 12/10/10 22:24 |
| Blank | 0L06022-BLK1 | 036F3601.D | 12/10/10 22:24 |
| LCS | 0L06022-BS1 | 037F3701.D | 12/10/10 22:43 |
| LCS | 0L06022-BS1 | 037R3701.D | 12/10/10 22:43 |
| 1011008-01 | 1012009-02 | 039F3901.D | 12/10/10 23:20 |
| 1011008-01 | 1012009-02 | 039R3901.D | 12/10/10 23:20 |
| 1011008-01 | 0L06022-MS1 | 040F4001.D | 12/10/10 23:38 |
| 1011008-01 | 0L06022-MS1 | 040R4001.D | 12/10/10 23:38 |
| 1011008-01 | 0L06022-MSD1 | 041R4101.D | 12/10/10 23:57 |
| 1011008-01 | 0L06022-MSD1 | 041F4101.D | 12/10/10 23:57 |
| 1011008-02 | 1012009-03 | 042R4201.D | 12/11/10 00:15 |
| 1011008-02 | 1012009-03 | 042F4201.D | 12/11/10 00:15 |
| Calibration Check | 0L35009-CCVB | 043F4301.D | 12/11/10 00:34 |
| Calibration Check | 0L35009-CCVB | 043R4301.D | 12/11/10 00:34 |
| Calibration Check | 0L35009-CCVD | 045R4501.D | 12/11/10 01:11 |
| Calibration Check | 0L35009-CCVD | 045F4501.D | 12/11/10 01:11 |

# PREPARATION BATCH SUMMARY

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Batch: 0L06022 Batch Matrix: Solid
Preparation: EXT_3546

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06022-BLK1 | 11/10/10 11:40 | 30.00 | 10.00 |
| LCS | 0L06022-BS1 | 11/10/10 11:40 | 30.00 | 10.00 |
| 1011008-01 | 0L06022-MS1 | 11/10/10 11:40 | 30.04 | 10.00 |
| 1011008-01 | 0L06022-MSD1 | 11/10/10 11:40 | 30.00 | 10.00 |
| 1011008-01 | 1012009-02 | 11/10/10 11:40 | 30.06 | 10.00 |
| 1011008-02 | 1012009-03 | 11/10/10 11:40 | 30.00 | 10.00 |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L06022-BLK1 File ID: 036F3601.D

Sampled: Prepared: 11/10/10 11:40 Analyzed: 12/10/10 22:24

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg wet | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 72-55-9 | 4,4'-DDE | | 0.170 | 0.340 | 0.670 | U |
| 72-54-8 | 4,4'-DDD | | 0.170 | 0.340 | 0.670 | U |
| 50-29-3 | 4,4'-DDT | | 0.170 | 0.340 | 0.670 | U |
| 309-00-2 | Aldrin | | 0.110 | 0.340 | 0.670 | U |
| 319-84-6 | alpha-BHC | | 0.110 | 0.340 | 0.670 | U |
| 5103-71-9 | alpha-Chlordane | | 0.110 | 0.340 | 0.670 | U |
| 319-85-7 | beta-BHC | | 0.110 | 0.340 | 0.670 | U |
| 319-86-8 | delta-BHC | | 0.110 | 0.340 | 0.670 | U |
| 60-57-1 | Dieldrin | | 0.170 | 0.340 | 0.670 | U |
| 959-98-8 | Endosulfan I | | 0.110 | 0.340 | 0.670 | U |
| 33213-65-9 | Endosulfan II | | 0.170 | 0.340 | 0.670 | U |
| 1031-07-8 | Endosulfan sulfate | | 0.170 | 0.340 | 0.670 | U |
| 72-20-8 | Endrin | | 0.170 | 0.340 | 0.670 | U |
| 7421-93-4 | Endrin aldehyde | | 0.170 | 0.340 | 0.670 | U |
| 53494-70-5 | Endrin ketone | | 0.170 | 0.340 | 0.670 | U |
| 58-89-9 | gamma-BHC (Lindane) | | 0.110 | 0.340 | 0.670 | U |
| 5103-74-2 | gamma-Chlordane | | 0.110 | 0.340 | 0.670 | U |
| 76-44-8 | Heptachlor | | 0.110 | 0.340 | 0.670 | U |
| 1024-57-3 | Heptachlor epoxide | | 0.110 | 0.340 | 0.670 | U |
| 72-43-5 | Methoxychlor | | 0.110 | 0.340 | 0.670 | U |
| 8001-35-2 | Toxaphene | | 11.0 | 22.0 | 33.0 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg wet) | CONC (ug/Kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 6.667 | 6.956 | 104 | 70 - 125 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 8.342 | 125 | 70 - 125 | |
| Decachlorobiphenyl | 6.667 | 6.928 | 104 | 55 - 130 | |
| Decachlorobiphenyl [2C] | 6.667 | 8.284 | 124 | 55 - 130 | |

* Values outside of QC limits

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L06022 | Laboratory ID: | 0L06022-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **4,4'-DDE** | **16.67** | **21.61** | **130** | **70 - 125** |
| **4,4'-DDE [2C]** | **16.67** | **22.38** | **134** | **70 - 125** |
| 4,4'-DDD | 16.67 | 22.11 | 133 | 30 - 135 |
| **4,4'-DDD [2C]** | **16.67** | **22.94** | **138** | **30 - 135** |
| **4,4'-DDT** | **16.67** | **23.93** | **144** | **45 - 140** |
| **4,4'-DDT [2C]** | **16.67** | **24.40** | **146** | **45 - 140** |
| Aldrin | 16.67 | 23.24 | 139 | 45 - 140 |
| **Aldrin [2C]** | **16.67** | **23.90** | **143** | **45 - 140** |
| **alpha-BHC** | **16.67** | **23.99** | **144** | **60 - 125** |
| **alpha-BHC [2C]** | **16.67** | **25.46** | **153** | **60 - 125** |
| **alpha-Chlordane** | **16.67** | **22.09** | **133** | **65 - 120** |
| **alpha-Chlordane [2C]** | **16.67** | **22.13** | **133** | **65 - 120** |
| **beta-BHC** | **16.67** | **21.48** | **129** | **60 - 125** |
| **beta-BHC [2C]** | **16.67** | **23.29** | **140** | **60 - 125** |
| **delta-BHC** | **16.67** | **21.90** | **131** | **55 - 130** |
| **delta-BHC [2C]** | **16.67** | **24.30** | **146** | **55 - 130** |
| **Dieldrin** | **16.67** | **23.38** | **140** | **65 - 125** |
| **Dieldrin [2C]** | **16.67** | **23.32** | **140** | **65 - 125** |
| Endosulfan I | 16.67 | 22.36 | 134 | 15 - 135 |
| Endosulfan I [2C] | 16.67 | 22.42 | 135 | 15 - 135 |
| Endosulfan II | 16.67 | 21.21 | 127 | 35 - 140 |
| Endosulfan II [2C] | 16.67 | 22.51 | 135 | 35 - 140 |
| Endosulfan sulfate | 16.67 | 21.25 | 127 | 60 - 135 |
| **Endosulfan sulfate [2C]** | **16.67** | **23.18** | **139** | **60 - 135** |
| **Endrin** | **16.67** | **25.36** | **152** | **60 - 135** |
| **Endrin [2C]** | **16.67** | **25.79** | **155** | **60 - 135** |
| Endrin aldehyde | 16.67 | 16.94 | 102 | 35 - 145 |
| Endrin aldehyde [2C] | 16.67 | 18.04 | 108 | 35 - 145 |
| Endrin ketone | 16.67 | 20.65 | 124 | 65 - 135 |
| Endrin ketone [2C] | 16.67 | 22.39 | 134 | 65 - 135 |

# LCS / LCS DUPLICATE RECOVERY

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Solid | | |
| Batch: | 0L06022 | Laboratory ID: | 0L06022-BS1 |
| Preparation: | EXT_3546 | Initial/Final: | 30 g / 10 mL |

| ANALYTE | SPIKE ADDED (ug/Kg wet) | LCS CONCENTRATION (ug/Kg wet) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| **gamma-BHC (Lindane)** | **16.67** | **23.78** | **143** | **60 - 125** |
| **gamma-BHC (Lindane) [2C]** | **16.67** | **24.49** | **147** | **60 - 125** |
| **gamma-Chlordane** | **16.67** | **21.82** | **131** | **65 - 125** |
| **gamma-Chlordane [2C]** | **16.67** | **22.15** | **133** | **65 - 125** |
| **Heptachlor** | **16.67** | **25.42** | **152** | **50 - 140** |
| **Heptachlor [2C]** | **16.67** | **25.37** | **152** | **50 - 140** |
| **Heptachlor epoxide** | **16.67** | **23.23** | **139** | **65 - 130** |
| **Heptachlor epoxide [2C]** | **16.67** | **23.63** | **142** | **65 - 130** |
| Methoxychlor | 16.67 | 22.77 | 137 | 55 - 145 |
| Methoxychlor [2C] | 16.67 | 23.61 | 142 | 55 - 145 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011008-01**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Solid

Batch: 0L06022

% Solids: 90.70

SDG: CTOJM16KW_010

Project: CTOJM16 Key West 2010

Source Sample Name: **1012009-02**

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| 4,4'-DDE | 18.35 | 0.8575 | 22.70 | 119 | | 70 - 125 |
| 4,4'-DDE [2C] | 18.35 | ND | 22.37 | 122 | | 70 - 125 |
| 4,4'-DDD | 18.35 | ND | 22.31 | 122 | | 30 - 135 |
| 4,4'-DDD [2C] | 18.35 | ND | 22.63 | 123 | | 30 - 135 |
| 4,4'-DDT | 18.35 | ND | 25.88 | 141 | * | 45 - 140 |
| 4,4'-DDT [2C] | 18.35 | ND | 25.92 | 141 | * | 45 - 140 |
| Aldrin | 18.35 | ND | 22.94 | 125 | | 45 - 140 |
| Aldrin [2C] | 18.35 | ND | 21.83 | 119 | | 45 - 140 |
| alpha-BHC | 18.35 | ND | 23.96 | 131 | * | 60 - 125 |
| alpha-BHC [2C] | 18.35 | 0.1940 | 24.96 | 135 | * | 60 - 125 |
| alpha-Chlordane | 18.35 | ND | 22.08 | 120 | | 65 - 120 |
| alpha-Chlordane [2C] | 18.35 | 9.991 | 28.35 | 100 | | 65 - 120 |
| beta-BHC | 18.35 | 0.5716 | 22.22 | 118 | | 60 - 125 |
| beta-BHC [2C] | 18.35 | 0.9725 | 24.29 | 127 | * | 60 - 125 |
| delta-BHC | 18.35 | ND | 22.15 | 121 | | 55 - 130 |
| delta-BHC [2C] | 18.35 | ND | 24.23 | 132 | * | 55 - 130 |
| Dieldrin | 18.35 | ND | 23.20 | 126 | * | 65 - 125 |
| Dieldrin [2C] | 18.35 | ND | 21.71 | 118 | | 65 - 125 |
| Endosulfan I | 18.35 | 0.8017 | 22.83 | 120 | | 15 - 135 |
| Endosulfan I [2C] | 18.35 | ND | 22.38 | 122 | | 15 - 135 |
| Endosulfan II | 18.35 | 0.6738 | 21.68 | 114 | | 35 - 140 |
| Endosulfan II [2C] | 18.35 | 0.3776 | 22.34 | 120 | | 35 - 140 |
| Endosulfan sulfate | 18.35 | ND | 21.14 | 115 | | 60 - 135 |
| Endosulfan sulfate [2C] | 18.35 | ND | 24.20 | 132 | | 60 - 135 |
| Endrin | 18.35 | ND | 26.60 | 145 | * | 60 - 135 |
| Endrin [2C] | 18.35 | ND | 26.60 | 145 | * | 60 - 135 |
| Endrin aldehyde | 18.35 | ND | 16.30 | 88.8 | | 35 - 145 |
| Endrin aldehyde [2C] | 18.35 | ND | 17.03 | 92.8 | | 35 - 145 |
| Endrin ketone | 18.35 | 0.4167 | 19.54 | 104 | | 65 - 135 |
| Endrin ketone [2C] | 18.35 | ND | 21.95 | 120 | | 65 - 135 |
| gamma-BHC (Lindane) | 18.35 | 0.4243 | 24.10 | 129 | * | 60 - 125 |
| gamma-BHC (Lindane) [2C] | 18.35 | ND | 24.48 | 133 | * | 60 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011008-01**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L06022

% Solids: 90.70

Source Sample Name: **1012009-02**

| ANALYTE | SPIKE ADDED (ug/Kg dry) | SAMPLE CONCENTRATION (ug/Kg dry) | MS CONCENTRATION (ug/Kg dry) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| gamma-Chlordane | 18.35 | 5.952 | 25.84 | 108 | | 65 - 125 |
| gamma-Chlordane [2C] | 18.35 | ND | 21.12 | 115 | | 65 - 125 |
| Heptachlor | 18.35 | ND | 27.26 | 149 | * | 50 - 140 |
| Heptachlor [2C] | 18.35 | 0.1891 | 26.35 | 143 | * | 50 - 140 |
| Heptachlor epoxide | 18.35 | ND | 22.79 | 124 | | 65 - 130 |
| Heptachlor epoxide [2C] | 18.35 | ND | 23.44 | 128 | | 65 - 130 |
| Methoxychlor | 18.35 | ND | 24.97 | 136 | | 55 - 145 |
| Methoxychlor [2C] | 18.35 | ND | 26.28 | 143 | | 55 - 145 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011008-01**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Solid

Batch: 0L06022

% Solids: 90.70

SDG: CTOJM16KW_010

Project: CTOJM16 Key West 2010

Source Sample Name: **1012009-02**

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 18.38 | 23.17 | 121 | 2.04 | | 30 | 70 - 125 |
| 4,4'-DDE [2C] | 18.38 | 23.24 | 126 | 3.80 | * | 30 | 70 - 125 |
| 4,4'-DDD | 18.38 | 22.95 | 125 | 2.85 | | 30 | 30 - 135 |
| 4,4'-DDD [2C] | 18.38 | 23.29 | 127 | 2.89 | | 30 | 30 - 135 |
| 4,4'-DDT | 18.38 | 26.64 | 145 | 2.90 | * | 30 | 45 - 140 |
| 4,4'-DDT [2C] | 18.38 | 26.61 | 145 | 2.63 | * | 30 | 45 - 140 |
| Aldrin | 18.38 | 24.55 | 134 | 6.75 | | 30 | 45 - 140 |
| Aldrin [2C] | 18.38 | 23.14 | 126 | 5.85 | | 30 | 45 - 140 |
| alpha-BHC | 18.38 | 25.58 | 139 | 6.54 | * | 30 | 60 - 125 |
| alpha-BHC [2C] | 18.38 | 26.73 | 144 | 6.83 | * | 30 | 60 - 125 |
| alpha-Chlordane | 18.38 | 22.82 | 124 | 3.31 | * | 30 | 65 - 120 |
| alpha-Chlordane [2C] | 18.38 | 25.42 | 84.0 | 10.9 | | 30 | 65 - 120 |
| beta-BHC | 18.38 | 23.54 | 125 | 5.76 | | 30 | 60 - 125 |
| beta-BHC [2C] | 18.38 | 25.67 | 134 | 5.49 | * | 30 | 60 - 125 |
| delta-BHC | 18.38 | 23.56 | 128 | 6.17 | | 30 | 55 - 130 |
| delta-BHC [2C] | 18.38 | 25.61 | 139 | 5.54 | * | 30 | 55 - 130 |
| Dieldrin | 18.38 | 24.17 | 132 | 4.11 | * | 30 | 65 - 125 |
| Dieldrin [2C] | 18.38 | 22.85 | 124 | 5.12 | | 30 | 65 - 125 |
| Endosulfan I | 18.38 | 24.11 | 127 | 5.47 | | 30 | 15 - 135 |
| Endosulfan I [2C] | 18.38 | 23.28 | 127 | 3.92 | | 30 | 15 - 135 |
| Endosulfan II | 18.38 | 22.07 | 116 | 1.77 | | 30 | 35 - 140 |
| Endosulfan II [2C] | 18.38 | 23.46 | 126 | 4.92 | | 30 | 35 - 140 |
| Endosulfan sulfate | 18.38 | 22.91 | 125 | 8.02 | | 30 | 60 - 135 |
| Endosulfan sulfate [2C] | 18.38 | 24.99 | 136 | 3.23 | * | 30 | 60 - 135 |
| Endrin | 18.38 | 27.74 | 151 | 4.21 | * | 30 | 60 - 135 |
| Endrin [2C] | 18.38 | 27.76 | 151 | 4.26 | * | 30 | 60 - 135 |
| Endrin aldehyde | 18.38 | 16.97 | 92.3 | 4.03 | | 30 | 35 - 145 |
| Endrin aldehyde [2C] | 18.38 | 17.72 | 96.4 | 3.95 | | 30 | 35 - 145 |
| Endrin ketone | 18.38 | 20.32 | 108 | 3.88 | | 30 | 65 - 135 |
| Endrin ketone [2C] | 18.38 | 22.70 | 124 | 3.35 | | 30 | 65 - 135 |
| gamma-BHC (Lindane) | 18.38 | 26.42 | 141 | 9.16 | * | 30 | 60 - 125 |
| gamma-BHC (Lindane) [2C] | 18.38 | 25.98 | 141 | 5.96 | * | 30 | 60 - 125 |
| gamma-Chlordane | 18.38 | 23.96 | 98.0 | 7.55 | | 30 | 65 - 125 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW8081A**

**1011008-01**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Solid

Batch: 0L06022

% Solids: 90.70

Source Sample Name: **1012009-02**

| ANALYTE | SPIKE ADDED (ug/Kg dry) | MSD CONCENTRATION (ug/Kg dry) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| gamma-Chlordane [2C] | 18.38 | 22.22 | 121 | 5.10 | | 30 | 65 - 125 |
| Heptachlor | 18.38 | 29.03 | 158 | 6.27 | * | 30 | 50 - 140 |
| Heptachlor [2C] | 18.38 | 27.58 | 149 | 4.55 | * | 30 | 50 - 140 |
| Heptachlor epoxide | 18.38 | 24.29 | 132 | 6.36 | * | 30 | 65 - 130 |
| Heptachlor epoxide [2C] | 18.38 | 24.67 | 134 | 5.12 | * | 30 | 65 - 130 |
| Methoxychlor | 18.38 | 25.51 | 139 | 2.12 | | 30 | 55 - 145 |
| Methoxychlor [2C] | 18.38 | 26.98 | 147 | 2.65 | * | 30 | 55 - 145 |

# INITIAL CALIBRATION STANDARDS

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011R1101.D | 11/19/10 15:56 |
| 10G0172 | Toxaphene CAL1 @2000ppb | 0K32715-CAL7 | 011F1101.D | 11/19/10 15:56 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012F1201.D | 11/19/10 16:14 |
| 10G0173 | Toxaphene CAL2 @1000ppb | 0K32715-CAL8 | 012R1201.D | 11/19/10 16:14 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013F1301.D | 11/19/10 16:33 |
| 10G0175 | Toxaphene CAL3 @750ppb | 0K32715-CAL9 | 013R1301.D | 11/19/10 16:33 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014F1401.D | 11/19/10 16:52 |
| 10G0176 | Toxaphene CAL4 @500ppb | 0K32715-CALA | 014R1401.D | 11/19/10 16:52 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015F1501.D | 11/19/10 17:10 |
| 10G0177 | Toxaphene CAL5 @250ppb | 0K32715-CALB | 015R1501.D | 11/19/10 17:10 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016R1601.D | 11/19/10 17:29 |
| 10G0178 | Toxaphene CAL1 (S.P.) @100ppb | 0K32715-CALC | 016F1601.D | 11/19/10 17:29 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_010

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 200 | 37513.33 | 100 | 33730.93 | 50 | 34388.64 | 25 | 33301.96 | 10 | 32327.8 | 5 | 31612 |
| 4,4'-DDE [2C] | 200 | 18257.3 | 100 | 18338.82 | 50 | 20151.58 | 25 | 21368.44 | 10 | 22221.1 | 5 | 22326 |
| 4,4'-DDD | 200 | 31518.02 | 100 | 28321.8 | 50 | 28748.18 | 25 | 27328.36 | 10 | 26325.1 | 5 | 25505.8 |
| 4,4'-DDD [2C] | 200 | 16513.82 | 100 | 16419.14 | 50 | 17910.14 | 25 | 18290.88 | 10 | 19251.5 | 5 | 19909 |
| 4,4'-DDT | 200 | 31197.69 | 100 | 26071.43 | 50 | 25942.18 | 25 | 24957.56 | 10 | 22888.2 | 5 | 22055.6 |
| 4,4'-DDT [2C] | 200 | 15542.91 | 100 | 14446.41 | 50 | 15476.54 | 25 | 15916.8 | 10 | 16093.1 | 5 | 15635.8 |
| Aldrin | 200 | 40767.94 | 100 | 37299.45 | 50 | 37537.34 | 25 | 36051.2 | 10 | 34777 | 5 | 33953 |
| Aldrin [2C] | 200 | 19617.71 | 100 | 20294.77 | 50 | 21953.9 | 25 | 22503.8 | 10 | 23712.4 | 5 | 24651.6 |
| alpha-BHC | 200 | 47167.84 | 100 | 42289.44 | 50 | 42861.2 | 25 | 40287.04 | 10 | 38376.7 | 5 | 36953 |
| alpha-BHC [2C] | 200 | 25165.1 | 100 | 24453.88 | 50 | 26202.34 | 25 | 25862.96 | 10 | 26405.8 | 5 | 26809.2 |
| alpha-Chlordane | 200 | 36000.86 | 100 | 32733.34 | 50 | 33417.76 | 25 | 32553 | 10 | 32043.1 | 5 | 31429.4 |
| alpha-Chlordane [2C] | 200 | 18546.3 | 100 | 18517.16 | 50 | 20113.24 | 25 | 21125.88 | 10 | 22565.8 | 5 | 23774.2 |
| beta-BHC | 200 | 16661.48 | 100 | 15277.28 | 50 | 15642.24 | 25 | 15286.52 | 10 | 15203.2 | 5 | 15623.6 |
| beta-BHC [2C] | 200 | 9426.75 | 100 | 8924.51 | 50 | 9284.36 | 25 | 9176.12 | 10 | 9017.8 | 5 | 9404.6 |
| delta-BHC | 200 | 39647.29 | 100 | 35123.66 | 50 | 36041.72 | 25 | 33068.12 | 10 | 31230.7 | 5 | 29532.2 |
| delta-BHC [2C] | 200 | 21031.8 | 100 | 19998.31 | 50 | 21501.58 | 25 | 20358.56 | 10 | 19943.4 | 5 | 19848.8 |
| Dieldrin | 200 | 38496.14 | 100 | 34608.85 | 50 | 35074.08 | 25 | 33560.2 | 10 | 32585.1 | 5 | 31793.2 |
| Dieldrin [2C] | 200 | 19662.69 | 100 | 19504.01 | 50 | 21226.14 | 25 | 22038.96 | 10 | 23246.3 | 5 | 24006.8 |
| Endosulfan I | 200 | 35075.56 | 100 | 31932.15 | 50 | 32708.06 | 25 | 31682.4 | 10 | 31095.7 | 5 | 30242.2 |
| Endosulfan I [2C] | 200 | 17977.4 | 100 | 18059.23 | 50 | 20018.4 | 25 | 21082.56 | 10 | 21729.4 | 5 | 22837.4 |
| Endosulfan II | 200 | 32415.48 | 100 | 29233.23 | 50 | 29896.28 | 25 | 29325.6 | 10 | 28538 | 5 | 28919 |
| Endosulfan II [2C] | 200 | 16730.24 | 100 | 16636.04 | 50 | 17930.88 | 25 | 19021.6 | 10 | 20551.5 | 5 | 21079 |
| Endosulfan sulfate | 200 | 28655.84 | 100 | 25484.04 | 50 | 26055.9 | 25 | 24786.24 | 10 | 24957.3 | 5 | 24179.6 |
| Endosulfan sulfate [2C] | 200 | 15083.04 | 100 | 14820.32 | 50 | 15997.64 | 25 | 16290.4 | 10 | 17059 | 5 | 17493.4 |
| Endrin | 200 | 28873.78 | 100 | 24723.13 | 50 | 25349.54 | 25 | 25170.56 | 10 | 23415.3 | 5 | 23110.4 |
| Endrin [2C] | 200 | 15221.71 | 100 | 14379.04 | 50 | 15716.62 | 25 | 16628 | 10 | 17495.9 | 5 | 18016.8 |
| Endrin aldehyde | 200 | 26063.46 | 100 | 23971.36 | 50 | 23857.48 | 25 | 23122.04 | 10 | 23556.1 | 5 | 23707.8 |
| Endrin aldehyde [2C] | 200 | 14492.01 | 100 | 14601.62 | 50 | 15568 | 25 | 16051.84 | 10 | 17817.6 | 5 | 18427.6 |
| Endrin ketone | 200 | 37851.39 | 100 | 34261.26 | 50 | 34676.24 | 25 | 33902.16 | 10 | 33884.3 | 5 | 32911.2 |
| Endrin ketone [2C] | 200 | 19946.04 | 100 | 19965.76 | 50 | 21730.44 | 25 | 22773.36 | 10 | 24427.3 | 5 | 25021 |
| gamma-BHC (Lindane) | 200 | 41557.52 | 100 | 37289.21 | 50 | 37763.9 | 25 | 35892.32 | 10 | 34220.6 | 5 | 33185.8 |

# INITIAL CALIBRATION DATA

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 200 | 22560.79 | 100 | 22019.83 | 50 | 23457.66 | 25 | 23621.84 | 10 | 24180.3 | 5 | 24926.2 |
| gamma-Chlordane | 200 | 37678.01 | 100 | 34110.69 | 50 | 34834.82 | 25 | 33600.4 | 10 | 32976.7 | 5 | 32060.8 |
| gamma-Chlordane [2C] | 200 | 18741.21 | 100 | 18638.62 | 50 | 20193.42 | 25 | 21045.52 | 10 | 22343.3 | 5 | 23488.2 |
| Heptachlor | 200 | 35954.45 | 100 | 31207.27 | 50 | 31243.86 | 25 | 29497.2 | 10 | 27414.9 | 5 | 26224.6 |
| Heptachlor [2C] | 200 | 19133.32 | 100 | 18879.69 | 50 | 20417.26 | 25 | 21733.52 | 10 | 22929.1 | 5 | 23873 |
| Heptachlor epoxide | 200 | 37029.96 | 100 | 33434.91 | 50 | 34511.94 | 25 | 33438.32 | 10 | 33013.2 | 5 | 32270.8 |
| Heptachlor epoxide [2C] | 200 | 18183.73 | 100 | 18799.95 | 50 | 20518.56 | 25 | 20888.88 | 10 | 22351.8 | 5 | 23774.8 |
| Methoxychlor | 200 | 14869.25 | 100 | 12633.48 | 50 | 12981.86 | 25 | 12793.56 | 10 | 12299.8 | 5 | 11342.6 |
| Methoxychlor [2C] | 200 | 7716.485 | 100 | 7239.67 | 50 | 8103.94 | 25 | 8548.48 | 10 | 9115.5 | 5 | 9132.6 |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 200 | 30396.38 | 100 | 28270.71 | 50 | 28442.38 | 25 | 28656.12 | 10 | 28496 | 5 | 28638.4 |
| Tetrachloro-m-xylene [2C] | 200 | 19072.68 | 100 | 19248.97 | 50 | 20109.36 | 25 | 20564.48 | 10 | 22076.7 | 5 | 22878.2 |
| Decachlorobiphenyl | 200 | 29960.3 | 100 | 27340.04 | 50 | 28005.84 | 25 | 29560.24 | 10 | 31558.5 | 5 | 31300.2 |
| Decachlorobiphenyl [2C] | 200 | 14811.62 | 100 | 14456.54 | 50 | 15435.18 | 25 | 16877.6 | 10 | 18462 | 5 | 19614.2 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | 1 | 31951 | | | | | | | | | | |
| 4,4'-DDE [2C] | 1 | 24738 | | | | | | | | | | |
| 4,4'-DDD | 1 | 25907 | | | | | | | | | | |
| 4,4'-DDD [2C] | 1 | 22562 | | | | | | | | | | |
| 4,4'-DDT | 1 | 20072 | | | | | | | | | | |
| 4,4'-DDT [2C] | 1 | 16995 | | | | | | | | | | |
| Aldrin | 1 | 32644 | | | | | | | | | | |
| Aldrin [2C] | 1 | 25861 | | | | | | | | | | |
| alpha-BHC | 1 | 34933 | | | | | | | | | | |
| alpha-BHC [2C] | 1 | 28769 | | | | | | | | | | |
| alpha-Chlordane | 1 | 31571 | | | | | | | | | | |
| alpha-Chlordane [2C] | 1 | 27087 | | | | | | | | | | |
| beta-BHC | 1 | 17234 | | | | | | | | | | |
| beta-BHC [2C] | 1 | 12377 | | | | | | | | | | |
| delta-BHC | 1 | 30132 | | | | | | | | | | |
| delta-BHC [2C] | 1 | 22251 | | | | | | | | | | |
| Dieldrin | 1 | 31152 | | | | | | | | | | |
| Dieldrin [2C] | 1 | 26944 | | | | | | | | | | |
| Endosulfan I | 1 | 29367 | | | | | | | | | | |
| Endosulfan I [2C] | 1 | 24840 | | | | | | | | | | |
| Endosulfan II | 1 | 29335 | | | | | | | | | | |
| Endosulfan II [2C] | 1 | 23869 | | | | | | | | | | |
| Endosulfan sulfate | 1 | 25200 | | | | | | | | | | |
| Endosulfan sulfate [2C] | 1 | 20799 | | | | | | | | | | |
| Endrin | 1 | 22503 | | | | | | | | | | |
| Endrin [2C] | 1 | 19839 | | | | | | | | | | |
| Endrin aldehyde | 1 | 24485 | | | | | | | | | | |
| Endrin aldehyde [2C] | 1 | 22312 | | | | | | | | | | |
| Endrin ketone | 1 | 34970 | | | | | | | | | | |
| Endrin ketone [2C] | 1 | 28984 | | | | | | | | | | |
| gamma-BHC (Lindane) | 1 | 32313 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | 1 | 27325 | | | | | | | | | | |
| gamma-Chlordane | 1 | 32467 | | | | | | | | | | |
| gamma-Chlordane [2C] | 1 | 26897 | | | | | | | | | | |
| Heptachlor | 1 | 26518 | | | | | | | | | | |
| Heptachlor [2C] | 1 | 24813 | | | | | | | | | | |
| Heptachlor epoxide | 1 | 32094 | | | | | | | | | | |
| Heptachlor epoxide [2C] | 1 | 26915 | | | | | | | | | | |
| Methoxychlor | 1 | 12547 | | | | | | | | | | |
| Methoxychlor [2C] | 1 | 11049 | | | | | | | | | | |
| Chlordane (tech) | | | | | | | | | | | | |
| Chlordane (1) | | | | | | | | | | | | |
| Chlordane (2) | | | | | | | | | | | | |
| Chlordane (3) | | | | | | | | | | | | |
| Chlordane (4) | | | | | | | | | | | | |
| Chlordane (5) | | | | | | | | | | | | |
| Chlordane (tech) [2C] | | | | | | | | | | | | |
| Chlordane (1) [2C] | | | | | | | | | | | | |
| Chlordane (2) [2C] | | | | | | | | | | | | |
| Chlordane (3) [2C] | | | | | | | | | | | | |
| Chlordane (4) [2C] | | | | | | | | | | | | |
| Chlordane (5) [2C] | | | | | | | | | | | | |
| Toxaphene (1) | | | 100 | 1011.74 | 250 | 1138.296 | 500 | 1329.082 | 750 | 1350.244 | 1000 | 1473.986 |
| Toxaphene (2) | | | 100 | 355.43 | 250 | 435.488 | 500 | 522.674 | 750 | 553.6027 | 1000 | 624.948 |
| Toxaphene (3) | | | 100 | 802.53 | 250 | 873.748 | 500 | 1043.166 | 750 | 1063.331 | 1000 | 1152.338 |
| Toxaphene (4) | | | 100 | 764.03 | 250 | 1017.328 | 500 | 1190.532 | 750 | 1224.499 | 1000 | 1393.516 |
| Toxaphene (5) | | | 100 | 505.48 | 250 | 515.472 | 500 | 613.14 | 750 | 609.9133 | 1000 | 706.184 |
| Toxaphene (1) [2C] | | | 100 | 1099.76 | 250 | 1365.06 | 500 | 1316.87 | 750 | 1459.457 | 1000 | 1382.324 |
| Toxaphene (2) [2C] | | | 100 | 281.3 | 250 | 293.268 | 500 | 391.276 | 750 | 486.7773 | 1000 | 404.162 |
| Toxaphene (3) [2C] | | | 100 | 795.76 | 250 | 866.04 | 500 | 961.43 | 750 | 762.968 | 1000 | 1000.542 |
| Toxaphene (4) [2C] | | | 100 | 538.2 | 250 | 581.584 | 500 | 642.586 | 750 | 715.0347 | 1000 | 671.258 |
| Toxaphene (5) [2C] | | | 100 | 267.14 | 250 | 287.752 | 500 | 344.098 | 750 | 400.944 | 1000 | 369.859 |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | 1 | 28456 | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | 1 | 25708 | | | | | | | | | | |
| Decachlorobiphenyl | 1 | 31973 | | | | | | | | | | |
| Decachlorobiphenyl [2C] | 1 | 22932 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | | | | | | | | | | | | |
| 4,4'-DDE [2C] | | | | | | | | | | | | |
| 4,4'-DDD | | | | | | | | | | | | |
| 4,4'-DDD [2C] | | | | | | | | | | | | |
| 4,4'-DDT | | | | | | | | | | | | |
| 4,4'-DDT [2C] | | | | | | | | | | | | |
| Aldrin | | | | | | | | | | | | |
| Aldrin [2C] | | | | | | | | | | | | |
| alpha-BHC | | | | | | | | | | | | |
| alpha-BHC [2C] | | | | | | | | | | | | |
| alpha-Chlordane | | | | | | | | | | | | |
| alpha-Chlordane [2C] | | | | | | | | | | | | |
| beta-BHC | | | | | | | | | | | | |
| beta-BHC [2C] | | | | | | | | | | | | |
| delta-BHC | | | | | | | | | | | | |
| delta-BHC [2C] | | | | | | | | | | | | |
| Dieldrin | | | | | | | | | | | | |
| Dieldrin [2C] | | | | | | | | | | | | |
| Endosulfan I | | | | | | | | | | | | |
| Endosulfan I [2C] | | | | | | | | | | | | |
| Endosulfan II | | | | | | | | | | | | |
| Endosulfan II [2C] | | | | | | | | | | | | |
| Endosulfan sulfate | | | | | | | | | | | | |
| Endosulfan sulfate [2C] | | | | | | | | | | | | |
| Endrin | | | | | | | | | | | | |
| Endrin [2C] | | | | | | | | | | | | |
| Endrin aldehyde | | | | | | | | | | | | |
| Endrin aldehyde [2C] | | | | | | | | | | | | |
| Endrin ketone | | | | | | | | | | | | |
| Endrin ketone [2C] | | | | | | | | | | | | |
| gamma-BHC (Lindane) | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | | | 5 | 2280.04 | 10 | 2255.94 | 20 | 2254.73 | 50 | 2214.676 | 100 | 2349.214 |
| Chlordane (1) | | | 5 | 4651.4 | 10 | 4498 | 20 | 4586.1 | 50 | 4440.14 | 100 | 4695.65 |
| Chlordane (2) | | | 5 | 961 | 10 | 953.3 | 20 | 1010.75 | 50 | 1015.74 | 100 | 1073.7 |
| Chlordane (3) | | | 5 | 924.8 | 10 | 1165.8 | 20 | 984 | 50 | 956.96 | 100 | 1030.14 |
| Chlordane (4) | | | 5 | 3814.6 | 10 | 3608.6 | 20 | 3721.45 | 50 | 3693.02 | 100 | 3932.96 |
| Chlordane (5) | | | 5 | 1048.4 | 10 | 1054 | 20 | 971.35 | 50 | 967.52 | 100 | 1013.62 |
| Chlordane (tech) [2C] | | | 5 | 1214.8 | 10 | 1413.52 | 20 | 1337.26 | 50 | 1235.78 | 100 | 1163.546 |
| Chlordane (1) [2C] | | | 5 | 2063.8 | 10 | 2727.2 | 20 | 2329.95 | 50 | 2229.98 | 100 | 2006.16 |
| Chlordane (2) [2C] | | | 5 | 804.6 | 10 | 805.6 | 20 | 793.6 | 50 | 731.02 | 100 | 715.14 |
| Chlordane (3) [2C] | | | 5 | 810.6 | 10 | 832.3 | 20 | 797.25 | 50 | 816.9 | 100 | 816.81 |
| Chlordane (4) [2C] | | | 5 | 1539.2 | 10 | 1853.8 | 20 | 1945.95 | 50 | 1608.14 | 100 | 1465.95 |
| Chlordane (5) [2C] | | | 5 | 855.8 | 10 | 848.7 | 20 | 819.55 | 50 | 792.86 | 100 | 813.67 |
| Toxaphene (1) | 2000 | 1204.354 | | | | | | | | | | |
| Toxaphene (2) | 2000 | 506.6215 | | | | | | | | | | |
| Toxaphene (3) | 2000 | 963.318 | | | | | | | | | | |
| Toxaphene (4) | 2000 | 1103.312 | | | | | | | | | | |
| Toxaphene (5) | 2000 | 543.27 | | | | | | | | | | |
| Toxaphene (1) [2C] | 2000 | 1246.983 | | | | | | | | | | |
| Toxaphene (2) [2C] | 2000 | 286.0805 | | | | | | | | | | |
| Toxaphene (3) [2C] | 2000 | 792.6895 | | | | | | | | | | |
| Toxaphene (4) [2C] | 2000 | 530.3725 | | | | | | | | | | |
| Toxaphene (5) [2C] | 2000 | 293.6005 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | | | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | | | | | | | | | | | | |
| Decachlorobiphenyl | | | | | | | | | | | | |
| Decachlorobiphenyl [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| 4,4'-DDE | | | | | | | | | | | | |
| 4,4'-DDE [2C] | | | | | | | | | | | | |
| 4,4'-DDD | | | | | | | | | | | | |
| 4,4'-DDD [2C] | | | | | | | | | | | | |
| 4,4'-DDT | | | | | | | | | | | | |
| 4,4'-DDT [2C] | | | | | | | | | | | | |
| Aldrin | | | | | | | | | | | | |
| Aldrin [2C] | | | | | | | | | | | | |
| alpha-BHC | | | | | | | | | | | | |
| alpha-BHC [2C] | | | | | | | | | | | | |
| alpha-Chlordane | | | | | | | | | | | | |
| alpha-Chlordane [2C] | | | | | | | | | | | | |
| beta-BHC | | | | | | | | | | | | |
| beta-BHC [2C] | | | | | | | | | | | | |
| delta-BHC | | | | | | | | | | | | |
| delta-BHC [2C] | | | | | | | | | | | | |
| Dieldrin | | | | | | | | | | | | |
| Dieldrin [2C] | | | | | | | | | | | | |
| Endosulfan I | | | | | | | | | | | | |
| Endosulfan I [2C] | | | | | | | | | | | | |
| Endosulfan II | | | | | | | | | | | | |
| Endosulfan II [2C] | | | | | | | | | | | | |
| Endosulfan sulfate | | | | | | | | | | | | |
| Endosulfan sulfate [2C] | | | | | | | | | | | | |
| Endrin | | | | | | | | | | | | |
| Endrin [2C] | | | | | | | | | | | | |
| Endrin aldehyde | | | | | | | | | | | | |
| Endrin aldehyde [2C] | | | | | | | | | | | | |
| Endrin ketone | | | | | | | | | | | | |
| Endrin ketone [2C] | | | | | | | | | | | | |
| gamma-BHC (Lindane) | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| gamma-BHC (Lindane) [2C] | | | | | | | | | | | | |
| gamma-Chlordane | | | | | | | | | | | | |
| gamma-Chlordane [2C] | | | | | | | | | | | | |
| Heptachlor | | | | | | | | | | | | |
| Heptachlor [2C] | | | | | | | | | | | | |
| Heptachlor epoxide | | | | | | | | | | | | |
| Heptachlor epoxide [2C] | | | | | | | | | | | | |
| Methoxychlor | | | | | | | | | | | | |
| Methoxychlor [2C] | | | | | | | | | | | | |
| Chlordane (tech) | 200 | 2240.281 | | | | | | | | | | |
| Chlordane (1) | 200 | 4489.525 | | | | | | | | | | |
| Chlordane (2) | 200 | 1052.785 | | | | | | | | | | |
| Chlordane (3) | 200 | 962.275 | | | | | | | | | | |
| Chlordane (4) | 200 | 3752.235 | | | | | | | | | | |
| Chlordane (5) | 200 | 944.585 | | | | | | | | | | |
| Chlordane (tech) [2C] | 200 | 1040.755 | | | | | | | | | | |
| Chlordane (1) [2C] | 200 | 1775.265 | | | | | | | | | | |
| Chlordane (2) [2C] | 200 | 654.565 | | | | | | | | | | |
| Chlordane (3) [2C] | 200 | 709.4 | | | | | | | | | | |
| Chlordane (4) [2C] | 200 | 1367.205 | | | | | | | | | | |
| Chlordane (5) [2C] | 200 | 697.34 | | | | | | | | | | |
| Toxaphene (1) | | | | | | | | | | | | |
| Toxaphene (2) | | | | | | | | | | | | |
| Toxaphene (3) | | | | | | | | | | | | |
| Toxaphene (4) | | | | | | | | | | | | |
| Toxaphene (5) | | | | | | | | | | | | |
| Toxaphene (1) [2C] | | | | | | | | | | | | |
| Toxaphene (2) [2C] | | | | | | | | | | | | |
| Toxaphene (3) [2C] | | | | | | | | | | | | |
| Toxaphene (4) [2C] | | | | | | | | | | | | |
| Toxaphene (5) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_010

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Tetrachloro-m-xylene | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Tetrachloro-m-xylene [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| 4,4'-DDE | 33546.52 | 6.000484 | 8.184572 | 2.267959E-02 | | | 20 | |
| 4,4'-DDE [2C] | 21057.32 | 11.07954 | 6.824143 | 2.103318E-02 | | | 20 | |
| 4,4'-DDD | 27664.89 | 7.540731 | 8.810143 | 5.248612E-03 | | | 20 | |
| 4,4'-DDD [2C] | 18693.78 | 11.44265 | 7.438286 | 2.802734E-02 | | | 20 | |
| 4,4'-DDT | 24740.67 | 14.5165 | 9.189857 | 7.068491E-03 | | | 20 | |
| 4,4'-DDT [2C] | 15729.51 | 4.871312 | 7.721286 | 1.954911E-02 | | | 20 | |
| Aldrin | 36147.13 | 7.456226 | 7.128143 | 1.296638E-02 | | | 20 | |
| Aldrin [2C] | 22656.45 | 9.98282 | 5.819 | 1.806906E-02 | | | 20 | |
| alpha-BHC | 40409.75 | 10.16852 | 5.832857 | 2.119288E-02 | | | 20 | |
| alpha-BHC [2C] | 26238.33 | 5.215596 | 4.972572 | 0.0158976 | | | 20 | |
| alpha-Chlordane | 32821.21 | 4.761104 | 7.986286 | 3.589714E-03 | | | 20 | |
| alpha-Chlordane [2C] | 21675.65 | 14.21858 | 6.625714 | 1.577067E-02 | | | 20 | |
| beta-BHC | 15846.9 | 4.976926 | 6.370286 | 1.550503E-02 | | | 20 | |
| beta-BHC [2C] | 9658.734 | 12.56008 | 5.537714 | 3.655615E-02 | | | 20 | |
| delta-BHC | 33539.38 | 10.83928 | 6.629143 | 1.181652E-02 | | | 20 | |
| delta-BHC [2C] | 20704.78 | 4.437113 | 5.747714 | 3.745169E-02 | | | 20 | |
| Dieldrin | 33895.65 | 7.310364 | 8.373143 | 1.230849E-02 | | | 20 | |
| Dieldrin [2C] | 22375.56 | 11.72956 | 6.969286 | 1.351574E-02 | | | 20 | |
| Endosulfan I | 31729.01 | 5.810311 | 8.049428 | 2.163559E-02 | | | 20 | |
| Endosulfan I [2C] | 20934.91 | 11.92243 | 6.689286 | 0.0156653 | | | 20 | |
| Endosulfan II | 29666.08 | 4.320259 | 8.922857 | 9.499018E-03 | | | 20 | |
| Endosulfan II [2C] | 19402.61 | 13.50319 | 7.609286 | 1.172058E-02 | | | 20 | |
| Endosulfan sulfate | 25616.99 | 5.703931 | 9.372 | 2.124432E-02 | | | 20 | |
| Endosulfan sulfate [2C] | 16791.83 | 11.98722 | 8.077286 | 1.600537E-02 | | | 20 | |
| Endrin | 24735.1 | 8.585635 | 8.649143 | 0.0197868 | | | 20 | |
| Endrin [2C] | 16756.72 | 11.09602 | 7.271286 | 0.0204429 | | | 20 | |
| Endrin aldehyde | 24109.03 | 3.96554 | 9.082714 | 8.921441E-03 | | | 20 | |
| Endrin aldehyde [2C] | 17038.67 | 16.23379 | 7.816857 | 2.146648E-02 | | | 20 | |
| Endrin ketone | 34636.65 | 4.514572 | 9.976571 | 1.195761E-02 | | | 20 | |
| Endrin ketone [2C] | 23263.99 | 13.77737 | 8.678857 | 2.201704E-02 | | | 20 | |
| gamma-BHC (Lindane) | 36031.77 | 8.801481 | 6.163429 | 8.315358E-03 | | | 20 | |
| gamma-BHC (Lindane) [2C] | 24013.09 | 7.287553 | 5.262857 | 1.952569E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| gamma-Chlordane | 33961.2 | 5.579594 | 7.897286 | 4.623527E-03 | | | 20 | |
| gamma-Chlordane [2C] | 21621.04 | 13.53738 | 6.561 | 1.259477E-02 | | | 20 | |
| Heptachlor | 29722.9 | 11.59268 | 6.759857 | 1.171619E-02 | | | 20 | |
| Heptachlor [2C] | 21682.7 | 10.66915 | 5.559143 | 1.004687E-02 | | | 20 | |
| Heptachlor epoxide | 33684.73 | 4.993924 | 7.605 | 3.240937E-03 | | | 20 | |
| Heptachlor epoxide [2C] | 21633.25 | 13.96005 | 6.309286 | 1.977155E-02 | | | 20 | |
| Methoxychlor | 12781.08 | 8.3161 | 9.791 | 1.095047E-02 | | | 20 | |
| Methoxychlor [2C] | 8700.811 | 14.35167 | 8.413714 | 0.0173794 | | | 20 | |
| Chlordane (tech) | 2265.814 | 2.036435 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (1) | 4560.136 | 2.206321 | 7.989 | 1.416297E-02 | | | 20 | |
| Chlordane (2) | 1011.213 | 4.748592 | 6.536 | 1.188001E-02 | | | 20 | |
| Chlordane (3) | 1003.996 | 8.624511 | 6.760834 | 8.797502E-03 | | | 20 | |
| Chlordane (4) | 3753.811 | 2.957383 | 7.897833 | 8.880134E-03 | | | 20 | |
| Chlordane (5) | 999.9125 | 4.559042 | 9.007667 | 7.207414E-03 | | | 20 | |
| Chlordane (tech) [2C] | 1234.277 | 10.59888 | 7.605 | 3.28691E-03 | | | 20 | |
| Chlordane (1) [2C] | 2188.726 | 14.89601 | 6.6265 | 1.838167E-02 | | | 20 | |
| Chlordane (2) [2C] | 750.7542 | 8.135717 | 5.401333 | 1.394675E-02 | | | 20 | |
| Chlordane (3) [2C] | 797.21 | 5.579656 | 5.56 | 3.498735E-03 | | | 20 | |
| Chlordane (4) [2C] | 1630.041 | 13.84368 | 6.581167 | 8.453161E-03 | | | 20 | |
| Chlordane (5) [2C] | 804.6533 | 7.142321 | 7.605 | 3.28691E-03 | | | 20 | |
| Toxaphene (1) | 1251.284 | 13.26694 | 9.874667 | 1.008505E-02 | | | 20 | |
| Toxaphene (2) | 499.794 | 18.79183 | 8.578 | 1.896147E-02 | | | 20 | |
| Toxaphene (3) | 983.0718 | 13.15648 | 9.2395 | 1.502643E-02 | | | 20 | |
| Toxaphene (4) | 1115.536 | 19.14758 | 9.35 | 0.0145175 | | | 20 | |
| Toxaphene (5) | 582.2432 | 13.0691 | 10.32517 | 1.365035E-02 | | | 20 | |
| Toxaphene (1) [2C] | 1311.742 | 9.570442 | 8.5295 | 5.472725E-03 | | | 20 | |
| Toxaphene (2) [2C] | 357.144 | 23.44747 | 7.601 | 1.768119E-02 | | | 20 | * |
| Toxaphene (3) [2C] | 863.2383 | 11.36044 | 7.942333 | 2.059764E-02 | | | 20 | |
| Toxaphene (4) [2C] | 613.1725 | 12.22375 | 8.908834 | 1.237003E-02 | | | 20 | |
| Toxaphene (5) [2C] | 327.2323 | 16.07536 | 9.074667 | 1.398232E-02 | | | 20 | |
| Tetrachloro-m-xylene | 28765.14 | 2.541019 | 5.388857 | 1.804526E-02 | | | 20 | |
| Tetrachloro-m-xylene [2C] | 21379.77 | 11.06958 | 4.526 | 6.298631E-02 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Decachlorobiphenyl | 29956.87 | 5.97861 | 11.62329 | 1.578512E-02 | | | 20 | |
| Decachlorobiphenyl [2C] | 17512.73 | 17.45123 | 10.00071 | 1.794087E-02 | | | 20 | |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 017F1701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV2 | Injection Time: | 17:47 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1110 | 1251.284 | 1389.576 | | 11.1 | 20 | |
| Toxaphene (2) | A | 1000 | 1136 | 499.794 | 567.613 | | 13.6 | 20 | |
| Toxaphene (3) | A | 1000 | 1110 | 983.0718 | 1091.295 | | 11.0 | 20 | |
| Toxaphene (4) | A | 1000 | 1150 | 1115.536 | 1283.494 | | 15.1 | 20 | |
| Toxaphene (5) | A | 1000 | 1129 | 582.2432 | 657.346 | | 12.9 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 1006 | 1311.742 | 1318.988 | | 0.6 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1214 | 357.144 | 433.465 | | 21.4 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1153 | 863.2383 | 995.34 | | 15.3 | 20 | |
| Toxaphene (4) [2C] | A | 1000 | 1033 | 613.1725 | 633.434 | | 3.3 | 20 | |
| Toxaphene (5) [2C] | A | 1000 | 1003 | 327.2323 | 328.351 | | 0.3 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025F2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 104.8 | 33546.52 | 35173.04 | | 4.8 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 91.21 | 21057.32 | 19206.02 | | -8.8 | 20 |
| 4,4'-DDD | A | 100.0 | 104.0 | 27664.89 | 28779.14 | | 4.0 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 89.33 | 18693.78 | 16698.8 | | -10.7 | 20 |
| 4,4'-DDT | A | 100.0 | 106.8 | 24740.67 | 26437.44 | | 6.9 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 92.11 | 15729.51 | 14489.01 | | -7.9 | 20 |
| Aldrin | A | 100.0 | 105.8 | 36147.13 | 38246.73 | | 5.8 | 20 |
| Aldrin [2C] | A | 100.0 | 92.49 | 22656.45 | 20955.53 | | -7.5 | 20 |
| alpha-BHC | A | 100.0 | 109.5 | 40409.75 | 44244.95 | | 9.5 | 20 |
| alpha-BHC [2C] | A | 100.0 | 97.38 | 26238.33 | 25550.97 | | -2.6 | 20 |
| alpha-Chlordane | A | 100.0 | 104.0 | 32821.21 | 34128.09 | | 4.0 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 88.98 | 21675.65 | 19286.5 | | -11.0 | 20 |
| beta-BHC | A | 100.0 | 104.2 | 15846.9 | 16511.38 | | 4.2 | 20 |
| beta-BHC [2C] | A | 100.0 | 102.0 | 9658.734 | 9850.8 | | 2.0 | 20 |
| delta-BHC | A | 100.0 | 109.9 | 33539.38 | 36866.04 | | 9.9 | 20 |
| delta-BHC [2C] | A | 100.0 | 101.0 | 20704.78 | 20920.6 | | 1.0 | 20 |
| Dieldrin | A | 100.0 | 103.6 | 33895.65 | 35122.84 | | 3.6 | 20 |
| Dieldrin [2C] | A | 100.0 | 88.17 | 22375.56 | 19728.31 | | -11.8 | 20 |
| Endosulfan I | A | 100.0 | 105.5 | 31729.01 | 33463.25 | | 5.5 | 20 |
| Endosulfan I [2C] | A | 100.0 | 90.93 | 20934.91 | 19035.91 | | -9.1 | 20 |
| Endosulfan II | A | 100.0 | 99.65 | 29666.08 | 29561.55 | | -0.4 | 20 |
| Endosulfan II [2C] | A | 100.0 | 86.57 | 19402.61 | 16796.12 | | -13.4 | 20 |
| Endosulfan sulfate | A | 100.0 | 102.5 | 25616.99 | 26259 | | 2.5 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 90.41 | 16791.83 | 15181.22 | | -9.6 | 20 |
| Endrin | A | 100.0 | 96.91 | 24735.1 | 23971.57 | | -3.1 | 20 |
| Endrin [2C] | A | 100.0 | 84.35 | 16756.72 | 14134.37 | | -15.6 | 20 |
| Endrin aldehyde | A | 100.0 | 99.85 | 24109.03 | 24072.34 | | -0.2 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 85.73 | 17038.67 | 14606.93 | | -14.3 | 20 |
| Endrin ketone | A | 100.0 | 100.7 | 34636.65 | 34880.58 | | 0.7 | 20 |

# INITIAL CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 025R2501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32715 | Injection Date: | 11/19/10 |
| Lab Sample ID: | 0K32715-ICV3 | Injection Time: | 20:16 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 87.14 | 23263.99 | 20271.19 | | -12.9 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 109.0 | 36031.77 | 39277 | | 9.0 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 95.47 | 24013.09 | 22925.86 | | -4.5 | 20 |
| gamma-Chlordane | A | 100.0 | 105.1 | 33961.2 | 35701.47 | | 5.1 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 89.96 | 21621.04 | 19451 | | -10.0 | 20 |
| Heptachlor | A | 100.0 | 110.8 | 29722.9 | 32936.84 | | 10.8 | 20 |
| Heptachlor [2C] | A | 100.0 | 89.51 | 21682.7 | 19408.4 | | -10.5 | 20 |
| Heptachlor epoxide | A | 100.0 | 104.2 | 33684.73 | 35102.63 | | 4.2 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 89.32 | 21633.25 | 19321.83 | | -10.7 | 20 |
| Methoxychlor | A | 100.0 | 104.1 | 12781.08 | 13303.99 | | 4.1 | 20 |
| Methoxychlor [2C] | A | 100.0 | 87.23 | 8700.811 | 7589.37 | | -12.8 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

Not used

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003F0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 95.06 | 33546.52 | 31888.7 | | -4.9 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 100.0 | 21057.32 | 21064.45 | | 0.03 | 20 |
| 4,4'-DDD | A | 100.0 | 95.57 | 27664.89 | 26440.41 | | -4.4 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 98.26 | 18693.78 | 18368.22 | | -1.7 | 20 |
| 4,4'-DDT | A | 100.0 | 106.1 | 24740.67 | 26244.44 | | 6.1 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 109.8 | 15729.51 | 17280.22 | | 9.9 | 20 |
| Aldrin | A | 100.0 | 101.0 | 36147.13 | 36522.16 | | 1.0 | 20 |
| Aldrin [2C] | A | 100.0 | 105.8 | 22656.45 | 23975.62 | | 5.8 | 20 |
| alpha-BHC | A | 100.0 | 103.6 | 40409.75 | 41864.64 | | 3.6 | 20 |
| alpha-BHC [2C] | A | 100.0 | 110.9 | 26238.33 | 29096.28 | | 10.9 | 20 |
| alpha-Chlordane | A | 100.0 | 96.05 | 32821.21 | 31524.94 | | -3.9 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 97.22 | 21675.65 | 21073.43 | | -2.8 | 20 |
| beta-BHC | A | 100.0 | 92.91 | 15846.9 | 14723.35 | | -7.1 | 20 |
| beta-BHC [2C] | A | 100.0 | 105.7 | 9658.734 | 10213.81 | | 5.7 | 20 |
| delta-BHC | A | 100.0 | 102.9 | 33539.38 | 34521.92 | | 2.9 | 20 |
| delta-BHC [2C] | A | 100.0 | 113.0 | 20704.78 | 23401.31 | | 13.0 | 20 |
| Dieldrin | A | 100.0 | 99.30 | 33895.65 | 33657.62 | | -0.7 | 20 |
| Dieldrin [2C] | A | 100.0 | 99.90 | 22375.56 | 22352.35 | | -0.1 | 20 |
| Endosulfan I | A | 100.0 | 98.79 | 31729.01 | 31346.03 | | -1.2 | 20 |
| Endosulfan I [2C] | A | 100.0 | 100.6 | 20934.91 | 21052.3 | | 0.6 | 20 |
| Endosulfan II | A | 100.0 | 94.01 | 29666.08 | 27888.18 | | -6.0 | 20 |
| Endosulfan II [2C] | A | 100.0 | 95.93 | 19402.61 | 18613 | | -4.1 | 20 |
| Endosulfan sulfate | A | 100.0 | 94.30 | 25616.99 | 24156.69 | | -5.7 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 99.04 | 16791.83 | 16630.45 | | -1.0 | 20 |
| Endrin | A | 100.0 | 115.7 | 24735.1 | 28622.15 | | 15.7 | 20 |
| Endrin [2C] | A | 100.0 | 114.5 | 16756.72 | 19189.85 | | 14.5 | 20 |
| Endrin aldehyde | A | 100.0 | 92.06 | 24109.03 | 22194.94 | | -7.9 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 94.16 | 17038.67 | 16044.42 | | -5.8 | 20 |
| Endrin ketone | A | 100.0 | 91.67 | 34636.65 | 31751.26 | | -8.3 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003R0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 94.14 | 23263.99 | 21901.02 | | -5.9 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 101.7 | 36031.77 | 36639.85 | | 1.7 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 107.5 | 24013.09 | 25804.91 | | 7.5 | 20 |
| gamma-Chlordane | A | 100.0 | 96.86 | 33961.2 | 32896.08 | | -3.1 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 98.55 | 21621.04 | 21307.95 | | -1.4 | 20 |
| Heptachlor | A | 100.0 | 105.6 | 29722.9 | 31389.52 | | 5.6 | 20 |
| Heptachlor [2C] | A | 100.0 | 109.9 | 21682.7 | 23835.42 | | 9.9 | 20 |
| Heptachlor epoxide | A | 100.0 | 98.15 | 33684.73 | 33060.71 | | -1.9 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 99.81 | 21633.25 | 21592.45 | | -0.2 | 20 |
| Methoxychlor | A | 100.0 | 102.8 | 12781.08 | 13145.66 | | 2.9 | 20 |
| Methoxychlor [2C] | A | 100.0 | 101.7 | 8700.811 | 8846.79 | | 1.7 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 90.38 | 28765.14 | 25999.25 | | -9.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 97.24 | 21379.77 | 20790.76 | | -2.8 | 20 |
| Decachlorobiphenyl | A | 100.0 | 86.52 | 29956.87 | 25919.92 | | -13.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 91.76 | 17512.73 | 16070.47 | | -8.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

**SW8081A** not used

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 005F0501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV3 | Injection Time: | 12:44 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 959.4 | 1251.284 | 1200.434 | | -4.1 | 20 | |
| Toxaphene (2) | A | 1000 | 976.8 | 499.794 | 488.208 | | -2.3 | 20 | |
| Toxaphene (3) | A | 1000 | 980.5 | 983.0718 | 963.89 | | -2.0 | 20 | |
| Toxaphene (4) | A | 1000 | 989.6 | 1115.536 | 1103.948 | | -1.0 | 20 | |
| Toxaphene (5) | A | 1000 | 884.8 | 582.2432 | 515.191 | | -11.5 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 826.6 | 1311.742 | 1084.238 | | -17.3 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1311 | 357.144 | 468.215 | | 31.1 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1230 | 863.2383 | 1061.713 | | 23.0 | 20 | * |
| Toxaphene (4) [2C] | A | 1000 | 1072 | 613.1725 | 657.243 | | 7.2 | 20 | |
| Toxaphene (5) [2C] | A | 1000 | 1043 | 327.2323 | 341.423 | | 4.3 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031F3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| 4,4'-DDE | A | 100.0 | 100.3 | 33546.52 | 33639.75 | | 0.3 | 20 | |
| 4,4'-DDE [2C] | A | 100.0 | 101.4 | 21057.32 | 21355.1 | | 1.4 | 20 | |
| 4,4'-DDD | A | 100.0 | 103.3 | 27664.89 | 28570.6 | | 3.3 | 20 | |
| 4,4'-DDD [2C] | A | 100.0 | 104.6 | 18693.78 | 19546.39 | | 4.6 | 20 | |
| 4,4'-DDT | A | 100.0 | 110.4 | 24740.67 | 27324.32 | | 10.4 | 20 | |
| 4,4'-DDT [2C] | A | 100.0 | 115.8 | 15729.51 | 18223.18 | | 15.9 | 20 | |
| Aldrin | A | 100.0 | 106.0 | 36147.13 | 38328 | | 6.0 | 20 | |
| Aldrin [2C] | A | 100.0 | 106.8 | 22656.45 | 24201.48 | | 6.8 | 20 | |
| alpha-BHC | A | 100.0 | 114.1 | 40409.75 | 46112.18 | | 14.1 | 20 | |
| alpha-BHC [2C] | A | 100.0 | 119.7 | 26238.33 | 31413.67 | | 19.7 | 20 | |
| alpha-Chlordane | A | 100.0 | 99.88 | 32821.21 | 32782.2 | | -0.1 | 20 | |
| alpha-Chlordane [2C] | A | 100.0 | 102.2 | 21675.65 | 22144.07 | | 2.2 | 20 | |
| beta-BHC | A | 100.0 | 100.7 | 15846.9 | 15956.51 | | 0.7 | 20 | |
| beta-BHC [2C] | A | 100.0 | 110.0 | 9658.734 | 10622 | | 10.0 | 20 | |
| delta-BHC | A | 100.0 | 115.0 | 33539.38 | 38572.21 | | 15.0 | 20 | |
| delta-BHC [2C] | A | 100.0 | 128.2 | 20704.78 | 26539.96 | | 28.2 | 20 | * |
| Dieldrin | A | 100.0 | 104.1 | 33895.65 | 35280.86 | | 4.1 | 20 | |
| Dieldrin [2C] | A | 100.0 | 102.4 | 22375.56 | 22908.72 | | 2.4 | 20 | |
| Endosulfan I | A | 100.0 | 101.0 | 31729.01 | 32059.15 | | 1.0 | 20 | |
| Endosulfan I [2C] | A | 100.0 | 101.2 | 20934.91 | 21180.75 | | 1.2 | 20 | |
| Endosulfan II | A | 100.0 | 98.86 | 29666.08 | 29327.82 | | -1.1 | 20 | |
| Endosulfan II [2C] | A | 100.0 | 102.3 | 19402.61 | 19847.8 | | 2.3 | 20 | |
| Endosulfan sulfate | A | 100.0 | 101.5 | 25616.99 | 26009.05 | | 1.5 | 20 | |
| Endosulfan sulfate [2C] | A | 100.0 | 107.4 | 16791.83 | 18029.59 | | 7.4 | 20 | |
| Endrin | A | 100.0 | 107.6 | 24735.1 | 26624.33 | | 7.6 | 20 | |
| Endrin [2C] | A | 100.0 | 110.5 | 16756.72 | 18517.45 | | 10.5 | 20 | |
| Endrin aldehyde | A | 100.0 | 101.5 | 24109.03 | 24470.41 | | 1.5 | 20 | |
| Endrin aldehyde [2C] | A | 100.0 | 103.7 | 17038.67 | 17671.18 | | 3.7 | 20 | |
| Endrin ketone | A | 100.0 | 101.0 | 34636.65 | 34989.36 | | 1.0 | 20 | |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031R3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 102.5 | 23263.99 | 23853.72 | | 2.5 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 111.4 | 36031.77 | 40125.7 | | 11.4 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 116.3 | 24013.09 | 27934.94 | | 16.3 | 20 |
| gamma-Chlordane | A | 100.0 | 100.2 | 33961.2 | 34043.75 | | 0.2 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 103.8 | 21621.04 | 22450.69 | | 3.8 | 20 |
| Heptachlor | A | 100.0 | 118.7 | 29722.9 | 35283.51 | | 18.7 | 20 |
| Heptachlor [2C] | A | 100.0 | 112.9 | 21682.7 | 24487.38 | | 12.9 | 20 |
| Heptachlor epoxide | A | 100.0 | 103.6 | 33684.73 | 34912.7 | | 3.6 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 103.0 | 21633.25 | 22288.54 | | 3.0 | 20 |
| Methoxychlor | A | 100.0 | 106.7 | 12781.08 | 13635.6 | | 6.7 | 20 |
| Methoxychlor [2C] | A | 100.0 | 105.5 | 8700.811 | 9183.64 | | 5.5 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 94.61 | 28765.14 | 27215.45 | | -5.4 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 100.5 | 21379.77 | 21496.84 | | 0.5 | 20 |
| Decachlorobiphenyl | A | 100.0 | 93.78 | 29956.87 | 28094.31 | | -6.2 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 101.0 | 17512.73 | 17696.02 | | 1.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 033F3301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV8 | Injection Time: | 21:28 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1034 | 1251.284 | 1293.902 | | 3.4 | 20 | |
| Toxaphene (2) | A | 1000 | 1084 | 499.794 | 541.667 | | 8.4 | 20 | |
| Toxaphene (3) | A | 1000 | 1049 | 983.0718 | 1031.635 | | 4.9 | 20 | |
| Toxaphene (4) | A | 1000 | 1028 | 1115.536 | 1147.046 | | 2.8 | 20 | |
| Toxaphene (5) | A | 1000 | 906.7 | 582.2432 | 527.931 | | -9.3 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 964.9 | 1311.742 | 1265.7 | | -3.5 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1301 | 357.144 | 464.811 | | 30.1 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1335 | 863.2383 | 1152.173 | | 33.5 | 20 | * |
| Toxaphene (4) [2C] | A | 1000 | 1280 | 613.1725 | 785.22 | | 28.1 | 20 | * |
| Toxaphene (5) [2C] | A | 1000 | 1278 | 327.2323 | 418.067 | | 27.8 | 20 | * |

Ave. 24.0

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 043F4301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVB | Injection Time: | 00:34 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| 4,4'-DDE | A | 100.0 | 99.99 | 33546.52 | 33542.27 | | -0.01 | 20 |
| 4,4'-DDE [2C] | A | 100.0 | 101.8 | 21057.32 | 21430.77 | | 1.8 | 20 |
| 4,4'-DDD | A | 100.0 | 106.4 | 27664.89 | 29426.51 | | 6.4 | 20 |
| 4,4'-DDD [2C] | A | 100.0 | 107.4 | 18693.78 | 20072.43 | | 7.4 | 20 |
| 4,4'-DDT | A | 100.0 | 105.2 | 24740.67 | 26040.29 | | 5.3 | 20 |
| 4,4'-DDT [2C] | A | 100.0 | 111.2 | 15729.51 | 17484.87 | | 11.2 | 20 |
| Aldrin | A | 100.0 | 104.5 | 36147.13 | 37767.61 | | 4.5 | 20 |
| Aldrin [2C] | A | 100.0 | 104.5 | 22656.45 | 23685.36 | | 4.5 | 20 |
| alpha-BHC | A | 100.0 | 114.0 | 40409.75 | 46050.99 | | 14.0 | 20 |
| alpha-BHC [2C] | A | 100.0 | 120.7 | 26238.33 | 31670.06 | | 20.7 | 20 * |
| alpha-Chlordane | A | 100.0 | 98.07 | 32821.21 | 32188.98 | | -1.9 | 20 |
| alpha-Chlordane [2C] | A | 100.0 | 100.4 | 21675.65 | 21753.72 | | 0.4 | 20 |
| beta-BHC | A | 100.0 | 100.7 | 15846.9 | 15956.92 | | 0.7 | 20 |
| beta-BHC [2C] | A | 100.0 | 118.8 | 9658.734 | 11476.18 | | 18.8 | 20 |
| delta-BHC | A | 100.0 | 117.0 | 33539.38 | 39242.77 | | 17.0 | 20 |
| delta-BHC [2C] | A | 100.0 | 131.0 | 20704.78 | 27129.21 | | 31.0 | 20 * |
| Dieldrin | A | 100.0 | 102.3 | 33895.65 | 34667.68 | | 2.3 | 20 |
| Dieldrin [2C] | A | 100.0 | 104.9 | 22375.56 | 23469.09 | | 4.9 | 20 |
| Endosulfan I | A | 100.0 | 99.39 | 31729.01 | 31534.29 | | -0.6 | 20 |
| Endosulfan I [2C] | A | 100.0 | 99.36 | 20934.91 | 20802.07 | | -0.6 | 20 |
| Endosulfan II | A | 100.0 | 97.54 | 29666.08 | 28936.2 | | -2.5 | 20 |
| Endosulfan II [2C] | A | 100.0 | 100.6 | 19402.61 | 19519.8 | | 0.6 | 20 |
| Endosulfan sulfate | A | 100.0 | 103.0 | 25616.99 | 26375.42 | | 3.0 | 20 |
| Endosulfan sulfate [2C] | A | 100.0 | 108.9 | 16791.83 | 18283.74 | | 8.9 | 20 |
| Endrin | A | 100.0 | 114.2 | 24735.1 | 28255.66 | | 14.2 | 20 |
| Endrin [2C] | A | 100.0 | 117.7 | 16756.72 | 19718.66 | | 17.7 | 20 |
| Endrin aldehyde | A | 100.0 | 98.41 | 24109.03 | 23725.17 | | -1.6 | 20 |
| Endrin aldehyde [2C] | A | 100.0 | 98.51 | 17038.67 | 16784.56 | | -1.5 | 20 |
| Endrin ketone | A | 100.0 | 98.67 | 34636.65 | 34176.27 | | -1.3 | 20 |

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 043R4301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVB | Injection Time: | 00:34 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Endrin ketone [2C] | A | 100.0 | 99.24 | 23263.99 | 23088.42 | | -0.8 | 20 |
| gamma-BHC (Lindane) | A | 100.0 | 111.4 | 36031.77 | 40138.63 | | 11.4 | 20 |
| gamma-BHC (Lindane) [2C] | A | 100.0 | 117.1 | 24013.09 | 28109.79 | | 17.1 | 20 |
| gamma-Chlordane | A | 100.0 | 98.55 | 33961.2 | 33468.99 | | -1.4 | 20 |
| gamma-Chlordane [2C] | A | 100.0 | 102.4 | 21621.04 | 22140.02 | | 2.4 | 20 |
| Heptachlor | A | 100.0 | 118.9 | 29722.9 | 35352.26 | | 18.9 | 20 |
| Heptachlor [2C] | A | 100.0 | 115.3 | 21682.7 | 25009.74 | | 15.3 | 20 |
| Heptachlor epoxide | A | 100.0 | 102.2 | 33684.73 | 34444.28 | | 2.3 | 20 |
| Heptachlor epoxide [2C] | A | 100.0 | 102.1 | 21633.25 | 22082.06 | | 2.1 | 20 |
| Methoxychlor | A | 100.0 | 102.8 | 12781.08 | 13132.89 | | 2.8 | 20 |
| Methoxychlor [2C] | A | 100.0 | 102.3 | 8700.811 | 8900.06 | | 2.3 | 20 |
| Tetrachloro-m-xylene | A | 100.0 | 94.42 | 28765.14 | 27159.06 | | -5.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 102.3 | 21379.77 | 21880.2 | | 2.3 | 20 |
| Decachlorobiphenyl | A | 100.0 | 90.52 | 29956.87 | 27118.33 | | -9.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 92.76 | 17512.73 | 16244.24 | | -7.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8081A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 045F4501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVD | Injection Time: | 01:11 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) | |
| Toxaphene (1) | A | 1000 | 1126 | 1251.284 | 1408.672 | | 12.6 | 20 | |
| Toxaphene (2) | A | 1000 | 1284 | 499.794 | 641.488 | | 28.4 | 20 | * |
| Toxaphene (3) | A | 1000 | 1293 | 983.0718 | 1270.836 | | 29.3 | 20 | * |
| Toxaphene (4) | A | 1000 | 1195 | 1115.536 | 1332.709 | | 19.5 | 20 | |
| Toxaphene (5) | A | 1000 | 1086 | 582.2432 | 632.191 | | 8.6 | 20 | |
| Toxaphene (1) [2C] | A | 1000 | 1039 | 1311.742 | 1363.045 | | 3.9 | 20 | |
| Toxaphene (2) [2C] | A | 1000 | 1558 | 357.144 | 556.62 | | 55.9 | 20 | * |
| Toxaphene (3) [2C] | A | 1000 | 1037 | 863.2383 | 895.451 | | 3.7 | 20 | |
| Toxaphene (4) [2C] | A | 1000 | 1387 | 613.1725 | 850.316 | | 38.7 | 20 | * |
| Toxaphene (5) [2C] | A | 1000 | 1167 | 327.2323 | 381.759 | | 16.7 | 20 | |

Ave. 19.7

Ave. 23.78

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM1 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 0.00 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.83 |
| Endrin | 6.09 |

# BREAKDOWN REPORT

**Lab Sample ID:** 0L35009-PEM2 **Analyzed:** 12/10/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.24 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 0.00 |
| Endrin | 9.32 |

# BREAKDOWN REPORT

**Lab Sample ID:** 0K32715-PEM1 **Analyzed:** 11/19/2010

**Column Number:** 1

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 3.85 |
| Endrin | 9.88 |

**Column Number:** 2

| Analyte | % Breakdown |
|---|---|
| 4.4'-DDT | 5.52 |
| Endrin | 10.41 |

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011008-02

Lab Name: Empirical Laboratories, LLC

GKHMS-50-FD001-1010

Lab Sample ID: 1012009-03 Date(s) Analyzed: 12/11/2010 12/11/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW | | CONCENTRATION | %D |
|---|---|---|---|---|---|---|
| | | | FROM | TO | | |
| 4,4'-DDE | 1 | 7.84 | 8.15 | 8.21 | 2.35 | |
| | 2 | 6.52 | 6.79 | 6.85 | 0.947 | 85 |
| 4,4'-DDT | 1 | 8.82 | 9.16 | 9.22 | 0.940 | |
| | 2 | 7.40 | 7.69 | 7.75 | 1.03 | 9 |
| alpha-BHC | 1 | 5.55 | 5.80 | 5.86 | 0.291 | |
| | 2 | 4.74 | 4.94 | 5.00 | 0.215 | 30 |
| alpha-Chlordane | 1 | 7.63 | 7.96 | 8.02 | 0.393 | |
| | 2 | 6.30 | 6.60 | 6.66 | 9.93 | 185 |
| beta-BHC | 1 | 6.05 | 6.34 | 6.40 | 0.774 | |
| | 2 | 5.30 | 5.51 | 5.57 | 2.70 | 111 |
| Dieldrin | 1 | 8.00 | 8.34 | 8.40 | 0.235 | |
| | 2 | 6.66 | 6.94 | 7.00 | 0.882 | 116 |
| Endosulfan II | 1 | 8.56 | 8.89 | 8.95 | 0.321 | |
| | 2 | 7.27 | 7.58 | 7.64 | 0.739 | 79 |
| Endosulfan sulfate | 1 | 9.01 | 9.34 | 9.40 | 2.56 | |
| | 2 | 7.74 | 8.05 | 8.11 | 2.06 | 22 |
| gamma-Chlordane | 1 | 7.56 | 7.87 | 7.93 | 8.77 | |
| | 2 | 6.27 | 6.53 | 6.59 | 0.148 | 193 |
| Heptachlor | 1 | 6.43 | 6.73 | 6.79 | 0.185 | |
| | 2 | 5.29 | 5.53 | 5.59 | 0.239 | 25 |
| Heptachlor epoxide | 1 | 7.25 | 7.58 | 7.64 | 0.319 | |
| | 2 | 6.02 | 6.28 | 6.34 | 0.179 | 56 |
| Methoxychlor | 1 | 9.41 | 9.76 | 9.82 | 1.78 | |
| | 2 | 8.10 | 8.38 | 8.44 | 0.258 | 149 |

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

1011008-01

Lab Name: Empirical Laboratories, LLC

GKHMS-SO-FD002-1010

Lab Sample ID: 1012009-02 Date(s) Analyzed: 12/10/2010 12/10/2010

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

| ANALYTE | COL | RT | RT WINDOW | | CONCENTRATION | %D |
|---|---|---|---|---|---|---|
| | | | FROM | TO | | |
| beta-BHC | 1 | 6.05 | 6.34 | 6.40 | 0.572 | |
| | 2 | 5.30 | 5.51 | 5.57 | 0.973 | 52 |
| Endosulfan II | 1 | 8.56 | 8.89 | 8.95 | 0.674 | |
| | 2 | 7.28 | 7.58 | 7.64 | 0.378 | 56 |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_010

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Solid **Instrument:** GL-ECD3

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| 4,4'-DDD | 0.170 | 0.670 | ug/Kg | SW8081A |
| 4,4'-DDD [2C] | 0.170 | 0.670 | ug/Kg | SW8081A |
| 4,4'-DDE | 0.170 | 0.670 | ug/Kg | SW8081A |
| 4,4'-DDE [2C] | 0.170 | 0.670 | ug/Kg | SW8081A |
| 4,4'-DDT | 0.170 | 0.670 | ug/Kg | SW8081A |
| 4,4'-DDT [2C] | 0.170 | 0.670 | ug/Kg | SW8081A |
| Aldrin | 0.110 | 0.670 | ug/Kg | SW8081A |
| alpha-BHC | 0.110 | 0.670 | ug/Kg | SW8081A |
| alpha-Chlordane | 0.110 | 0.670 | ug/Kg | SW8081A |
| beta-BHC | 0.110 | 0.670 | ug/Kg | SW8081A |
| beta-BHC [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| delta-BHC | 0.110 | 0.670 | ug/Kg | SW8081A |
| Dieldrin | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endosulfan I | 0.110 | 0.670 | ug/Kg | SW8081A |
| Endosulfan I [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| Endosulfan II | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endosulfan II [2C] | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endosulfan sulfate | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endrin | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endrin aldehyde | 0.170 | 0.670 | ug/Kg | SW8081A |
| Endrin ketone [2C] | 0.170 | 0.670 | ug/Kg | SW8081A |
| gamma-BHC (Lindane) [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| gamma-Chlordane [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| Heptachlor | 0.110 | 0.670 | ug/Kg | SW8081A |
| Heptachlor [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| Heptachlor epoxide | 0.110 | 0.670 | ug/Kg | SW8081A |
| Methoxychlor | 0.110 | 0.670 | ug/Kg | SW8081A |
| Methoxychlor [2C] | 0.110 | 0.670 | ug/Kg | SW8081A |
| Toxaphene | 11.0 | 33.0 | ug/Kg | SW8081A |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L35009-CCV1 | 003F0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV1 | 003R0301.D | 12/10/10 12:06 |
| Calibration Check | 0L35009-CCV4 | 006F0601.D | 12/10/10 13:03 |
| Calibration Check | 0L35009-CCV4 | 006R0601.D | 12/10/10 13:03 |
| Calibration Check | 0L35009-CCV5 | 007R0701.D | 12/10/10 13:21 |
| Calibration Check | 0L35009-CCV5 | 007F0701.D | 12/10/10 13:21 |
| Calibration Check | 0L35009-CCV6 | 031R3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV6 | 031F3101.D | 12/10/10 20:51 |
| Calibration Check | 0L35009-CCV9 | 034R3401.D | 12/10/10 21:47 |
| Calibration Check | 0L35009-CCV9 | 034F3401.D | 12/10/10 21:47 |
| Calibration Check | 0L35009-CCVA | 035F3501.D | 12/10/10 22:05 |
| Calibration Check | 0L35009-CCVA | 035R3501.D | 12/10/10 22:05 |
| Blank | 0L06022-BLK1 | 036R3601.D | 12/10/10 22:24 |
| Blank | 0L06022-BLK1 | 036F3601.D | 12/10/10 22:24 |
| 1011008-01 | 1012009-02 | 039R3901.D | 12/10/10 23:20 |
| 1011008-01 | 1012009-02 | 039F3901.D | 12/10/10 23:20 |
| 1011008-02 | 1012009-03 | 042F4201.D | 12/11/10 00:15 |
| 1011008-02 | 1012009-03 | 042R4201.D | 12/11/10 00:15 |
| Calibration Check | 0L35009-CCVB | 043R4301.D | 12/11/10 00:34 |
| Calibration Check | 0L35009-CCVB | 043F4301.D | 12/11/10 00:34 |
| Calibration Check | 0L35009-CCVE | 046F4601.D | 12/11/10 01:30 |
| Calibration Check | 0L35009-CCVE | 046R4601.D | 12/11/10 01:30 |
| Calibration Check | 0L35009-CCVF | 047F4701.D | 12/11/10 01:48 |
| Calibration Check | 0L35009-CCVF | 047R4701.D | 12/11/10 01:48 |

# PREPARATION BATCH SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Batch: 0L06022 Batch Matrix: Solid
Preparation: EXT_3546

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06022-BLK1 | 11/10/10 11:40 | 30.00 | 10.00 |
| 1011008-01 | 1012009-02 | 11/10/10 11:40 | 30.06 | 10.00 |
| 1011008-02 | 1012009-03 | 11/10/10 11:40 | 30.00 | 10.00 |

# HOLDING TIME SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

| Sample Name | Date Collected | Date Received | Date Prepared | Days to Prep | Max Days to Prep | Date Analyzed | Days to Analysis | Max Days to Analysis | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1011008-01 | 11/02/10 00:00 | 12/01/10 08:11 | 11/10/10 11:40 | 8.53 | 14.00 | 12/10/10 23:20 | 30.49 | 40.00 | |
| 1011008-02 | 11/02/10 00:00 | 12/01/10 08:11 | 11/10/10 11:40 | 8.53 | 14.00 | 12/11/10 00:15 | 30.52 | 40.00 | |

# ANALYSIS DATA SHEET

**Blank**

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_010

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Matrix: Laboratory ID: 0L06022-BLK1 File ID: 036F3601.D

Sampled: Prepared: 11/10/10 11:40 Analyzed: 12/10/10 22:24

Solids: Preparation: EXT_3546 Dilution:

Batch: 0L06022 Sequence: 0L35009 Calibration: 0344005 Instrument: GL-ECD3

| CAS NO. | COMPOUND | CONC. (ug/Kg wet | DL | LOD | LOQ | Q |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | | 4.20 | 8.33 | 17.0 | UX |
| 11104-28-2 | Aroclor-1221 | | 4.20 | 8.33 | 17.0 | U |
| 11141-16-5 | Aroclor-1232 | | 4.20 | 8.33 | 17.0 | U |
| 53469-21-9 | Aroclor-1242 | | 4.20 | 8.33 | 17.0 | U |
| 12672-29-6 | Aroclor-1248 | | 4.20 | 8.33 | 17.0 | U |
| 11097-69-1 | Aroclor-1254 | | 4.20 | 8.33 | 17.0 | U |
| 11096-82-5 | Aroclor-1260 | | 4.20 | 8.33 | 17.0 | UX |
| 37324-23-5 | Aroclor-1262 | | 4.20 | 8.33 | 17.0 | U |
| 11100-14-4 | Aroclor-1268 | | 4.20 | 8.33 | 17.0 | U |

| SYSTEM MONITORING COMPOUND | ADDED (ug/Kg wet) | CONC (ug/Kg wet) | % REC | QC LIMITS | Q |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 6.667 | 6.956 | 104 | 70 - 125 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 8.342 | 125 | 70 - 125 | |
| Decachlorobiphenyl | 6.667 | 6.928 | 104 | 60 - 125 | |
| Decachlorobiphenyl [2C] | 6.667 | 8.284 | 124 | 60 - 125 | |

* Values outside of QC limits

# SURROGATE STANDARD RECOVERY AND RT SUMMARY

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L35009
Instrument: GL-ECD3
Calibration: 0344005

| Surrogate Compound | Spike Level | % Recovery | Recovery Limits | RT | CCV RT | RT Diff | RT Diff Limit | Q |
|---|---|---|---|---|---|---|---|---|
| **Calibration Check (0L35009-CCV1 ) ug/L** | | | | Lab File ID: 003F0301.D | | Analyzed: 12/10/10 12:06 | | |
| Tetrachloro-m-xylene | 100.0 | 90.4 | 80 - 120 | 5.122 | 5.122 | 0.0000 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 97.2 | 80 - 120 | 4.319 | 4.319 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 86.5 | 80 - 120 | 11.227 | 11.227 | 0.0000 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 91.8 | 80 - 120 | 9.651 | 9.651 | 0.0000 | +/-0.030 | |
| **Calibration Check (0L35009-CCV6 ) ug/L** | | | | Lab File ID: 031F3101.D | | Analyzed: 12/10/10 20:51 | | |
| Tetrachloro-m-xylene | 100.0 | 94.6 | 80 - 120 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 100 | 80 - 120 | 4.315 | 4.319 | -0.0040 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 93.8 | 80 - 120 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 101 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Blank (0L06022-BLK1 ) ug/Kg wet** | | | | Lab File ID: 036F3601.D | | Analyzed: 12/10/10 22:24 | | |
| Tetrachloro-m-xylene | 6.667 | 104 | 70 - 125 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 6.667 | 125 | 70 - 125 | 4.314 | 4.319 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl | 6.667 | 104 | 60 - 125 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 6.667 | 124 | 60 - 125 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **1011008-01 (1012009-02 ) ug/Kg dry** | | | | Lab File ID: 039F3901.D | | Analyzed: 12/10/10 23:20 | | |
| Tetrachloro-m-xylene | 7.336 | 88.4 | 70 - 125 | 5.118 | 5.122 | -0.0040 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 7.336 | 104 | 70 - 125 | 4.313 | 4.319 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl | 7.336 | 91.8 | 60 - 125 | 11.222 | 11.227 | -0.0050 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 7.336 | 101 | 60 - 125 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **1011008-02 (1012009-03 ) ug/Kg dry** | | | | Lab File ID: 042F4201.D | | Analyzed: 12/11/10 00:15 | | |
| Tetrachloro-m-xylene | 7.326 | 148 | 70 - 125 | 5.117 | 5.122 | -0.0050 | +/-0.030 | * |
| Tetrachloro-m-xylene [2C] | 7.326 | 148 | 70 - 125 | 4.312 | 4.319 | -0.0070 | +/-0.030 | * |
| Decachlorobiphenyl | 7.326 | 136 | 60 - 125 | 11.221 | 11.227 | -0.0060 | +/-0.030 | * |
| Decachlorobiphenyl [2C] | 7.326 | 123 | 60 - 125 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |
| **Calibration Check (0L35009-CCVB ) ug/L** | | | | Lab File ID: 043F4301.D | | Analyzed: 12/11/10 00:34 | | |
| Tetrachloro-m-xylene | 100.0 | 94.4 | 80 - 120 | 5.119 | 5.122 | -0.0030 | +/-0.030 | |
| Tetrachloro-m-xylene [2C] | 100.0 | 102 | 80 - 120 | 4.316 | 4.319 | -0.0030 | +/-0.030 | |
| Decachlorobiphenyl | 100.0 | 90.5 | 80 - 120 | 11.221 | 11.227 | -0.0060 | +/-0.030 | |
| Decachlorobiphenyl [2C] | 100.0 | 92.8 | 80 - 120 | 9.647 | 9.651 | -0.0040 | +/-0.030 | |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32606 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0K32606-CAL1 | 001R0101.D | 11/18/10 12:48 |
| Cal Standard | 0K32606-CAL1 | 001F0101.D | 11/18/10 12:48 |
| Cal Standard | 0K32606-CAL2 | 002R0201.D | 11/18/10 13:07 |
| Cal Standard | 0K32606-CAL2 | 002F0201.D | 11/18/10 13:07 |
| Cal Standard | 0K32606-CAL3 | 003R0301.D | 11/18/10 13:25 |
| Cal Standard | 0K32606-CAL3 | 003F0301.D | 11/18/10 13:25 |
| Cal Standard | 0K32606-CAL4 | 004R0401.D | 11/18/10 13:44 |
| Cal Standard | 0K32606-CAL4 | 004F0401.D | 11/18/10 13:44 |
| Cal Standard | 0K32606-CAL5 | 005R0501.D | 11/18/10 14:03 |
| Cal Standard | 0K32606-CAL5 | 005F0501.D | 11/18/10 14:03 |
| Cal Standard | 0K32606-CAL6 | 006R0601.D | 11/18/10 14:22 |
| Cal Standard | 0K32606-CAL6 | 006F0601.D | 11/18/10 14:22 |
| Initial Cal Check | 0K32606-ICV1 | 007R0701.D | 11/18/10 14:40 |
| Initial Cal Check | 0K32606-ICV1 | 007F0701.D | 11/18/10 14:40 |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| Cal Standard | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| Cal Standard | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| Cal Standard | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| Cal Standard | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| Cal Standard | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| Cal Standard | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |
| Cal Standard | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |

# ANALYSIS SEQUENCE SUMMARY

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34414 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34414-CAL1 | 007R0701.D | 12/10/10 13:21 |
| Cal Standard | 0L34414-CAL1 | 007F0701.D | 12/10/10 13:21 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32606 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10G0158 | Aro-1660 Cal1@2500/125 | 0K32606-CAL1 | 001R0101.D | 11/18/10 12:48 |
| 10G0158 | Aro-1660 Cal1@2500/125 | 0K32606-CAL1 | 001F0101.D | 11/18/10 12:48 |
| 10G0159 | Aro-1660 Cal2@1000/50 (CCV) | 0K32606-CAL2 | 002F0201.D | 11/18/10 13:07 |
| 10G0159 | Aro-1660 Cal2@1000/50 (CCV) | 0K32606-CAL2 | 002R0201.D | 11/18/10 13:07 |
| 10G0160 | Aro-1660 Cal3@750/37.5 | 0K32606-CAL3 | 003F0301.D | 11/18/10 13:25 |
| 10G0160 | Aro-1660 Cal3@750/37.5 | 0K32606-CAL3 | 003R0301.D | 11/18/10 13:25 |
| 10G0161 | Aro-1660 Cal4@500/25 | 0K32606-CAL4 | 004F0401.D | 11/18/10 13:44 |
| 10G0161 | Aro-1660 Cal4@500/25 | 0K32606-CAL4 | 004R0401.D | 11/18/10 13:44 |
| 10G0162 | Aro-1660 Cal5@100/5 | 0K32606-CAL5 | 005F0501.D | 11/18/10 14:03 |
| 10G0162 | Aro-1660 Cal5@100/5 | 0K32606-CAL5 | 005R0501.D | 11/18/10 14:03 |
| 10G0163 | Aro-1660 Cal6@50/2.5 | 0K32606-CAL6 | 006F0601.D | 11/18/10 14:22 |
| 10G0163 | Aro-1660 Cal6@50/2.5 | 0K32606-CAL6 | 006R0601.D | 11/18/10 14:22 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0K32715 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018R1801.D | 11/19/10 18:06 |
| 10I0162 | Pest_ICAL7@1ppb | 0K32715-CALD | 018F1801.D | 11/19/10 18:06 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019R1901.D | 11/19/10 18:24 |
| 10I0161 | Pest_ICAL6@5ppb | 0K32715-CALE | 019F1901.D | 11/19/10 18:24 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020F2001.D | 11/19/10 18:43 |
| 10I0160 | Pest_ICAL5@10ppb | 0K32715-CALF | 020R2001.D | 11/19/10 18:43 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021F2101.D | 11/19/10 19:02 |
| 10I0159 | Pest_ICAL4@25ppb | 0K32715-CALG | 021R2101.D | 11/19/10 19:02 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022F2201.D | 11/19/10 19:20 |
| 10I0158 | Pest_ICAL3@50ppb | 0K32715-CALH | 022R2201.D | 11/19/10 19:20 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023F2301.D | 11/19/10 19:39 |
| 10I0157 | Pest. AB/Sur CCV @ 100ppb | 0K32715-CALI | 023R2301.D | 11/19/10 19:39 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024F2401.D | 11/19/10 19:57 |
| 10I0155 | Pest_ICAL1@200ppb | 0K32715-CALJ | 024R2401.D | 11/19/10 19:57 |

# INITIAL CALIBRATION STANDARDS

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34414 | Instrument: | GL-ECD3 |
| Calibration: | 0344005 | | |

| Standard ID | Description | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|---|
| 10L0258 | Aroclor-1242 CCV@ 1000ppm | 0L34414-CAL1 | 007R0701.D | 12/10/10 13:21 |
| 10L0258 | Aroclor-1242 CCV@ 1000ppm | 0L34414-CAL1 | 007F0701.D | 12/10/10 13:21 |

# INITIAL CALIBRATION DATA

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1016 (1) | | | | | | | | | | | | |
| Aroclor-1016 (2) | | | | | | | | | | | | |
| Aroclor-1016 (3) | | | | | | | | | | | | |
| Aroclor-1016 (4) | | | | | | | | | | | | |
| Aroclor-1016 (5) | | | | | | | | | | | | |
| Aroclor-1016 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1242 | | | | | | | | | | | | |
| Aroclor-1242 (1) | | | | | | | | | | | | |
| Aroclor-1242 (2) | | | | | | | | | | | | |
| Aroclor-1242 (3) | | | | | | | | | | | | |
| Aroclor-1242 (4) | | | | | | | | | | | | |
| Aroclor-1242 (5) | | | | | | | | | | | | |
| Aroclor-1242 [2C] | | | | | | | | | | | | |
| Aroclor-1242 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (1) | | | | | | | | | | | | |
| Aroclor-1260 (2) | | | | | | | | | | | | |
| Aroclor-1260 (3) | | | | | | | | | | | | |
| Aroclor-1260 (4) | | | | | | | | | | | | |
| Aroclor-1260 (5) | | | | | | | | | | | | |
| Aroclor-1260 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (4) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA

## SW8082A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_010

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 01 | | Level 02 | | Level 03 | | Level 04 | | Level 05 | | Level 06 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | | | | | | | | | | |
| Tetrachloro-m-xylene | 200 | 30396.38 | 100 | 28270.71 | 50 | 28442.38 | 25 | 28656.12 | 10 | 28496 | 5 | 28638.4 |
| Tetrachloro-m-xylene [2C] | 200 | 19072.68 | 100 | 19248.97 | 50 | 20109.36 | 25 | 20564.48 | 10 | 22076.7 | 5 | 22878.2 |
| Decachlorobiphenyl | 200 | 29960.3 | 100 | 27340.04 | 50 | 28005.84 | 25 | 29560.24 | 10 | 31558.5 | 5 | 31300.2 |
| Decachlorobiphenyl [2C] | 200 | 14811.62 | 100 | 14456.54 | 50 | 15435.18 | 25 | 16877.6 | 10 | 18462 | 5 | 19614.2 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1016 (1) | | | | | | | | | | | | |
| Aroclor-1016 (2) | | | | | | | | | | | | |
| Aroclor-1016 (3) | | | | | | | | | | | | |
| Aroclor-1016 (4) | | | | | | | | | | | | |
| Aroclor-1016 (5) | | | | | | | | | | | | |
| Aroclor-1016 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1242 | | | | | | | | | | | | |
| Aroclor-1242 (1) | | | | | | | | | | | | |
| Aroclor-1242 (2) | | | | | | | | | | | | |
| Aroclor-1242 (3) | | | | | | | | | | | | |
| Aroclor-1242 (4) | | | | | | | | | | | | |
| Aroclor-1242 (5) | | | | | | | | | | | | |
| Aroclor-1242 [2C] | | | | | | | | | | | | |
| Aroclor-1242 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (1) | | | | | | | | | | | | |
| Aroclor-1260 (2) | | | | | | | | | | | | |
| Aroclor-1260 (3) | | | | | | | | | | | | |
| Aroclor-1260 (4) | | | | | | | | | | | | |
| Aroclor-1260 (5) | | | | | | | | | | | | |
| Aroclor-1260 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (4) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 07 | | Level 08 | | Level 09 | | Level 10 | | Level 11 | | Level 12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | | | | | | | | | | |
| Tetrachloro-m-xylene | 1 | 28456 | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | 1 | 25708 | | | | | | | | | | |
| Decachlorobiphenyl | 1 | 31973 | | | | | | | | | | |
| Decachlorobiphenyl [2C] | 1 | 22932 | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 0344005

Matrix: Water

SDG: CTOJM16KW_010

Project: CTOJM16 Key West 2010

Instrument: GL-ECD3

Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1016 (1) | | | | | | | | | | | | |
| Aroclor-1016 (2) | | | | | | | | | | | | |
| Aroclor-1016 (3) | | | | | | | | | | | | |
| Aroclor-1016 (4) | | | | | | | | | | | | |
| Aroclor-1016 (5) | | | | | | | | | | | | |
| Aroclor-1016 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1016 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1242 | | | | | | | | | | | | |
| Aroclor-1242 (1) | | | | | | | | | | | | |
| Aroclor-1242 (2) | | | | | | | | | | | | |
| Aroclor-1242 (3) | | | | | | | | | | | | |
| Aroclor-1242 (4) | | | | | | | | | | | | |
| Aroclor-1242 (5) | | | | | | | | | | | | |
| Aroclor-1242 [2C] | | | | | | | | | | | | |
| Aroclor-1242 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (1) | | | | | | | | | | | | |
| Aroclor-1260 (2) | | | | | | | | | | | | |
| Aroclor-1260 (3) | | | | | | | | | | | | |
| Aroclor-1260 (4) | | | | | | | | | | | | |
| Aroclor-1260 (5) | | | | | | | | | | | | |
| Aroclor-1260 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (4) [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 13 | | Level 14 | | Level 15 | | Level 16 | | Level 17 | | Level 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | | | | | | | | | | |
| Tetrachloro-m-xylene | | | | | | | | | | | | |
| Tetrachloro-m-xylene [2C] | | | | | | | | | | | | |
| Decachlorobiphenyl | | | | | | | | | | | | |
| Decachlorobiphenyl [2C] | | | | | | | | | | | | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_010
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Calibration: 0344005
Instrument: GL-ECD3
Matrix: Water
Calibration Date: 11/19/2010 12:00:42AM

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1016 (1) | | | 50 | 1495.9 | 100 | 1379.86 | 500 | 1353.35 | 750 | 1351.843 | 1000 | 1371.552 |
| Aroclor-1016 (2) | | | 50 | 478.5 | 100 | 454.64 | 500 | 435.762 | 750 | 431.7173 | 1000 | 440.106 |
| Aroclor-1016 (3) | | | 50 | 704.12 | 100 | 664.9 | 500 | 637.41 | 750 | 627.5187 | 1000 | 640.493 |
| Aroclor-1016 (4) | | | 50 | 697.8 | 100 | 654.92 | 500 | 633.068 | 750 | 632.4706 | 1000 | 641.782 |
| Aroclor-1016 (5) | | | 50 | 572.92 | 100 | 530.08 | 500 | 501.912 | 750 | 503.0813 | 1000 | 509.949 |
| Aroclor-1016 (1) [2C] | | | 50 | 1518.82 | 100 | 1291.13 | 500 | 1062.188 | 750 | 1001.393 | 1000 | 986.116 |
| Aroclor-1016 (2) [2C] | | | 50 | 608.86 | 100 | 526.06 | 500 | 472.152 | 750 | 455.7093 | 1000 | 434.192 |
| Aroclor-1016 (3) [2C] | | | 50 | 699.36 | 100 | 628.97 | 500 | 514.674 | 750 | 484.9987 | 1000 | 474.112 |
| Aroclor-1016 (4) [2C] | | | 50 | 948.94 | 100 | 818.8 | 500 | 641.51 | 750 | 600.444 | 1000 | 585.566 |
| Aroclor-1016 (5) [2C] | | | 50 | 672.54 | 100 | 594.08 | 500 | 486.382 | 750 | 469.5453 | 1000 | 463.649 |
| Aroclor-1242 | | | | | | | | | | | | |
| Aroclor-1242 (1) | | | | | | | | | | | | |
| Aroclor-1242 (2) | | | | | | | | | | | | |
| Aroclor-1242 (3) | | | | | | | | | | | | |
| Aroclor-1242 (4) | | | | | | | | | | | | |
| Aroclor-1242 (5) | | | | | | | | | | | | |
| Aroclor-1242 [2C] | | | | | | | | | | | | |
| Aroclor-1242 (1) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (2) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (3) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (4) [2C] | | | | | | | | | | | | |
| Aroclor-1242 (5) [2C] | | | | | | | | | | | | |
| Aroclor-1260 (1) | | | 50 | 4038.86 | 100 | 3838.16 | 500 | 3690.114 | 750 | 3447.547 | 1000 | 3698.998 |
| Aroclor-1260 (2) | | | 50 | 2181.16 | 100 | 2008.25 | 500 | 1934.762 | 750 | 1901.885 | 1000 | 1991.364 |
| Aroclor-1260 (3) | | | 50 | 2315.88 | 100 | 2297.87 | 500 | 2062.272 | 750 | 2005.591 | 1000 | 2115.154 |
| Aroclor-1260 (4) | | | 50 | 1812.3 | 100 | 1617.43 | 500 | 1591.534 | 750 | 1534.256 | 1000 | 1611.527 |
| Aroclor-1260 (5) | | | 50 | 1022.96 | 100 | 944.94 | 500 | 906.088 | 750 | 841.22 | 1000 | 916.282 |
| Aroclor-1260 (1) [2C] | | | 50 | 2541.76 | 100 | 2234.09 | 500 | 1975.376 | 750 | 1833.392 | 1000 | 1882.631 |
| Aroclor-1260 (2) [2C] | | | 50 | 1366.76 | 100 | 1199 | 500 | 974.864 | 750 | 918.148 | 1000 | 915.273 |
| Aroclor-1260 (3) [2C] | | | 50 | 1608.24 | 100 | 1405.76 | 500 | 1174.532 | 750 | 1105.324 | 1000 | 1104.948 |
| Aroclor-1260 (4) [2C] | | | 50 | 1514.18 | 100 | 1340.42 | 500 | 1115.872 | 750 | 1050.079 | 1000 | 1064.022 |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Level 19 | | Level 20 | | Level 21 | | Level 22 | | Level 23 | | Level 24 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF | ug/L | RF |
| Aroclor-1260 (5) [2C] | | | 50 | 1193.36 | 100 | 1040.37 | 500 | 889.262 | 750 | 825.8493 | 1000 | 844.715 |
| Tetrachloro-m-xylene | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Tetrachloro-m-xylene [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |
| Decachlorobiphenyl [2C] | | | 2.5 | | 5 | | 25 | | 37.5 | | 50 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 (1) | 1377.504 | 4.536308 | 6.700333 | 3.426844E-02 | | | 20 | |
| Aroclor-1016 (2) | 444.0847 | 4.44248 | 5.826833 | 3.181603E-02 | | | 20 | |
| Aroclor-1016 (3) | 649.9719 | 4.621188 | 6.179167 | 3.737598E-02 | | | 20 | |
| Aroclor-1016 (4) | 648.8554 | 3.928386 | 6.382333 | 4.135933E-02 | | | 20 | |
| Aroclor-1016 (5) | 518.3258 | 5.712167 | 6.986333 | 4.281168E-02 | | | 20 | |
| Aroclor-1016 (1) [2C] | 1116.305 | 22.05288 | 5.6205 | 8.742721E-02 | | | 20 | * |
| Aroclor-1016 (2) [2C] | 482.1738 | 15.65584 | 5.207667 | 6.233316E-02 | | | 20 | |
| Aroclor-1016 (3) [2C] | 538.2843 | 19.29511 | 5.3845 | 6.561467E-02 | | | 20 | |
| Aroclor-1016 (4) [2C] | 685.3173 | 23.96236 | 5.673333 | 7.372141E-02 | | | 20 | * |
| Aroclor-1016 (5) [2C] | 518.0925 | 18.33539 | 6.050167 | 3.093481E-02 | | | 20 | |
| Aroclor-1242 | | | | | | | 20 | |
| Aroclor-1242 (1) | | | | | | | 20 | |
| Aroclor-1242 (2) | | | | | | | 20 | |
| Aroclor-1242 (3) | | | | | | | 20 | |
| Aroclor-1242 (4) | | | | | | | 20 | |
| Aroclor-1242 (5) | | | | | | | 20 | |
| Aroclor-1242 [2C] | | | | | | | 20 | |
| Aroclor-1242 (1) [2C] | | | | | | | 20 | |
| Aroclor-1242 (2) [2C] | | | | | | | 20 | |
| Aroclor-1242 (3) [2C] | | | | | | | 20 | |
| Aroclor-1242 (4) [2C] | | | | | | | 20 | |
| Aroclor-1242 (5) [2C] | | | | | | | 20 | |
| Aroclor-1260 (1) | 3707.263 | 5.739381 | 9.985833 | 4.225337E-02 | | | 20 | |
| Aroclor-1260 (2) | 1987.077 | 5.271371 | 8.871167 | 0.0462616 | | | 20 | |
| Aroclor-1260 (3) | 2134.259 | 6.546249 | 9.215667 | 0.0358565 | | | 20 | |
| Aroclor-1260 (4) | 1615.479 | 6.430938 | 9.3155 | 3.563058E-02 | | | 20 | |
| Aroclor-1260 (5) | 907.6331 | 8.228581 | 11.0785 | 2.856956E-02 | | | 20 | |
| Aroclor-1260 (1) [2C] | 2013.278 | 16.31731 | 8.419 | 8.340063E-03 | | | 20 | |
| Aroclor-1260 (2) [2C] | 1028.947 | 20.55875 | 7.164667 | 1.777219E-02 | | | 20 | * |
| Aroclor-1260 (3) [2C] | 1227.66 | 19.18172 | 7.3915 | 0.0314888 | | | 20 | |
| Aroclor-1260 (4) [2C] | 1169.368 | 18.45489 | 7.554333 | 1.416947E-02 | | | 20 | |
| Aroclor-1260 (5) [2C] | 921.5547 | 18.06768 | 8.109833 | 0.0215561 | | | 20 | |

# INITIAL CALIBRATION DATA (Continued)

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Calibration: | 0344005 | Instrument: | GL-ECD3 |
| Matrix: | Water | Calibration Date: | 11/19/2010 12:00:42AM |

| Compound | Mean RF | RF RSD | Mean RT | RT RSD | Linear r | Quad COD | LIMIT | Q |
|---|---|---|---|---|---|---|---|---|
| Tetrachloro-m-xylene | 28765.14 | 2.541019 | 5.388857 | 1.804526E-02 | | | 20 | |
| Tetrachloro-m-xylene [2C] | 21379.77 | 11.06958 | 4.526 | 6.298631E-02 | | | 20 | |
| Decachlorobiphenyl | 29956.87 | 5.97861 | 11.62329 | 1.578512E-02 | | | 20 | |
| Decachlorobiphenyl [2C] | 17512.73 | 17.45123 | 10.00071 | 1.794087E-02 | | | 20 | |

# INITIAL CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 007F0701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0K32606 | Injection Date: | 11/18/10 |
| Lab Sample ID: | 0K32606-ICV1 | Injection Time: | 14:40 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | | |
|---|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | ICV | ICAL | ICV | MIN (#) | ICV | LIMIT (#) | |
| Aroclor-1016 (1) | A | 1000 | 965.8 | 1377.504 | 1330.475 | | -3.4 | 20 | |
| Aroclor-1016 (2) | A | 1000 | 954.1 | 444.0847 | 423.696 | | -4.6 | 20 | |
| Aroclor-1016 (3) | A | 1000 | 990.4 | 649.9719 | 643.709 | | -1.0 | 20 | |
| Aroclor-1016 (4) | A | 1000 | 1001 | 648.8554 | 649.524 | | 0.1 | 20 | |
| Aroclor-1016 (5) | A | 1000 | 1007 | 518.3258 | 521.878 | | 0.7 | 20 | |
| Aroclor-1016 (1) [2C] | A | 1000 | 770.6 | 1116.305 | 860.241 | | -22.9 | 20 | * |
| Aroclor-1016 (2) [2C] | A | 1000 | 955.3 | 482.1738 | 460.605 | | -4.5 | 20 | |
| Aroclor-1016 (3) [2C] | A | 1000 | 884.8 | 538.2843 | 476.271 | | -11.5 | 20 | |
| Aroclor-1016 (4) [2C] | A | 1000 | 869.8 | 685.3173 | 596.06 | | -13.0 | 20 | |
| Aroclor-1016 (5) [2C] | A | 1000 | 893.4 | 518.0925 | 462.882 | | -10.7 | 20 | |
| Aroclor-1260 (1) | A | 1000 | 914.4 | 3707.263 | 3390.072 | | -8.6 | 20 | |
| Aroclor-1260 (2) | A | 1000 | 999.0 | 1987.077 | 1985.004 | | -0.1 | 20 | |
| Aroclor-1260 (3) | A | 1000 | 1044 | 2134.259 | 2227.99 | | 4.4 | 20 | |
| Aroclor-1260 (4) | A | 1000 | 845.2 | 1615.479 | 1365.422 | | -15.5 | 20 | |
| Aroclor-1260 (5) | A | 1000 | 819.7 | 907.6331 | 744.024 | | -18.0 | 20 | |
| Aroclor-1260 (1) [2C] | A | 1000 | 848.7 | 2013.278 | 1708.677 | | -15.1 | 20 | |
| Aroclor-1260 (2) [2C] | A | 1000 | 914.8 | 1028.947 | 941.29 | | -8.5 | 20 | |
| Aroclor-1260 (3) [2C] | A | 1000 | 939.9 | 1227.66 | 1153.839 | | -6.0 | 20 | |
| Aroclor-1260 (4) [2C] | A | 1000 | 917.8 | 1169.368 | 1073.231 | | -8.2 | 20 | |
| Aroclor-1260 (5) [2C] | A | 1000 | 816.1 | 921.5547 | 752.068 | | -18.4 | 20 | |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 003F0301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV1 | Injection Time: | 12:06 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Tetrachloro-m-xylene | A | 100.0 | 90.38 | 28765.14 | 25999.25 | | -9.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 97.24 | 21379.77 | 20790.76 | | -2.8 | 20 |
| Decachlorobiphenyl | A | 100.0 | 86.52 | 29956.87 | 25919.92 | | -13.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 91.76 | 17512.73 | 16070.47 | | -8.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 006F0601.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV4 | Injection Time: | 13:03 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1016 (1) | A | 1000 | 951.3 | 1377.504 | 1310.397 | | -4.9 | 20 |
| Aroclor-1016 (2) | A | 1000 | 969.3 | 444.0847 | 430.444 | | -3.1 | 20 |
| Aroclor-1016 (3) | A | 1000 | 979.0 | 649.9719 | 636.323 | | -2.1 | 20 |
| Aroclor-1016 (4) | A | 1000 | 974.5 | 648.8554 | 632.336 | | -2.5 | 20 |
| Aroclor-1016 (5) | A | 1000 | 957.0 | 518.3258 | 496.025 | | -4.3 | 20 |
| Aroclor-1016 (1) [2C] | A | 1000 | 1032 | 1116.305 | 1152.408 | | 3.2 | 20 |
| Aroclor-1016 (2) [2C] | A | 1000 | 1084 | 482.1738 | 522.447 | | 8.4 | 20 |
| Aroclor-1016 (3) [2C] | A | 1000 | 1074 | 538.2843 | 577.849 | | 7.4 | 20 |
| Aroclor-1016 (4) [2C] | A | 1000 | 1085 | 685.3173 | 743.499 | | 8.5 | 20 |
| Aroclor-1016 (5) [2C] | A | 1000 | 1036 | 518.0925 | 536.731 | | 3.6 | 20 |
| Aroclor-1260 (1) | A | 1000 | 1026 | 3707.263 | 3802.841 | | 2.6 | 20 |
| Aroclor-1260 (2) | A | 1000 | 973.7 | 1987.077 | 1934.916 | | -2.6 | 20 |
| Aroclor-1260 (3) | A | 1000 | 947.6 | 2134.259 | 2022.331 | | -5.2 | 20 |
| Aroclor-1260 (4) | A | 1000 | 974.9 | 1615.479 | 1574.97 | | -2.5 | 20 |
| Aroclor-1260 (5) | A | 1000 | 991.1 | 907.6331 | 899.54 | | -0.9 | 20 |
| Aroclor-1260 (1) [2C] | A | 1000 | 1094 | 2013.278 | 2202.64 | | 9.4 | 20 |
| Aroclor-1260 (2) [2C] | A | 1000 | 1086 | 1028.947 | 1117.371 | | 8.6 | 20 |
| Aroclor-1260 (3) [2C] | A | 1000 | 1089 | 1227.66 | 1337.058 | | 8.9 | 20 |
| Aroclor-1260 (4) [2C] | A | 1000 | 1060 | 1169.368 | 1239.274 | | 6.0 | 20 |
| Aroclor-1260 (5) [2C] | A | 1000 | 1080 | 921.5547 | 995.047 | | 8.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 031F3101.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV6 | Injection Time: | 20:51 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Tetrachloro-m-xylene | A | 100.0 | 94.61 | 28765.14 | 27215.45 | | -5.4 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 100.5 | 21379.77 | 21496.84 | | 0.5 | 20 |
| Decachlorobiphenyl | A | 100.0 | 93.78 | 29956.87 | 28094.31 | | -6.2 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 101.0 | 17512.73 | 17696.02 | | 1.0 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 034F3401.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCV9 | Injection Time: | 21:47 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1016 (1) | A | 1000 | 1021 | 1377.504 | 1406.546 | | 2.1 | 20 |
| Aroclor-1016 (2) | A | 1000 | 1083 | 444.0847 | 480.87 | | 8.3 | 20 |
| Aroclor-1016 (3) | A | 1000 | 1073 | 649.9719 | 697.735 | | 7.3 | 20 |
| Aroclor-1016 (4) | A | 1000 | 1089 | 648.8554 | 706.812 | | 8.9 | 20 |
| Aroclor-1016 (5) | A | 1000 | 1050 | 518.3258 | 544.351 | | 5.0 | 20 |
| Aroclor-1016 (1) [2C] | A | 1000 | 1101 | 1116.305 | 1228.779 | | 10.1 | 20 |
| Aroclor-1016 (2) [2C] | A | 1000 | 1204 | 482.1738 | 580.539 | | 20.4 | 20 * |
| Aroclor-1016 (3) [2C] | A | 1000 | 1123 | 538.2843 | 604.314 | | 12.3 | 20 |
| Aroclor-1016 (4) [2C] | A | 1000 | 1079 | 685.3173 | 739.261 | | 7.9 | 20 |
| Aroclor-1016 (5) [2C] | A | 1000 | 1170 | 518.0925 | 606.449 | | 17.1 | 20 |
| Aroclor-1260 (1) | A | 1000 | 1084 | 3707.263 | 4019.111 | | 8.4 | 20 |
| Aroclor-1260 (2) | A | 1000 | 1043 | 1987.077 | 2073.009 | | 4.3 | 20 |
| Aroclor-1260 (3) | A | 1000 | 1005 | 2134.259 | 2145.317 | | 0.5 | 20 |
| Aroclor-1260 (4) | A | 1000 | 1024 | 1615.479 | 1654.279 | | 2.4 | 20 |
| Aroclor-1260 (5) | A | 1000 | 1051 | 907.6331 | 954.183 | | 5.1 | 20 |
| Aroclor-1260 (1) [2C] | A | 1000 | 1134 | 2013.278 | 2283.256 | | 13.4 | 20 |
| Aroclor-1260 (2) [2C] | A | 1000 | 1108 | 1028.947 | 1140.68 | | 10.9 | 20 |
| Aroclor-1260 (3) [2C] | A | 1000 | 1116 | 1227.66 | 1369.787 | | 11.6 | 20 |
| Aroclor-1260 (4) [2C] | A | 1000 | 1132 | 1169.368 | 1323.483 | | 13.2 | 20 |
| Aroclor-1260 (5) [2C] | A | 1000 | 1153 | 921.5547 | 1062.37 | | 15.3 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 035F3501.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/10/10 |
| Lab Sample ID: | 0L35009-CCVA | Injection Time: | 22:05 |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1242 (1) | A | 1000 | 1129 | | 1088.652 | | | 20 |
| Aroclor-1242 (2) | A | 1000 | 1126 | | 536.214 | | | 20 |
| Aroclor-1242 (3) | A | 1000 | 1128 | | 539.074 | | | 20 |
| Aroclor-1242 (4) | A | 1000 | 1126 | | 411.732 | | | 20 |
| Aroclor-1242 (5) | A | 1000 | 1142 | | 536.652 | | | 20 |
| Aroclor-1242 (1) [2C] | A | 1000 | 1130 | | 1022.213 | | | 20 |
| Aroclor-1242 (2) [2C] | A | 1000 | 1101 | | 342.696 | | | 20 |
| Aroclor-1242 (3) [2C] | A | 1000 | 1050 | | 469.216 | | | 20 |
| Aroclor-1242 (4) [2C] | A | 1000 | 1103 | | 633.05 | | | 20 |
| Aroclor-1242 (5) [2C] | A | 1000 | 1182 | | 569.5 | | | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 043F4301.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVB | Injection Time: | 00:34 |

| COMPOUND | TYPE | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| | | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Tetrachloro-m-xylene | A | 100.0 | 94.42 | 28765.14 | 27159.06 | | -5.6 | 20 |
| Tetrachloro-m-xylene [2C] | A | 100.0 | 102.3 | 21379.77 | 21880.2 | | 2.3 | 20 |
| Decachlorobiphenyl | A | 100.0 | 90.52 | 29956.87 | 27118.33 | | -9.5 | 20 |
| Decachlorobiphenyl [2C] | A | 100.0 | 92.76 | 17512.73 | 16244.24 | | -7.2 | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 046F4601.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVE | Injection Time: | 01:30 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1016 (1) | A | 1000 | 1213 | 1377.504 | 1671.315 | | 21.3 | 20 * |
| Aroclor-1016 (2) | A | 1000 | 1278 | 444.0847 | 567.328 | | 27.8 | 20 * |
| Aroclor-1016 (3) | A | 1000 | 1274 | 649.9719 | 827.973 | | 27.4 | 20 * |
| Aroclor-1016 (4) | A | 1000 | 1268 | 648.8554 | 822.73 | | 26.8 | 20 * |
| Aroclor-1016 (5) | A | 1000 | 1239 | 518.3258 | 642.156 | | 23.9 | 20 * |
| Aroclor-1016 (1) [2C] | A | 1000 | 1340 | 1116.305 | 1495.299 | | 34.0 | 20 * |
| Aroclor-1016 (2) [2C] | A | 1000 | 1443 | 482.1738 | 695.657 | | 44.3 | 20 * |
| Aroclor-1016 (3) [2C] | A | 1000 | 1378 | 538.2843 | 741.908 | | 37.8 | 20 * |
| Aroclor-1016 (4) [2C] | A | 1000 | 1334 | 685.3173 | 913.881 | | 33.4 | 20 * |
| Aroclor-1016 (5) [2C] | A | 1000 | 1435 | 518.0925 | 743.571 | | 43.5 | 20 * |
| Aroclor-1260 (1) | A | 1000 | 1298 | 3707.263 | 4810.821 | | 29.8 | 20 * |
| Aroclor-1260 (2) | A | 1000 | 1290 | 1987.077 | 2563.639 | | 29.0 | 20 * |
| Aroclor-1260 (3) | A | 1000 | 1208 | 2134.259 | 2577.69 | | 20.8 | 20 * |
| Aroclor-1260 (4) | A | 1000 | 1236 | 1615.479 | 1997.266 | | 23.6 | 20 * |
| Aroclor-1260 (5) | A | 1000 | 1300 | 907.6331 | 1179.783 | | 30.0 | 20 * |
| Aroclor-1260 (1) [2C] | A | 1000 | 1439 | 2013.278 | 2896.948 | | 43.9 | 20 * |
| Aroclor-1260 (2) [2C] | A | 1000 | 1411 | 1028.947 | 1452.179 | | 41.1 | 20 * |
| Aroclor-1260 (3) [2C] | A | 1000 | 1425 | 1227.66 | 1749.86 | | 42.5 | 20 * |
| Aroclor-1260 (4) [2C] | A | 1000 | 1417 | 1169.368 | 1657.035 | | 41.7 | 20 * |
| Aroclor-1260 (5) [2C] | A | 1000 | 1433 | 921.5547 | 1320.791 | | 43.3 | 20 * |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# CONTINUING CALIBRATION CHECK

## SW8082A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_010 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Instrument ID: | GL-ECD3 | Calibration: | 0344005 |
| Lab File ID: | 047F4701.D | Calibration Date: | 11/19/10 00:00 |
| Sequence: | 0L35009 | Injection Date: | 12/11/10 |
| Lab Sample ID: | 0L35009-CCVF | Injection Time: | 01:48 |

| | | CONC. (ug/L) | | RESPONSE FACTOR | | | % DIFF / DRIFT | |
|---|---|---|---|---|---|---|---|---|
| COMPOUND | TYPE | STD | CCV | ICAL | CCV | MIN (#) | CCV | LIMIT (#) |
| Aroclor-1242 (1) | A | 1000 | 1208 | | 1164.325 | | | 20 |
| Aroclor-1242 (2) | A | 1000 | 1150 | | 547.793 | | | 20 |
| Aroclor-1242 (3) | A | 1000 | 1174 | | 560.967 | | | 20 |
| Aroclor-1242 (4) | A | 1000 | 1167 | | 426.385 | | | 20 |
| Aroclor-1242 (5) | A | 1000 | 1204 | | 565.645 | | | 20 |
| Aroclor-1242 (1) [2C] | A | 1000 | 1136 | | 1027.767 | | | 20 |
| Aroclor-1242 (2) [2C] | A | 1000 | 1161 | | 361.39 | | | 20 |
| Aroclor-1242 (3) [2C] | A | 1000 | 1327 | | 593.112 | | | 20 |
| Aroclor-1242 (4) [2C] | A | 1000 | 1138 | | 652.888 | | | 20 |
| Aroclor-1242 (5) [2C] | A | 1000 | 1304 | | 628.764 | | | 20 |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_010

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Solid **Instrument:** GL-ECD3

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aroclor-1016 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1221 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1232 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1242 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1248 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1254 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1260 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1262 | 4.20 | 17.0 | ug/Kg | SW8082A |
| Aroclor-1268 | 4.20 | 17.0 | ug/Kg | SW8082A |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE: FEBRUARY 14, 2011**

**FROM:** **DANIELLE M. BAUGHMAN** **COPIES: DV FILE**

**SUBJECT:** **INORGANIC DATA VALIDATION – TAL METALS**
**CTO JM16 NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – CTOJM16KW_001**

**SAMPLES:**

8/Aqueous/

| | | |
|---|---|---|
| GKHMS-GW-017-1010 | GKHMS-GW-018-1010 | GKHMS-GW-019-1010 |
| GKHMS-GW-022-1010 | GKHMS-GW-023-1010 | GKHMS-GW-FD001-1010 |
| GKHMS-GW-FD002-1010 | GKHMS-GW-FD003-1010 | |

Overview

The sample set for NAS Key West, CTO JM16, SDG CTOJM16KW_001, consists of eight (8) aqueous environmental samples. Three (3) field duplicate pairs ((GKHMS-GW-017-1010/ GKHMS-GW-FD001-1010), (GKHMS-GW-019-1010/GKHMS-GW-FD002-1010), and (GKHMS-GW-022-1010/GKHMS-GW-FD003-1010)) were included within this SDG.

All samples were analyzed for aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc. The samples were collected by Tetra Tech NUS on November 1 and 2, 2010 and analyzed by Empirical Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metal analyses were conducted using SW-846 method 6010 C. Mercury analyses were conducted using SW-846 method 7470A.

These data were evaluated based on the following parameters:

* • Data Completeness
• Holding Times
• Initial / Continuing Calibration Verification Results
* • Laboratory Method Blank Analyses
* • Laboratory Control Sample Recoveries
* • Matrix Spike Recoveries
* • Laboratory Duplicate Precision
* • Serial Dilution Results
* • Field Duplicate Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

Holding times for mercury exceeded in all samples analyzed three (3) days after collection. Samples affected were qualified as estimated "UJ".

The CCV % recovery on 12/7/10 at 1438 for sodium was > 110% quality control limit. Six samples were affected. Results reported for sodium were qualified as estimated "J".

Notes

Positive results greater than the method detection limit (MDL), but less than the reporting limit (RL) were qualified as estimated "J".

Form I's contained lab IDs. Field sample IDs needed to be determined and were hand written on all Form I's.

Executive Summary

**Laboratory Performance:** Holding times for mercury exceeded in all samples. The CCV % recovery for sodium was outside of the 90-110% quality control limit.

**Other Factors Affecting Data Quality:** Positive results greater than the method detection limit (MDL), but less than the reporting limit (RL) were qualified.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", January 2006.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Danielle M. Baughman
Project Engineer

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

# APPENDIX A
# QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS-GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O - Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DOT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_001 | LAB_ID | 1011255-01 | | | 1011255-02 | | | 1011255-03 | | | 1011255-04 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 94.3 | J | P | 128 | J | P | 125 | J | P | 117 | J | P |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| BARIUM | | 6.46 | J | P | 5 | U | | 5 | U | | 5 | U | |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 3.18 | J | P | 1.93 | J | P | 2.21 | J | P | 2.18 | J | P |
| CALCIUM | | 139000 | | | 125000 | | | 116000 | | | 116000 | | |
| CHROMIUM | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 30 | U | | 146 | | | 201 | | | 116 | | |
| LEAD | | 1.5 | U | | 1.5 | U | | 1.5 | U | | 1.5 | U | |
| MAGNESIUM | | 100000 | | | 38100 | | | 38800 | | | 61200 | | |
| MANGANESE | | 3 | U | | 3.55 | J | P | 5.5 | J | P | 3 | U | |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 26000 | | | 5890 | | | 6310 | | | 4290 | J | P |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 519000 | | | 107000 | J | C | 88800 | J | C | 81000 | J | C |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 8.36 | J | P | 5 | U | | 7.53 | J | P | 5 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-023-1010 | | | GKHMS-GW-FD001-1010 | | | GKHMS-GW-FD002-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: CTOJM16KW_001 | LAB_ID | 1011255-05 | | | 1011255-06 | | | 1011255-07 | | | 1011255-08 | | |
| FRACTION: M | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | GKHMS-GW-017-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| ALUMINUM | | 193 | J | P | 91.6 | J | P | 75.2 | J | P | 101 | J | P |
| ANTIMONY | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ARSENIC | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| BARIUM | | 5 | U | | 6.66 | J | P | 5 | U | | 5 | U | |
| BERYLLIUM | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| CADMIUM | | 1.99 | J | P | 3.26 | J | P | 2.09 | J | P | 2.08 | J | P |
| CALCIUM | | 124000 | | | 134000 | | | 115000 | | | 107000 | | |
| CHROMIUM | | 2 | U | | 2 | U | | 2 | U | | 2 | U | |
| COBALT | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| COPPER | | 4 | U | | 4 | U | | 4 | U | | 4 | U | |
| IRON | | 155 | | | 30 | U | | 194 | | | 103 | | |
| LEAD | | 1.5 | U | | 1.5 | U | | 1.5 | U | | 1.5 | U | |
| MAGNESIUM | | 29400 | | | 102000 | | | 40000 | | | 62800 | | |
| MANGANESE | | 3 | U | | 3 | U | | 5.23 | J | P | 3 | U | |
| MERCURY | | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H | 0.08 | UJ | H |
| NICKEL | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| POTASSIUM | | 2800 | J | P | 27400 | | | 6740 | | | 4530 | J | P |
| SELENIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| SILVER | | 1 | U | | 1 | U | | 1 | U | | 1 | U | |
| SODIUM | | 42000 | J | C | 522000 | | | 93300 | J | C | 88700 | J | C |
| THALLIUM | | 3 | U | | 3 | U | | 3 | U | | 3 | U | |
| VANADIUM | | 5 | U | | 5 | U | | 5 | U | | 5 | U | |
| ZINC | | 5 | U | | 5 | U | | 5 | U | | 5.18 | J | P |

# APPENDIX B
# RESULTS AS REPORTED BY THE LABORATORY

GKHMS - GW-017-1010

# ANALYSIS DATA SHEET

1011003-02

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 08:40
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-01
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06006 | 12/08/10 11:52 |
| 7429-90-5 | Aluminum | 94.3 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-39-3 | Barium | 6.46 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-43-9 | Cadmium | 3.18 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-70-2 | Calcium | 139000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7439-95-4 | Magnesium | 100000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-09-7 | Potassium | 26000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-23-5 | Sodium | 519000 | 400 | 6000 | 10000 | 2 | D | SW6010C | 0L06009 | 12/08/10 21:20 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:24 |
| 7440-66-6 | Zinc | 8.36 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:24 |

GKHMS-GW-018-1010

# ANALYSIS DATA SHEET

1011003-03

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 08:00
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-02
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06006 | 12/08/10 11:53 |
| 7429-90-5 | Aluminum | 128 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-43-9 | Cadmium | 1.93 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-70-2 | Calcium | 125000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7439-89-6 | Iron | 146 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7439-95-4 | Magnesium | 38100 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7439-96-5 | Manganese | 3.55 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-09-7 | Potassium | 5890 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-23-5 | Sodium | 107000 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:29 |

GKHMS-GW-019-1010

# ANALYSIS DATA SHEET

1011003-04

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 09:20
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-03
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06006 | 12/08/10 11:58 |
| 7429-90-5 | Aluminum | 125 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-43-9 | Cadmium | 2.21 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-70-2 | Calcium | 116000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7439-89-6 | Iron | 201 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7439-95-4 | Magnesium | 38800 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7439-96-5 | Manganese | 5.50 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-09-7 | Potassium | 6310 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-23-5 | Sodium | 88800 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:54 |
| 7440-66-6 | Zinc | 7.53 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:54 |

GKHMS-GW-022-1010

# ANALYSIS DATA SHEET

1011003-05

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 10:50
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-04
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06006 | 12/08/10 11:59 |
| 7429-90-5 | Aluminum | 117 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-43-9 | Cadmium | 2.18 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-70-2 | Calcium | 116000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7439-89-6 | Iron | 116 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7439-95-4 | Magnesium | 61200 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-09-7 | Potassium | 4290 | 1000 | 3000 | 5000 | 1 | I | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-23-5 | Sodium | 81000 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 13:59 |

GKHMS-GW-023-1010

1011003-06

# ANALYSIS DATA SHEET

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 10:00
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-05
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06006 | 12/08/10 12:01 |
| 7429-90-5 | Aluminum | 193 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-43-9 | Cadmium | 1.99 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-70-2 | Calcium | 124000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7439-89-6 | Iron | 155 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7439-95-4 | Magnesium | 29400 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-09-7 | Potassium | 2800 | 1000 | 3000 | 5000 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-23-5 | Sodium | 42000 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:04 |

GKHMS-GW-FD001-1010

# ANALYSIS DATA SHEET

1011003-07

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 00:00
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-06
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:05 |
| 7429-90-5 | Aluminum | 91.6 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-39-3 | Barium | 6.66 | 5.00 | 10.0 | 40.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-43-9 | Cadmium | 3.26 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-70-2 | Calcium | 134000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7439-89-6 | Iron | | 30.0 | 60.0 | 100 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7439-95-4 | Magnesium | 102000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-09-7 | Potassium | 27400 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-23-5 | Sodium | 522000 | 400 | 6000 | 10000 | 2 | D | SW6010C | 0L06009 | 12/08/10 21:25 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:08 |

GKHMS-GW-FD002-1010

# ANALYSIS DATA SHEET

1011003-08

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 00:00
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-07
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:17 |
| 7429-90-5 | Aluminum | 75.2 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-43-9 | Cadmium | 2.09 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-70-2 | Calcium | 115000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7439-89-6 | Iron | 194 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7439-95-4 | Magnesium | 40000 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7439-96-5 | Manganese | 5.23 | 3.00 | 6.00 | 15.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-09-7 | Potassium | 6740 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-23-5 | Sodium | 93300 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |
| 7440-66-6 | Zinc | | 5.00 | 10.0 | 20.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:13 |

GKHMS-GW-FD003-1010

# ANALYSIS DATA SHEET

1011003-09

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 11/02/10 00:00
% Solids: 0.00

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 1011255-08
Received: 11/30/10 08:25

| CAS NO. | Analyte | Conc. (ug/L) | DL | LOD | LOQ | D.F. | Q | Method | Batch | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | | 0.0800 | 0.200 | 0.200 | 1 | H3 U | SW7470A | 0L06007 | 12/08/10 12:18 |
| 7429-90-5 | Aluminum | 101 | 50.0 | 100 | 200 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-36-0 | Antimony | | 5.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-38-2 | Arsenic | | 3.00 | 5.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-39-3 | Barium | | 5.00 | 10.0 | 40.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-41-7 | Beryllium | | 1.00 | 2.00 | 5.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-43-9 | Cadmium | 2.08 | 1.00 | 2.00 | 5.00 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-70-2 | Calcium | 107000 | 1000 | 2000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-47-3 | Chromium | | 2.00 | 4.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-48-4 | Cobalt | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-50-8 | Copper | | 4.00 | 8.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7439-89-6 | Iron | 103 | 30.0 | 60.0 | 100 | 1 | | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7439-92-1 | Lead | | 1.50 | 3.00 | 3.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7439-95-4 | Magnesium | 62800 | 1000 | 3000 | 5000 | 1 | | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7439-96-5 | Manganese | | 3.00 | 6.00 | 15.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-02-0 | Nickel | | 3.00 | 6.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-09-7 | Potassium | 4530 | 1000 | 3000 | 5000 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7782-49-2 | Selenium | | 3.00 | 5.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-22-4 | Silver | | 1.00 | 2.00 | 10.0 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-23-5 | Sodium | 88700 | 200 | 3000 | 5000 | 1 | X | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-28-0 | Thallium | | 3.00 | 4.00 | 8.00 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-62-2 | Vanadium | | 5.00 | 10.0 | 12.5 | 1 | U | SW6010C | 0L06009 | 12/07/10 14:18 |
| 7440-66-6 | Zinc | 5.18 | 5.00 | 10.0 | 20.0 | 1 | I | SW6010C | 0L06009 | 12/07/10 14:18 |

# APPENDIX C
# SUPPORT DOCUMENTATION

## Sample Delivery Group Case Narrative

**Receipt Information**
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

All samples for SW7470A were received in the laboratory out of the EPA recommending holding time.

**Changes to the Revision**
Revision 01: The package was revised to lower the LOD and LOQ for Arsenic by SW6010C. The Analysis Data Sheets were replaced.

**Analytical Information**
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

**Chromatographic Flags for Manual Integration:**
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

**A:** The peak was manually integrated as it was not integrated in the original chromatogram.
**B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
**C:** The peak was manually integrated to correct the baseline from the original chromatogram.
**D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
**E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

**SW6010C/SW7470A:**
Samples 1011257-01, -02, -03, -04, -05, -06, -07 and -08 were received after the EPA recommended holding time for SW7470A.

The continuing calibration verification 0L34305-CCV2 exceeded criteria with a positive bias for Sodium.

The matrix spike associated to sample 1011255-02 exceeded criteria for Calcium but the concentration of Calcium in the parent sample was greater then 4 times the amount spiked. The post digestion spike associated to sample 1011255-02 exceeded criteria for Calcium and Sodium.

No additional anomalies or deviations are noted and the data is properly qualified.

**Data Qualifiers**
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

**Analytical Report Terms and Qualifiers**

**MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

**LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

**LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

**B**: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

**D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

**E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

**H1**: The result was analyzed outside of the EPA recommended holding time.

**H2**: The result was extracted outside of the EPA recommended holding time.

**H3**: The sample for this analyte was received outside of the EPA recommended holding time.

**J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

**M**: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

**N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

**P**: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

**Q**: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

**S**: The associated internal standard failed criteria.

**U**: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

**X**: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

**Y**: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

**LIMS Definitions / Naming Conventions:**
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

**BLK**: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to

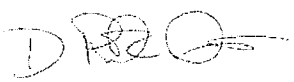
which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

**BS**: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

**MS**: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

**IDs**: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE**" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

**Statement of Data Authenticity:**
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

CENTAURI LABS™

WORK ORDER

1011003

Approved

Printed: 11/3/2010 11:46:13AM

*Due Date: 11/17/10 00:00 (14 day TAT)*

*Date Received: 11/03/10 10:10*

Client: Tetra Tech NUS, Inc
Contact: Shauna Stotler-Hardy
Address 661 Andersen Dr., Foster Plaza 7
Pittsburgh, PA 15220
Phone: (803) 641-4944
Fax: (803) 642-8454

Lab PM: Chino Ortiz
Project: KEY WEST NAS
Project # [none]
Comments: LEVEL 3

EXTRACTIONS HOLDING TIME FOR WATER AND SOIL ARE 7 DAYS!!!!!!!

| Analysis | Expires | Comments |
|---|---|---|
| 1011003-01 GKHMS-TB-03 [Water] Sampled 11/01/10 08:00 Eastern | | |
| 8260B LL VOA | 11/15/10 08:00 | |
| 1011003-02 GKHMS-GW-017-1010 [Water] Sampled 11/02/10 08:40 Eastern | | |
| 6020A QSM TAL | 05/01/11 08:40 | |
| 8260B LL VOA | 11/16/10 08:40 | |
| 8270D LL SVOC TCL | 11/09/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 08:40 | |
| 1011003-03 GKHMS-GW-018-1010 [Water] Sampled 11/02/10 08:00 Eastern | | *Use for QC* |
| 8270D LL SVOC TCL | 11/09/10 08:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 08:00 | |
| 8260B LL VOA | 11/16/10 08:00 | |
| 6020A QSM TAL | 05/01/11 08:00 | |
| 1011003-04 GKHMS-GW-019-1010 [Water] Sampled 11/02/10 09:20 Eastern | | |
| 8260B LL VOA | 11/16/10 09:20 | |
| 8270D LL SVOC TCL | 11/09/10 09:20 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 09:20 | |
| 6020A QSM TAL | 05/01/11 09:20 | |
| 1011003-05 GKHMS-GW-022-1010 [Water] Sampled 11/02/10 10:50 Eastern | | |
| 8270D LL SVOC TCL | 11/09/10 10:50 | PLUS SIM PAHs |
| 8260B LL VOA | 11/16/10 10:50 | |
| 6020A QSM TAL | 05/01/11 10:50 | |
| 8081B Pesticides | 11/09/10 10:50 | |
| Mercury, Total 7470A | 11/30/10 10:50 | |
| 8082 PCBs | 11/09/10 10:50 | |

CENTAURI LABS™

WORK ORDER

1011003

Approved

Printed: 11/3/2010 11:46:13AM

*Due Date: 11/17/10 00:00 (14 day TAT)*

*Date Received: 11/03/10 10:10*

| Analysis | Expires | Comments |
|---|---|---|
| 1011003-06 GKHMS-GW-023-1010 [Water] | | Sampled 11/02/10 10:00 Eastern |
| 6020A QSM TAL | 05/01/11 10:00 | |
| 8260B LL VOA | 11/16/10 10:00 | |
| 8270D LL SVOC TCL | 11/09/10 10:00 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/30/10 10:00 | |
| 1011003-07 GKHMS-GW-FD001-1010 [Water] | | Sampled 11/02/10 00:00 Eastern |
| 8260B LL VOA | 11/16/10 00:00 | |
| 1011003-08 GKHMS-GW-FD002-1010 [Water] | | Sampled 11/02/10 00:00 Eastern |
| 6020A QSM TAL | 05/01/11 00:00 | |
| Mercury, Total 7470A | 11/30/10 00:00 | |
| 8260B LL VOA | 11/16/10 00:00 | |
| 8270D LL SVOC TCL | 11/09/10 00:00 | PLUS SIM PAHs |
| 1011003-09 GKHMS-GW-FD003-1010 [Water] | | Sampled 11/02/10 00:00 Eastern |
| Mercury, Total 7470A | 11/30/10 00:00 | |
| 6020A QSM TAL | 05/01/11 00:00 | |
| 8081B Pesticides | 11/09/10 00:00 | |
| 8082 PCBs | 11/09/10 00:00 | |
| 8260B LL VOA | 11/16/10 00:00 | |
| 8270D LL SVOC TCL | 11/09/10 00:00 | PLUS SIM PAHs |

Container Locations

| | |
|---|---|
| 32oz Am | WB-1 |
| 32oz HDPE w/ HNO3 | WB-1 |
| VOA 40mL Vial w/ HCL | VW-1 |

Reviewed By

11/3/10

Date

**SUBCONTRACT ORDER**

**Centauri Labs, LLC**

**1011003**

| **SENDING LABORATORY:** | **RECEIVING LABORATORY:** |
|---|---|
| Centauri Labs, LLC<br>7210 Corporate Court<br>Frederick, MD 21703<br>Phone: 301.694.5310<br>Fax: 301.620.0731<br>Project Manager: Chino Ortiz | EMPERICAL LABS<br>621 MAINSTREAM DR SUITE 270<br>NASHVILLE, TN 37228<br>Phone :(615) 345-1115<br>Fax: (000) 000-0000 |

| Analysis | | Expires | Comments |
|---|---|---|---|
| | | | 10/1255-01 |
| **Sample ID: 1011003-02** | **Water** | **Sampled:11/02/10 08:40** | |
| Mercury, Total 7470A | | 11/30/10 08:40 | |
| 6020A QSM TAL | | 05/01/11 08:40 | |
| *Containers Supplied:* | | | |
| | | | -02 |
| **Sample ID: 1011003-03** | **Water** | **Sampled:11/02/10 08:00** | |
| 6020A QSM TAL | | 05/01/11 08:00 | |
| Mercury, Total 7470A | | 11/30/10 08:00 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-04** | **Water** | **Sampled:11/02/10 09:20** | -03 |
| 6020A QSM TAL | | 05/01/11 09:20 | |
| Mercury, Total 7470A | | 11/30/10 09:20 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-05** | **Water** | **Sampled:11/02/10 10:50** | -04 |
| Mercury, Total 7470A | | 11/30/10 10:50 | |
| 6020A QSM TAL | | 05/01/11 10:50 | |
| *Containers Supplied:* | | | |
| **Sample ID: 1011003-06** | **Water** | **Sampled:11/02/10 10:00** | -05 |
| Mercury, Total 7470A | | 11/30/10 10:00 | |
| 6020A QSM TAL | | 05/01/11 10:00 | |
| *Containers Supplied:* | | | |
| | | | 2.4°C |

| Released By | Date | Received By | Date |
|---|---|---|---|
| [signature] | 11/29 | [signature] | 11/30/10 08:25 |
| | | | |
| Released By | Date | Received By | Date |

HOLD TIME

**SDG** CTOJM16KW

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| HG | UG/L | 1011003-09 | 1011255-08 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| HG | UG/L | 1011003-03 | 1011255-02 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| HG | UG/L | 1011003-04 | 1011255-03 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| HG | UG/L | 1011003-05 | 1011255-04 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| HG | UG/L | 1011003-06 | 1011255-05 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| HG | UG/L | 1011003-07 | 1011255-06 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| HG | UG/L | 1011003-08 | 1011255-07 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| HG | UG/L | 1011003-02 | 1011255-01 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| M | UG/L | 1011003-02 | 1011255-01RE1 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| M | UG/L | 1011003-09 | 1011255-08 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |
| M | UG/L | 1011003-03 | 1011255-02 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |
| M | UG/L | 1011003-04 | 1011255-03 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |
| M | UG/L | 1011003-05 | 1011255-04 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |
| M | UG/L | 1011003-06 | 1011255-05 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |
| M | UG/L | 1011003-07 | 1011255-06 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| M | UG/L | 1011003-07 | 1011255-06RE1 | NM | 11/02/2010 | 12/06/2010 | 12/08/2010 | 34 | 2 | 36 |
| M | UG/L | 1011003-08 | 1011255-07 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |
| M | UG/L | 1011003-02 | 1011255-01 | NM | 11/02/2010 | 12/06/2010 | 12/07/2010 | 34 | 1 | 35 |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-ICV1 | Aluminum | 10000 | 9592 | 95.9 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 977.2 | 97.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 982.8 | 98.3 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1090 | 109 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 963.7 | 96.4 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 47900 | 95.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 958.0 | 95.8 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 966.4 | 96.6 | ug/L | +/- 10.00% |
| | Copper | 1000 | 958.6 | 95.9 | ug/L | +/- 10.00% |
| | Iron | 10000 | 9772 | 97.7 | ug/L | +/- 10.00% |
| | Lead | 1000 | 977.8 | 97.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 52330 | 105 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 957.9 | 95.8 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 960.6 | 96.1 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 9476 | 94.8 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 986.2 | 98.6 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 468.8 | 93.8 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 50550 | 101 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 939.5 | 93.9 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 953.1 | 95.3 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 972.5 | 97.2 | ug/L | +/- 10.00% |
| 0L34305-CCV1 | Aluminum | 10000 | 9799 | 98.0 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 987.0 | 98.7 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1014 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1012 | 101 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1046 | 105 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1037 | 104 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 50720 | 101 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 999.4 | 99.9 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 960.8 | 96.1 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1018 | 102 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10380 | 104 | ug/L | +/- 10.00% |
| | Lead | 1000 | 957.7 | 95.8 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54130 | 108 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 1065 | 106 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 988.0 | 98.8 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10060 | 101 | ug/L | +/- 10.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Calibration: 0350004
Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34305-CCV1 | Selenium | 1000 | 972.7 | 97.3 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 501.7 | 100 | ug/L | +/- 10.00% |
| | Sodium | 50000 | 54310 | 109 | ug/L | +/- 10.00% |
| | Thallium | 1000 | 992.7 | 99.3 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 968.6 | 96.9 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 1038 | 104 | ug/L | +/- 10.00% |
| 0L34305-CCV2 | Aluminum | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Antimony | 1000 | 999.2 | 99.9 | ug/L | +/- 10.00% |
| | Arsenic | 1000 | 1013 | 101 | ug/L | +/- 10.00% |
| | Barium | 1000 | 1016 | 102 | ug/L | +/- 10.00% |
| | Beryllium | 1000 | 1002 | 100 | ug/L | +/- 10.00% |
| | Cadmium | 1000 | 1032 | 103 | ug/L | +/- 10.00% |
| | Calcium | 50000 | 46890 | 93.8 | ug/L | +/- 10.00% |
| | Chromium | 1000 | 982.5 | 98.3 | ug/L | +/- 10.00% |
| | Cobalt | 1000 | 956.9 | 95.7 | ug/L | +/- 10.00% |
| | Copper | 1000 | 1010 | 101 | ug/L | +/- 10.00% |
| | Iron | 10000 | 10100 | 101 | ug/L | +/- 10.00% |
| | Lead | 1000 | 962.2 | 96.2 | ug/L | +/- 10.00% |
| | Magnesium | 50000 | 54390 | 109 | ug/L | +/- 10.00% |
| | Manganese | 1000 | 995.2 | 99.5 | ug/L | +/- 10.00% |
| | Nickel | 1000 | 976.0 | 97.6 | ug/L | +/- 10.00% |
| | Potassium | 10000 | 10810 | 108 | ug/L | +/- 10.00% |
| | Selenium | 1000 | 980.7 | 98.1 | ug/L | +/- 10.00% |
| | Silver | 500.0 | 483.4 | 96.7 | ug/L | +/- 10.00% |
| | **Sodium** | **50000** | **56400** | **113** | **ug/L** | +/- 10.00% |
| | Thallium | 1000 | 990.3 | 99.0 | ug/L | +/- 10.00% |
| | Vanadium | 1000 | 931.0 | 93.1 | ug/L | +/- 10.00% |
| | Zinc | 1000 | 995.1 | 99.5 | ug/L | +/- 10.00% |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Instrument: ME-ICP
Calibration: 0350004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34305-CAL1 | 120710A-001 | 12/07/10 10:19 |
| Cal Standard | 0L34305-CAL2 | 120710A-002 | 12/07/10 10:24 |
| Cal Standard | 0L34305-CAL3 | 120710A-003 | 12/07/10 10:28 |
| Cal Standard | 0L34305-CAL4 | 120710A-004 | 12/07/10 10:32 |
| Cal Standard | 0L34305-CAL5 | 120710A-005 | 12/07/10 10:37 |
| Cal Standard | 0L34305-CAL6 | 120710A-006 | 12/07/10 10:41 |
| Cal Standard | 0L34305-CAL7 | 120710A-007 | 12/07/10 10:46 |
| Cal Standard | 0L34305-CAL8 | 120710A-008 | 12/07/10 10:51 |
| Initial Cal Check | 0L34305-ICV1 | 120710B-001 | 12/07/10 11:44 |
| Initial Cal Blank | 0L34305-ICB1 | 120710B-002 | 12/07/10 11:51 |
| Instrument RL Check | 0L34305-CRL1 | 120710B-004 | 12/07/10 12:01 |
| Instrument RL Check | 0L34305-CRL2 | 120710B-006 | 12/07/10 12:13 |
| Interference Check A | 0L34305-IFA1 | 120710B-007 | 12/07/10 12:18 |
| Interference Check B | 0L34305-IFB1 | 120710B-008 | 12/07/10 12:25 |
| Interference Check B | 0L34305-IFB2 | 120710B-009 | 12/07/10 12:32 |
| Calibration Check | 0L34305-CCV1 | 120710B-011 | 12/07/10 12:52 |
| Calibration Blank | 0L34305-CCB1 | 120710B-012 | 12/07/10 13:04 |
| Blank | 0L06009-BLK1 | 120710B-013 | 12/07/10 13:08 |
| LCS | 0L06009-BS1 | 120710B-014 | 12/07/10 13:13 |
| 1011003-02 GWHMS-GW-017-1010 | 1011255-01 | 120710B-016 | 12/07/10 13:24 |
| 1011003-03 018-1010 | 1011255-02 | 120710B-017 | 12/07/10 13:29 |
| 1011003-03 | 0L06009-MS1 | 120710B-018 | 12/07/10 13:34 |
| 1011003-03 | 0L06009-MSD1 | 120710B-019 | 12/07/10 13:39 |
| 1011003-03 | 0L06009-PS1 | 120710B-020 | 12/07/10 13:44 |
| 1011003-03 | 0L06009-DUP1 | 120710B-021 | 12/07/10 13:49 |
| 1011003-04 019-1010 | 1011255-03 | 120710B-022 | 12/07/10 13:54 |
| 1011003-05 022-1010 | 1011255-04 | 120710B-023 | 12/07/10 13:59 |
| 1011003-06 023-1010 | 1011255-05 | 120710B-024 | 12/07/10 14:04 |
| 1011003-07 FD001-1010 | 1011255-06 | 120710B-025 | 12/07/10 14:08 |
| 1011003-08 FD002-1010 | 1011255-07 | 120710B-026 | 12/07/10 14:13 |
| 1011003-09 FD003-1010 | 1011255-08 | 120710B-027 | 12/07/10 14:18 |
| Calibration Check | 0L34305-CCV2 | 120710B-029 | 12/07/10 14:38 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_001 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34305 | Instrument: | ME-ICP |
| Calibration: | 0350004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Blank | 0L34305-CCB2 | 120710B-030 | 12/07/10 14:46 |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Sequence: 0L34403
Instrument: ME-FIMS
Calibration: 0344004

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34403-CAL1 | COPY120810W-002 | 12/08/10 10:42 |
| Cal Standard | 0L34403-CAL2 | COPY120810W-003 | 12/08/10 10:43 |
| Cal Standard | 0L34403-CAL3 | COPY120810W-004 | 12/08/10 10:45 |
| Cal Standard | 0L34403-CAL4 | COPY120810W-005 | 12/08/10 10:47 |
| Cal Standard | 0L34403-CAL5 | COPY120810W-006 | 12/08/10 10:49 |
| Cal Standard | 0L34403-CAL6 | COPY120810W-007 | 12/08/10 10:51 |
| Cal Standard | 0L34403-CAL7 | COPY120810W-008 | 12/08/10 10:53 |
| Initial Cal Check | 0L34403-ICV1 | COPY120810W-009 | 12/08/10 10:59 |
| Initial Cal Blank | 0L34403-ICB1 | COPY120810W-010 | 12/08/10 11:00 |
| Instrument RL Check | 0L34403-CRL1 | COPY120810W-011 | 12/08/10 11:02 |
| LCS | 0L06006-BS1 | COPY120810W-012 | 12/08/10 11:04 |
| Blank | 0L06006-BLK1 | COPY120810W-013 | 12/08/10 11:05 |
| Calibration Check | 0L34403-CCV1 | COPY120810W-021 | 12/08/10 11:28 |
| Calibration Blank | 0L34403-CCB1 | COPY120810W-022 | 12/08/10 11:29 |
| Calibration Check | 0L34403-CCV2 | COPY120810W-033 | 12/08/10 11:49 |
| Calibration Blank | 0L34403-CCB2 | COPY120810W-034 | 12/08/10 11:50 |
| 1011003-02 017-1010 | 1011255-01 | COPY120810W-035 | 12/08/10 11:52 |
| 1011003-03 018-1010 | 1011255-02 | COPY120810W-036 | 12/08/10 11:53 |
| 1011003-03 | 0L06006-MS2 | COPY120810W-037 | 12/08/10 11:54 |
| 1011003-03 | 0L06006-MSD2 | COPY120810W-038 | 12/08/10 11:56 |
| 1011003-04 019-1010 | 1011255-03 | COPY120810W-039 | 12/08/10 11:58 |
| 1011003-05 022-1010 | 1011255-04 | COPY120810W-040 | 12/08/10 11:59 |
| 1011003-06 023-1010 | 1011255-05 | COPY120810W-041 | 12/08/10 12:01 |
| LCS | 0L06007-BS1 | COPY120810W-042 | 12/08/10 12:02 |
| Blank | 0L06007-BLK1 | COPY120810W-043 | 12/08/10 12:04 |
| 1011003-07 FD001-1010 | 1011255-06 | COPY120810W-044 | 12/08/10 12:05 |
| Calibration Check | 0L34403-CCV3 | COPY120810W-045 | 12/08/10 12:12 |
| Calibration Blank | 0L34403-CCB3 | COPY120810W-046 | 12/08/10 12:13 |
| 1011003-08 FD002-1010 | 1011255-07 | COPY120810W-047 | 12/08/10 12:17 |
| 1011003-09 FD003-1010 | 1011255-08 | COPY120810W-048 | 12/08/10 12:18 |
| Calibration Check | 0L34403-CCV4 | COPY120810W-057 | 12/08/10 12:30 |
| Calibration Blank | 0L34403-CCB4 | COPY120810W-058 | 12/08/10 12:32 |

# ANALYSIS SEQUENCE SUMMARY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_001 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34403 | Instrument: | ME-FIMS |
| Calibration: | 0344004 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Calibration Check | 0L34403-CCV7 | COPY120810W-092 | 12/08/10 13:35 |
| Calibration Blank | 0L34403-CCB7 | COPY120810W-093 | 12/08/10 13:37 |
| Instrument RL Check | 0L34403-CRL2 | COPY120810W-097 | 12/08/10 13:42 |
| Calibration Check | 0L34403-CCV8 | COPY120810W-098 | 12/08/10 13:44 |
| Calibration Blank | 0L34403-CCB8 | COPY120810W-099 | 12/08/10 13:46 |

# ANALYSIS SEQUENCE SUMMARY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_001 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Sequence: | 0L34704 | Instrument: | ME-ICP |
| Calibration: | 0347001 | | |

| Sample Name | Lab Sample ID | Lab File ID | Analysis Date/Time |
|---|---|---|---|
| Cal Standard | 0L34704-CAL1 | 120810A-001 | 12/08/10 13:09 |
| Cal Standard | 0L34704-CAL2 | 120810A-002 | 12/08/10 13:13 |
| Cal Standard | 0L34704-CAL3 | 120810A-003 | 12/08/10 13:18 |
| Cal Standard | 0L34704-CAL7 | 120810A-007 | 12/08/10 13:38 |
| Cal Standard | 0L34704-CAL8 | 120810A-008 | 12/08/10 13:43 |
| Initial Cal Check | 0L34704-ICV1 | 120810B-001 | 12/08/10 14:34 |
| Initial Cal Blank | 0L34704-ICB1 | 120810B-002 | 12/08/10 14:41 |
| Instrument RL Check | 0L34704-CRL1 | 120810B-003 | 12/08/10 14:46 |
| Interference Check A | 0L34704-IFA1 | 120810B-008 | 12/08/10 15:12 |
| Interference Check B | 0L34704-IFB1 | 120810B-009 | 12/08/10 15:17 |
| Calibration Check | 0L34704-CCV1 | 120810B-011 | 12/08/10 15:29 |
| Calibration Blank | 0L34704-CCB1 | 120810B-012 | 12/08/10 15:37 |
| Calibration Check | 0L34704-CCV5 | 120810B-071 | 12/08/10 20:24 |
| Calibration Blank | 0L34704-CCB5 | 120810B-072 | 12/08/10 20:32 |
| 1011003-02 017-1010 | 1011255-01RE1 | 120810B-082 | 12/08/10 21:20 |
| 1011003-07 FD-001-1010 | 1011255-06RE1 | 120810B-083 | 12/08/10 21:25 |
| Calibration Check | 0L34704-CCV6 | 120810B-090 | 12/08/10 21:59 |
| Calibration Blank | 0L34704-CCB6 | 120810B-091 | 12/08/10 22:06 |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Calibration: 0344004
Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34403-ICV1 | Mercury | 4.000 | 4.047 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV1 | Mercury | 4.000 | 4.030 | 101 | ug/L | +/- 15.00% |
| 0L34403-CCV2 | Mercury | 4.000 | 4.123 | 103 | ug/L | +/- 15.00% |
| 0L34403-CCV3 | Mercury | 2.000 | 1.845 | 92.2 | ug/L | +/- 15.00% |
| 0L34403-CCV4 | Mercury | 2.000 | 1.835 | 91.7 | ug/L | +/- 15.00% |
| 0L34403-CCV7 | Mercury | 2.000 | 1.860 | 93.0 | ug/L | +/- 15.00% |
| 0L34403-CCV8 | Mercury | 2.000 | 1.903 | 95.2 | ug/L | +/- 15.00% |

# INITIAL AND CONTINUING CALIBRATION CHECK

## SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Calibration: 0347001
Sequence: 0L34704

| Lab Sample ID | Analyte | True | Found | %R | Units | Control Limit |
|---|---|---|---|---|---|---|
| 0L34704-ICV1 | Sodium | 50000 | 51210 | 102 | ug/L | +/- 10.00% |
| 0L34704-CCV1 | Sodium | 50000 | 52800 | 106 | ug/L | +/- 10.00% |
| 0L34704-CCV5 | Sodium | 50000 | 53340 | 107 | ug/L | +/- 10.00% |
| 0L34704-CCV6 | Sodium | 50000 | 52120 | 104 | ug/L | +/- 10.00% |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_001

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-ICP

Calibration: 0350004

Sequence: 0L34305

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34305-CRL1 | Aluminum | 100.0 | 99.73 | 99.7 | ug/L | 80 - 120 |
| | Antimony | 8.000 | 6.500 | 81.2 | ug/L | 80 - 120 |
| | Barium | 10.00 | 10.07 | 101 | ug/L | 80 - 120 |
| | Beryllium | 2.000 | 2.054 | 103 | ug/L | 80 - 120 |
| | Cadmium | 2.000 | 1.846 | 92.3 | ug/L | 80 - 120 |
| | Calcium | 2000 | 1966 | 98.3 | ug/L | 80 - 120 |
| | Chromium | 4.000 | 3.982 | 99.6 | ug/L | 80 - 120 |
| | Cobalt | 10.00 | 9.079 | 90.8 | ug/L | 80 - 120 |
| | Copper | 8.000 | 7.542 | 94.3 | ug/L | 80 - 120 |
| | Iron | 60.00 | 64.06 | 107 | ug/L | 80 - 120 |
| | Lead | 3.000 | 2.566 | 85.5 | ug/L | 80 - 120 |
| | Magnesium | 3000 | 3113 | 104 | ug/L | 80 - 120 |
| | Manganese | 6.000 | 6.735 | 112 | ug/L | 80 - 120 |
| | Nickel | 6.000 | 5.898 | 98.3 | ug/L | 80 - 120 |
| | Potassium | 3000 | 3020 | 101 | ug/L | 80 - 120 |
| | Silver | 2.000 | 1.893 | 94.7 | ug/L | 80 - 120 |
| | Sodium | 3000 | 3298 | 110 | ug/L | 80 - 120 |
| | Thallium | 4.000 | 4.272 | 107 | ug/L | 80 - 120 |
| | Vanadium | 10.00 | 9.529 | 95.3 | ug/L | 80 - 120 |
| | Zinc | 10.00 | 9.414 | 94.1 | ug/L | 80 - 120 |
| 0L34305-CRL2 | Arsenic | 5.000 | 4.042 | 80.8 | ug/L | 80 - 120 |
| | Selenium | 5.000 | 4.812 | 96.2 | ug/L | 80 - 120 |

# CRDL STANDARD

## SW7470A

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_001

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Instrument ID: ME-FIMS

Calibration: 0344004

Sequence: 0L34403

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34403-CRL1 | Mercury | 0.2000 | 0.1985 | 99.3 | ug/L | 70 - 130 |
| 0L34403-CRL2 | Mercury | 0.2000 | 0.2066 | 103 | ug/L | 70 - 130 |

# CRDL STANDARD

## SW6010C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Instrument ID: ME-ICP

Sequence: 0L34704

SDG: CTOJM16KW_001

Project: CTOJM16 Key West 2010

Calibration: 0347001

| Lab Sample ID | Analyte | True | Found | %R | Units | QC Limts |
|---|---|---|---|---|---|---|
| 0L34704-CRL1 | Sodium | 3000 | 3455 | 115 | ug/L | 80 - 120 |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-ICB1 | Aluminum | 1.815 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.0008800 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.4936 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.04896 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.1662 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.09110 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 10.71 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.06206 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.2396 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | 0.006120 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.525 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.2232 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -0.1900 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.1529 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.3307 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 4.330 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.4155 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.1294 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 11.82 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.3133 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.09286 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.06542 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L34305-CCB1 | Aluminum | 4.29 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.141 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.226 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | 0.00225 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | -0.000740 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.0220 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.134 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.110 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.235 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.54 | 30.0 | 100 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB1 | Lead | -0.0467 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -1.90 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.120 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.488 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 15.5 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | 0.671 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0628 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 8.23 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | -0.0416 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | -0.176 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 2.27 | 5.00 | 20.0 | ug/L | U | SW6010C |
| 0L06009-BLK1 | Aluminum | 3.34 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | -0.399 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | 0.158 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | -0.00804 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | -0.0128 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | -0.0964 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 6.56 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.0606 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | 0.112 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.305 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 2.63 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | 0.00902 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -5.25 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0827 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.410 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 6.17 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.898 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.0819 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 4.16 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 0.477 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.00932 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.297 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34305
Calibration: 0350004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34305-CCB2 | Aluminum | 2.36 | 50.0 | 200 | ug/L | U | SW6010C |
| | Antimony | 0.137 | 5.00 | 10.0 | ug/L | U | SW6010C |
| | Arsenic | -0.797 | 3.00 | 5.00 | ug/L | U | SW6010C |
| | Barium | -0.0616 | 5.00 | 40.0 | ug/L | U | SW6010C |
| | Beryllium | 0.0689 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Cadmium | 0.416 | 1.00 | 5.00 | ug/L | U | SW6010C |
| | Calcium | 2.69 | 1000 | 5000 | ug/L | U | SW6010C |
| | Chromium | -0.214 | 2.00 | 10.0 | ug/L | U | SW6010C |
| | Cobalt | -0.00589 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Copper | -0.0684 | 4.00 | 10.0 | ug/L | U | SW6010C |
| | Iron | 0.276 | 30.0 | 100 | ug/L | U | SW6010C |
| | Lead | -0.391 | 1.50 | 3.00 | ug/L | U | SW6010C |
| | Magnesium | -2.05 | 1000 | 5000 | ug/L | U | SW6010C |
| | Manganese | 0.0433 | 3.00 | 15.0 | ug/L | U | SW6010C |
| | Nickel | 0.125 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Potassium | 5.44 | 1000 | 5000 | ug/L | U | SW6010C |
| | Selenium | -0.259 | 3.00 | 10.0 | ug/L | U | SW6010C |
| | Silver | -0.203 | 1.00 | 10.0 | ug/L | U | SW6010C |
| | Sodium | 21.8 | 200 | 5000 | ug/L | U | SW6010C |
| | Thallium | 1.07 | 3.00 | 8.00 | ug/L | U | SW6010C |
| | Vanadium | 0.0689 | 5.00 | 12.5 | ug/L | U | SW6010C |
| | Zinc | 0.0667 | 5.00 | 20.0 | ug/L | U | SW6010C |

# BLANKS
## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: CTOJM16 Key West 2010
Sequence: 0L34403
Calibration: 0344004

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34403-ICB1 | Mercury | 0.02156 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L06006-BLK1 | Mercury | 0.0185 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB1 | Mercury | 0.0158 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB2 | Mercury | 0.0309 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L06007-BLK1 | Mercury | 0.00684 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB3 | Mercury | 0.0237 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB4 | Mercury | 0.0237 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB7 | Mercury | 0.0330 | 0.0800 | 0.200 | ug/L | U | SW7470A |
| 0L34403-CCB8 | Mercury | 0.0301 | 0.0800 | 0.200 | ug/L | U | SW7470A |

# BLANKS
## SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTOJM16 Key West 2010
Sequence: 0L34704
Calibration: 0347001

| Lab Sample ID | Analyte | Found | MDL | MRL | Units | C | Method |
|---|---|---|---|---|---|---|---|
| 0L34704-ICB1 | Sodium | 8.560 | 200 | 5000 | ug/L | U | SW6010C |
| 0L34704-CCB1 | Sodium | 9.13 | 200 | 5000 | ug/L | U | SW6010C |
| 0L34704-CCB5 | Sodium | 0.220 | 200 | 5000 | ug/L | U | SW6010C |
| 0L34704-CCB6 | Sodium | 26.6 | 200 | 5000 | ug/L | U | SW6010C |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

**SW7470A**

**1011003-03**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_001

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06006

% Solids:

Source Sample Name: **1011255-02**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Mercury | 2.000 | ND | 2.195 | 110 | | 80 - 120 |

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Mercury | 2.000 | 1.970 | 98.5 | 10.8 | | 20 | 80 - 120 |

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## SW6010C

**1011003-03**

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM16KW_001

Client: Tetra Tech NUS, Inc. (T010)

Project: CTOJM16 Key West 2010

Matrix: Water

Batch: 0L06009

% Solids:

Source Sample Name: **1011255-02**

| ANALYTE | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC. | Q | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Aluminum | 2000 | 127.6 | 2134 | 100 | | 80 - 120 |
| Antimony | 250.0 | ND | 264.9 | 106 | | 80 - 120 |
| Arsenic | 250.0 | ND | 267.0 | 107 | | 80 - 120 |
| Barium | 2000 | ND | 2081 | 104 | | 80 - 120 |
| Beryllium | 50.00 | ND | 50.94 | 102 | | 80 - 120 |
| Cadmium | 125.0 | 1.931 | 136.2 | 107 | | 80 - 120 |
| Calcium | 5000 | 125200 | 128200 | 59.4 | | 80 - 120 |
| Chromium | 200.0 | ND | 193.4 | 96.7 | | 80 - 120 |
| Cobalt | 500.0 | ND | 482.0 | 96.4 | | 80 - 120 |
| Copper | 250.0 | ND | 260.2 | 104 | | 80 - 120 |
| Iron | 1000 | 145.7 | 1164 | 102 | | 80 - 120 |
| Lead | 250.0 | ND | 246.0 | 98.4 | | 80 - 120 |
| Magnesium | 5000 | 38140 | 43140 | 100 | | 80 - 120 |
| Manganese | 500.0 | 3.554 | 517.1 | 103 | | 80 - 120 |
| Nickel | 500.0 | ND | 499.7 | 99.9 | | 80 - 120 |
| Potassium | 5000 | 5886 | 11240 | 107 | | 80 - 120 |
| Selenium | 250.0 | ND | 232.4 | 93.0 | | 80 - 120 |
| Silver | 250.0 | ND | 254.9 | 102 | | 80 - 120 |
| Sodium | 5000 | 107300 | 113200 | 118 | | 80 - 120 |
| Thallium | 250.0 | ND | 239.7 | 95.9 | | 80 - 120 |
| Vanadium | 500.0 | ND | 481.4 | 96.3 | | 80 - 120 |
| Zinc | 500.0 | ND | 516.0 | 103 | | 80 - 120 |

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# MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

## SW6010C

**1011003-03**

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 0L06009

% Solids:

SDG: CTOJM16KW_001

Project: CTOJM16 Key West 2010

Source Sample Name: **1011255-02**

| ANALYTE | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC. # | % RPD | Q | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|---|
| Aluminum | 2000 | 2181 | 103 | 2.21 | | 20 | 80 - 120 |
| Antimony | 250.0 | 270.2 | 108 | 1.96 | | 20 | 80 - 120 |
| Arsenic | 250.0 | 274.0 | 110 | 2.60 | | 20 | 80 - 120 |
| Barium | 2000 | 2123 | 106 | 1.99 | | 20 | 80 - 120 |
| Beryllium | 50.00 | 52.98 | 106 | 3.93 | | 20 | 80 - 120 |
| Cadmium | 125.0 | 139.5 | 110 | 2.36 | | 20 | 80 - 120 |
| Calcium | 5000 | 131100 | 117 | 2.21 | | 20 | 80 - 120 |
| Chromium | 200.0 | 196.4 | 98.2 | 1.51 | | 20 | 80 - 120 |
| Cobalt | 500.0 | 488.9 | 97.8 | 1.42 | | 20 | 80 - 120 |
| Copper | 250.0 | 261.8 | 105 | 0.621 | | 20 | 80 - 120 |
| Iron | 1000 | 1190 | 104 | 2.29 | | 20 | 80 - 120 |
| Lead | 250.0 | 251.8 | 101 | 2.30 | | 20 | 80 - 120 |
| Magnesium | 5000 | 43570 | 109 | 1.01 | | 20 | 80 - 120 |
| Manganese | 500.0 | 519.5 | 103 | 0.463 | | 20 | 80 - 120 |
| Nickel | 500.0 | 503.0 | 101 | 0.656 | | 20 | 80 - 120 |
| Potassium | 5000 | 11240 | 107 | 0.00889 | | 20 | 80 - 120 |
| Selenium | 250.0 | 244.3 | 97.7 | 4.99 | | 20 | 80 - 120 |
| Silver | 250.0 | 253.6 | 101 | 0.515 | | 20 | 80 - 120 |
| Sodium | 5000 | 111600 | 87.6 | 1.37 | | 20 | 80 - 120 |
| Thallium | 250.0 | 243.3 | 97.3 | 1.48 | | 20 | 80 - 120 |
| Vanadium | 500.0 | 489.2 | 97.8 | 1.60 | | 20 | 80 - 120 |
| Zinc | 500.0 | 516.8 | 103 | 0.147 | | 20 | 80 - 120 |

# POST DIGEST SPIKE SAMPLE RECOVERY

## SW6010C

1011003-03

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Batch: 0L06009
Preparation: MET_3005A

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 0L06009-PS1
Lab Source ID: 1011255-02
Initial/Final: 20 mL / 20 mL

| Analyte | Spike Sample Result (SSR) (ug/L) | Sample Result (SR) (ug/L) | Spike Added (SA) (ug/L) | %R | Control Limit %R |
|---|---|---|---|---|---|
| Aluminum | 2154 | 127.6 | 2000 | 101 | 80 - 120 |
| Antimony | 261.9 | ND | 250.0 | 105 | 80 - 120 |
| Arsenic | 270.7 | ND | 250.0 | 109 | 80 - 120 |
| Barium | 2114 | ND | 2000 | 106 | 80 - 120 |
| Beryllium | 51.93 | ND | 50.00 | 104 | 80 - 120 |
| Cadmium | 139.3 | 1.931 | 125.0 | 110 | 80 - 120 |
| **Calcium** | **125600** | **125200** | **5000** | **6.80** | **80 - 120** |
| Chromium | 194.5 | ND | 200.0 | 96.9 | 80 - 120 |
| Cobalt | 481.8 | ND | 500.0 | 96.3 | 80 - 120 |
| Copper | 260.0 | ND | 250.0 | 104 | 80 - 120 |
| Iron | 1156 | 145.7 | 1000 | 101 | 80 - 120 |
| Lead | 250.4 | ND | 250.0 | 101 | 80 - 120 |
| Magnesium | 42760 | 38140 | 5000 | 92.5 | 80 - 120 |
| Manganese | 511.8 | 3.554 | 500.0 | 102 | 80 - 120 |
| Nickel | 494.8 | ND | 500.0 | 98.8 | 80 - 120 |
| Potassium | 11160 | 5886 | 5000 | 105 | 80 - 120 |
| Selenium | 262.8 | ND | 250.0 | 105 | 80 - 120 |
| Silver | 248.3 | ND | 250.0 | 99.4 | 80 - 120 |
| **Sodium** | **110000** | **107300** | **5000** | **55.6** | **80 - 120** |
| Thallium | 240.9 | ND | 250.0 | 96.4 | 80 - 120 |
| Vanadium | 490.9 | ND | 500.0 | 98.0 | 80 - 120 |
| Zinc | 504.8 | ND | 500.0 | 100 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_001 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06006 | Laboratory ID: | 0L06006-BS1 |
| Preparation: | pMercury-W SW 7470A | Initial/Final: | 30 mL / 30 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 2.000 | 2.250 | 113 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW7470A

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_001 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06007 | Laboratory ID: | 0L06007-BS1 |
| Preparation: | pMercury-W SW 7470A | Initial/Final: | 30 mL / 30 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Mercury | 2.000 | 2.024 | 101 | 80 - 120 |

# LCS / LCS DUPLICATE RECOVERY

## SW6010C

| | | | |
|---|---|---|---|
| Laboratory: | Empirical Laboratories, LLC | SDG: | CTOJM16KW_001 |
| Client: | Tetra Tech NUS, Inc. (T010) | Project: | CTOJM16 Key West 2010 |
| Matrix: | Water | | |
| Batch: | 0L06009 | Laboratory ID: | 0L06009-BS1 |
| Preparation: | MET_3005A | Initial/Final: | 50 mL / 50 mL |

| ANALYTE | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC. | QC LIMITS REC. |
|---|---|---|---|---|
| Aluminum | 2000 | 1972 | 98.6 | 80 - 120 |
| Antimony | 250.0 | 237.7 | 95.1 | 80 - 120 |
| Arsenic | 250.0 | 241.6 | 96.6 | 80 - 120 |
| Barium | 2000 | 2061 | 103 | 80 - 120 |
| Beryllium | 50.00 | 55.06 | 110 | 80 - 120 |
| Cadmium | 125.0 | 124.4 | 99.5 | 80 - 120 |
| Calcium | 5000 | 4873 | 97.5 | 80 - 120 |
| Chromium | 200.0 | 209.4 | 105 | 80 - 120 |
| Cobalt | 500.0 | 483.4 | 96.7 | 80 - 120 |
| Copper | 250.0 | 254.2 | 102 | 80 - 120 |
| Iron | 1000 | 1085 | 108 | 80 - 120 |
| Lead | 250.0 | 246.1 | 98.4 | 80 - 120 |
| Magnesium | 5000 | 5223 | 104 | 80 - 120 |
| Manganese | 500.0 | 567.2 | 113 | 80 - 120 |
| Nickel | 500.0 | 504.9 | 101 | 80 - 120 |
| Potassium | 5000 | 5179 | 104 | 80 - 120 |
| Selenium | 250.0 | 223.0 | 89.2 | 80 - 120 |
| Silver | 250.0 | 252.9 | 101 | 80 - 120 |
| Sodium | 5000 | 5723 | 114 | 80 - 120 |
| Thallium | 250.0 | 245.6 | 98.2 | 80 - 120 |
| Vanadium | 500.0 | 496.2 | 99.2 | 80 - 120 |
| Zinc | 500.0 | 521.1 | 104 | 80 - 120 |

# SERIAL DILUTION

## SW6010C

1011003-03

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sequence: 0L34305
Preparation: MET_3005A

SDG: CTOJM16KW_001
Project: CTOJM16 Key West 2010
Laboratory ID: 0L06009-DUP1
Lab Source ID: 1011255-02
Initial/Final: 50 / 50

| Analyte | Initial Sample Result (I) ug/L | Serial Dilution Result (S) ug/L | % Difference | Q | Method | QC Limits % Difference |
|---|---|---|---|---|---|---|
| Aluminum | 127.55 | ND | | | SW6010C | 10.00 |
| Antimony | ND | ND | | | SW6010C | 10.00 |
| Arsenic | ND | ND | | | SW6010C | 10.00 |
| Barium | ND | ND | | | SW6010C | 10.00 |
| Beryllium | ND | ND | | | SW6010C | 10.00 |
| Cadmium | 1.9309 | ND | | | SW6010C | 10.00 |
| Calcium | 125240 | 120090 | -4.11 | | SW6010C | 10.00 |
| Chromium | ND | ND | | | SW6010C | 10.00 |
| Cobalt | ND | ND | | | SW6010C | 10.00 |
| Copper | ND | ND | | | SW6010C | 10.00 |
| Iron | 145.66 | ND | | | SW6010C | 10.00 |
| Lead | ND | ND | | | SW6010C | 10.00 |
| Magnesium | 38135 | 37155 | -2.57 | | SW6010C | 10.00 |
| Manganese | 3.5541 | ND | | | SW6010C | 10.00 |
| Nickel | ND | ND | | | SW6010C | 10.00 |
| Potassium | 5885.9 | 5623 | -4.47 | | SW6010C | 10.00 |
| Selenium | ND | ND | | | SW6010C | 10.00 |
| Silver | ND | ND | | | SW6010C | 10.00 |
| Sodium | 107270 | 101100 | -5.75 | | SW6010C | 10.00 |
| Thallium | ND | ND | | | SW6010C | 10.00 |
| Vanadium | ND | ND | | | SW6010C | 10.00 |
| Zinc | ND | ND | | | SW6010C | 10.00 |

Field Duplicate Calculations

| Parameters | Original Sample | Duplicate Sample | RPD |
|---|---|---|---|
| | GKHMS-GW-017 | GKHMS-GW-FD001-1010 | |
| | | | |
| ZINC | 8.36 | 0 | 200.00 |
| SODIUM | 519000 | 522000 | 0.58 |
| POTASSIUM | 26000 | 27400 | 5.24 |
| MAGNESIUM | 100000 | 102000 | 1.98 |
| CALCIUM | 139000 | 134000 | 3.66 |
| CADMIUM | 3.18 | 3.26 | 2.48 |
| BARIUM | 6.46 | 6.66 | 3.05 |
| ALUMINUM | 94.3 | 91.6 | 2.90 |

| Parameters | Original Sample | Duplicate Sample | RPD |
|---|---|---|---|
| | GKHMS-GW-019-1010 | GKHMS-GW-FD002-1010 | |
| ZINC | 7.53 | 0 | 200.00 |
| SODIUM | 88800 | 93300 | 4.94 |
| POTASSIUM | 6310 | 6740 | 6.59 |
| MANGANESE | 5.5 | 5.23 | 5.03 |
| MAGNESIUM | 38800 | 40000 | 3.05 |
| IRON | 201 | 194 | 3.54 |
| CALCIUM | 116000 | 115000 | 0.87 |
| CADMIUM | 2.21 | 2.09 | 5.58 |
| ALUMINUM | 125 | 75.2 | 49.75 |

OK

| Parameters | Original Sample | Duplicate Sample | RPD |
|---|---|---|---|
| | GKHMS-GW-022-1010 | GKHMS-GW-FD003-1010 | |
| ZINC | 0 | 5.18 | 200.00 |
| SODIUM | 81000 | 88700 | 9.07 |
| POTASSIUM | 4290 | 4530 | 5.44 |
| MAGNESIUM | 61200 | 62800 | 2.58 |
| IRON | 116 | 103 | 11.87 |
| CALCIUM | 116000 | 107000 | 8.07 |
| CADMIUM | 2.18 | 2.08 | 4.69 |
| ALUMINUM | 117 | 101 | 14.68 |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC
**SDG:** CTOJM16KW_001
**Client:** Tetra Tech NUS, Inc. (T010)
**Project:** CTOJM16 Key West 2010
**Matrix:** Water
**Instrument:** ME-FIMS

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Mercury | 0.0800 | 0.200 | ug/L | SW7470A |

# METHOD DETECTION AND REPORTING LIMITS

**Laboratory:** Empirical Laboratories, LLC **SDG:** CTOJM16KW_001

**Client:** Tetra Tech NUS, Inc. (T010) **Project:** CTOJM16 Key West 2010

**Matrix:** Water **Instrument:** ME-ICP

| Analyte | MDL | MRL | Units | Method |
|---|---|---|---|---|
| Aluminum | 50.0 | 200 | ug/L | SW6010C |
| Antimony | 5.00 | 10.0 | ug/L | SW6010C |
| Arsenic | 3.00 | 5.00 | ug/L | SW6010C |
| Barium | 5.00 | 40.0 | ug/L | SW6010C |
| Beryllium | 1.00 | 5.00 | ug/L | SW6010C |
| Cadmium | 1.00 | 5.00 | ug/L | SW6010C |
| Calcium | 1000 | 5000 | ug/L | SW6010C |
| Chromium | 2.00 | 10.0 | ug/L | SW6010C |
| Cobalt | 5.00 | 12.5 | ug/L | SW6010C |
| Copper | 4.00 | 10.0 | ug/L | SW6010C |
| Iron | 30.0 | 100 | ug/L | SW6010C |
| Lead | 1.50 | 3.00 | ug/L | SW6010C |
| Magnesium | 1000 | 5000 | ug/L | SW6010C |
| Manganese | 3.00 | 15.0 | ug/L | SW6010C |
| Nickel | 3.00 | 10.0 | ug/L | SW6010C |
| Potassium | 1000 | 5000 | ug/L | SW6010C |
| Selenium | 3.00 | 10.0 | ug/L | SW6010C |
| Silver | 1.00 | 10.0 | ug/L | SW6010C |
| Sodium | 200 | 5000 | ug/L | SW6010C |
| Thallium | 3.00 | 8.00 | ug/L | SW6010C |
| Vanadium | 5.00 | 12.5 | ug/L | SW6010C |
| Zinc | 5.00 | 20.0 | ug/L | SW6010C |

# PREPARATION BATCH SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM16KW_001
Client: Tetra Tech NUS, Inc. (T010)
Project: CTOJM16 Key West 2010
Batch: 0L06006 Batch Matrix: Water
Preparation: pMercury-W SW 7470A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06006-BLK1 | 12/06/10 07:46 | 30.00 | 30.00 |
| LCS | 0L06006-BS1 | 12/06/10 07:46 | 30.00 | 30.00 |
| 1011003-03 | 0L06006-MS2 | 12/06/10 07:46 | 30.00 | 30.00 |
| 1011003-03 | 0L06006-MSD2 | 12/06/10 07:46 | 30.00 | 30.00 |
| 1011003-02 | 1011255-01 | 12/06/10 07:46 | 30.00 | 30.00 |
| 1011003-03 | 1011255-02 | 12/06/10 07:46 | 30.00 | 30.00 |
| 1011003-04 | 1011255-03 | 12/06/10 07:46 | 30.00 | 30.00 |
| 1011003-05 | 1011255-04 | 12/06/10 07:46 | 30.00 | 30.00 |
| 1011003-06 | 1011255-05 | 12/06/10 07:46 | 30.00 | 30.00 |

# PREPARATION BATCH SUMMARY

## SW7470A

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_001

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06007 Batch Matrix: Water Preparation: pMercury-W SW 7470A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06007-BLK1 | 12/06/10 07:47 | 30.00 | 30.00 |
| LCS | 0L06007-BS1 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011003-07 | 1011255-06 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011003-08 | 1011255-07 | 12/06/10 07:47 | 30.00 | 30.00 |
| 1011003-09 | 1011255-08 | 12/06/10 07:47 | 30.00 | 30.00 |

# PREPARATION BATCH SUMMARY

## SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM16KW_001

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM16 Key West 2010

Batch: 0L06009 Batch Matrix: Water Preparation: MET_3005A

| SAMPLE NAME | LAB SAMPLE ID | DATE PREPARED | INITIAL VOL./WEIGHT | FINAL VOL. |
|---|---|---|---|---|
| Blank | 0L06009-BLK1 | 12/06/10 07:53 | 50.00 | 50.00 |
| LCS | 0L06009-BS1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-03 | 0L06009-DUP1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-03 | 0L06009-MS1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-03 | 0L06009-MSD1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-03 | 0L06009-PS1 | 12/06/10 07:53 | 20.00 | 20.00 |
| 1011003-02 | 1011255-01 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-02 | 1011255-01RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-03 | 1011255-02 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-04 | 1011255-03 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-05 | 1011255-04 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-06 | 1011255-05 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-07 | 1011255-06 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-07 | 1011255-06RE1 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-08 | 1011255-07 | 12/06/10 07:53 | 50.00 | 50.00 |
| 1011003-09 | 1011255-08 | 12/06/10 07:53 | 50.00 | 50.00 |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 11, 2011**

**FROM:** **A. COGNETTI** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION- TRPH**
**CTO JM16, NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – F77666**

**SAMPLES:** 10/Aqueous/TRPH

| | | |
|---|---|---|
| GKHMS-GW-002-1010 | GKHMS-GW-003-1010 | GKHMS-GW-004-1010 |
| GKHMS-GW-004-1010 | GKHMS-GW-005-1010 | GKHMS-GW-006-1010 |
| GKHMS-GW-007-1010 | GKHMS-GW-008-1010 | GKHMS-GW-009-1010 |
| GKHMS-GW-012-1010 | GKHMS-GW-013-1010 | |

OVERVIEW

The sample set for NAS KEY WEST, CTO JM16, SDG F77666 consists of ten (10) aqueous environmental samples analyzed for total recoverable petroleum hydrocarbons (TRPH). There were no field duplicate pairs included within this SDG.

The samples were collected on October 28 and 29, 2010 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using FL-PRO for TRPH analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • Initial/continuing calibrations
* • Laboratory method blank results
* • Blank Spike
* • Matrix Spike/Matrix Spike Duplicate
* • Surrogate Recoveries
* • Detection limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Notes:

Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Nondetected results were reported down to the method detection limit (MDL).

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** None.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607<br>SDG: F77666<br>FRACTION: PET<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-002-1010 | | | GKHMS-GW-003-1010 | | | GKHMS-GW-004-1010 | | | GKHMS-GW-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | F77666-1 | | | F77666-2 | | | F77666-3 | | | F77666-4 | | |
| | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.14 | U | | 0.14 | U | | 0.186 | J | P | 0.15 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-006-1010 | | | GKHMS-GW-007-1010 | | | GKHMS-GW-008-1010 | | | GKHMS-GW-009-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77666 | LAB_ID | F77666-5 | | | F77666-6 | | | F77666-7 | | | F77666-8 | | |
| FRACTION: PET | SAMP_DATE | 10/28/2010 | | | 10/28/2010 | | | 10/28/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.14 | U | | 0.15 | U | | 0.15 | U | | 0.14 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-012-1010 | | | GKHMS-GW-013-1010 | | |
|---|---|---|---|---|---|---|---|
| SDG: F77666 | LAB_ID | F77666-9 | | | F77666-10 | | |
| FRACTION: PET | SAMP_DATE | 10/29/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.281 | | | 0.14 | U | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-002-1010 | | |
| Lab Sample ID: | F77666-1 | Date Sampled: | 10/28/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71517.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 72% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-003-1010 | | |
| Lab Sample ID: | F77666-2 | Date Sampled: | 10/28/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71518.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 68% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-004-1010 | | |
| Lab Sample ID: | F77666-3 | Date Sampled: | 10/28/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71519.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.186 | 0.24 | 0.14 | mg/l | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 85% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-005-1010 | | |
| Lab Sample ID: | F77666-4 | Date Sampled: | 10/28/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71520.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1030 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.24 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 81% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-006-1010 | | |
| Lab Sample ID: | F77666-5 | Date Sampled: | 10/28/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71521.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 74% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-007-1010 | | |
| Lab Sample ID: | F77666-6 | Date Sampled: | 10/28/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71522.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1030 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.24 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 82% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-008-1010 | | |
| Lab Sample ID: | F77666-7 | Date Sampled: | 10/28/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71523.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1030 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.24 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 85% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-009-1010 | | |
| Lab Sample ID: | F77666-8 | Date Sampled: | 10/29/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71524.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 84% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-012-1010 | | |
| Lab Sample ID: | F77666-9 | Date Sampled: | 10/29/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71527.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1030 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.281 | 0.24 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 66% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-013-1010 | | |
| Lab Sample ID: | F77666-10 | Date Sampled: | 10/29/10 |
| Matrix: | AQ - Ground Water | Date Received: | 10/30/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71528.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 86% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# APPENDIX C

## SUPPORT DOCUMENTATION

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Centauri Labs **Job** F77666

**Site:** NAS Key West, Key West, FL **Report Date:** 11/17/2010 7:45:28 AM

10 Samples were collected on 10/28/2010 and 10/29/2010 and were received at Accutest SE on 10/30/2010 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of F77666. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Extractables by GC by Method FLORIDA-PRO

**Matrix:** AQ **Batch ID:** OP34898

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77693-4MS, F77693-4MSD were used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Ellen Pampel, Inorganic QA (signature on file)

Date: November 17, 2010

Wednesday, November 17, 2010

F77666

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-2

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Accutest Laboratories SE**<br>**4405 Vineland Road C15**<br>**Orlando, FL 32811-7363** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Heather Wandry**<br>**407-425-6700** |

| | Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10/28/2010 | GKHMS-GW-002-1010 | 09:50 | **FL PRO** | GKHMS-GW002 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 2 | 10/28/2010 | GKHMS-GW-003-1010 | 09:20 | **FL PRO** | GKHMS-GW003 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 3 | 10/28/2010 | GKHMS-GW-004-1010 | 11:20 | **FL PRO** | GKHMS-GW004 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 4 | 10/28/2010 | GKHMS-GW-005-1010 | 12:00 | **FL PRO** | GKHMS-GW005 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 5 | 10/28/2010 | GKHMS-GW-006-1010 | 14:30 | **FL PRO** | GKHMS-GW006 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 6 | 10/28/2010 | GKHMS-GW-007-1010 | 15:40 | **FL PRO** | GKHMS-GW007 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 7 | 10/29/2010 | GKHMS-GW-008-1010 | 08:40 | **FL PRO** | GKHMS-GW008 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 8 | 10/29/2010 | GKHMS-GW-009-1010 | 09:20 | **FL PRO** | GKHMS-GW009 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 9 | 10/29/2010 | GKHMS-GW-012-1010 | 10:00 | **FL PRO** | GKHMS-GW012 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 10 | 10/29/2010 | GKHMS-GW-013-1010 | 13:50 | **FL PRO** | GKHMS-GW013 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |

| | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| 1. Relinquished By: **Derrick Haltiwanger** | 10/29/2010 | 16:12 | **Federal Express** | 10/29/2010 | 17:12 |
| 2. Relinquished By: Fx | | | J. Cornell (ALSE) | 10-30-10 | 09:20 |
| 3. Relinquished By: | | | | | |

3.6 4.2

http://www.terragena.com/customer/ttnus/fieldforms.nsf/103a8b9cbce17b228525705d0071b21c?OpenForm&ParentUNID=01... 10/29/2010

4.1 4

**F77666: Chain of Custody**
**Page 1 of 2**

## ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77666 CLIENT: TETRA TECH PROJECT: 112602607

DATE/TIME RECEIVED: 10-30-10 0900 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8739 7454 7771

### COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

### TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

### MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

### TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.6
- [ ] OBSERVED TEMPS: 3.0 3.6
- [ ] CORRECTED TEMPS: 3.6 4.2

### SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE: 10-30-10 REVIEWER SIGNATURE/DATE: 10/30/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1 4

**F77666: Chain of Custody**
**Page 2 of 2**

**SDG** F77666

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | MG/L | GKHMS-GW-013-1010 | F77666-10 | NM | 10/29/2010 | 11/03/2010 | 11/15/2010 | 5 | 12 | 17 |
| TPH | MG/L | GKHMS-GW-012-1010 | F77666-9 | NM | 10/29/2010 | 11/03/2010 | 11/15/2010 | 5 | 12 | 17 |
| TPH | MG/L | GKHMS-GW-009-1010 | F77666-8 | NM | 10/29/2010 | 11/03/2010 | 11/15/2010 | 5 | 12 | 17 |
| TPH | MG/L | GKHMS-GW-008-1010 | F77666-7 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| TPH | MG/L | GKHMS-GW-007-1010 | F77666-6 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| TPH | MG/L | GKHMS-GW-006-1010 | F77666-5 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| TPH | MG/L | GKHMS-GW-005-1010 | F77666-4 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| TPH | MG/L | GKHMS-GW-004-1010 | F77666-3 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| TPH | MG/L | GKHMS-GW-003-1010 | F77666-2 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |
| TPH | MG/L | GKHMS-GW-002-1010 | F77666-1 | NM | 10/28/2010 | 11/03/2010 | 11/15/2010 | 6 | 12 | 18 |

# Sample Summary

Centauri Labs

Job No: F77666

NAS Key West, Key West, FL
Project No: 112G02607

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| F77666-1 | 10/28/10 | 09:50 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-002-1010 |
| F77666-2 | 10/28/10 | 09:20 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-003-1010 |
| F77666-3 | 10/28/10 | 11:20 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-004-1010 |
| F77666-4 | 10/28/10 | 12:00 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-005-1010 |
| F77666-5 | 10/28/10 | 14:30 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-006-1010 |
| F77666-6 | 10/28/10 | 15:40 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-007-1010 |
| F77666-7 | 10/28/10 | 08:40 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-008-1010 |
| F77666-8 | 10/29/10 | 09:20 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-009-1010 |
| F77666-9 | 10/29/10 | 10:00 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-012-1010 |
| F77666-10 | 10/29/10 | 13:50 | DH | 10/30/10 | AQ | Ground Water | GKHMS-GW-013-1010 |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: GIJ | 2321 (NEW CURVE) |

| | |
|---|---|
| ANALYST: | ENCE/TF |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 1130526/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ F1326 | 3 | SOLVENT BLK | FL-PRO | | | | ✓ |
| IJ 27 | 3 | | | | | | ✓ |
| IJ 28 | 3 | | | | | | ✓ |
| IJ 29 | 3 | | | | | | ✓ |
| IJ 30 | 1 | ICV2321 -255 | | 53709 | 75:100 | | PASS |
| IJ 31 | 2 | -340 | | | 10x | | |
| IJ 32 | 3 | -680 | | | 5x | | |
| IJ 33 | 4 | ICV2321 -1360 | | | 2.5 | | |
| IJ 34 | 5 | ICV2321 -2040 | | | 3.5 | | |
| IJ 35 | 6 | -2720 | | | 4.5 | | |
| IJ 36 | 7 | -3400 | | | 1X | | CURVE PASSED |
| IJ 37 | 8 | ICV2321 -1360 | | UCIRA 53691J | 80:500 | | PASS |
| IJ 38 | 9 | CCB [illegible] | [illegible] | — | — | | ND |
| IJ 39 | 10 | OP34~~735~~ -~~MB~~ | | OP34966 | 1x | | ✓ |
| IJ 40 | 11 | OP34966 -MB | | | 1x | | PASS (ND) |
| IJ 41 | 12 | F77818 -1,CO | | | 1x | | ND |
| IJ 42 | 13 | F77801 -1,40 | | | 40x | | ✓ |
| IJ 43 | 14 | F77799 -1,20 | | | 20x | | ✓ |
| IJ F1344 | 15 | -2,10 | | | 10x | | ✓ |
| IJ F1345 | 16 | -3,10 | | | 10x | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Initial Calibration Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ICC2321
Lab FileID: IJ71333.D

Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Initial Calibration

Calibration Files
255 =IJ71330.D 340 =IJ71331.D 680 =IJ71332.D 1360=IJ71333.D
2040=IJ71334.D 2720=IJ71335.D 3400=IJ71336.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 2.834 | 3.110 | 3.059 | 2.826 | 3.160 | 3.221 | 3.114 | 3.046 E4 | 5.12 |
| 2)H TPH (C8-C40) | 2.674 | 2.958 | 2.865 | 2.545 | 2.647 | 2.527 | 2.403 | 2.660 E4 | 7.32 |

(#) = Out of Range

FL_PRO_R.M Fri Nov 12 08:59:22 2010

5.6.1

5

# Initial Calibration Verification



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~CIJ2321-ICV~~2321
Lab FileID: IJ71337.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71337.D Vial: 8
Acq On : 11 Nov 2010 6:49 pm Operator: enoca
Sample : icv2321-1360 Inst : FID 1
Misc : op34966,gij2321,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% Dev | (min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 H | TPH (C8-C40) | 1360.000 | 1434.350 | -5.5 | 110 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 08:59:02 2010

5.6.2 5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/16/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-R |
| PROC. METHOD: | I |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2324 |

| | |
|---|---|
| ANALYST: | EMC/A |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 1552210 / 46 |
| SIGNAL 2 SURR. AREA/CONC: | — / — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71511 | 1 | CC 2371 - 1360 ppb | FL-PRO | S3709 | 2.5 | | ✓ |
| IJ 12 | 1 | - 1360 | | | | | PASS |
| IJ 13 | 2 | -316 | | | 10x | | |
| IJ 14 | 3 | CCB | | — | — | | ND |
| IJ 15 | 4 | OP 34848 - BS | | OP34849 | 1 | | ✓ |
| IJ 16 | 5 | - MB | | | | | ND |
| IJ 17 | 6 | F77666 - 1 | | | | | ND |
| IJ 18 | 7 | -2 | | | | | ND |
| IJ 19 | 8 | -3 | | | | | ✓ |
| IJ 20 | 9 | -4 | | | | | ND |
| IJ 21 | 10 | -5 | | | | | ND |
| IJ 22 | 11 | -6 | | | | | ND |
| IJ 23 | 12 | -7 | | | | | ND |
| IJ 24 | 13 | -8 | | | | | ND |
| IJ 25 | 1 | CC 2371 - 1360 | | S3709 | 2.5 | | PASS |
| IJ 26 | 3 | CCB | | — | — | | ND |
| IJ 27 | 14 | F77666 - 9 | | OP34849 | 1 | | ✓ |
| IJ 28 | 15 | - 10 | | | | | ND |
| IJ 71529 | 4 | CC 2371 - 1360 | | S3709 | 2.5 | | PASS |
| IJ 71530 | 3 | ~~CC 2371 - 1360~~ | | ~~S3709~~ | ~~2.5~~ | | CCB / ND |

Peak on 11

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71512.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71512.D Vial: 1
Acq On : 15 Nov 2010 9:22 am Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34898,gij2324,1000,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 43.732 | -9.3 | 118 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1519.553 | -11.7 | 117 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 15:14:59 2010

5.6.3

5

# Continuing Calibration Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71513.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71513.D Vial: 2
Acq On : 15 Nov 2010 9:42 am Operator: enoca
Sample : cc2321-340 Inst : FID 1
Misc : op34898,gij2324,1000,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 10.000 | 9.435 | 5.6 | 92 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 340.000 | 369.521 | -8.7 | 98 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71331.D FL_PRO_R.M Mon Nov 15 15:15:24 2010

5.6.4

5

# Method Blank Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34898-MB | IJ71516.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77666-1, F77666-2, F77666-3, F77666-4, F77666-5, F77666-6, F77666-7, F77666-8, F77666-9, F77666-10

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 72% | 38-122% |

# Continuing Calibration Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71525.D



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71525.D Vial: 1
Acq On : 15 Nov 2010 2:24 pm Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34898,gij2324,1040,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 47.822 | -19.6 | 129 | 0.00 | 5.25- 5.45 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1638.263 | -20.5 | 126 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 15:15:00 2010

# Continuing Calibration Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71529.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71529.D Vial: 16
Acq On : 15 Nov 2010 3:55 pm Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34898,gij2324,1040,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.119 | 2.2 | 105 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1325.951 | 2.5 | 102 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 16:11:59 2010

5.6.6

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 1/5/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | " |
| CALIB. DATE: | 1/11/10 |
| RUN BATCH: | GIJ 23724 |

| | |
|---|---|
| ANALYST: | DRC/A |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 133229/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71531 | 17 | F77693 -1 | FL-PRO | OP34848 | 1.1 | | ND |
| IJ 32 | 18 | -2 | | | | | ND |
| IJ 33 | 19 | -3 | | | | | ND |
| IJ 34 | 20 | -4 | | | | | ✓ |
| IJ 35 | 21 | OP34848 -MS | | | | | ✓ |
| IJ 36 | 22 | -MSD | | | | | ✓ |
| IJ 37 | 23 | F77693 -5 | | | | | ND |
| IJ 38 | 24 | -6 | | | | | ND |
| IJ 39 | 25 | -7 | | | | | ND |
| IJ 40 | 26 | -8 | | | | | ✓ |
| IJ 41 | 16 | CC2771-1360 | | S3709 | 7.5 | | PASS |
| IJ 42 | 15 | CCB | | | | | ND |
| IJ 43 | 27 | F77693 -9 | | OP34848 | 1.1 | | ND |
| IJ 44 | 28 | -10 | | | | | ND |
| IJ 45 | 29 | OP34913 -BS | | OP34913 | 1.1 | | ✓ |
| IJ 46 | 30 | -MB | | | | | ND |
| IJ 47 | 31 | F77693 -11 | | | | | ND |
| IJ 48 | 32 | -12 | | | | | ✓ |
| IJ 49 | 33 | -13 | | | | | ND |
| IJ 71550 | 34 | -14,10 | | | 10.1 | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: _____

# Continuing Calibration Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71541.D



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71541.D Vial: 16
Acq On : 15 Nov 2010 7:57 pm Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34898,gij2324,1000,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.993 | 0.0 | 108 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1357.045 | 0.2 | 104 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Tue Nov 16 09:13:50 2010

# Semivolatile Surrogate Recovery Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Method: FLORIDA-PRO Matrix: AQ

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 [a] |
|---|---|---|
| F77666-1 | IJ71517.D | 72.0 |
| F77666-2 | IJ71518.D | 68.0 |
| F77666-3 | IJ71519.D | 85.0 |
| F77666-4 | IJ71520.D | 81.0 |
| F77666-5 | IJ71521.D | 74.0 |
| F77666-6 | IJ71522.D | 82.0 |
| F77666-7 | IJ71523.D | 85.0 |
| F77666-8 | IJ71524.D | 84.0 |
| F77666-9 | IJ71527.D | 66.0 |
| F77666-10 | IJ71528.D | 86.0 |
| OP34898-BS | IJ71515.D | 75.0 |
| OP34898-MB | IJ71516.D | 72.0 |
| OP34898-MS | IJ71535.D | 89.0 |
| OP34898-MSD | IJ71536.D | 81.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = o-Terphenyl | 38-122% |

(a) Recovery from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/15/10 |
| Lab File ID: | IJ71512.D | Injection Time: | 09:22 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.35 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP34898-BS | IJ71515.D | 11/15/10 | 11:02 | 5.35 |
| OP34898-MB | IJ71516.D | 11/15/10 | 11:22 | 5.35 |
| F77666-1 | IJ71517.D | 11/15/10 | 11:43 | 5.35 |
| F77666-2 | IJ71518.D | 11/15/10 | 12:03 | 5.35 |
| F77666-3 | IJ71519.D | 11/15/10 | 12:23 | 5.35 |
| F77666-4 | IJ71520.D | 11/15/10 | 12:43 | 5.35 |
| F77666-5 | IJ71521.D | 11/15/10 | 13:03 | 5.35 |
| F77666-6 | IJ71522.D | 11/15/10 | 13:23 | 5.35 |
| F77666-7 | IJ71523.D | 11/15/10 | 13:44 | 5.35 |
| F77666-8 | IJ71524.D | 11/15/10 | 14:04 | 5.35 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/15/10 |
| Lab File ID: | IJ71525.D | Injection Time: | 14:24 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.35 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77666-9 | IJ71527.D | 11/15/10 | 15:14 | 5.35 |
| F77666-10 | IJ71528.D | 11/15/10 | 15:34 | 5.35 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/15/10 |
| Lab File ID: | IJ71529.D | Injection Time: | 15:55 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.35 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71531.D | 11/15/10 | 16:35 | 5.35 |
| ZZZZZZ | IJ71532.D | 11/15/10 | 16:56 | 5.35 |
| ZZZZZZ | IJ71533.D | 11/15/10 | 17:16 | 5.35 |
| F77693-4 | IJ71534.D | 11/15/10 | 17:36 | 5.34 |
| OP34898-MS | IJ71535.D | 11/15/10 | 17:57 | 5.34 |
| OP34898-MSD | IJ71536.D | 11/15/10 | 18:17 | 5.34 |
| ZZZZZZ | IJ71537.D | 11/15/10 | 18:37 | 5.34 |
| ZZZZZZ | IJ71538.D | 11/15/10 | 18:57 | 5.34 |
| ZZZZZZ | IJ71539.D | 11/15/10 | 19:17 | 5.34 |
| ZZZZZZ | IJ71540.D | 11/15/10 | 19:37 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# Blank Spike Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34898-BS | IJ71515.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77666-1, F77666-2, F77666-3, F77666-4, F77666-5, F77666-6, F77666-7, F77666-8, F77666-9, F77666-10

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.680 | 80 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 75% | 38-122% |

Raw Data: IJ71535.D IJ71536.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77666
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34898-MS | IJ71535.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| OP34898-MSD | IJ71536.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| F77693-4 | IJ71534.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77666-1, F77666-2, F77666-3, F77666-4, F77666-5, F77666-6, F77666-7, F77666-8, F77666-9, F77666-10

| CAS No. | Compound | F77693-4 mg/l | Q | Spike mg/l | MS mg/l | MS % | MSD mg/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.380 | | 1.63 | 1.79 | 86 | 1.70 | 81 | 5 | 54-110/28 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77693-4 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | 81% | 85% | 38-122% |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 11, 2011**

**FROM:** **A. COGNETTI** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION- TRPH**
**CTO JM16, NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – F77693**

**SAMPLES:** 18/Aqueous/TRPH

| | | |
|---|---|---|
| GKHMS-GW-011-1010 | GKHMS-GW-014-1010 | GKHMS-GW-015-1010 |
| GKHMS-GW-016-1010 | GKHMS-GW-020-1010 | GKHMS-GW-021-1010 |
| GKHMS-GW-024-1010 | GKHMS-GW-025-1010 | GKHMS-GW-026-1010 |
| GKHMS-GW-027-1010 | GKHMS-GW-028-1010 | GKHMS-GW-029-1010 |
| GKHMS-GW-030-1010 | GKHMS-GW-031-1010 | GKHMS-GW-032D-1010 |
| GKHMS-GW-033D-1010 | GKHMS-GW-034D-1010 | GKHMS-GW-010-1010 |

OVERVIEW

The sample set for NAS KEY WEST, CTO JM16, SDG F77666 consists of eighteen (18) aqueous environmental samples analyzed for total recoverable petroleum hydrocarbons (TRPH). There were no field duplicate pairs included within this SDG.

The samples were collected by TetraTech on October 29, 30 and 31, 2010 and November 1, 2010 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using FL-PRO for TRPH analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- Data completeness
- * Holding times
- * Initial/continuing calibrations
- * Laboratory method blank results
- * Blank Spike
- Matrix Spike/Matrix Spike Duplicate
- * Surrogate Recoveries
- * Detection limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Notes:

Two samples received by the laboratory were not listed on the chain of custody, GKHMS-GW-010-1010 and GKHMS-GW-011-1010. The samples were analyzed for TRPH. The sample dates were acquired from the project manager.

The dates of extraction and analysis were not included in the database. The reviewer amended the database.

The matrix spike duplicate (MSD) percent recovery (%R) of TRPH was greater than the upper quality control limit in sample GKHMS-GW-021-1010. The %R in the matrix spike and the relative percent difference (RPD) within quality control limits. No action was taken on the positive TRPH result in sample GKHMS-GW-021-1010.

Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** None.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607<br>SDG: F77693<br>FRACTION: PET<br>MEDIA: WATER | NSAMPLE | GKHMS-GW-011-1010 | | | GKHMS-GW-014-1010 | | | GKHMS-GW-015-1010 | | | GKHMS-GW-016-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LAB_ID | F77693-18 | | | F77693-1 | | | F77693-2 | | | F77693-3 | | |
| | SAMP_DATE | 10/29/2010 | | | 10/30/2010 | | | 10/30/2010 | | | 10/30/2010 | | |
| | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.252 | | | 0.14 | U | | 0.14 | U | | 0.15 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-020-1010 | | | GKHMS-GW-021-1010 | | | GKHMS-GW-024-1010 | | | GKHMS-GW-025-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77693 | LAB_ID | F77693-13 | | | F77693-14 | | | F77693-4 | | | F77693-5 | | |
| FRACTION: PET | SAMP_DATE | 11/1/2010 | | | 11/1/2010 | | | 10/30/2010 | | | 10/30/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.14 | U | | 5.59 | | | 0.38 | | | 0.14 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-026-1010 | | | GKHMS-GW-027-1010 | | | GKHMS-GW-028-1010 | | | GKHMS-GW-029-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77693 | LAB_ID | F77693-7 | | | F77693-8 | | | F77693-9 | | | F77693-10 | | |
| FRACTION: PET | SAMP_DATE | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.15 | U | | 0.177 | J | P | 0.14 | U | | 0.14 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-030-1010 | | | GKHMS-GW-031-1010 | | | GKHMS-GW-032D-1010 | | | GKHMS-GW-033D-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77693 | LAB_ID | F77693-11 | | | F77693-15 | | | F77693-16 | | | F77693-12 | | |
| FRACTION: PET | SAMP_DATE | 10/31/2010 | | | 11/1/2010 | | | 11/1/2010 | | | 10/31/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.14 | U | | 0.14 | U | | 0.15 | U | | 0.163 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-034D-1010 | | | GKHMS-GW-10-1010 | | |
|---|---|---|---|---|---|---|---|
| SDG: F77693 | LAB_ID | F77693-6 | | | F77693-17 | | |
| FRACTION: PET | SAMP_DATE | 10/30/2010 | | | 10/29/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.15 | U | | 0.14 | U | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

Raw Data: IJ71557.D

2-11-11 JAI

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-10-1010 | | |
| Lab Sample ID: | F77693-17 | Date Sampled: | ~~11/01/10~~ 10/29/10 AE |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71557.D | 1 | 11/16/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-011-1010 | | |
| Lab Sample ID: | F77693-18 | Date Sampled: | ~~11/01/10~~ 10/29/10 AE |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71558.D | 1 | 11/16/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.252 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 83% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-014-1010 | | |
| Lab Sample ID: | F77693-1 | Date Sampled: | 10/30/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71531.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 75% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-015-1010 | | |
| Lab Sample ID: | F77693-2 | Date Sampled: | 10/30/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71532.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 74% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: IJ71533.D

Accutest Laboratories

# Report of Analysis



3.3

| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-016-1010 | | |
| Lab Sample ID: | F77693-3 | Date Sampled: | 10/30/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71533.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1020 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-020-1010 | | |
| Lab Sample ID: | F77693-13 | Date Sampled: | 11/01/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71549.D | 1 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 93% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-021-1010 | | |
| Lab Sample ID: | F77693-14 | Date Sampled: | 11/01/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71550.D | 10 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.59 | 2.4 | 1.4 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 102% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-024-1010 | | |
| Lab Sample ID: | F77693-4 | Date Sampled: | 10/30/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71534.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1020 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.380 | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 85% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-025-1010 | | |
| Lab Sample ID: | F77693-5 | Date Sampled: | 10/30/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71537.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 88% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-026-1010 | | |
| Lab Sample ID: | F77693-7 | Date Sampled: | 10/31/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71539.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 85% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-027-1010 | | |
| Lab Sample ID: | F77693-8 | Date Sampled: | 10/31/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71540.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.177 | 0.25 | 0.15 | mg/l | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 97% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-028-1010 | | |
| Lab Sample ID: | F77693-9 | Date Sampled: | 10/31/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71543.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-029-1010 | | |
| Lab Sample ID: | F77693-10 | Date Sampled: | 10/31/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71544.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 87% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-030-1010 | | |
| Lab Sample ID: | F77693-11 | Date Sampled: | 10/31/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71547.D | 1 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 98% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-031-1010 | | |
| Lab Sample ID: | F77693-15 | Date Sampled: | 11/01/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71555.D | 1 | 11/16/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-032D-1010 | | |
| Lab Sample ID: | F77693-16 | Date Sampled: | 11/01/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71556.D | 1 | 11/16/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1030 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.24 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: IJ71548.D

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-033D-1010 | | |
| Lab Sample ID: | F77693-12 | Date Sampled: | 10/31/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71548.D | 1 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1030 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.163 | 0.24 | 0.15 | mg/l | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-034D-1010 | | |
| Lab Sample ID: | F77693-6 | Date Sampled: | 10/30/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/02/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71538.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 79% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# APPENDIX C

## SUPPORT DOCUMENTATION

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Centauri Labs **Job** F77693

**Site:** NAS Key West, Key West, FL **Report Date:** 11/17/2010 9:01:28 AM

18 Samples were collected on/between 10/30/2010 and 11/01/2010 and were received at Accutest SE on 11/02/2010 properly preserved, at 2.6 Deg. C and intact. These Samples received an Accutest job number of F77693. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Extractables by GC by Method FLORIDA-PRO

**Matrix:** AQ **Batch ID:** OP34898

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77693-4MS, F77693-4MSD were used as the QC samples indicated.

**Matrix:** AQ **Batch ID:** OP34913

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77693-14MS, F77693-14MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery for TPH (C8-C40) is outside control limits. Outside control limits due to high level in sample relative to spike amount.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Ellen Pampel, Inorganic QA (signature on file)

Date: November 17, 2010

Wednesday, November 17, 2010

F77693



TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-4

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Accutest Laboratories SE**<br>**4405 Vineland Road C15**<br>**Orlando, FL 32811-7363** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Heather Wandry**<br>**407-425-6700** |

| | Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10/30/2010 | GKHMS-GW-014-1010 | 09:30 | FL PRO | GKHMS-GW014 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 2 | 10/30/2010 | GKHMS-GW-015-1010 | 10:00 | FL PRO | GKHMS-GW015 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 3 | 10/30/2010 | GKHMS-GW-016-1010 | 10:30 | FL PRO | GKHMS-GW016 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 4 | 10/30/2010 | GKHMS-GW-024-1010 | 13:00 | FL PRO | GKHMS-GW024 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 5 | 10/30/2010 | GKHMS-GW-025-1010 | 11:40 | FL PRO | GKHMS-GW025 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 6 | 10/30/2010 | GKHMS-GW-034D-1010 | 08:40 | FL PRO | GKHMS-GW034D | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 7 | 10/31/2010 | GKHMS-GW-026-1010 | 10:40 | FL PRO | GKHMS-GW026 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 8 | 10/31/2010 | GKHMS-GW-027-1010 | 12:20 | FL PRO | GKHMS-GW027 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 9 | 10/31/2010 | GKHMS-GW-028-1010 | 15:00 | FL PRO | GKHMS-GW028 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 10 | 10/31/2010 | GKHMS-GW-029-1010 | 13:00 | FL PRO | GKHMS-GW029 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 11 | 10/31/2010 | GKHMS-GW-030-1010 | 11:40 | FL PRO | GKHMS-GW030 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 12 | 10/31/2010 | GKHMS-GW-033D-1010 | 10:00 | FL PRO | GKHMS-GW033D | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 13 | 11/01/2010 | GKHMS-GW-020-1010 | 10:00 | FL PRO | GKHMS-GW020 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 14 | 11/01/2010 | GKHMS-GW-021-1010 | 11:00 | FL PRO | GKHMS-GW021 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 15 | 11/01/2010 | GKHMS-GW-031-1010 | 09:20 | FL PRO | GKHMS-GW031 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 16 | 11/01/2010 | GKHMS-GW-032D-1010 | 08:40 | FL PRO | GKHMS-GW032D | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/01/2010 | 16:32 | **Federal Express** | 11/01/2010 | 17:00 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| FX | 11/2/10 | 9:00 | Dett Hall | 11/2/10 | 9:00 |



**F77693: Chain of Custody**
**Page 1 of 3**

## ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77693 CLIENT: TETRA TECH PROJECT: KEY WEST NAS

DATE/TIME RECEIVED: 11/2/10 9:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 4

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8731 0541 5500

### COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

### TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [✓] TRIP BLANK NOT PROVIDED
- [✓] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

### MISC. INFORMATION

NUMBER OF ENCORES ? ____

NUMBER OF 5035 FIELD KITS ? ____

NUMBER OR LAB FILTERED METALS ? ____

### TEMPERATURE INFORMATION

- [ ] IR THERM ID #3 CORR. FACTOR +0.6
- [ ] OBSERVED TEMPS: 1.8 1.6 2.0 1.4
- [ ] CORRECTED TEMPS: 2.4 2.2 2.6 2.0

### SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [✓] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: RECEIVED EXTRA 1000mL UNPRESERVED BOTTLE FOR SAMPLE #13 GKHMS-GW-020-1010, SW846 ANALYSIS, NOT LISTED ON COC. RECEIVED 2 EXTRA FLOPRO SAMPLES GKHMS-GW-10 AND GKHMS-GW-011, WHICH WILL BECOME SAMPLES 17 & 18.

TECHNICIAN SIGNATURE/DATE [signature] 11/2/10 REVIEWER SIGNATURE/DATE JC 11-2-10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

**F77693: Chain of Custody**
**Page 3 of 3**

SDG

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|

CENTAURI LABS™

WORK ORDER

1010098

Approved

Printed: 11/2/2010 3:02:11PM

*Due Date: 11/13/10 00:00 (14 day TAT)*

*Date Received: 10/30/10 10:55*

| Analysis | Expires | Comments |
|---|---|---|
| 1010098-06 GKHMS-GW-007-1010 [Water] | Sampled 10/28/10 15:40 Eastern | |
| 6020A QSM TAL | 04/26/11 15:40 | |
| 8260B LL VOA | 11/11/10 15:40 | |
| 8270D LL SVOC TCL | 11/04/10 15:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/25/10 15:40 | |
| 1010098-07 GKHMS-TB-01 [Water] | Sampled 10/28/10 08:00 Eastern | |
| 8260B LL VOA | 11/11/10 08:00 | |
| 1010098-08 GKHMS-GW-008-1010 [Water] | Sampled 10/29/10 08:40 Eastern | |
| 6020A QSM TAL | 04/27/11 08:40 | |
| 8270D LL SVOC TCL | 11/05/10 08:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 08:40 | |
| 8260B LL VOA | 11/12/10 08:40 | |
| 1010098-09 GKHMS-GW-009-1010 [Water] | Sampled 10/29/10 09:20 Eastern | |
| Mercury, Total 7470A | 11/26/10 09:20 | |
| 6020A QSM TAL | 04/27/11 09:20 | |
| 8260B LL VOA | 11/12/10 09:20 | |
| 8270D LL SVOC TCL | 11/05/10 09:20 | PLUS SIM PAHs |
| 1010098-10 GKHMS-GW-010-1010 [Water] | Sampled 10/29/10 11:30 Eastern | |
| 8270D LL SVOC TCL | 11/05/10 11:30 | PLUS SIM PAHs |
| 8260B LL VOA | 11/12/10 11:30 | |
| 8082 PCBs | 11/05/10 11:30 | |
| 6020A QSM TAL | 04/27/11 11:30 | |
| Mercury, Total 7470A | 11/26/10 11:30 | |
| 8081B Pesticides | 11/05/10 11:30 | |
| 1010098-11 GKHMS-GW-011-1010 [Water] | Sampled 10/29/10 10:40 Eastern | |
| 8260B LL VOA | 11/12/10 10:40 | |
| 8270D LL SVOC TCL | 11/05/10 10:40 | PLUS SIM PAHs |
| Mercury, Total 7470A | 11/26/10 10:40 | |
| 8082 PCBs | 11/05/10 10:40 | |
| 6020A QSM TAL | 04/27/11 10:40 | |
| 8081B Pesticides | 11/05/10 10:40 | |

Accutest Laboratories

# Sample Summary

Centauri Labs

Job No: F77693

NAS Key West, Key West, FL
Project No: 112G02607

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| F77693-1 | 10/30/10 | 09:30 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-014-1010 |
| F77693-2 | 10/30/10 | 10:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-015-1010 |
| F77693-3 | 10/30/10 | 10:30 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-016-1010 |
| F77693-4 | 10/30/10 | 13:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-024-1010 |
| F77693-5 | 10/30/10 | 11:40 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-025-1010 |
| F77693-6 | 10/30/10 | 08:40 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-034D-1010 |
| F77693-7 | 10/31/10 | 10:40 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-026-1010 |
| F77693-8 | 10/31/10 | 12:20 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-027-1010 |
| F77693-9 | 10/31/10 | 15:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-028-1010 |
| F77693-10 | 10/31/10 | 13:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-029-1010 |
| F77693-11 | 10/31/10 | 11:40 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-030-1010 |
| F77693-12 | 10/31/10 | 10:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-033D-1010 |
| F77693-13 | 11/01/10 | 10:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-020-1010 |

# Sample Summary
(continued)

Centauri Labs

Job No: F77693

NAS Key West, Key West, FL
Project No: 112G02607

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| F77693-14 | 11/01/10 | 11:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-021-1010 |
| F77693-15 | 11/01/10 | 09:20 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-031-1010 |
| F77693-16 | 11/01/10 | 08:40 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-032D-1010 |
| F77693-17 | 11/01/10 | 00:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-10-1010 |
| F77693-18 | 11/01/10 | 00:00 | GB | 11/02/10 | AQ | Ground Water | GKHMS-GW-011-1010 |

ACCUTEST LABORATORIES SE

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-R |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2321 (NEW CURVE) |

| | |
|---|---|
| ANALYST: | ENG/IP |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 1130526/40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71326 | 3 | SOLVENT BLK | FL-PRO | — | — | | ✓ |
| IJ 27 | 3 | | | | | | ✓ |
| IJ 28 | 3 | | | | | | ✓ |
| IJ 29 | 3 | | | | | | ✓ |
| IJ 30 | 1 | IC2321 -155 | | S3709 | 75:1000 | | PASS |
| IJ 31 | 2 | -340 | | | 10X | | |
| IJ 32 | 3 | -680 | | | 5X | | |
| IJ 33 | 4 | ICC2321 -1360 | | | 2.5 | | |
| IJ 34 | 5 | IC2321 -2040 | | | 3.5 | | |
| IJ 35 | 6 | -2720 | | | 4.5 | | |
| IJ 36 | 7 | -3400 | | | 1X | | CURVE PASSED |
| IJ 37 | 8 | ICV2321 - 1360 | | ULTRA 5096J | 80:500 | | PASS |
| IJ 38 | 9 | CC Baseline | | — | — | | ND |
| IJ 39 | 10 | OP34 ~~735~~ 966 - ~~MB~~ BS | | OP34966 | 1X | | ✓ |
| IJ 40 | 11 | OP34966 - MB | | | 1X | | PASS (ND) |
| IJ 41 | 12 | F77818 -1, C.O. | | | 1X | | ND |
| IJ 42 | 13 | F77801 -1, 40 | | | 40X | | ✓ |
| IJ 43 | 14 | F77799 -1, 20 | | | 20X | | ✓ |
| IJ 71344 | 15 | -2, 10 | | | 10X | | ✓ |
| IJ 71345 | 16 | -3, 10 | | | 10X | | ✓ |

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Initial Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ICC2321
Lab FileID: IJ71333.D



Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Initial Calibration

Calibration Files
255 =IJ71330.D 340 =IJ71331.D 680 =IJ71332.D 1360=IJ71333.D
2040=IJ71334.D 2720=IJ71335.D 3400=IJ71336.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 2.834 | 3.110 | 3.059 | 2.826 | 3.160 | 3.221 | 3.114 | 3.046 E4 | 5.12 |
| 2)H TPH (C8-C40) | 2.674 | 2.958 | 2.865 | 2.545 | 2.647 | 2.527 | 2.403 | 2.660 E4 | 7.32 |

(#) = Out of Range

FL_PRO_R.M Fri Nov 12 08:59:22 2010

# Initial Calibration Verification



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ICV2321
Lab FileID: IJ71337.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71337.D
Acq On : 11 Nov 2010 6:49 pm
Sample : icv2321-1360
Misc : op34966,gij2321,30.0,,,1,1,soil
IntFile : events.e

Vial: 8
Operator: enoca
Inst : FID 1
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 | H | TPH (C8-C40) | 1360.000 | 1434.350 | -5.5 | 110 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 08:59:02 2010

5.6.2

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/15/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-R |
| PROC. METHOD: | I |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2324 |

| | |
|---|---|
| ANALYST: | EMC/A |
| MECL2 LOT #: | J77303 |
| SIGNAL 1 SURR. AREA/CONC: | 137210 / 40 |
| SIGNAL 2 SURR. AREA/CONC: | — / — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71511 | 1 | CC 2371 - 1360 11/11/10 | FL-PRO | 53709 | 1.5 | | V |
| IJ 12 | 1 | - 1360 | | | | | PASS |
| IJ 13 | 2 | -3116 | | | 10.0 | | I |
| IJ 14 | 3 | CCB | | — | — | | ND |
| IJ 15 | 4 | OP 31848 - BS | | OP34899 | 1.1 | | V |
| IJ 16 | 5 | -MB | | | | | ND |
| IJ 17 | 6 | F77666 - 1 | | | | | ND |
| IJ 18 | 7 | -2 | | | | | ND |
| IJ 19 | 8 | -3 | | | | | V |
| IJ 20 | 9 | -4 | | | | | ND |
| IJ 21 | 10 | -5 | | | | | ND |
| IJ 22 | 11 | -6 | | | | | ND |
| IJ 23 | 12 | -7 | | | | | ND |
| IJ 24 | 13 | -9 | | | | | ND |
| IJ 25 | 1 | CC 2371 - 1360 | | 53709 | 1.5 | | PASS |
| IJ 26 | 2 | CCB | | — | — | | ND |
| IJ 27 | 14 | F77666 - 9 | | OP34899 | 1.1 | | V |
| IJ 28 | 15 | -10 | | | | | ND |
| IJ 71529 | 16 | CC 2371 - 1360 | | 53709 | 1.5 | | PASS |
| IJ 71530 | 3 | ~~CC 2371 - 1360~~ 11/11/10 | | ~~53709~~ 11/16/10 | ~~1.5~~ 11/16/10 | | CCB / ND |

Each on 11

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71512.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71512.D Vial: 1
Acq On : 15 Nov 2010 9:22 am Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34898,gij2324,1000,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 43.732 | -9.3 | 118 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1519.553 | -11.7 | 117 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 15:14:59 2010

5.6.3

5

# Continuing Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71513.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71513.D Vial: 2
Acq On : 15 Nov 2010 9:42 am Operator: enoca
Sample : cc2321-340 Inst : FID 1
Misc : op34898,gij2324,1000,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 10.000 | 9.435 | 5.6 | 92 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 340.000 | 369.521 | -8.7 | 98 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71331.D FL_PRO_R.M Mon Nov 15 15:15:24 2010

5.6.4

5

Raw Data: IJ71516.D

# Method Blank Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34898-MB | IJ71516.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77693-1, F77693-2, F77693-3, F77693-4, F77693-5, F77693-6, F77693-7, F77693-8, F77693-9, F77693-10

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 72% | 38-122% |

# Continuing Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71525.D



Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71525.D          Vial: 1
Acq On    : 15 Nov 2010   2:24 pm                   Operator: enoca
Sample    : cc2321-1360                            Inst    : FID 1
Misc      : op34898,gij2324,1040,,,1,1,water       Multiplr: 1.00
IntFile   : events.e

Method       : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 47.822 | -19.6 | 129 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1638.263 | -20.5 | 126 | 0.00 | 2.23- 9.54 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
IJ71333.D  FL_PRO_R.M  Mon Nov 15 15:15:00 2010

# Continuing Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71529.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71529.D Vial: 16
Acq On : 15 Nov 2010 3:55 pm Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34898,gij2324,1040,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.119 | 2.2 | 105 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1325.951 | 2.5 | 102 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 16:11:59 2010

5.6.6

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/5/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 23714 |

| | |
|---|---|
| ANALYST: | DDC/JL |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 133210/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71531 | 17 | F77693 -1 | FL-PRO | OP34883 | 1.1 | | ND |
| IJ 32 | 18 | -2 | | | | | ND |
| IJ 33 | 19 | -3 | | | | | ND |
| IJ 34 | 20 | -4 | | | | | ✓ |
| IJ 35 | 21 | OP34893 -MS | | | | | ✓ |
| IJ 36 | 22 | -MSD | | | | | ✓ |
| IJ 37 | 23 | F77693 -5 | | | | | ND |
| IJ 38 | 24 | -6 | | | | | ND |
| IJ 39 | 25 | -7 | | | | | ND |
| IJ 40 | 26 | -8 | | | | | ✓ |
| IJ 41 | 10 | CC2371-1360 | | S3709 | 7.5 | | PASS |
| IJ 42 | 13 | CCB | | | | | ND |
| IJ 43 | 27 | F77693 -9 | | OP34893 | 1.1 | | ND |
| IJ 44 | 28 | -10 | | | | | ND |
| IJ 45 | 29 | OP34913 -BS | | OP34913 | 1.1 | | ✓ |
| IJ 46 | 30 | -MSD | | | | | ND |
| IJ 47 | 31 | F77693 -11 | | | | | ND |
| IJ 48 | 32 | -12 | | | | | ✓ |
| IJ 49 | 33 | -13 | | | | | ND |
| IJ 71550 | 34 | -14,10 | | | 10.1 | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71541.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71541.D Vial: 16
Acq On : 15 Nov 2010 7:57 pm Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34898,gij2324,1000,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.993 | 0.0 | 108 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1357.045 | 0.2 | 104 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Tue Nov 16 09:13:50 2010

5.6.7

5

Raw Data: IJ71546.D

# Method Blank Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34913-MB | IJ71546.D | 1 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77693-11, F77693-12, F77693-13, F77693-14, F77693-15, F77693-16, F77693-17, F77693-18

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 93% | 38-122% |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/12/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 23724 |

| | |
|---|---|
| ANALYST: | EPOC/A |
| MECL2 LOT #: | 127503 |
| SIGNAL 1 SURR. AREA/CONC: | 135290/90 |
| SIGNAL 2 SURR. AREA/CONC: | —/— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71551 | 35 | OP34913-MS,10 | FL-PRO | OP34913 | 10x | | ✓ |
| IJ 52 | 36 | -MSD,10 | | " | " | | ✓ |
| IJ 53 | (16) | CC2321-1360 | | 53709 | 1:5 | | PASS |
| IJ 54 | (3) | CCB | | — | — | | ND |
| IJ 55 | 37 | F77693-15 | | OP34913 | 1x | | ND |
| IJ 56 | 38 | -16 | | | | | ND |
| IJ 57 | 39 | -17 | | | | | ND |
| IJ 58 | 40 | -18 | | | | | ✓ |
| IJ 59 | 41 | OP35017-MB | | OP35017 | 1x | | ND |
| IJ 60 | 42 | F77950-1,10 | | " | 10x | | ✓ |
| IJ 61 | 43 | -2,100 | | " | 100x | | ✓ |
| IJ 62 | (16) | CC2321-1360 | | 53709 | 1:5 | | PASS |
| IJ 63 | 44 | OP35012-MB | | OP35012 | 1x | | ND |
| IJ 64 | 45 | F77764-1,2 | | | 2x | | ✓ |
| IJ 65 | 46 | -3 | | | 1x | | ✓ |
| IJ 66 | 47 | -4 | | | | | ✓ |
| IJ 67 | 48 | -6 | | | | | ✓ |
| IJ 68 | 49 | F77746-(1),2 | | | 2x 11/10/10 | | ✓ |
| IJ 64 | 50 | -(2) | | | 1x | | ✓ Some Aliph (Re extract) |
| IJ 71570 | 51 | -5 | | | | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71553.D



Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71553.D          Vial: 16
Acq On    : 15 Nov 2010  11:58 pm                    Operator: enoca
Sample    : cc2321-1360                              Inst    : FID 1
Misc      : op34913,gij2324,1000,,,1,1,water         Multiplr: 1.00
IntFile   : events.e

Method       : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 40.432 | -1.1 | 109 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1346.839 | 1.0 | 104 | 0.00 | 2.23- 9.54 |

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 IJ71333.D  FL_PRO_R.M       Tue Nov 16 09:13:50 2010
```

# Continuing Calibration Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2324-CC2321
Lab FileID: IJ71562.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71562.D Vial: 16
Acq On : 16 Nov 2010 2:58 am Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op35017,gij2324,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.215 | 2.0 | 106 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1316.901 | 3.2 | 101 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Tue Nov 16 09:13:50 2010

5.6.9

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/15/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2324 |

| | |
|---|---|
| ANALYST: | CNEC/A |
| MECL2 LOT #: | J 17503 |
| SIGNAL 1 SURR. AREA/CONC: | 332210 / 40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71571 | 52 | F77809 - 5 | FL-PRO | OP35012 | 1.1 | | ✓ |
| IJ 72 | 53 | F77741 - 22 | | | | | ✓ |
| IJ 71573 | 16 | LCC2371 - 1360 | | 51709 | 2.5 | | PASS |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |
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| IJ | | | | | | | |
| IJ | | | | | | | |

F-C&A 11/16/10

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PIP Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature:

# Blank Spike Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34898-BS | IJ71515.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77693-1, F77693-2, F77693-3, F77693-4, F77693-5, F77693-6, F77693-7, F77693-8, F77693-9, F77693-10

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.680 | 80 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 75% | 38-122% |

Raw Data: IJ71545.D

# Blank Spike Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34913-BS | IJ71545.D | 1 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77693-11, F77693-12, F77693-13, F77693-14, F77693-15, F77693-16, F77693-17, F77693-18

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.766 | 90 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 92% | 38-122% |

Raw Data: IJ71535.D IJ71536.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34898-MS | IJ71535.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| OP34898-MSD | IJ71536.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |
| F77693-4 | IJ71534.D | 1 | 11/15/10 | FEA | 11/03/10 | OP34898 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77693-1, F77693-2, F77693-3, F77693-4, F77693-5, F77693-6, F77693-7, F77693-8, F77693-9, F77693-10

| CAS No. | Compound | F77693-4 mg/l | Q | Spike mg/l | MS mg/l | MS % | MSD mg/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.380 | | 1.63 | 1.79 | 86 | 1.70 | 81 | 5 | 54-110/28 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77693-4 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | 81% | 85% | 38-122% |

Raw Data: IJ71551.D IJ71552.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34913-MS | IJ71551.D | 10 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| OP34913-MSD | IJ71552.D | 10 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |
| F77693-14 | IJ71550.D | 10 | 11/15/10 | FEA | 11/04/10 | OP34913 | GIJ2324 |

EKHMS-GW-021010

5.3.2

5

The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77693-11, F77693-12, F77693-13, F77693-14, F77693-15, F77693-16, F77693-17, F77693-18

| CAS No. | Compound | F77693-14 mg/l | Q | Spike mg/l | MS mg/l | MS % | MSD mg/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.59 | | 1.63 | 6.91 | 81 | 8.73 | 192* a | 23 | 54-110/28 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77693-14 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | 101% | 102% | 38-122% |

(a) Outside control limits due to high level in sample relative to spike amount.

# Semivolatile Surrogate Recovery Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Method: FLORIDA-PRO | Matrix: AQ |
|---|---|

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 [a] |
|---|---|---|
| F77693-1 | IJ71531.D | 75.0 |
| F77693-2 | IJ71532.D | 74.0 |
| F77693-3 | IJ71533.D | 91.0 |
| F77693-4 | IJ71534.D | 85.0 |
| F77693-5 | IJ71537.D | 88.0 |
| F77693-6 | IJ71538.D | 79.0 |
| F77693-7 | IJ71539.D | 85.0 |
| F77693-8 | IJ71540.D | 97.0 |
| F77693-9 | IJ71543.D | 91.0 |
| F77693-10 | IJ71544.D | 87.0 |
| F77693-11 | IJ71547.D | 98.0 |
| F77693-12 | IJ71548.D | 96.0 |
| F77693-13 | IJ71549.D | 93.0 |
| F77693-14 | IJ71550.D | 102.0 |
| F77693-15 | IJ71555.D | 89.0 |
| F77693-16 | IJ71556.D | 96.0 |
| F77693-17 | IJ71557.D | 94.0 |
| F77693-18 | IJ71558.D | 83.0 |
| OP34898-BS | IJ71515.D | 75.0 |
| OP34898-MB | IJ71516.D | 72.0 |
| OP34898-MS | IJ71535.D | 89.0 |
| OP34898-MSD | IJ71536.D | 81.0 |
| OP34913-BS | IJ71545.D | 92.0 |
| OP34913-MB | IJ71546.D | 93.0 |
| OP34913-MS | IJ71551.D | 91.0 |
| OP34913-MSD | IJ71552.D | 101.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = o-Terphenyl | 38-122% |

(a) Recovery from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/15/10 |
| Lab File ID: | IJ71512.D | Injection Time: | 09:22 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.35 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP34898-BS | IJ71515.D | 11/15/10 | 11:02 | 5.35 |
| OP34898-MB | IJ71516.D | 11/15/10 | 11:22 | 5.35 |
| ZZZZZZ | IJ71517.D | 11/15/10 | 11:43 | 5.35 |
| ZZZZZZ | IJ71518.D | 11/15/10 | 12:03 | 5.35 |
| ZZZZZZ | IJ71519.D | 11/15/10 | 12:23 | 5.35 |
| ZZZZZZ | IJ71520.D | 11/15/10 | 12:43 | 5.35 |
| ZZZZZZ | IJ71521.D | 11/15/10 | 13:03 | 5.35 |
| ZZZZZZ | IJ71522.D | 11/15/10 | 13:23 | 5.35 |
| ZZZZZZ | IJ71523.D | 11/15/10 | 13:44 | 5.35 |
| ZZZZZZ | IJ71524.D | 11/15/10 | 14:04 | 5.35 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/15/10 |
| Lab File ID: | IJ71529.D | Injection Time: | 15:55 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.35 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77693-1 | IJ71531.D | 11/15/10 | 16:35 | 5.35 |
| F77693-2 | IJ71532.D | 11/15/10 | 16:56 | 5.35 |
| F77693-3 | IJ71533.D | 11/15/10 | 17:16 | 5.35 |
| F77693-4 | IJ71534.D | 11/15/10 | 17:36 | 5.34 |
| OP34898-MS | IJ71535.D | 11/15/10 | 17:57 | 5.34 |
| OP34898-MSD | IJ71536.D | 11/15/10 | 18:17 | 5.34 |
| F77693-5 | IJ71537.D | 11/15/10 | 18:37 | 5.34 |
| F77693-6 | IJ71538.D | 11/15/10 | 18:57 | 5.34 |
| F77693-7 | IJ71539.D | 11/15/10 | 19:17 | 5.34 |
| F77693-8 | IJ71540.D | 11/15/10 | 19:37 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/15/10 |
| Lab File ID: | IJ71541.D | Injection Time: | 19:57 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77693-9 | IJ71543.D | 11/15/10 | 20:37 | 5.34 |
| F77693-10 | IJ71544.D | 11/15/10 | 20:58 | 5.34 |
| OP34913-BS | IJ71545.D | 11/15/10 | 21:18 | 5.34 |
| OP34913-MB | IJ71546.D | 11/15/10 | 21:38 | 5.34 |
| F77693-11 | IJ71547.D | 11/15/10 | 21:58 | 5.34 |
| F77693-12 | IJ71548.D | 11/15/10 | 22:18 | 5.34 |
| F77693-13 | IJ71549.D | 11/15/10 | 22:38 | 5.34 |
| F77693-14 | IJ71550.D | 11/15/10 | 22:57 | 5.34 |
| OP34913-MS | IJ71551.D | 11/15/10 | 23:18 | 5.34 |
| OP34913-MSD | IJ71552.D | 11/15/10 | 23:38 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77693
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/15/10 |
| Lab File ID: | IJ71553.D | Injection Time: | 23:58 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77693-15 | IJ71555.D | 11/16/10 | 00:38 | 5.34 |
| F77693-16 | IJ71556.D | 11/16/10 | 00:58 | 5.34 |
| F77693-17 | IJ71557.D | 11/16/10 | 01:18 | 5.34 |
| F77693-18 | IJ71558.D | 11/16/10 | 01:38 | 5.34 |
| OP35017-MB | IJ71559.D | 11/16/10 | 01:58 | 5.34 |
| ZZZZZZ | IJ71560.D | 11/16/10 | 02:18 | 5.34 |
| ZZZZZZ | IJ71561.D | 11/16/10 | 02:38 | 0.00 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **JANUARY 14, 2011**

**FROM:** **A. COGNETTI** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION- TRPH**
**CTO JM16, NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – F77712**

**SAMPLES:** 8/Aqueous/TRPH

| | | |
|---|---|---|
| GKHMS-GW-017-1010 | GKHMS-GW-018-1010 | GKHMS-GW-019-1010 |
| GKHMS-GW-022-1010 | GKHMS-GW-023-1010 | GKHMS-GW-FD001-1010 |
| GKHMS-GW-FD002-1010 | GKHMS-GW-FD003-1010 | |

OVERVIEW

The sample set for NAS KEY WEST, CTO JM16, SDG F77712 consists of eight (8) aqueous environmental samples analyzed for total recoverable petroleum hydrocarbons (TRPH). There are three field duplicate pairs associated with this SDG: GKHMS-GW-017-1010/GKHMS-GW-FD001-1010, GKHMS-GW-019-1010/GKHMS-GW-FD002-1010 and GKHMS-GW-022-1010/GKHMS-GW-FD003-1010.

The samples were collected by TetraTech on November 2, 2010 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using FL-PRO for TRPH analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • Initial/continuing calibrations
* • Laboratory method blank results
* • Blank Spike
* • Matrix Spike/Matrix Spike Duplicate
* • Surrogate Recoveries
* • Field Duplicate Precision
* • Detection limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Notes:

Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Nondetected results were reported to the method detection limit (MDL).

TO: S. Stotler-Hardy
FROM: A. Cognetti
DATE: January 14, 2011
SDG: F77712
PAGE: 2

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** None.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-017-1010 | | | GKHMS-GW-018-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77712 | LAB_ID | F77712-1 | | | F77712-2 | | | F77712-3 | | | F77712-4 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 2.77 | | | 0.621 | | | 0.576 | | | 0.231 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-GW-023-1010 | | | GKHMS-GW-FD001-1010 | | | GKHMS-GW-FD002-1010 | | | GKHMS-GW-FD003-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77712 | LAB_ID | F77712-5 | | | F77712-6 | | | F77712-7 | | | F77712-8 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | GKHMS-GW-017-1010 | | | GKHMS-GW-019-1010 | | | GKHMS-GW-022-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.15 | U | | 2.81 | | | 0.459 | | | 0.224 | J | P |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-017-1010 | | |
| Lab Sample ID: | F77712-1 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71426.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 2.77 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 92% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-018-1010 | | |
| Lab Sample ID: | F77712-2 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71427.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.621 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-019-1010 | | |
| Lab Sample ID: | F77712-3 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71428.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.576 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-022-1010 | | |
| Lab Sample ID: | F77712-4 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71429.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.231 | 0.24 | 0.14 | mg/l | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 79% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-023-1010 | | |
| Lab Sample ID: | F77712-5 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71430.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1000 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.15 U | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-FD001-1010 | | |
| Lab Sample ID: | F77712-6 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71433.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 2.81 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-FD002-1010 | | |
| Lab Sample ID: | F77712-7 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71434.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.459 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 76% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-FD003-1010 | | |
| Lab Sample ID: | F77712-8 | Date Sampled: | 11/02/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/03/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71435.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.224 | 0.24 | 0.14 | mg/l | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 77% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# APPENDIX C

## SUPPORT DOCUMENTATION

F77712

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-5

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Accutest Laboratories SE**<br>**4405 Vineland Road C15**<br>**Orlando, FL 32811-7363** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Heather Wandry**<br>**407-425-6700** |

| | Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11/02/2010 | GKHMS-GW-017-1010 | 08:40 | **FL PRO** | GKHMS-GW017 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 2 | 11/02/2010 | GKHMS-GW-018-1010 | 08:00 | **FL PRO** | GKHMS-GW018 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | run ms/msd |
| 3 | 11/02/2010 | GKHMS-GW-019-1010 | 09:20 | **FL PRO** | GKHMS-GW019 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 4 | 11/02/2010 | GKHMS-GW-022-1010 | 10:50 | **FL PRO** | GKHMS-GW022 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 5 | 11/02/2010 | GKHMS-GW-023-1010 | 10:00 | **FL PRO** | GKHMS-GW023 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 6 | 11/02/2010 | GKHMS-GW-FD001-1010 | 00:00 | **FL PRO** | QC | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 7 | 11/02/2010 | GKHMS-GW-FD002-1010 | 00:00 | **FL PRO** | QC | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 8 | 11/02/2010 | GKHMS-GW-FD003-1010 | 00:00 | **FL PRO** | QC | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |

fx FX Accutest
11.03.10
09:30

3.4 4.2

http://www.terragena.com/customer/ttnus/fieldforms.nsf/103a8b9cbce17b228525705d0071b21c?OpenForm&ParentUNID=EE2... 11/2/2010

**F77712: Chain of Custody**
**Page 1 of 2**

## ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77712 CLIENT: TetraTech PROJECT: 112602607

DATE/TIME RECEIVED: 11.03.10 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 2

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8731 0541 8551 0

### COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

### TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

### MISC. INFORMATION

NUMBER OF ENCORES ? 0

NUMBER OF 5035 FIELD KITS ? 8

NUMBER OR LAB FILTERED METALS ? 4

### TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +.6
- [ ] OBSERVED TEMPS: 2.8 3.6
- [ ] CORRECTED TEMPS: 3.4 4.2

### SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE E.T 11.03.10 REVIEWER SIGNATURE/DATE JC 11-3-10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1 4

**F77712: Chain of Custody**
**Page 2 of 2**

# Sample Summary

Centauri Labs

Job No: F77712

NAS Key West, Key West, FL
Project No: 112G02607

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| F77712-1 | 11/02/10 | 08:40 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-017-1010 |
| F77712-2 | 11/02/10 | 08:00 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-018-1010 |
| F77712-3 | 11/02/10 | 09:20 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-019-1010 |
| F77712-4 | 11/02/10 | 10:50 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-022-1010 |
| F77712-5 | 11/02/10 | 10:00 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-023-1010 |
| F77712-6 | 11/02/10 | 00:00 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-FD001-1010 |
| F77712-7 | 11/02/10 | 00:00 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-FD002-1010 |
| F77712-8 | 11/02/10 | 00:00 | GB | 11/03/10 | AQ | Ground Water | GKHMS-GW-FD003-1010 |

**SDG** F77712

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | MG/L | GKHMS-GW-FD003-1010 | F77712-8 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |
| TPH | MG/L | GKHMS-GW-FD002-1010 | F77712-7 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |
| TPH | MG/L | GKHMS-GW-FD001-1010 | F77712-6 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |
| TPH | MG/L | GKHMS-GW-023-1010 | F77712-5 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |
| TPH | MG/L | GKHMS-GW-022-1010 | F77712-4 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |
| TPH | MG/L | GKHMS-GW-019-1010 | F77712-3 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |
| TPH | MG/L | GKHMS-GW-018-1010 | F77712-2 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |
| TPH | MG/L | GKHMS-GW-017-1010 | F77712-1 | NM | 11/02/2010 | 11/09/2010 | 11/13/2010 | 7 | 4 | 11 |

# NAS KEY WEST
# WATER DATA
# F77712

| FRACTION | CHEMICAL | GKHMS-GW-017-1010 | UNITS | GKHMS-GW-FD001-101( | RPD | D |
|---|---|---|---|---|---|---|
| PET | TPH (C08-C40) | 2.77 | MG/L | 2.81 | 1.43 | 0.04 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# NAS KEY WEST
# WATER DATA
# F77712

| FRACTION | CHEMICAL | GKHMS-GW-019-1010 | UNITS | GKHMS-GW-FD002-101( | RPD | D |
|---|---|---|---|---|---|---|
| PET | TPH (C08-C40) | 0.576 | MG/L | 0.459 | 22.61 | 0.12 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# NAS KEY WEST
# WATER DATA
# F77712

| FRACTION | CHEMICAL | GKHMS-GW-022-1010 | UNITS | GKHMS-GW-FD003-101( | RPD | D |
|---|---|---|---|---|---|---|
| PET | TPH (C08-C40) | 0.231 I | MG/L | 0.224 I | 3.08 | 0.01 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Centauri Labs **Job** F77712

**Site:** NAS Key West, Key West, FL **Report Date:** 11/17/2010 9:05:24 AM

8 Samples were collected on 11/02/2010 and were received at Accutest SE on 11/03/2010 properly preserved, at 4.2 Deg. C and intact. These Samples received an Accutest job number of F77712. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Extractables by GC by Method FLORIDA-PRO

**Matrix:** AQ **Batch ID:** OP34976

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77759-6MS, F77759-6MSD were used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Ellen Pampel, Inorganic QA (signature on file)

Date: November 17, 2010

Wednesday, November 17, 2010

ACCUTEST LABORATORIES SE

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-R |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2321 (NEW CURVE) |

| | |
|---|---|
| ANALYST: | |
| MECL2 LOT #: | T27503 |
| SIGNAL 1 SURR. AREA/CONC: | 1130576/40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71326 | 3 | SOLVENT BLK | FL-PRO | — | — | | ✓ |
| IJ 27 | 3 | | | | | | ✓ |
| IJ 28 | 3 | | | | | | ✓ |
| IJ 29 | 3 | | | | | | ✓ |
| IJ 30 | 1 | IC2321 -155 | | S3709 | 75:1000 | | PASS |
| IJ 31 | 2 | -340 | | | 10X | | |
| IJ 32 | 3 | -680 | | | 5X | | |
| IJ 33 | 4 | ICC2321 -1360 | | | 2.5 | | |
| IJ 34 | 5 | IC2321 -2040 | | | 3.5 | | |
| IJ 35 | 6 | -2720 | | | 4.5 | | |
| IJ 36 | 7 | -3400 | | | 1X | | Curve Passed |
| IJ 37 | 8 | ICV2321 - 1360 | | ULTRA 5096J | 80:500 | | PASS |
| IJ 38 | 9 | CC Bag | | — | — | | ND |
| IJ 39 | 10 | OP34966-B3 | | OP34966 | 1X | | ✓ |
| IJ 40 | 11 | OP34966 - MB | | | 1X | | PASS (ND) |
| IJ 41 | 12 | F77818 -1 C.O. | | | 1X | | ND |
| IJ 42 | 13 | F77801 -1,40 | | | 40X | | ✓ |
| IJ 43 | 14 | F77799 -1,10 | | | 10X | | ✓ |
| IJ 71344 | 15 | -2,10 | | | 10X | | ✓ |
| IJ 71345 | 16 | -3,10 | | | 10X | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: ____





ACCUTEST LABORATORIES F77712

# Initial Calibration Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ICC2321
Lab FileID: IJ71333.D

Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Initial Calibration

Calibration Files
255 =IJ71330.D 340 =IJ71331.D 680 =IJ71332.D 1360=IJ71333.D
2040=IJ71334.D 2720=IJ71335.D 3400=IJ71336.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 2.834 | 3.110 | 3.059 | 2.826 | 3.160 | 3.221 | 3.114 | 3.046 E4 | 5.12 |
| 2)H TPH (C8-C40) | 2.674 | 2.958 | 2.865 | 2.545 | 2.647 | 2.527 | 2.403 | 2.660 E4 | 7.32 |

(#) = Out of Range

FL_PRO_R.M Fri Nov 12 08:59:22 2010

5.6.1

5

# Initial Calibration Verification



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ICV2321
Lab FileID: IJ71337.D

5.6.2 5

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71337.D Vial: 8
Acq On : 11 Nov 2010 6:49 pm Operator: enoca
Sample : icv2321-1360 Inst : FID 1
Misc : op34966,gij2321,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 H | TPH (C8-C40) | 1360.000 | 1434.350 | -5.5 | 110 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 08:59:02 2010

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/12/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FC-PRO |
| ACQ. METHOD: | FC-PRO-R |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2322 |

| | |
|---|---|
| ANALYST: | CHOI/A |
| MECL2 LOT #: | J27502 |
| SIGNAL 1 SURR. AREA/CONC: | 111630/40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71402 | 17 | OP34886-(MS) | FC-PRO | OP34886 | 10X | | RR1X |
| IJ 03 | 18 | " -(MSD)10 | | | " | | RR1X |
| IJ 04 | 19 | F77618 -75,10 | | | " | | ✓ (Rpt) |
| IJ 05 | 20 | " -(BS) " | | | " | | RR50X |
| IJ 06 | 21 | " -(BSD) " | | | " | | RR40X |
| IJ 07 | 22 | " -(DUP) L | | | " | | RR4X |
| IJ 08 | 1 | CC2321-136 | | S3709 | 2:5 | | PASS |
| IJ 09 | 23 | OP34976-BS | | OP34976 | 1/1 | | ✓ |
| IJ 10 | 24 | " -MB | | " | " | | ND |
| IJ 11 | 25 | F77759 -1 | | | " | | ✓ |
| IJ 12 | 26 | " -2 | | | " | | ND |
| IJ 13 | 27 | " -3 | | | " | | ND |
| IJ 14 | 28 | " -4 | | | " | | ND |
| IJ 15 | 29 | " -6 | | | " | | ✓ |
| IJ 16 | 30 | OP34976 -MS | | | " | | ✓ |
| IJ 17 | 31 | " -MSD | | | " | | ✓ |
| IJ 18 | 32 | F77759 -5 | | | " | | ✓ |
| IJ 19 | 33 | CC2321-136 | | S3709 | 2:5 | | PASS |
| IJ 71420 | 3 | CCB | | — | — | | ND |
| IJ 71421 | 34 | F77759-7 | ✓ | OP34976 | 1/1 | | ND |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2322-CC2321
Lab FileID: IJ71408.D



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1112PRO\IJ71408.D Vial: 1
Acq On : 12 Nov 2010 9:06 pm Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op34888,gij2322,5.0,,,1,10,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 38.163 | 4.6 | 103 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1355.344 | 0.3 | 104 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Sat Nov 13 13:39:20 2010

# Continuing Calibration Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2322-CC2321
Lab FileID: IJ71419.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1112PRO\IJ71419.D Vial: 33
Acq On : 13 Nov 2010 12:45 am Operator: enoca
Sample : cc2321-1306 Inst : FID 1
Misc : op34976,gij2322,1050,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 33.975 | 15.1 | 92 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1142.441 | 16.0 | 88 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Sat Nov 13 13:39:20 2010

5.6.4 5

# Continuing Calibration Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2322-CC2321
Lab FileID: IJ71431.D



Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\1112PRO\IJ71431.D          Vial: 33
Acq On    : 13 Nov 2010   4:43 am                    Operator: enoca
Sample    : cc2321-1360                              Inst    : FID 1
Misc      : op34976,gij2322,1000,,,1,1,water         Multiplr: 1.00
IntFile   : events.e

Method       : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 37.263 | 6.8 | 100 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1256.250 | 7.6 | 97 | 0.00 | 2.23- 9.54 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
IJ71333.D  FL_PRO_R.M  Sat Nov 13 13:39:20 2010

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/12/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | TL-PRO |
| ACQ. METHOD: | FL-PRO-K |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: GIJ | 2322 |

| | |
|---|---|
| ANALYST: | GGC/A |
| MECL2 LOT #: | J7750 |
| SIGNAL 1 SURR. AREA/CONC: | 111650/40 |
| SIGNAL 2 SURR. AREA/CONC: | —/— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71472 | 35 | F77759 -8 | FL-PRO | OP34976 | 1/1 | | ✓ |
| IJ 23 | 36 | -9 | | | | | ✓ |
| IJ 24 | 37 | -10 | | | | | ND |
| IJ 25 | 38 | -11 | | | | | ND |
| IJ 26 | 39 | F77712 -1 | | | | | ✓ |
| IJ 27 | 40 | -2 | | | | | ✓ |
| IJ 28 | 41 | -3 | | | | | ✓ |
| IJ 29 | 42 | -4 | | | | | ✓ |
| IJ 30 | 43 | -5 | | | | | ND |
| IJ 31 | (35) | CC2321-1360 | | 57709 | 2:5 | | PASS |
| IJ 32 | 3 | CCB | | — | — | | ND |
| IJ 33 | 44 | F77712 -6 | | OP34976 | 1/1 | | ✓ |
| IJ 34 | 45 | -7 | | | | | ✓ |
| IJ 71475 | 46 | -8 | | | | | ✓ |
| IJ 71476 | (35) | CC2321-1360 | | 57709 | 2:5 | | PASS |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | (FCA 11/13/10) | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: GGC/A

# Continuing Calibration Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2322-ECC2321
Lab FileID: IJ71436.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1112PRO\IJ71436.D Vial: 33
Acq On : 13 Nov 2010 6:23 am Operator: enoca
Sample : ecc2321-1360 Inst : FID 1
Misc : op34976,gij2322,1050,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 35.432 | 11.4 | 95 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1192.761 | 12.3 | 92 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Sat Nov 13 13:39:21 2010

5.6.6

5

# Method Blank Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34976-MB | IJ71410.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77712-1, F77712-2, F77712-3, F77712-4, F77712-5, F77712-6, F77712-7, F77712-8

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | 38-122% |

# Blank Spike Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34976-BS | IJ71409.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77712-1, F77712-2, F77712-3, F77712-4, F77712-5, F77712-6, F77712-7, F77712-8

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.732 | 86 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 92% | 38-122% |

Raw Data: IJ71416.D IJ71417.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34976-MS | IJ71416.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| OP34976-MSD | IJ71417.D | 1 | 11/13/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |
| F77759-6 | IJ71415.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34976 | GIJ2322 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77712-1, F77712-2, F77712-3, F77712-4, F77712-5, F77712-6, F77712-7, F77712-8

| CAS No. | Compound | F77759-6 mg/l | Q | Spike mg/l | MS mg/l | MS % | MSD mg/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.208 | I | 1.7 | 1.62 | 83 | 1.78 | 92 | 9 | 54-110/28 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77759-6 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | 97% | 88% | 38-122% |

# Semivolatile Surrogate Recovery Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Method: FLORIDA-PRO | Matrix: AQ |
|---|---|

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 [a] |
|---|---|---|
| F77712-1 | IJ71426.D | 92.0 |
| F77712-2 | IJ71427.D | 89.0 |
| F77712-3 | IJ71428.D | 91.0 |
| F77712-4 | IJ71429.D | 79.0 |
| F77712-5 | IJ71430.D | 96.0 |
| F77712-6 | IJ71433.D | 89.0 |
| F77712-7 | IJ71434.D | 76.0 |
| F77712-8 | IJ71435.D | 77.0 |
| OP34976-BS | IJ71409.D | 92.0 |
| OP34976-MB | IJ71410.D | 94.0 |
| OP34976-MS | IJ71416.D | 89.0 |
| OP34976-MSD | IJ71417.D | 97.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = o-Terphenyl | 38-122% |

(a) Recovery from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2322-CC2321 | Injection Date: | 11/12/10 |
| Lab File ID: | IJ71408.D | Injection Time: | 21:06 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP34976-BS | IJ71409.D | 11/12/10 | 21:26 | 5.34 |
| OP34976-MB | IJ71410.D | 11/12/10 | 21:46 | 5.34 |
| ZZZZZZ | IJ71411.D | 11/12/10 | 22:06 | 5.34 |
| ZZZZZZ | IJ71412.D | 11/12/10 | 22:26 | 5.34 |
| ZZZZZZ | IJ71413.D | 11/12/10 | 22:46 | 5.34 |
| ZZZZZZ | IJ71414.D | 11/12/10 | 23:06 | 5.34 |
| F77759-6 | IJ71415.D | 11/12/10 | 23:26 | 5.34 |
| OP34976-MS | IJ71416.D | 11/12/10 | 23:45 | 5.34 |
| OP34976-MSD | IJ71417.D | 11/13/10 | 00:05 | 5.34 |
| ZZZZZZ | IJ71418.D | 11/13/10 | 00:25 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2322-CC2321 | Injection Date: | 11/13/10 |
| Lab File ID: | IJ71419.D | Injection Time: | 00:45 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71421.D | 11/13/10 | 01:25 | 5.34 |
| ZZZZZZ | IJ71422.D | 11/13/10 | 01:45 | 5.34 |
| ZZZZZZ | IJ71423.D | 11/13/10 | 02:05 | 5.34 |
| ZZZZZZ | IJ71424.D | 11/13/10 | 02:24 | 5.34 |
| ZZZZZZ | IJ71425.D | 11/13/10 | 02:44 | 5.34 |
| F77712-1 | IJ71426.D | 11/13/10 | 03:04 | 5.34 |
| F77712-2 | IJ71427.D | 11/13/10 | 03:24 | 5.34 |
| F77712-3 | IJ71428.D | 11/13/10 | 03:44 | 5.34 |
| F77712-4 | IJ71429.D | 11/13/10 | 04:04 | 5.34 |
| F77712-5 | IJ71430.D | 11/13/10 | 04:24 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77712
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2322-CC2321 | Injection Date: | 11/13/10 |
| Lab File ID: | IJ71431.D | Injection Time: | 04:43 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77712-6 | IJ71433.D | 11/13/10 | 05:23 | 5.34 |
| F77712-7 | IJ71434.D | 11/13/10 | 05:43 | 5.34 |
| F77712-8 | IJ71435.D | 11/13/10 | 06:03 | 5.34 |
| GIJ2322-ECC2321 | IJ71436.D | 11/13/10 | 06:23 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 14, 2011**

**FROM:** **A. COGNETTI** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION- TRPH**
**CTO JM16, NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – F77741**

**SAMPLES:** 22/Soil/TRPH

| | | |
|---|---|---|
| GKHMS-SO-001-1010 | GKHMS-SO-002-1010 | GKHMS-SO-003-1010 |
| GKHMS-SO-005-1010 | GKHMS-SO-007-1010 | GKHMS-SO-011-1010 |
| GKHMS-SO-012-1010 | GKHMS-SO-014-1010 | GKHMS-SO-017-1010 |
| GKHMS-SO-018-1010 | GKHMS-SO-019-1010 | GKHMS-SO-021-1010 |
| GKHMS-SO-022-1010 | GKHMS-SO-023-1010 | GKHMS-SO-025-1010 |
| GKHMS-SO-028-1010 | GKHMS-SO-030-1010 | GKHMS-SO-031-1010 |
| GKHMS-SO-032-1010 | GKHMS-SO-034-1010 | GKHMS-SO-FD001-1010 |
| GKHMS-SO-FD002-1010 | | |

OVERVIEW

The sample set for NAS KEY WEST, CTO JM16, SDG F77741 consists of twenty two (22) soil environmental samples analyzed for total recoverable petroleum hydrocarbons (TRPH). There are two field duplicate pairs associated with this SDG: GKHMS-SO-017-1010/GKHMS-SO-FD001-1010 and GKHMS-SO-031-1010/GKHMS-SO-FD002-1010.

The samples were collected by TetraTech on November 2, 2010 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using FL-PRO for TRPH analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • Initial/continuing calibrations
* • Laboratory method blank results
* • Blank Spike
* • Matrix Spike/Matrix Spike Duplicate
* • Surrogate Recoveries
• Field Duplicate Precision
* • Detection limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Minor

- Field duplicate imprecision was noted in the field duplicate pair GKHMS-SO-017-1010 and GKHMS-SO-FD001-1010 for TRPH. The relative percent difference (RPD) for TRPH was greater than the 50% quality

control limit. The positive TRPH results in samples GKHMS-SO-017-1010 and GKHMS-SO-FD001-1010 were qualified as estimated (J).

Notes:

Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** None.

**Other Factors Affecting Data Quality:** Field duplicate imprecision was noted for TRPH in samples GKHMS-SO-017-1010 and GKHMS-SO-FD001-1010.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-001-1010 | | | GKHMS-SO-002-1010 | | | GKHMS-SO-003-1010 | | | GKHMS-SO-005-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77741 | LAB_ID | F77741-1 | | | F77741-2 | | | F77741-3 | | | F77741-4 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 86.7 | | | 87.2 | | | 82.9 | | | 85.8 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 24.1 | | | 5.7 | U | | 6.1 | U | | 5.8 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-007-1010 | | | GKHMS-SO-011-1010 | | | GKHMS-SO-012-1010 | | | GKHMS-SO-014-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77741 | LAB_ID | F77741-5 | | | F77741-6 | | | F77741-7 | | | F77741-8 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 84.7 | | | 81.5 | | | 80.4 | | | 85.5 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 6 | U | | 11.8 | | | 6.2 | U | | 5.9 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-017-1010 | | | GKHMS-SO-018-1010 | | | GKHMS-SO-019-1010 | | | GKHMS-SO-021-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77741 | LAB_ID | F77741-9 | | | F77741-10 | | | F77741-11 | | | F77741-12 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.5 | | | 85.8 | | | 87.4 | | | 87.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 21.6 | J | G | 5.8 | U | | 6.68 | J | P | 64.6 | | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-022-1010 | | | GKHMS-SO-023-1010 | | | GKHMS-SO-025-1010 | | | GKHMS-SO-028-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77741 | LAB_ID | F77741-13 | | | F77741-14 | | | F77741-15 | | | F77741-16 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 84.7 | | | 77.4 | | | 83.4 | | | 78.4 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 7.68 | J | P | 13.9 | | | 6 | U | | 6.3 | U | |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-030-1010 | | | GKHMS-SO-031-1010 | | | GKHMS-SO-032-1010 | | | GKHMS-SO-034-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77741 | LAB_ID | F77741-17 | | | F77741-18 | | | F77741-19 | | | F77741-20 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 86.8 | | | 79.4 | | | 87.5 | | | 77.3 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 5.79 | J | P | 6.3 | U | | 6.73 | J | P | 7.29 | J | P |

| PROJ_NO: 02607 | NSAMPLE | GKHMS-SO-FD001-1010 | | | GKHMS-SO-FD002-1010 | | |
|---|---|---|---|---|---|---|---|
| SDG: F77741 | LAB_ID | F77741-22 | | | F77741-21 | | |
| FRACTION: PET | SAMP_DATE | 11/2/2010 | | | 11/2/2010 | | |
| MEDIA: SOIL | QC_TYPE | NM | | | NM | | |
| | UNITS | MG/KG | | | MG/KG | | |
| | PCT_SOLIDS | 87.0 | | | 88.8 | | |
| | DUP_OF | GKHMS-SO-017-1010 | | | GKHMS-SO-031-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 72.3 | J | G | 5.5 | U | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-001-1010 | | |
| Lab Sample ID: | F77741-1 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 86.7 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71378.D | 1 | 11/12/10 | FEA | 11/05/10 | OP34944 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.4 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 24.1 | 9.5 | 5.7 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 108% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-002-1010 | | |
| Lab Sample ID: | F77741-2 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 87.2 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71242.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.0 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.7 U | 9.6 | 5.7 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 81% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-003-1010 | | |
| Lab Sample ID: | F77741-3 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 82.9 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71243.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 29.9 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.1 U | 10 | 6.1 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 90% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-005-1010 | | |
| Lab Sample ID: | F77741-4 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 85.8 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71244.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.2 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.8 U | 9.6 | 5.8 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 82% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-007-1010 | | |
| Lab Sample ID: | F77741-5 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 84.7 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71245.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 29.7 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.0 U | 9.9 | 6.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 98% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-011-1010 | | |
| Lab Sample ID: | F77741-6 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 81.5 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71379.D | 1 | 11/12/10 | FEA | 11/05/10 | OP34944 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.4 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 11.8 | 10 | 6.1 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-012-1010 | | |
| Lab Sample ID: | F77741-7 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 80.4 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71247.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.3 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.2 U | 10 | 6.2 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 86% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-014-1010 | | |
| Lab Sample ID: | F77741-8 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 85.5 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71254.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 29.9 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.9 U | 9.8 | 5.9 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 82% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-017-1010 | | |
| Lab Sample ID: | F77741-9 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 87.5 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | ZF37482.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GZF1572 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.1 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 21.6 | 9.5 | 5.7 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 85% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-018-1010 | | |
| Lab Sample ID: | F77741-10 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 85.8 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71355.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.4 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.8 U | 9.6 | 5.8 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 82% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-019-1010 | | |
| Lab Sample ID: | F77741-11 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 87.4 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71356.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.1 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.68 | 9.5 | 5.7 | mg/kg | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 81% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-021-1010 | | |
| Lab Sample ID: | F77741-12 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 87.0 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71357.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.1 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 64.6 | 9.5 | 5.7 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 88% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-022-1010 | | |
| Lab Sample ID: | F77741-13 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 84.7 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71358.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.3 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 7.68 | 9.7 | 5.8 | mg/kg | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 90% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-023-1010 | | |
| Lab Sample ID: | F77741-14 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 77.4 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71359.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.4 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 13.9 | 11 | 6.4 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range
I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-025-1010 | | |
| Lab Sample ID: | F77741-15 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 83.4 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71360.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.2 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.0 U | 9.9 | 6.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: IJ71363.D

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-028-1010 | | |
| Lab Sample ID: | F77741-16 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 78.4 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71363.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.3 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.3 U | 11 | 6.3 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 81% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-030-1010 | | |
| Lab Sample ID: | F77741-17 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 86.8 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71364.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.1 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.79 | 9.6 | 5.7 | mg/kg | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 92% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-031-1010 | | |
| Lab Sample ID: | F77741-18 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 79.4 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL33989.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.1 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.3 U | 10 | 6.3 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 81% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-032-1010 | | |
| Lab Sample ID: | F77741-19 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 87.5 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL33990.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.1 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 6.73 | 9.5 | 5.7 | mg/kg | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-034-1010 | | |
| Lab Sample ID: | F77741-20 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 77.3 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL33991.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.5 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 7.29 | 11 | 6.4 | mg/kg | I |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 93% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-FD001-1010 | | |
| Lab Sample ID: | F77741-22 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 87.0 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71572.D | 1 | 11/16/10 | FEA | 11/11/10 | OP35012 | GIJ2324 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.5 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 72.3 | 9.4 | 5.7 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 105% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-SO-FD002-1010 | | |
| Lab Sample ID: | F77741-21 | Date Sampled: | 11/02/10 |
| Matrix: | SO - Soil | Date Received: | 11/04/10 |
| Method: | FLORIDA-PRO SW846 3550C | Percent Solids: | 88.8 |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | IJ71502.D | 1 | 11/14/10 | FEA | 11/11/10 | OP35012 | GIJ2323 |
| Run #2 | | | | | | | |

| | Initial Weight | Final Volume |
|---|---|---|
| Run #1 | 30.5 g | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 5.5 U | 9.2 | 5.5 | mg/kg | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 67% | | 47-111% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# APPENDIX C

## SUPPORT DOCUMENTATION

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Centauri Labs **Job** F77741

**Site:** NAS Key West, Key West, FL **Report Date:** 11/17/2010 3:14:19 PM

22 Samples were collected on 11/02/2010 and were received at Accutest SE on 11/04/2010 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of F77741. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Extractables by GC by Method FLORIDA-PRO

**Matrix:** SO **Batch ID:** OP34944

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Samples F77723-3MS, F77723-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Sample OP35004-MS has surrogates outside control limits. Probable cause due to matrix interference.

**Matrix:** SO **Batch ID:** OP34966

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77801-3MS, F77801-3MSD were used as the QC samples indicated.

Sample OP35004-MS has surrogates outside control limits. Probable cause due to matrix interference.

**Matrix:** SO **Batch ID:** OP35004

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77914-1MS, F77914-1MSD were used as the QC samples indicated.

Sample OP35004-MS has surrogates outside control limits. Probable cause due to matrix interference.

**Matrix:** SO **Batch ID:** OP35012

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Samples F77741-21MS, F77741-21MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Sample OP35004-MS has surrogates outside control limits. Probable cause due to matrix interference.

## Wet Chemistry by Method SM19 2540G

**Matrix:** SO **Batch ID:** GN42080

Sample F77740-1DUP was used as the QC sample for Solids, Percent.

**Matrix:** SO **Batch ID:** GN42081

Sample F77752-1DUP was used as the QC sample for Solids, Percent.

F77741

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-8

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Accutest Laboratories SE<br>4405 Vineland Road C15<br>Orlando, FL 32811-7363** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Heather Wandry<br>407-425-6700** |

| | Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11/02/2010 | GKHMS-SO-001-1010 | 08:00 | FL PRO | GKHMS-SO001 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 2 | 11/02/2010 | GKHMS-SO-002-1010 | 08:20 | FL PRO | GKHMS-SO002 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 3 | 11/02/2010 | GKHMS-SO-003-1010 | 08:40 | FL PRO | GKHMS-SO003 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 4 | 11/02/2010 | GKHMS-SO-005-1010 | 09:00 | FL PRO | GKHMS-SO005 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 5 | 11/02/2010 | GKHMS-SO-007-1010 | 09:20 | FL PRO | GKHMS-SO007 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 6 | 11/02/2010 | GKHMS-SO-011-1010 | 09:40 | FL PRO | GKHMS-SO011 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 7 | 11/02/2010 | GKHMS-SO-012-1010 | 12:00 | FL PRO | GKHMS-SO012 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 8 | 11/02/2010 | GKHMS-SO-014-1010 | 14:00 | FL PRO | GKHMS-SO014 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 9 | 11/02/2010 | GKHMS-SO-017-1010 | 10:00 | FL PRO | GKHMS-SO017 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 10 | 11/02/2010 | GKHMS-SO-018-1010 | 11:40 | FL PRO | GKHMS-SO018 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 11 | 11/02/2010 | GKHMS-SO-019-1010 | 10:20 | FL PRO | GKHMS-SO019 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 12 | 11/02/2010 | GKHMS-SO-021-1010 | 10:40 | FL PRO | GKHMS-SO021 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 13 | 11/02/2010 | GKHMS-SO-022-1010 | 11:00 | FL PRO | GKHMS-SO022 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 14 | 11/02/2010 | GKHMS-SO-023-1010 | 13:40 | FL PRO | GKHMS-SO023 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 15 | 11/02/2010 | GKHMS-SO-025-1010 | 11:20 | FL PRO | GKHMS-SO025 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 16 | 11/02/2010 | GKHMS-SO-028-1010 | 13:20 | FL PRO | GKHMS-SO028 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 17 | 11/02/2010 | GKHMS-SO-030-1010 | 12:40 | FL PRO | GKHMS-SO030 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 18 | 11/02/2010 | GKHMS-SO-031-1010 | 11:40 | FL PRO | GKHMS-SO031 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 19 | 11/02/2010 | GKHMS-SO-032-1010 | 12:20 | FL PRO | GKHMS-SO032 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 20 | 11/02/2010 | GKHMS-SO-034-1010 | 13:00 | FL PRO | GKHMS-SO034 | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 21 | 11/02/2010 | GKHMS-SO-FD002-1010 | 00:00 | FL PRO | QC | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |
| 22 | 11/02/2010 | GKHMS-SO-FDOO1-1010 | 00:00 | FL PRO | QC | SO | TRPH | 4°C | 1 | Glass - Clear | 4 oz. wide-mouth w/Teflon cap | |





**F77741: Chain of Custody**
**Page 1 of 3**

F77741

| 1. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
|---|---|---|---|---|---|
| **Gary Braganza** | 11/03/2010 | 15:12 | **Federal Express** | 11/03/2010 | 16:12 |
| 2. Relinquished By: FX | Date: | Time: | Received By: J Cooper AISE | Date: 11-4-10 | Time: 09:00 |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

Comments: 3-8





**F77741: Chain of Custody**
**Page 2 of 3**

## ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77741 CLIENT: TETRA TECH PROJECT: 112602607

DATE/TIME RECEIVED: 11-4-10 09:20 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8731 0541 5521

### COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

### TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

### MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

### TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.6
- [ ] OBSERVED TEMPS: 3.2
- [ ] CORRECTED TEMPS: 3.8

### SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE JE 11-4-10 REVIEWER SIGNATURE/DATE FT 11/4/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

**F77741: Chain of Custody**
**Page 3 of 3**

Accutest Laboratories

# Sample Summary

Centauri Labs

Job No: F77741

NAS Key West, Key West, FL
Project No: 112G02607

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| F77741-1 | 11/02/10 | 08:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-001-1010 |
| F77741-2 | 11/02/10 | 08:20 | GB | 11/04/10 | SO | Soil | GKHMS-SO-002-1010 |
| F77741-3 | 11/02/10 | 08:40 | GB | 11/04/10 | SO | Soil | GKHMS-SO-003-1010 |
| F77741-4 | 11/02/10 | 09:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-005-1010 |
| F77741-5 | 11/02/10 | 09:20 | GB | 11/04/10 | SO | Soil | GKHMS-SO-007-1010 |
| F77741-6 | 11/02/10 | 09:40 | GB | 11/04/10 | SO | Soil | GKHMS-SO-011-1010 |
| F77741-7 | 11/02/10 | 12:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-012-1010 |
| F77741-8 | 11/02/10 | 14:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-014-1010 |
| F77741-9 | 11/02/10 | 10:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-017-1010 |
| F77741-10 | 11/02/10 | 11:40 | GB | 11/04/10 | SO | Soil | GKHMS-SO-018-1010 |
| F77741-11 | 11/02/10 | 10:20 | GB | 11/04/10 | SO | Soil | GKHMS-SO-019-1010 |
| F77741-12 | 11/02/10 | 10:40 | GB | 11/04/10 | SO | Soil | GKHMS-SO-021-1010 |
| F77741-13 | 11/02/10 | 11:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-022-1010 |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Accutest Laboratories

# Sample Summary
(continued)

Centauri Labs

Job No: F77741

NAS Key West, Key West, FL
Project No: 112G02607

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| F77741-14 | 11/02/10 | 13:40 | GB | 11/04/10 | SO | Soil | GKHMS-SO-023-1010 |
| F77741-15 | 11/02/10 | 11:20 | GB | 11/04/10 | SO | Soil | GKHMS-SO-025-1010 |
| F77741-16 | 11/02/10 | 13:20 | GB | 11/04/10 | SO | Soil | GKHMS-SO-028-1010 |
| F77741-17 | 11/02/10 | 12:40 | GB | 11/04/10 | SO | Soil | GKHMS-SO-030-1010 |
| F77741-18 | 11/02/10 | 11:40 | GB | 11/04/10 | SO | Soil | GKHMS-SO-031-1010 |
| F77741-19 | 11/02/10 | 12:20 | GB | 11/04/10 | SO | Soil | GKHMS-SO-032-1010 |
| F77741-20 | 11/02/10 | 13:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-034-1010 |
| F77741-21 | 11/02/10 | 00:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-FD002-1010 |
| F77741-22 | 11/02/10 | 00:00 | GB | 11/04/10 | SO | Soil | GKHMS-SO-FD001-1010 |

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

HOLDTIME

**SDG** F77741

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | MG/KG | GKHMS-SO-021-1010 | F77741-12 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |
| TPH | MG/KG | GKHMS-SO-002-1010 | F77741-2 | NM | 11/02/2010 | 11/05/2010 | 11/10/2010 | 3 | 5 | 8 |
| TPH | MG/KG | GKHMS-SO-003-1010 | F77741-3 | NM | 11/02/2010 | 11/05/2010 | 11/10/2010 | 3 | 5 | 8 |
| TPH | MG/KG | GKHMS-SO-005-1010 | F77741-4 | NM | 11/02/2010 | 11/05/2010 | 11/10/2010 | 3 | 5 | 8 |
| TPH | MG/KG | GKHMS-SO-007-1010 | F77741-5 | NM | 11/02/2010 | 11/05/2010 | 11/10/2010 | 3 | 5 | 8 |
| TPH | MG/KG | GKHMS-SO-011-1010 | F77741-6 | NM | 11/02/2010 | 11/05/2010 | 11/12/2010 | 3 | 7 | 10 |
| TPH | MG/KG | GKHMS-SO-012-1010 | F77741-7 | NM | 11/02/2010 | 11/05/2010 | 11/10/2010 | 3 | 5 | 8 |
| TPH | MG/KG | GKHMS-SO-014-1010 | F77741-8 | NM | 11/02/2010 | 11/05/2010 | 11/10/2010 | 3 | 5 | 8 |
| TPH | MG/KG | GKHMS-SO-017-1010 | F77741-9 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |
| TPH | MG/KG | GKHMS-SO-001-1010 | F77741-1 | NM | 11/02/2010 | 11/05/2010 | 11/12/2010 | 3 | 7 | 10 |
| TPH | MG/KG | GKHMS-SO-019-1010 | F77741-11 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |
| TPH | MG/KG | GKHMS-SO-FD002-1010 | F77741-21 | NM | 11/02/2010 | 11/11/2010 | 11/14/2010 | 9 | 3 | 12 |
| TPH | MG/KG | GKHMS-SO-022-1010 | F77741-13 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |
| TPH | MG/KG | GKHMS-SO-023-1010 | F77741-14 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |
| TPH | MG/KG | GKHMS-SO-025-1010 | F77741-15 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | MG/KG | GKHMS-SO-028-1010 | F77741-16 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |
| TPH | MG/KG | GKHMS-SO-030-1010 | F77741-17 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |
| TPH | MG/KG | GKHMS-SO-031-1010 | F77741-18 | NM | 11/02/2010 | 11/11/2010 | 11/15/2010 | 9 | 4 | 13 |
| TPH | MG/KG | GKHMS-SO-032-1010 | F77741-19 | NM | 11/02/2010 | 11/11/2010 | 11/15/2010 | 9 | 4 | 13 |
| TPH | MG/KG | GKHMS-SO-034-1010 | F77741-20 | NM | 11/02/2010 | 11/11/2010 | 11/15/2010 | 9 | 4 | 13 |
| TPH | MG/KG | GKHMS-SO-FD001-1010 | F77741-22 | NM | 11/02/2010 | 11/11/2010 | 11/16/2010 | 9 | 5 | 14 |
| TPH | MG/KG | GKHMS-SO-018-1010 | F77741-10 | NM | 11/02/2010 | 11/09/2010 | 11/12/2010 | 7 | 3 | 10 |

# NAS KEY WEST
# SOIL DATA
# F77741

| FRACTION | CHEMICAL | GKHMS-SO-017-1010 | UNITS | GKHMS-SO-FD001-1010 | RPD | D |
|---|---|---|---|---|---|---|
| PET | TPH (C08-C40) | 21.6 | MG/KG | 72.3 | 107.99 | 50.70 |

**Current RPD Quality Control Limit: 50 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 10/21/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

## GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-R |
| PROC. METHOD: | ↓ |
| CALIB. DATE: | 10/21/10 |
| RUN BATCH: | GIJ2307 |

| | |
|---|---|
| ANALYST: | EPCC/A |
| MECL2 LOT #: | J77503 |
| SIGNAL 1 SURR. AREA/CONC: | 1082357/40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 40715 | 3 | SOLVENT DUC | FL-PRO | — | — | | ✓ |
| IJ 16 | 3 | ↓ | ↓ | — | — | | ✓ |
| IJ 17 | 1 | CC2307-1360 | | S36565 | 5 | | ✓ |
| IJ 18 | 1 | | | | | | ✓ |
| IJ 19 | 1 | | | | | | ✓ |
| IJ 20 | 1 | | | | | | ✓ |
| IJ 21 | 1 | | | | | | ✓ |
| IJ 22 | 1 | ↓ | | ↓ | ↓ | | ✓ |
| IJ 23 | 1 | CC2307-1360 | | S36693 | 2.5 | | ✓ |
| IJ 24 | 2 | ↓ -340 | | ↓ | 10x | | ✓ |
| IJ 25 | 1 | IC2307-2555 | | S3666 | 75:1000 | | PASS |
| IJ 26 | 2 | IC2307-340 | | | 10x | | PASS |
| IJ 27 | 3 | IC2307-680 | | | 5x | | PASS |
| IJ 28 | 4 | ICC2307-1360 | | | 2.5 | | PASS |
| IJ 29 | 5 | IC2307-2040 | | | 3.5 | | PASS |
| IJ 30 | 6 | IC2307-2720 | | | 4:5 | | PASS |
| IJ 31 | 7 | IC2307-3400 | | ↓ | 1x | | PASS (Cont. passed) |
| IJ 32 | 8 | ICV2307-1360 | | VCUA5046H | 80:570 | | PASS |
| IJ 33 | 9 | CCB | | — | — | | ND |
| IJ 40734 | 10 | OP34732-MB | ↓ | OP34732 | 1X | | ND (Surr high) (ND) |

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

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Analyst's Signature: [signature]

# Initial Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2307-ICC2307
Lab FileID: IJ70728.D



Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Thu Oct 21 16:25:05 2010
Response via : Initial Calibration

Calibration Files
255 =IJ70725.D 340 =IJ70726.D 680 =IJ70727.D 1360=IJ70728.D
2040=IJ70729.D 2720=IJ70730.D 3400=IJ70731.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 3.009 | 2.992 | 2.731 | 2.706 | 2.699 | 2.694 | 2.467 | 2.757 E4 | 6.85 |
| 2)H TPH (C8-C40) | 2.998 | 2.806 | 2.497 | 2.409 | 2.344 | 2.287 | 2.037 | 2.483 E4 | 13.07 |

(#) = Out of Range

FL_PRO_R.M Fri Oct 22 13:18:33 2010

# Initial Calibration Verification



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2307-ICV2307
Lab FileID: IJ70732.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1021PRO\IJ70732.D Vial: 8
Acq On : 21 Oct 2010 4:26 pm Operator: enoca
Sample : ICV2307-1360 Inst : FID 1
Misc : op34732,gij2307,1000,,,1,1,water Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Thu Oct 21 16:25:05 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 H | TPH (C8-C40) | 1360.000 | 1241.672 | 8.7 | 94 | 0.00 | 2.34-10.20 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ70728.D FL_PRO_R.M Fri Oct 22 13:17:47 2010

5.6.2

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 10/21/15 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | |
| CALIB. DATE: | 10/21/15 |
| RUN BATCH: | GIJ 2307 |

| | |
|---|---|
| ANALYST: | EMC/A |
| MECL2 LOT #: | 327501 |
| SIGNAL 1 SURR. AREA/CONC: | 1063362/1.0 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 707[illegible] | 11 | F77315-5,10 | FL-PRO | OP34932 | 1X | | ✓ (Post Surrogate) DC |
| IJ | 12 | -1,10 | | | 1X | | ✓ |
| IJ | 13 | -4,10 | | | 10X | | ✓ |
| IJ | 14 | [illegible] | | E3499 | 2.5 | | ✓ (Water dilution factor) BR |
| IJ | 15 | OP34707 -BS | | OP34707 | 1X | | ✓ |
| IJ | 16 | -MB | | | | | ND |
| IJ | 17 | F77315 -1 | | | | | ND |
| IJ | 18 | -2 | | | | | ND |
| IJ | 19 | F77316 -1 | | | | | ✓ |
| IJ | 4 | CC 2507 - 10X | | S3699 | 2.5 | | PASS |
| IJ | 9 | CCB | | — | — | | ND |
| IJ | 20 | F77316 -2 | | OP34707 | 1X | | ✓ |
| IJ | 21 | -3 | | | | | ND |
| IJ | 22 | -4 | | | | | ND |
| IJ | 23 | OP34707 -MS | | | | | ✓ |
| IJ | 24 | -MSD | | | | | ✓ |
| IJ | 25 | F77320 -5 | | | | | ND |
| IJ | 26 | F77323 A(1) | | | | | ✓ BR 10X |
| IJ | 27 | -7 | | | | | ✓ |
| IJ [illegible] | 29 | A(1) | | | | | ✓ BR 10X |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

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Analyst's Signature: [signature]

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 10/21/16 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-K |
| PROC. METHOD: | L |
| CALIB. DATE: | 10/21/16 |
| RUN BATCH: GIJ | 2307 |

| | |
|---|---|
| ANALYST: | EMSC/A |
| MECL2 LOT #: | 527589 |
| SIGNAL 1 SURR. AREA/CONC: | 1083352/48 |
| SIGNAL 2 SURR. AREA/CONC: | —/— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 767 55 | 29 | F77220 -4 | FL-PRO | | | | ND |
| IJ T 56 | 4 | CC2307 -160 | T | 536B | 2.5 | | PASS |
| IJ 57 | 9 | CCB | | — | — | | ND |
| IJ 58 | 32 | OP34716 -BS | | OP34716 | L1 | | ✓ |
| IJ 59 | 33 | T -MB | | T | T | | ND |
| IJ 60 | 34 | F77267 -5 | | | | | ✓ |
| IJ 61 | 35 | -6 | | | | | ✓ |
| IJ 62 | 36 | -7 | | | | | ✓ |
| IJ 63 | 37 | -8 | | | | | ✓ |
| IJ 64 | 38 | -9 | | | | | ✓ |
| IJ 65 | 39 | -10 | | | | | ND |
| IJ 66 | 40 | -11 | | | | | ND |
| IJ 67 | 41 | OP34716 -MS | | ↓ | ↓ | | ✓ |
| IJ 68 | 4 | CC2307 -160 | | 536B | 2.5 | | PASS |
| IJ 69 | 9 | CCB | | — | — | | ND |
| IJ 70 | 44 | OP34716 -MSD | | OP34716 | L1 | | ✓ |
| IJ 71 | 45 | F77267 -1 | | | T | | ✓ |
| IJ 72 | 46 | -2 | | | | | ND |
| IJ T 73 | 47 | -3 | | | | | ND |
| IJ 767 74 | 48 | ↓ -4 | ↓ | ↓ | ↓ | | ND |

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: _____

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 10/21/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

## GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FC-PRO |
| ACQ. METHOD: | FC-PRO-IJ |
| PROC. METHOD: | |
| CALIB. DATE: | 10/21/10 |
| RUN BATCH: | GIJ 2307 |

| | |
|---|---|
| ANALYST: | [illegible] |
| MECL2 LOT #: | [illegible] |
| SIGNAL 1 SURR. AREA/CONC: | 1082352/40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 70775 | 49 | F77209 -5 | FC-PRO | OP39940 | 1X | | ✓ |
| IJ 76 | 50 | -6 | | | | | ND |
| IJ 77 | 51 | -7 | | | | | ND |
| IJ 78 | 52 | -8 | | | | | ✓ |
| IJ 79 | 53 | -9 | | | | | ND |
| IJ 80 | 1 | CC2307 - 1360 | | S3690 | 1.5 | | PASS |
| IJ 81 | 9 | CCB | | — | — | | ND |
| IJ 82 | 56 | F77209 -10 | | OP39940 | 1X | | ND |
| IJ 83 | 57 | -11 | | | | | ✓ |
| IJ 84 | 58 | -13 | | | | | ✓ |
| IJ 85 | 59 | -14 | | | | | ✓ |
| IJ 70786 | 60 | F77223 -1,10 | | OP39702 | 10X | | ✓ |
| IJ 70787 | 61 | -8,10 | | | 10X | | ✓ |
| IJ 70788 | 62 | E3494, 2.5 | | E3494 | 2.5 | | [illegible] |
| IJ 70789 | 4 | CC2387 - 1360 | | S3649 | 2.5 | | PASS |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |

(FGA 10/22/10)

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

Page 54 of 100

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/9/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-VR |
| PROC. METHOD: | |
| CALIB. DATE: | 10/21/10 |
| RUN BATCH: | GIJ 2319 |

| | |
|---|---|
| ANALYST: | ENSC/A |
| MECL2 LOT #: | J 32502 |
| SIGNAL 1 SURR. AREA/CONC: | 1042039/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71194 | 1 | CC7307 -1360 | FL-PRO | S3709 | 2.5 | | PASS |
| IJ 95 | 2 | -340 | | | 10 | | PASS |
| IJ 96 | 3 | CCB | | — | — | | ND |
| IJ 97 | 4 | E3511, 340 ppm 5 | | E3511 Spike | 5X | | PASS |
| IJ 98 | 5 | OP34939-35 | | OP34939 | 1X | | ✓ |
| IJ 71199 | 6 | -143 | | | | | ND |
| IJ 71200 | 7 | F77775 -7 | | | | | ND |
| IJ 01 | 8 | -8 | | | | | ND |
| IJ 02 | 9 | -9 | | | | | ND |
| IJ 03 | 10 | F77776 -7 | | | | | ✓ |
| IJ 04 | 11 | -14 | | | | | RR for bad injection. |
| IJ 05 | 12 | F77743 -3 | | | | | ✓ |
| IJ 06 | 13 | F77745 -1 | | | | | ND |
| IJ 07 | 1 | CC7307 -1360 | | S3709 | 2.5 | | PASS |
| IJ 08 | 3 | CCB | | — | — | | ND |
| IJ 09 | 14 | F77745 -2 | | OP34939 | 1X | | ✓ |
| IJ 10 | 15 | -3 | | | | | ✓ |
| IJ 11 | 16 | -4 | | | | | ND |
| IJ 12 | 17 | 5 | | | | | RR4X |
| IJ 71213 | 18 | 6 | | | | | RR4X |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature:

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/9/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | F |
| CALIB. DATE: | 10/21/10 |
| RUN BATCH: | GIJ 2319 |

| | |
|---|---|
| ANALYST: | CHOI |
| MECL2 LOT #: | J3L502 |
| SIGNAL 1 SURR. AREA/CONC: | 043039 / 90 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71 2[illegible]14 | 19 | F77745-7 | FL-PRO | OP34939 | 1X | | ND |
| IJ 2[illegible]15 | 20 | " -8 | " | " | " | | RR4X |
| IJ 2[illegible]4 | 21 | OP34939-MS | | | | | |
| IJ 2[illegible]17 | 22 | " -MSD | | | | | |
| IJ 2[illegible]10 | 23 | F77745-9 | | | | | RR5X |
| IJ 2[illegible]14 | 1 | CC2307-1360 | | S3709 | 2.5 | | PASS |
| IJ 2[illegible]10 | 3 | CCB | | — 3A | 1 11/10/10 | | ND |
| IJ 2[illegible]4 | 24 | F77745-10 | | OP34944 | 1X | | ND |
| IJ 2[illegible]12 | 25 | F77747-1 | | | — | | ND |
| IJ 2[illegible]13 | 26 | " -2 | | | | | RR2X (PM) |
| IJ 2[illegible]14 | 27 | " -3 | | | | | ND |
| IJ 2[illegible]15 | 1 | CC2307-1360 | | S3709 | 2.5 | | PASS |
| IJ 3[illegible]4 | 28 | OP34944-BS | | OP34944 | 1X | | |
| IJ 3[illegible]17 | 29 | " -MP | | | | | ND |
| IJ 3[illegible]18 | 30 | F77723-3 | | | | | ND |
| IJ 3[illegible]19 | 31 | OP34944-MS | | | | | |
| IJ 3[illegible]20 | 32 | " -MSD | | | | | |
| IJ 3[illegible]21 | 33 | F77723-4,4 | | | 4X | | RR1X |
| IJ 3[illegible]32 | 34 | F77723-5 | | | 1X | | ND |
| IJ 71 2[illegible]33 | 35 | F77744-1 | | | | | ND |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2319-CC2307
Lab FileID: IJ71225.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1109PRO\IJ71225.D Vial: 1
Acq On : 10 Nov 2010 12:28 am Operator: enoca
Sample : CC2307-1360 Inst : FID 1
Misc : op34944,gij2319,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Sat Nov 06 11:36:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 41.762 | -4.4 | 106 | 0.00 | 5.24- 5.44 |
| 2 H | TPH (C8-C40) | 1360.000 | 1255.487 | 7.7 | 95 | 0.00 | 2.24- 9.53 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ70728.D FL_PRO_R.M Wed Nov 10 11:47:35 2010

5.6.3 5

# Blank Spike Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34944-BS | IJ71226.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-1, F77741-2, F77741-3, F77741-4, F77741-5, F77741-6, F77741-7, F77741-8

| CAS No. | Compound | Spike mg/kg | BSP mg/kg | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 28.3 | 21.2 | 75 | 53-107 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | 47-111% |

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34944-MB | IJ71227.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-1, F77741-2, F77741-3, F77741-4, F77741-5, F77741-6, F77741-7, F77741-8

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 88% | 47-111% |

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| | |
|---|---|
| DATE: | 11/9/10 |
| COLUMN TYPE: | DJ-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IR |
| PROC. METHOD: | " |
| CALIB. DATE: | 10/21/10 |
| RUN BATCH: | GIJ 2319 |

| | |
|---|---|
| ANALYST: | EWOC/A |
| MECL2 LOT #: | 332502 |
| SIGNAL 1 SURR. AREA/CONC: | 1042039/40 |
| SIGNAL 2 SURR. AREA/CONC: | —/— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71234 | 36 | F77729 -1,10 | FL-PRO | OP34944 | 10X | | RR 1X |
| IJ 35 | 37 | " -2,11 | " | " | 4X | | RR 1X |
| IJ 36 | 1 | CC2307 - 1360 | " | S3709 | 2.5 | | PASS |
| IJ 37 | 3 | CCB | " | — | — | | ND |
| IJ 38 | 38 | F77729 -4,10 | " | OP34944 | 10X | | RR 1X |
| IJ 39 | 39 | " -6,10 | " | " | 10X | | RR 5X |
| IJ 40 | 40 | F77730 -1,10 | " | " | 10X | | ✓ (DM) |
| IJ 41 | 41 | F77741 -1,10 | " | " | 10X | | RR 1X |
| IJ 42 | 42 | " -2 | " | " | 1X | | ND |
| IJ 43 | 43 | " -3 | " | " | — | | ND |
| IJ 44 | 44 | " -4 | " | " | " | | ND |
| IJ 45 | 45 | " -5 | " | " | " | | ND |
| IJ 46 | 46 | " -6,4 | " | " | 4X | | RR 1X |
| IJ 47 | 47 | " -7 | " | " | 1X | | ND |
| IJ 48 | 1 | CC2307 -1360 | " | S3709 | 2.5 | | PASS |
| IJ 49 | 2 | " -340 | " | " | 10X | | PASS |
| IJ 50 | 3 | CCB | " | — | — | | ND |
| IJ 51 | 48 | F77726 -14, RR | " | OP31934 | 1X | | ND |
| IJ 52 | 49 | F77743 -2,10 | " | OP34944 | 10X | | RR 1X |
| IJ 71253 | 50 | F77743 -1 | " | " | 1X | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: _____

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2319-CC2307
Lab FileID: IJ71236.D



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1109PRO\IJ71236.D Vial: 1
Acq On : 10 Nov 2010 4:06 am Operator: enoca
Sample : CC2307-1360 Inst : FID 1
Misc : op34944,gij2319,29.6,,,1,4,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Sat Nov 06 11:36:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.673 | -6.7 | 109 | 0.00 | 5.24- 5.44 |
| 2 H | TPH (C8-C40) | 1360.000 | 1310.336 | 3.7 | 99 | 0.00 | 2.24- 9.53 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ70728.D FL_PRO_R.M Wed Nov 10 11:47:35 2010

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2319-CC2307
Lab FileID: IJ71248.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1109PRO\IJ71248.D Vial: 1
Acq On : 10 Nov 2010 8:20 am Operator: enoca
Sample : CC2307-1360 Inst : FID 1
Misc : op34944,gij2319,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Sat Nov 06 11:36:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 43.019 | -7.5 | 110 | 0.00 | 5.24- 5.44 |
| 2 H | TPH (C8-C40) | 1360.000 | 1271.251 | 6.5 | 96 | 0.00 | 2.24- 9.53 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ70728.D FL_PRO_R.M Wed Nov 10 11:18:13 2010

5.6.5

5

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2319-CC2307
Lab FileID: IJ71249.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1109PRO\IJ71249.D Vial: 2
Acq On : 10 Nov 2010 8:40 am Operator: enoca
Sample : CC2307-340 Inst : FID 1
Misc : op34944,gij2319,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Sat Nov 06 11:36:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 10.000 | 10.613 | -6.1 | 98 | 0.00 | 5.24- 5.44 |
| 2 | H | TPH (C8-C40) | 340.000 | 323.631 | 4.8 | 84 | 0.00 | 2.24- 9.53 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ70726.D FL_PRO_R.M Wed Nov 10 11:19:17 2010

5.6.6

5

ACCUTEST LABORATORIES SE

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|---|---|
| DATE: | 11/9/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FC-PRO |
| ACQ. METHOD: | FC-PRO-12 |
| PROC. METHOD: | " |
| CALIB. DATE: | 10/21/10 |
| RUN BATCH: | GIJ 2319 |

| | |
|---|---|
| ANALYST: | EVOC/A |
| MECL2 LOT #: | 532502 |
| SIGNAL 1 SURR. AREA/CONC: | 1697834 / 40 |
| SIGNAL 2 SURR. AREA/CONC: | ---- / ---- |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71254 | 51 | F77741 - 8 | FC-PRO | OP34944 | 1X | | ND |
| IJ 52 | 1 | CCC 2507 - 1360 | " | 53709 | 2.5 | | PASS |
| IJ 53 | 3 | CCB | " | — | — | | ✓ |
| IJ 54 | 3 | CCB | " | — | — | | ✓ |
| IJ 55 | 52 | F77745 - 5,4 | " | OP34939 | 4X | | ND |
| IJ 56 | 53 | " - 6,4 | " | " | " | | ✓ |
| IJ 57 | 54 | " - 8,4 | " | " | " | | ✓ |
| IJ 58 | 55 | OP34939 - MS,4 | " | " | " | | ✓ |
| IJ 59 | 56 | OP34966 - BS | " | OP34966 | 1X | | ✓ |
| IJ 60 | 57 | " - MB | " | " | " | | ✓ |
| IJ 61 | 58 | F77801 - 3 | " | " | " | | ND |
| IJ 62 | 59 | " - 3 | " | " | " | | ND |
| IJ 63 | 60 | " - 3 (F1) | " | " | " | | ND |
| IJ 64 | 61 | F77818 - 1 | " | " | " | | RE 40X (DWR) ✓ |
| IJ 71264 | 62 | CCC 2507 - 1360 | " | 53709 | 2.5 | | ✓ IRR for C.O. I PASS |
| IJ 71264 | 63 | CCB | " | — | — | | ✓ |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |

(FCA 11/10/10)

Manual Integration Rationale SOP CA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature:

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2319-CC2307
Lab FileID: IJ71255.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1109PRO\IJ71255.D Vial: 1
Acq On : 10 Nov 2010 10:40 am Operator: enoca
Sample : CC2307-1360 Inst : FID 1
Misc : op34944,gij2319,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Sat Nov 06 11:36:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 43.986 | -10.0 | 112 | 0.00 | 5.24- 5.44 |
| 2 H | TPH (C8-C40) | 1360.000 | 1310.487 | 3.6 | 99 | 0.00 | 2.24- 9.53 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ70728.D FL_PRO_R.M Wed Nov 10 11:47:35 2010

5.6.7

5

Raw Data: IJ71262.D

# Blank Spike Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34966-BS | IJ71262.D | 1 | 11/10/10 | FEA | 11/09/10 | OP34966 | GIJ2319 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-9, F77741-10, F77741-11, F77741-12, F77741-13, F77741-14, F77741-15, F77741-16, F77741-17

| CAS No. | Compound | Spike mg/kg | BSP mg/kg | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 28.3 | 20.5 | 72 | 53-107 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | 47-111% |

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34966-MB | IJ71263.D | 1 | 11/10/10 | FEA | 11/09/10 | OP34966 | GIJ2319 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-9, F77741-10, F77741-11, F77741-12, F77741-13, F77741-14, F77741-15, F77741-16, F77741-17

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | 47-111% |

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~CIJ2319~~-ECC2307
Lab FileID: IJ71268.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1109PRO\IJ71268.D Vial: 62
Acq On : 10 Nov 2010 3:53 pm Operator: enoca
Sample : ECC2307-1360 Inst : FID 1
Misc : op34966,gij2319,30.2,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Sat Nov 06 11:36:47 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 48.582 | -21.5 | 124 | 0.00 | 5.24- 5.44 |
| 2 H | TPH (C8-C40) | 1360.000 | 1521.289 | -11.9 | 115 | 0.00 | 2.24- 9.53 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ70728.D FL_PRO_R.M Thu Nov 11 14:44:25 2010

5.6.8

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| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2321 (NEW CURVE) |

| | |
|---|---|
| ANALYST: | EMC/IY |
| MECL2 LOT #: | J2P503 |
| SIGNAL 1 SURR. AREA/CONC: | 113052/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71326 | 3 | SOLVENT BLK | FL-PRO | | | | ✓ |
| IJ 27 | 3 | | | | | | ✓ |
| IJ 28 | 3 | | | | | | ✓ |
| IJ 29 | 3 | | | | | | ✓ |
| IJ 30 | 1 | IC2321 -755 | | S3709 | 75:1000 | | PASS |
| IJ 31 | 2 | -340 | | | 10X | | |
| IJ 32 | 3 | -650 | | | 5X | | |
| IJ 33 | 4 | IC 2321 -1360 | | | 2.5 | | |
| IJ 34 | 5 | IC 2321 -2040 | | | 3.5 | | |
| IJ 35 | 6 | -2720 | | | 4.5 | | |
| IJ 36 | 7 | -3400 | | | 1X | | CURVE PASSED |
| IJ 37 | 8 | ICV2321 -1360 | | UCIPA 3C96J | 80:500 | | PASS |
| IJ 38 | 9 | CCB 1/1000 | 1/1000 | — | — | | ND |
| IJ 39 | 10 | OP34966 -BS | | OP34966 | 1X | | ✓ |
| IJ 40 | 11 | OP34966 -MB | | | 1X | | PASS (ND) |
| IJ 41 | 12 | F77818 -1,C.O. | | | 1X | | ND |
| IJ 42 | 13 | F77801 -1,40 | | | 40X | | ✓ |
| IJ 43 | 14 | F77799 -1,20 | | | 20X | | ✓ |
| IJ 71344 | 15 | -2,10 | | | 10X | | ✓ |
| IJ 71345 | 16 | -3,10 | | | 10X | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Initial Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ICC2321
Lab FileID: IJ71333.D

Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Initial Calibration

Calibration Files
255 =IJ71330.D 340 =IJ71331.D 680 =IJ71332.D 1360=IJ71333.D
2040=IJ71334.D 2720=IJ71335.D 3400=IJ71336.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 2.834 | 3.110 | 3.059 | 2.826 | 3.160 | 3.221 | 3.114 | 3.046 E4 | 5.12 |
| 2)H TPH (C8-C40) | 2.674 | 2.958 | 2.865 | 2.545 | 2.647 | 2.527 | 2.403 | 2.660 E4 | 7.32 |

(#) = Out of Range

FL_PRO_R.M Fri Nov 12 08:59:22 2010

5.6.9

5

# Initial Calibration Verification



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ICV2321
Lab FileID: IJ71337.D



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71337.D Vial: 8
Acq On : 11 Nov 2010 6:49 pm Operator: enoca
Sample : icv2321-1360 Inst : FID 1
Misc : op34966,gij2321,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 H | TPH (C8-C40) | 1360.000 | 1434.350 | -5.5 | 110 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 08:59:02 2010

# Blank Spike Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34966-BS | IJ71339.D | 1 | 11/11/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-9, F77741-10, F77741-11, F77741-12, F77741-13, F77741-14, F77741-15, F77741-16, F77741-17

| CAS No. | Compound | Spike mg/kg | BSP mg/kg | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 28.3 | 24.3 | 86 | 53-107 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | 47-111% |

Raw Data: IJ71340.D

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34966-MB | IJ71340.D | 1 | 11/11/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-9, F77741-10, F77741-11, F77741-12, F77741-13, F77741-14, F77741-15, F77741-16, F77741-17

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 86% | 47-111% |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IJ |
| PROC. METHOD: | ↓ |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2321 (NEW CURVE) |

| | |
|---|---|
| ANALYST: | EVOC/A |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 1150526/96 |
| SIGNAL 2 SURR. AREA/CONC: | —/— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71346 | 17 | F77799 -4 | FL-PRO | OP34966 | 1.1 | | ✓ |
| IJ 47 | 18 | F77802 -1 | ↓ | ↓ | ↓ | | ND |
| IJ 48 | 19 | ↓ -2 | | | | | ND |
| IJ 49 | (4) | CC2321 - 1360 | | 53709 | 2.5 | | PASS |
| IJ 50 | (9) | CCB | | — | — | | ND |
| IJ 51 | 22 | F77802 -3 | | OP34966 | 1.1 | | ND |
| IJ 52 | 21 | OP34966 - MS | | ↓ | ↓ | | ✓ |
| IJ 53 | 22 | ↓ -MSD | | | | | ✓ |
| IJ 54 | 23 | F77741 -9 | | | | | ND [RE1X (DNF) |
| IJ 55 | 24 | ↓ -10 | | | | | ND |
| IJ 56 | 25 | -11 | | | | | ✓ |
| IJ 57 | 26 | -12 | | | | | ✓ |
| IJ 58 | 27 | -13 | | | | | ✓ |
| IJ 59 | 28 | -14 | | | | | ✓ |
| IJ 60 | 29 | -15 | | ↓ | ↓ | | ND |
| IJ 61 | (4) | CC2321 - 1360 | | 53709 | 2.5 | | PASS |
| IJ 62 | (9) | CCB | | — | — | | ND |
| IJ 63 | 30 | F77741 -16 | | OP34966 | 1.1 | | ND |
| IJ 71364 | 31 | ↓ -17 | | ↓ | ↓ | | ✓ |
| IJ 71365 | 32 | OP34959 - MB | ↓ | OP34959 | 1.1 | | ND |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-CC2321
Lab FileID: IJ71349.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71349.D Vial: 4
Acq On : 11 Nov 2010 10:48 pm Operator: enoca
Sample : CC2321-1360 Inst : FID 1
Misc : op34966,gij2321,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 38.486 | 3.8 | 104 | 0.00 | 5.25- 5.45 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1355.799 | 0.3 | 104 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 14:49:27 2010

5.6.11

5

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-CC2321
Lab FileID: IJ71361.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71361.D Vial: 4
Acq On : 12 Nov 2010 2:47 am Operator: enoca
Sample : CC2321-1360 Inst : FID 1
Misc : op34966,gij2321,30.2,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.632 | 0.9 | 107 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1172.135 | 13.8 | 90 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 14:49:28 2010

5.6.12
5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-VC |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2321 (FOR CURVE) |

| | |
|---|---|
| ANALYST: | [illegible] |
| MECL2 LOT #: | J 27503 |
| SIGNAL 1 SURR. AREA/CONC: | 115536/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ F1366 | 33 | OP34939-MS,4 | FL-PRO | OP34934 | 4? | | |
| IJ 67 | 34 | I -MSD4 | | | 4X | | |
| IJ 68 | 35 | F77705 -9,5 | | | 5x | | |
| IJ 69 | 36 | F77747 -7,2 | | | 2x | | |
| IJ 70 | 37 | OP34944-MB | | OP34944 | 1/1 | | ND |
| IJ 71 | 38 | F77729 -4 | | | | | |
| IJ 72 | 39 | F77729 -1 | | | | | |
| IJ 73 | 41 | CC2371-1360 | | 33704 | 2:5 | | PASS |
| IJ 74 | 9 | CCB | | — | — | | ND |
| IJ 75 | 40 | F77729 -2 | | OP34944 | 1/1 | | Sum 4 (DIF)(R2) |
| IJ 76 | 41 | -4 | | | | | |
| IJ 77 | 42 | -6,5 | | | 5x1 | | |
| IJ 78 | 43 | F77741 -1 | | | 1/1 | | |
| IJ 79 | 44 | -6 | | | | | |
| IJ F1380 | 45 | F77743 -2 | | | | | |
| IJ F1381 | 9 | CCC2371-1360 | | 33707 | 2:5 | | PASS |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1 _ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34944-MB | IJ71370.D | 1 | 11/12/10 | FEA | 11/05/10 | OP34944 | GIJ2321 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-1, F77741-2, F77741-3, F77741-4, F77741-5, F77741-6, F77741-7, F77741-8

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | 47-111% |

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-CC2321
Lab FileID: IJ71373.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71373.D Vial: 4
Acq On : 12 Nov 2010 6:45 am Operator: enoca
Sample : CC2321-1360 Inst : FID 1
Misc : op34944,gij2321,29.6,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.617 | 1.0 | 107 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1141.496 | 16.1 | 88 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 14:49:28 2010

5.6.13
5

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2321-ECC2321
Lab FileID: IJ71381.D



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\IJ71381.D Vial: 4
Acq On : 12 Nov 2010 9:26 am Operator: enoca
Sample : ECC2321-1360 Inst : FID 1
Misc : op34944,gij2321,30.4,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 08:48:30 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.813 | 0.5 | 107 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1170.902 | 13.9 | 90 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Fri Nov 12 14:49:28 2010

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/13/20 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-V |
| PROC. METHOD: | " |
| CALIB. DATE: | 11/11/20 |
| RUN BATCH: | GIJ 2323 |

| | |
|---|---|
| ANALYST: | DDC/JA |
| MECL2 LOT #: | 327502 |
| SIGNAL 1 SURR. AREA/CONC: | 290253 / 40 |
| SIGNAL 2 SURR. AREA/CONC: | ——— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ A11437 | 1 | CC2321 - 1360 | FL-PRO | S3709 | 2.5 | | PASS |
| IJ 38 | 2 | " -360 | " | " | 10x | | PASS |
| IJ 39 | 3 | CCB | | ——— | ——— | | ND |
| IJ 40 | 4 | OP34888 - MB | | OP34888 | 1x | | ND |
| IJ 41 | 5 | F77618 -17 | | | 1x | | ✓ |
| IJ 42 | 6 | -18 | | | 1x | | ✓ |
| IJ 43 | 7 | -70 | | | 1x | | ✓ |
| IJ 44 | 8 | -21,2 | | | 2x | | ✓ |
| IJ 45 | 9 | -72 | | | 1x | | ✓ |
| IJ 46 | 10 | -73 | | | 1x | | ✓ |
| IJ 47 | 11 | -74,2 | | | 2x | | ✓ |
| IJ 48 | 12 | -75,2 | | | 2x | | ✓ |
| IJ 49 | 13 | " -76 | | " | 1x | | ✓ |
| IJ 50 | 1 | CC2321 - 1310 | | S3709 | 2.5 | | PASS |
| IJ 51 | 3 | CCB | | ——— | ——— | | ND |
| IJ 52 | 14 | F77618 -77 | | OP34888 | 1x | | ✓ |
| IJ 53 | 15 | OP34888 - MS | | | 1x | | ✓ |
| IJ 54 | 16 | " -MSD | | | 1x | | ✓ |
| IJ 55 | 17 | F77618 -33,50 | | | 50x | | ✓ |
| IJ 711156 | 18 | " -34,54 11/13/20 | | " | 40x | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: _____

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/13/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-K |
| PROC. METHOD: | " |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2323 |

| | |
|---|---|
| ANALYST: | EVO/A |
| MECL2 LOT #: | J27502 |
| SIGNAL 1 SURR. AREA/CONC: | 1.2 60255/100 |
| SIGNAL 2 SURR. AREA/CONC: | ~~~ |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71457 | 19 | F77618 -35,4 | FL-PRO | OP39885 | 4X | | ✓ |
| IJ 58 | 1 | CC2321-1360 | | S5709 | 2.5 | | PASS |
| IJ 59 | 20 | OP35017 -BS | | OP35017 | 1X | | ✓ |
| IJ 60 | 21 | " -MB | | " | " | | ND |
| IJ 61 | 22 | F77946 -1 | | | | | ND |
| IJ 62 | 23 | " -2 | | | | | ✓ |
| IJ 63 | 24 | " -3 | | | | | ND |
| IJ 64 | 25 | " -4 | | | | | ✓ |
| IJ 65 | 26 | " -5 | | | | | ND |
| IJ 66 | 27 | " -6 | | | | | ND |
| IJ 67 | 28 | OP35017 -MS | | | | | ✓ |
| IJ 68 | 29 | " -(MS) | | | | | ✓ |
| IJ 69 | 1 | CC2321-1360 | | S5709 | 2.5 | | PASS |
| IJ 70 | 3 | CCB | | — | — | | ND |
| IJ 71 | 30 | F77947 -1 | | OP35017 | 1X | | ✓ |
| IJ 72 | 31 | " -2 | | " | " | | ✓ |
| IJ 73 | 32 | " -3 | | | | | ND |
| IJ 74 | 33 | F77948 -3 | | | | | ND |
| IJ 71475 | 74 | F77949 -1 | | | | | ND |
| IJ 71476 | 35 | " -3 | | | | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline. BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: [signature]

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/13/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FC-PRO |
| ACQ. METHOD: | FC-PRO-R |
| PROC. METHOD: | |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2323 |

| | |
|---|---|
| ANALYST: | GWOOTE |
| MECL2 LOT #: | I 7750 |
| SIGNAL 1 SURR. AREA/CONC: | 124025/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71477 | 36 | F77949 -5 | FC-PRO | OP35017 | 1 | | ND |
| IJ 78 | 37 | F77950 -(1) | | | 1 | | RR 10X |
| IJ 79 | 38 | -(2),10 | | | 10X | | RR 100X |
| IJ 80 | 39 | -3 | | | 1 | | ✓ |
| IJ 81 | 1 | CC2321-1360 | | S3709 | 2:5 | | PASS |
| IJ 82 | 3 | CCB | | — | — | | ND |
| IJ 83 | 40 | F77950 -4 | | OP35017 | 1 | | ✓ |
| IJ 84 | 41 | F77959 -2,10 | | | 10X | | ✓ (Rpt) |
| IJ 85 | 42 | F77959 -1 | | | | | ✓ |
| IJ 86 | 43 | OP35012 -BS | | OP35012 | 1 | | ✓ |
| IJ 87 | 44 | -MD | | | | | ND |
| IJ 88 | 45 | F77764 -(1),10 | | | 10 | | RR 2X |
| IJ 89 | 46 | -2 | | | | | ✓ (Rpt) |
| IJ 90 | 47 | -(3) | | | | | ND / RR 1X |
| IJ 91 | 48 | -4 | | | | | ✓ |
| IJ 92 | ~~50~~ | ~~CC2321-1360~~ | | | 1 | | F77764-5 ✓ |
| IJ 93 | 50 | CC2321-1360 | | S3709 | 2:5 | | PASS |
| IJ 94 | 3 | CCB | | — | — | | ND |
| IJ 71495 | 51 | F77764 A(6),10 | | OP35012 | 10X | | RR 1X |
| IJ 71496 | 52 | F77796 -(1),10 | | | | | RR 2X |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: _____

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2323-CC2321
Lab FileID: IJ71481.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1113PRO\IJ71481.D Vial: 1
Acq On : 14 Nov 2010 1:31 am Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op35017,gij2323,30.5,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.751 | -6.9 | 115 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1403.457 | -3.2 | 108 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 13:53:54 2010

# Blank Spike Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35012-BS | IJ71486.D | 1 | 11/14/10 | FEA | 11/11/10 | OP35012 | GIJ2323 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-21, F77741-22

| CAS No. | Compound | Spike mg/kg | BSP mg/kg | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 28.3 | 21.2 | 75 | 53-107 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 77% | 47-111% |

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35012-MB | IJ71487.D | 1 | 11/14/10 | FEA | 11/11/10 | OP35012 | GIJ2323 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-21, F77741-22

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 84% | 47-111% |

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~CIJ2323-CC2321~~
Lab FileID: IJ71493.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1113PRO\IJ71493.D Vial: 50
Acq On : 14 Nov 2010 5:29 am Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op35012,gij2323,30.4,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.802 | -7.0 | 115 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1370.142 | -0.7 | 105 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 13:53:55 2010

5.6.16

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/15/16 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO.M |
| PROC. METHOD: | ↓ |
| CALIB. DATE: | 11/11/16 |
| RUN BATCH: | GIJ 2323 |

| | |
|---|---|
| ANALYST: | EMC/A |
| MECL2 LOT #: | 527502 |
| SIGNAL 1 SURR. AREA/CONC: | 129025540 |
| SIGNAL 2 SURR. AREA/CONC: | —— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71497 | 39 | F77796 (2) 10 | FL-PRO | OP35012 | 10X | | RR1X |
| IJ 71498 | 40 | I (5) 10 | ↓ | ↓ | ↓ | | RR1X |
| IJ 71499 | 41 | F77809 (5) 10 | | | ↓ | | RR1X |
| IJ 71500 | 42 | F77809 - 6 | | | 1X | | ✓ |
| IJ 01 | 43 | -7 | | | — | | ✓ |
| IJ 02 | 44 | F77741 - 21 | | | | | ND |
| IJ 03 | 45 | OP35012 - MS | | | | | ✓ |
| IJ 04 | 46 | -MSD | | ↓ | ↓ | | ✓ |
| IJ 05 | 47 | CC2371 - 1760 | | 53709 | 1:5 | | PASS |
| IJ 06 | 48 | CC2371 - 3160 | | ↓ | 10X | | PASS |
| IJ 07 | 49 | CCB | | — | — | | ND |
| IJ 08 | 50 | F77809 - 8 | | OP35012 | 1X | | ✓ |
| IJ 09 | 62 | F77741 (22) 10 | | ↓ | 10X | | RR1X |
| IJ 71510 | 63 | ECC2371 - 1760 | ↓ | 53709 | 1:5 | | PASS |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | (FCH 11/15/16) | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |
| IJ | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: _____

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2323-CC2321
Lab FileID: IJ71505.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1113PRO\IJ71505.D Vial: 50
Acq On : 14 Nov 2010 9:29 am Operator: enoca
Sample : cc2321-1360 Inst : FID 1
Misc : op35012,gij2323,30.1,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 41.970 | -4.9 | 113 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1362.961 | -0.2 | 105 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Mon Nov 15 13:53:55 2010

5.6.17

5

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GIJ2323-CC2321
Lab FileID: IJ71506.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1113PRO\IJ71506.D Vial: 2
Acq On : 14 Nov 2010 9:49 am Operator: enoca
Sample : cc2321-340 Inst : FID 1
Misc : op35012,gij2323,30.1,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 10.000 | 9.787 | 2.1 | 96 | 0.00 | 5.25- 5.45 |
| 2 | H | TPH (C8-C40) | 340.000 | 337.150 | 0.8 | 89 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71331.D FL_PRO_R.M Mon Nov 15 13:59:48 2010

5.6.18 5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/15/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-12 |
| PROC. METHOD: | " |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2324 |

| | |
|---|---|
| ANALYST: | EMC/A |
| MECL2 LOT #: | J79503 |
| SIGNAL 1 SURR. AREA/CONC: | 1352210 / 40 |
| SIGNAL 2 SURR. AREA/CONC: | —— / —— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71511 | 1 | CC 2371 - 1360 | FL-PRO | S3709 | 1.5 | | ✓ |
| IJ 12 | 1 | " - 1360 | " | " | " | | PASS |
| IJ 13 | 2 | " -1360 | " | " | 10x | | " |
| IJ 14 | 3 | CCB | " | —— | —— | | ND |
| IJ 15 | 4 | OP 31898 - BS | " | OP34898 | 1/1 | | ✓ |
| IJ 16 | 5 | " -MB | " | " | " | | ND |
| IJ 17 | 6 | F77666 - 1 | " | " | " | | ND |
| IJ 18 | 7 | -2 | " | " | " | | ND |
| IJ 19 | 8 | -3 | " | " | " | | ✓ |
| IJ 20 | 9 | -4 | " | " | " | | ND |
| IJ 21 | 10 | -5 | " | " | " | | ND |
| IJ 22 | 11 | -6 | " | " | " | | ND |
| IJ 23 | 12 | -7 | " | " | " | | ND |
| IJ 24 | 13 | -8 | " | " | " | | ND |
| IJ 25 | 1 | CC 2371 - 1760 | " | S3709 | 1.5 | | PASS |
| IJ 26 | 2 | CCB | " | —— | —— | | ND |
| IJ 27 | 14 | F77666 - 9 | " | OP34898 | 1/1 | | ✓ |
| IJ 28 | 15 | " -10 | " | " | " | | ND |
| IJ 71529 | 16 | CC 2371 - 1360 | " | S3709 | 1.5 | | PASS |
| IJ 71530 | 3 | ~~CC 2371 - 1360~~ | " | ~~S3709~~ | ~~1.5~~ | | CCB / ND |

Each on 11

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/5/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO 7c |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2324 |

| | |
|---|---|
| ANALYST: | DRC /A |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 133221040 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71531 | 17 | F77693 -1 | FL-PRO | OP34868 | 1 | | ND |
| IJ 32 | 18 | -2 | | | | | ND |
| IJ 33 | 19 | -3 | | | | | ND |
| IJ 34 | 20 | -4 | | | | | ✓ |
| IJ 35 | 21 | OP34868 -MS | | | | | ✓ |
| IJ 36 | 22 | -MSD | | | | | ✓ |
| IJ 37 | 23 | F77693 -5 | | | | | ND |
| IJ 38 | 24 | -6 | | | | | ND |
| IJ 39 | 25 | -7 | | | | | ND |
| IJ 40 | 26 | -8 | | | | | ✓ |
| IJ 41 | (16) | CC2771-1360 | | S3709 | 7.5 | | PHFS |
| IJ 42 | (15) | CCB | | — | — | | ND |
| IJ 43 | 27 | F77693 -9 | | OP34868 | 1 | | ND |
| IJ 44 | 28 | -10 | | | | | ND |
| IJ 45 | 29 | OP34913 -BS | | OP34913 | 1.1 | | ✓ |
| IJ 46 | 30 | -MB | | | | | ND |
| IJ 47 | 31 | F77693 -11 | | | | | ND |
| IJ 48 | 32 | -12 | | | | | ✓ |
| IJ 49 | 33 | -13 | | | | | ND |
| IJ 71550 | 34 | -14,10 | | | 10.1 | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: _____

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/12/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-K |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 23724 |

| | |
|---|---|
| ANALYST: | EPOC/A |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 353210 / 90 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71551 | 35 | OP34913-MS,10 | FL-PRO | OP34913 | 10x | | ✓ |
| IJ 52 | 36 | -MSD,10 | | " | " | | ✓ |
| IJ 53 | (6) | CC2321-1360 | | 53709 | 1:5 | | PASS |
| IJ 54 | (3) | CCB | | — | — | | ND |
| IJ 55 | 37 | F77693-15 | | OP34913 | 1x | | ND |
| IJ 56 | 38 | -16 | | | | | ND |
| IJ 57 | 39 | -17 | | | | | ND |
| IJ 58 | 40 | -18 | | | | | ✓ |
| IJ 59 | 41 | OP35017-MB | | OP35017 | 1x | | ND |
| IJ 60 | 42 | F77950-1,10 | | " | 10x | | ✓ |
| IJ 61 | 43 | -2,100 | | " | 100x | | ✓ |
| IJ 62 | (18) | CC2321-1360 | | 53709 | 1:5 | | PASS |
| IJ 63 | 44 | OP35012-MB | | OP35012 | 1x | | ND |
| IJ 64 | 45 | F77764-1,2 | | | 2x | | ✓ |
| IJ 65 | 46 | -3 | | | 1x | | ✓ |
| IJ 66 | 47 | -4 | | | | | ✓ |
| IJ 67 | 48 | -6 | | | | | ✓ |
| IJ 68 | 49 | F77796-(1),2 | | | 2x 11/10/10 | | ✓ |
| IJ 69 | 50 | -(2) | | | 1x | | ✓ *Surr. High (Re extract) |
| IJ 71570 | 51 | -5 | | | 1x | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: [signature]

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GIJ2324-CC2321~~
Lab FileID: IJ71562.D

5.6.19

5

Evaluate Continuing Calibration Report

```
Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71562.D          Vial: 16
Acq On    : 16 Nov 2010   2:58 am                  Operator: enoca
Sample    : cc2321-1360                            Inst    : FID 1
Misc      : op35017,gij2324,30.0,,,1,1,soil        Multiplr: 1.00
IntFile   : events.e

Method       : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.215 | 2.0 | 106 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1316.901 | 3.2 | 101 | 0.00 | 2.23- 9.54 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
IJ71333.D  FL_PRO_R.M  Tue Nov 16 09:13:50 2010

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35012-MB | IJ71563.D | 1 | 11/16/10 | FEA | 11/11/10 | OP35012 | GIJ2324 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-21, F77741-22

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 95% | 47-111% |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/5/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID1-IJ |

GC FID3-IJ ANALYSIS LOG

| | |
|---|---|
| METHODS: | FC-PRO |
| ACQ. METHOD: | FC-PRO-F |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GIJ 2324 |

| | |
|---|---|
| ANALYST: | CMC/A |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 33 2210 / 40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| IJ 71571 | 52 | F77809 - F | FC-PRO | OP33012 | 1.1 | | ✓ |
| IJ 72 | 53 | F77741 - 22 | | | | | ✓ |
| IJ 71573 | 16 | CCC2371 - 1360 | | 57709 | 2.5 | | PASS |
| IJ | | | | | | | |
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(F-C-A 11/16/10)

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PI Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid1_ij_log.xls NF rev. 08/09

Analyst's Signature: _____

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~CIJ2324-ECC2321~~
Lab FileID: IJ71573.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1115PRO\IJ71573.D Vial: 16
Acq On : 16 Nov 2010 6:38 am Operator: enoca
Sample : ecc2321-1360 Inst : FID 1
Misc : op35012,gij2324,30.5,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL_PRO_R.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Mon Nov 15 12:52:10 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 41.808 | -4.5 | 113 | 0.00 | 5.25- 5.45 |
| 2 H | TPH (C8-C40) | 1360.000 | 1386.093 | -1.9 | 107 | 0.00 | 2.23- 9.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
IJ71333.D FL_PRO_R.M Tue Nov 16 09:13:50 2010

5.6.20 5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/12/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.m |
| CALIB. DATE: | 11/12/10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M.Walls |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 5078324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 333866 | 1 | Blank | FL-PRO | J27503 | 1X | | BDL |
| LL 67 | 2 | ICI273-255 | | S3709 | 75.1000 | | CURVE Pass |
| LL 68 | 3 | -340 | | | 10X | | |
| LL 69 | 4 | -680 | | | 5X | | |
| LL 70 | 5 | ICC1273-1360 | | | 2.5 | | |
| LL 71 | 6 | IC 1273-2040 | | | 3.5 | | |
| LL 72 | 7 | -2720 | | | 4.5 | | |
| LL 73 | 8 | -3400 | | | 1X | | |
| LL 74 | 9 | ICV1273-1360 | | | 2.5 | | PASS |
| LL 75 | 10 | ccb | | J27503 | 1X | | BDL |
| LL 76 | 11 | OP34950-bs | | 34950 | 1X | | ✓ |
| LL 77 | 12 | -mb | | | 1X | | BDL |
| LL 78 | 13 | F77803-2 | | | 1X | | BDL |
| LL 79 | 14 | -3 | | | 20X | | ✓ |
| LL 80 | 15 | -4 | | | 10X | | RR 100X |
| LL 81 | 16 | -5 | | | 1X | PDB | ✓ |
| LL 82 | 17 | -6 | | | 1X | PDB | ✓ |
| LL 83 | 18 | -10 | | | 10X | | RR 1X |
| LL 84 | 19 | -11 | | | 10X | PDB | ✓ |
| LL 85 | 20 | -12 | | | 1X | | RR 20X |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M.Walls

Raw Data: LL33867.D LL33868.D LL33869.D LL33870.D LL33871.D LL33872.D LL33873.D

# Initial Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-ICC1273
Lab FileID: LL33870.D

Response Factor Report FID 4

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Initial Calibration

Calibration Files
255 =LL33867.D 340 =LL33868.D 680 =LL33869.D 1360=LL33870.D
2040=LL33871.D 2720=LL33872.D 3400=LL33873.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 1.241 | 1.274 | 1.270 | 1.316 | 1.313 | 1.296 | 1.345 | 1.294 E6 | 2.69 |
| 2)H TPH (C8-C40) | 1.304 | 1.291 | 1.216 | 1.229 | 1.225 | 1.194 | 1.226 | 1.241 E6 | 3.28 |

(#) = Out of Range

FL_PRO_F.M Mon Nov 15 11:51:19 2010

5.6.21

5

# Initial Calibration Verification



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GLL1273-ICV~~1273
Lab FileID: LL33874.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1112FLPRO\LL33874.D Vial: 9
Acq On : 12 Nov 2010 10:52 am Operator: marthav
Sample : icv1273-1360 Inst : FID 4
Misc : OP34950,GLL1273,30.0,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 H | TPH (C8-C40) | 1360.000 | 1445.169 | -6.3 | 107 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 15:14:42 2010

5.6.22

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 50781324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33886 | 21 | cc1273-1360 | | 53709 | 2.5 | | pass |
| LL 87 | 22 | ccb | | J27503 | 1X | | BDL |
| LL 88 | 23 | F77803-13 | | 34950 | 1X | | Vial empty (Not enough RR 20X |
| LL 89 | 24 | op34950-ms | | | | | RR 20X |
| LL 90 | 25 | ↓ -msd | | | | | RR 20X |
| LL 91 | 26 | F77803-14 | | | ↓ | | RR 20X |
| LL 92 | 27 | -16 | | | 5X | | RR 1X |
| LL 93 | 28 | -17 | | | 1X | PDB | ✓ |
| LL 94 | 29 | -18 | | | 5X | PDB | ✓ |
| LL 95 | 30 | -19 | | | 4X | PDB | ✓ |
| LL 96 | 31 | -20 | | | 1X | PDB | ✓ |
| LL 97 | 32 | ↓ -21 | | ↓ | 10X | | RR 4X |
| LL 98 | 33 | CC 1273-1360 CC1360 | | 53709 | 2.5 | | PASS |
| LL ↓ 99 | 34 | ccb | | J27503 | 1X | | BDL |
| LL 33900 | 35 | F77803-23 | | 34950 | 20X | | ✓ |
| LL 01 | 36 | -24 | | | 10X | | RR 100X |
| LL 02 | 37 | -25 | | | 1X | | RR 1X to verify carry over |
| LL 03 | 38 | ↓ -26 | | ↓ | ↓ | | RR 1X carry over |
| LL 04 | 39 | op34992-bs | | 34992 | 1 | | ✓ |
| LL ↓ 05 | 40 | ↓ -mb | ↓ | ↓ | ↓ | | mx 11-13-10 ✓ BDL |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valles

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | A. Valle |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 5078132 4/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 339066 | 41 | F77702-3 | | 34992 | 1X | | ✓ |
| LL 07 | 42 | -4 | | | | | BDL |
| LL 08 | 43 | -11 | | | | | ✓ |
| LL 09 | 44 | -14 | | | 10X | | RR 50X |
| LL 10 | 45 | CC1273-1360 | | 53709 | 2:5 | | PASS |
| LL 11 | 46 | ccb | | J27503 | 1X | | BDL |
| LL 12 | 47 | F77803-7 | | 34992 | | | ✓ |
| LL 13 | 48 | -22 | | | | | ✓ |
| LL 14 | 49 | F77799-5 | | | | | ✓ |
| LL 15 | 50 | 8 | | | | | ✓ |
| LL 16 | 51 | F77796-4 | | | | | ✓ |
| LL 17 | 52 | F77886-1 | | | | PDB | ✓ |
| LL 18 | 53 | -2 | | | | PDB | ✓ |
| LL 19 | 54 | -3 | | | | PDB | ✓ |
| LL 20 | 55 | F77807-1 | | | | | ✓ |
| LL 21 | 56 | 2 | | | | PDB | ✓ |
| LL 22 | 57 | CC1273-1360 | | 53709 | 2:5 | | PASS |
| LL 23 | 58 | ccb | | J27503 | 1X | | BDL |
| LL 24 | 59 | F77809-1 | | 34992 | | | BDL |
| LL 25 | 60 | -2 | | | | | BDL |

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | Y-Valle2 |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | SD78324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 333926 | 61 | F77809-3 | FL-PRO | 34992 | 1X | PDB | ✓ |
| LL 27 | 62 | ↓ -4 | ↓ | ↓ | ↓ | PDB | BDL |
| LL 28 | 63 | F77799-6 | | | | | BDL |
| LL 29 | 64 | op34992-ms | | | | | ✓ |
| LL 30 | 65 | ↓ -msd | | | | | ✓ |
| LL 31 | 66 | F77799-7 | | ↓ | ↓ | PDB | ✓ |
| LL ↓ 32 | 57 | ccc1273-1360 | ↓ | S3709 | 2.5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | 4/5 | 11-13-10 | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple. PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: Y-Valle2

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | ~~11-14-10~~ 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.m |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL1275 |

| | |
|---|---|
| ANALYST: | Y. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 41.09798/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33952 | 1 | CC1273-1360 | FL-PRO | S3709 | 2.5 | | PASS |
| LL 53 | 2 | CC1273-340 | | S3709 | 10X | | PASS |
| LL 54 | 3 | ccb | | J27503 | 1X | | BDL |
| LL 55 | 4 | op34950-mb | | 34950 | ↓ | | BDL |
| LL 56 | 5 | F77803-12 | | | 20X | | ✓ |
| LL 57 | 6 | ↓ -14 | | | 20X | | ✓ |
| LL 58 | 7 | ↓ -24 | | ↓ | 200X | | ✓ |
| LL 59 | 8 | op34992-mb | | 34992 | 1X | | BDL |
| LL 60 | 9 | F77762-14 | | ↓ | 5X | | ✓ |
| LL 61 | 10 | CC1273-1360 | | S3709 | 2.5 | | PASS |
| LL 62 | 11 | ccb | | J27503 | 1X | | BDL |
| LL 63 | 12 | op35004-bs | | 35004 | ↓ | | ✓ |
| LL 64 | 13 | ↓ -mb | | ↓ | ↓ | | BDL |
| LL 65 | 14 | F77803-13 | | 34950 | 4X | PDB | ✓ |
| LL 66 | 15 | F77917-1 | | 35004 | 20X | | RR 500X |
| LL 67 | 16 | F77914-2 | | | 1X | | ✓ |
| LL 68 | 17 | ↓ -3 | | | ↓ | | ✓ |
| LL 69 | 18 | ↓ -1 | | | | | ✓ |
| LL 70 | 19 | op35004-ms | | | | PDB | RR to confirm result. |
| LL ↓ 71 | 20 | ↓ -MSD | ↓ | ↓ | ↓ | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: Y. Valles

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GLL1275-~~CC1273
Lab FileID: LL33961.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33961.D Vial: 10
Acq On : 15 Nov 2010 12:12 pm Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP34992,GLL1275,1050,,,1,50,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.361 | -5.9 | 104 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1383.415 | -1.7 | 103 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 13:42:17 2010

5.6.23

5

# Blank Spike Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35004-BS | LL33963.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-18, F77741-19, F77741-20

| CAS No. | Compound | Spike mg/kg | BSP mg/kg | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 28.3 | 26.7 | 94 | 53-107 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 99% | 47-111% |

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35004-MB | LL33964.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-18, F77741-19, F77741-20

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 90% | 47-111% |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | j ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL1275 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33972 | 21 | F77914-4 | FL-PRO | 35004 | 1X | | BDL |
| LL 73 | 22 | CC1273-1300 | | 53709 | 2.5 | | PASS |
| LL 74 | 23 | ccb | | J27503 | 1X | | BDL |
| LL 75 | 24 | F77914-5 | | 35004 | 10X | | RR 1X |
| LL 76 | 25 | ↓ 6 | | | 4X | | RR 1X |
| LL 77 | 26 | F77936-1 | | | 4X | | RR 1X |
| LL 78 | 27 | -2 | | | 1X | | ✓ |
| LL 79 | 28 | -3 | | | | | ✓ |
| LL 80 | 29 | -4 | | | | | ✓ |
| LL 81 | 30 | -5 | | | | | ✓ |
| LL 82 | 31 | -6 | | | | | ✓ |
| LL 83 | 32 | -7 | | | | | ✓ |
| LL 84 | 33 | ↓ -8 | | ↓ | ↓ | | ✓ |
| LL 85 | 34 | CC1273-1310 (MV 11-16-10) | | 53709 | 2.5 | | PASS |
| LL 86 | 23 | ccb | | J27503 | 1X | | BDL |
| LL 87 | 36 | F77936-9 | | 35004 | | | ✓ |
| LL 88 | 37 | -10 | | | | | ✓ |
| LL 89 | 38 | -18 | F77741-18 | | | | BDL |
| LL 90 | 39 | -19 | F77741-19 | | | | ✓ |
| LL ↓ 91 | 40 | ↓ -20 | F77741-20 ↓ | ↓ | ↓ | PDB | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valles

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GLL1275-CC~~1273
Lab FileID: LL33973.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33973.D Vial: 22
Acq On : 11-15-10 04:48:27 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35004,GLL1275,30.3,,,1,4,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 45.881 | -14.7 | 114 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1487.164 | -9.4 | 110 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Tue Nov 16 12:37:23 2010

5.6.24
5

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GLL1275-CC1273~~
Lab FileID: LL33985.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33985.D Vial: 22
Acq On : 11-15-10 09:21:26 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35004,GLL1275,30.5,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 44.857 | -12.1 | 111 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1449.361 | -6.6 | 107 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Tue Nov 16 12:37:24 2010

5.6.25

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1275 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 46097908/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33992 | 41 | bp35025 bs | FL-PRO | 35025 | 1X | | ✓ |
| LL 93 | 42 | ↓ -mb | ↓ | ↓ | ↓ | | MU 11-16-10 ~~AA~~ BDL |
| LL 94 | 43 | F77936-11 | | | | | ✓ |
| LL 95 | 44 | -12 | | | | | ✓ |
| LL 96 | 45 | ↓ -13 | | ↓ | ↓ | | ✓ |
| LL 97 | 46 | ccc1273-136 | | 53709 | 2.5 | | PASS |
| LL 98 | 47 | ccb | | J27503 | 1X | | BDL |
| LL ↓ 99 | 48 | F77936-14 | | 35025 | | | ✓ *RR samples |
| LL 34000 | 49 | F77946-7 | | | | | ✓ |
| LL 01 | 50 | -8 | | | | | ✓ |
| LL 02 | 51 | ↓ -9 | | | ↓ | | BDL |
| LL 03 | 52 | F77886-4 | | | 4X | | RR 1X |
| LL ↓ 04 | 53 | ↓ -5 | ↓ | ↓ | 1X | | BDL |
| LL | | | | | | | *RR samples due to viol. error |
| LL | | | | | | | No ccv present to approve samples |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

11-16-10

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valles

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GLL1275-CC1273~~
Lab FileID: LL33997.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33997.D Vial: 46
Acq On : 11-16-10 01:53:44 AM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1275,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.942 | -7.4 | 107 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1405.862 | -3.4 | 104 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Tue Nov 16 12:37:25 2010

5.6.26

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-16-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.m |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1276 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J07503 |
| SIGNAL 1 SURR. AREA/CONC: | 49655283/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34005 | 1 | CC1273-1360 | FL-PRO | 53709 | 2.5 | | PASS |
| LL 06 | 2 | CC1273-340 | | ↓ | 10X | | PASS |
| LL 07 | 3 | ccb | | J07503 | 1X | | BDL |
| LL 08 | 4 | op35025 bs | | 35025 | \| | | ✓ |
| LL 09 | 5 | ↓ -mb | | ↓ | \| | | BDL |
| LL 10 | 6 | op35004-mb | | 35004 | ↓ | PDB | BDL |
| LL 11 | 7 | F77917-1 | | ↓ | 50X | | ✓ |
| LL 12 | 8 | F77886-6 | | 35025 | 10X | PDB | MV 11-17-10 RR ~~1X~~ 4X Surr ↑ |
| LL 13 | 9 | F77882-1 | | \| | 1X | | BDL |
| LL 14 | 10 | F77902-1 | | \| | \| | | ✓ |
| LL 15 | 11 | ↓ -5 | | \| | \| | PDB | ✓ |
| LL 16 | 12 | op35025 ms | | \| | \| | PDB | ✓ |
| LL 17 | 13 | ↓ -msd | | ↓ | ↓ | PDB | ✓ |
| LL 18 | 14 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL 19 | 15 | ccb | | J07503 | 1X | | BDL |
| LL 20 | 16 | F77902-2 | | 35025 | 4X | | RR 1X |
| LL 21 | 17 | \| -3 | | \| | 4X | | ✓ |
| LL 22 | 18 | \| -4 | | \| | 4X | PDB | ✓ |
| LL 23 | 19 | \| -6 | | \| | 4X | | ✓ |
| LL ↓ 24 | 20 | ↓ -7 | ↓ | ↓ | 4X | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valles

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34005.D



Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34005.D        Vial: 1
Acq On    : 16 Nov 2010  10:10 am                     Operator: marthav
Sample    : cc1273-1360                               Inst    : FID 4
Misc      : OP35025,GLL1276,1000,,,1,1,water          Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 40.856 | -2.1 | 101 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1352.947 | 0.5 | 100 | 0.00 | 1.84-10.54 |

```
(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 LL33297.D  FL_PRO_F.M       Wed Nov 17 13:05:47 2010
```

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34006.D



Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34006.D        Vial: 2
Acq On    : 16 Nov 2010  10:33 am                    Operator: marthav
Sample    : cc1273-340                               Inst    : FID 4
Misc      : OP35025,GLL1276,1000,,,1,1,water         Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 10.000 | 9.555 | 4.5 | 98 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 340.000 | 355.223 | -4.5 | 102 | 0.00 | 1.84-10.54 |

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 LL33298.D  FL_PRO_F.M       Wed Nov 17 13:06:27 2010
```

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35004-MB | LL34010.D | 1 | 11/16/10 | MV | 11/11/10 | OP35004 | GLL1276 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-18, F77741-19, F77741-20

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 78% | 47-111% |

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34018.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34018.D Vial: 14
Acq On : 11-16-10 03:07:36 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1276,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 43.029 | -7.6 | 107 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1405.713 | -3.4 | 104 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:48 2010

5.6.29

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-16-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1276 |

| | |
|---|---|
| ANALYST: | M-Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 44655083/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34025 | 21 | F77936-14 | FL-PRO | 35025 | 1X | | ✓ |
| LL 26 | 22 | F77946-7 | | | | | ✓ |
| LL 27 | 23 | 8 | | | | | ✓ |
| LL 28 | 24 | 9 | | | | | BDL |
| LL 29 | 25 | F77886-4 | | | | | ✓ |
| LL ~~30~~ | 26 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL 31 | 27 | ccb | | J27503 | 1X | | BDL |
| LL 32 | 28 | F77886-5 | | 35025 | | | BDL |
| LL 33 | 29 | 6 | | | | PDB | ✓ |
| LL 34 | 31 | F77914-5 | | 35004 | | | ✓ |
| LL 35 | 32 | 6 | | | | | ✓ |
| LL 36 | 33 | F77936-1 | | | | | ✓ |
| LL 37 | 26 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | 4.0 | 11-17-10 | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M-Valles

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID3-ZF |

# GC FID3-ZF ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | ↓ |
| CALIB. DATE: | 11/11/2010 |
| RUN BATCH: | GZF 1572 (NEW CURVE) |

| | |
|---|---|
| ANALYST: | EMC / A |
| MECL2 LOT #: | 527-503 |
| SIGNAL 1 SURR. AREA/CONC: | 4.465 FI / 40 |
| SIGNAL 2 SURR. AREA/CONC: | —— x —— |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| ZF 37425 | 1 | CCB | FL-PRO | — | — | | CR method fix |
| ZF 26 | 2 | IC1572 - 2.5 | | S3709 | 75:1000 | | ✓ |
| ZF 27 | 2 | IC1572 - 755 | | | ↓ | | ✓ |
| ZF 28 | 3 | -340 | | | 10x | | ✓ |
| ZF 29 | 4 | -680 | | | 5x | | ✓ |
| ZF 30 | 5 | ICC1572 - 1360 | | | 2.5 | | |
| ZF 31 | 6 | IC1572 - 2040 | | | 3.5 | | ✓ |
| ZF 32 | 7 | -2720 | | | 4.5 | | ✓ |
| ZF 33 | 8 | -3400 | | ↓ | 1X | | ✓ pass |
| ZF 34 | 9 | ICV1572 - 1360 | | [illegible] | 80:500 | | pass |
| ZF 35 | 10 | CCB | | — | — | | BDL |
| ZF 36 | 11 | OP34984 - BG | | OP34984 | 1.1 | | ✓ |
| ZF 37 | 12 | -MB | | | | | BDL |
| ZF 38 | 13 | F77413 - 1 | | | | | BDL |
| ZF 39 | 14 | -2 | | | | | ✓ |
| ZF 40 | 15 | -3 | | | ↓ | | ✓ |
| ZF 41 | 16 | -4/10 | | | 10x | | ✓ |
| ZF 42 | 17 | -5/10 | | | 10x | | ✓ |
| ZF 37443 | 18 | -6 | | | 1x | | BDL |
| ZF 37444 | 19 | -7 | ↓ | ↓ | ↓ | | BDL |

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

Analyst's Signature: [signature]

gcfid3_zf_log.xls NF rev. 08/09

Raw Data: ZF37427.D ZF37428.D ZF37429.D ZF37430.D ZF37431.D ZF37432.D ZF37433.D

# Initial Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~CZF1572~~ ICC1572
Lab FileID: ZF37430.D

Response Factor Report FID 3

Method : C:\HPCHEM\1\METHODS\FLPRO.M (Chemstation Integrator)
Title : TPH by FLPRO
Last Update : Thu Nov 11 17:59:07 2010
Response via : Initial Calibration

Calibration Files
255 =ZF37427.D 340 =ZF37428.D 680 =ZF37429.D 1360=ZF37430.D
2040=ZF37431.D 2720=ZF37432.D 3400=ZF37433.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 1.211 | 1.171 | 1.274 | 1.191 | 1.207 | 1.173 | 1.192 | 1.203 E4 | 2.91 |
| 2)H TPH (C8-C40) | 1.370 | 1.250 | 1.260 | 1.134 | 1.145 | 1.130 | 1.152 | 1.206 E4 | 7.53 |

(#) = Out of Range

FLPRO.M Fri Nov 12 16:38:06 2010

5.6.30 5

# Initial Calibration Verification



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GZF1572-ICV1572
Lab FileID: ZF37434.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\ZF37434.D Vial: 9
Acq On : 11 Nov 2010 5:26 pm Operator: enoca
Sample : icv1572-1360 Inst : FID 3
Misc : op34985,gzf1572,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FLPRO.M (Chemstation Integrator)
Title : TPH by FLPRO
Last Update : Thu Nov 11 17:59:07 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | ---------- | NA | ---------- | | | |
| 2 H | TPH (C8-C40) | 1360.000 | 1198.901 | 11.8 | 94 | 0.00 | 3.05-13.48 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ZF37430.D FLPRO.M Fri Nov 12 16:37:47 2010

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/11/16 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID3-ZF |

GC FID3-ZF ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/16 |
| RUN BATCH: | GZF 1572 |

| | |
|---|---|
| ANALYST: | CPOC |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 47457 / 40 |
| SIGNAL 2 SURR. AREA/CONC: | — / — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| ZF 37445 | 20 | F77913 -8 | FL-PRO | OP34984 | 1 | | ✓ |
| ZF 46 | (21) | CC1572 -1360 | | 53709 | 2.5 | | PASS |
| ZF 47 | (22) | CCB | | — | — | | ND |
| ZF 48 | 23 | F77913 -9 | | OP34984 | 1 | | ✓ |
| ZF 49 | 24 | -10 | | | | | ✓ |
| ZF 50 | 25 | OP34984 -MS | | | | | ✓ |
| ZF 51 | 26 | -MSD | | | | | ✓ |
| ZF 52 | 27 | F77913 -11,10 | | | 10x | | ✓ |
| ZF 53 | 28 | -12 | | | 1 | | ND |
| ZF 54 | 29 | -13,10 | | | 10x | | ✓ |
| ZF 55 | 30 | -14,10 | | | 10x | | ✓ |
| ZF 56 | 31 | -15 | | | 1 | | ✓ |
| ZF 57 | 32 | -16 | | | 1x | | ✓ |
| ZF 58 | (33) | CC1572 -1360 | | 53709 | 2.5 | | PASS |
| ZF 59 | (34) | CCB | | — | — | | ND |
| ZF 60 | 35 | F77913 -17 | | OP34984 | 1 | | ✓ |
| ZF [illegible] | 36 | -18 | | | 1x | | ✓ |
| ZF 46 | 37 | -19,4 | | | 4x | | ✓ |
| ZF 37603 | 38 | -20,100 | | | 100x | | ✓ |
| ZF 37604 | 39 | OP34985 -[illegible] | | OP34985 | | | ND |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid3_zf_log.xls NF rev. 08/09

Analyst's Signature: [signature]

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | ul |
| INSTRUMENT: | FID3-ZF |

GC FID3-ZF ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-IC |
| PROC. METHOD: | F |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GZF 1572 |

| | |
|---|---|
| ANALYST: | ENDC/A |
| MECL2 LOT #: | I77503 |
| SIGNAL 1 SURR. AREA/CONC: | 476579/40 |
| SIGNAL 2 SURR. AREA/CONC: | — |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| ZF 37465 | 40 | OP34985 - BS | FL-PRO | OP34985 | 1 | | ✓ |
| ZF | 41 | F77913 - 21 | | | — | | ND |
| ZF | 42 | OP34985 - MS | | | | | ✓ |
| ZF | 43 | I - MSD | | | | | ✓ |
| ZF | 44 | CC1572 - 1360 | | S3709 | 2.5 | | PASS |
| ZF | 45 | CCB | | — | — | | ND |
| ZF | 46 | F77913 - 22 | | OP34985 | 1 | | ND |
| ZF | 47 KR | I - 23 | | I | 1 | | ✓ |
| ZF | ~~44~~ 44 | CC1572 - 1360 | | S3709 | 2.5 | | PASS |
| ZF | 48 | CCB | | — | — | | ND |
| ZF | 49 | F77913 - 22, KR | | OP34985 | 1 | | ND |
| ZF | 50 | OP34864 - BS | | OP34864 | I | | ✓ (KR) |
| ZF | 51 | I - MS | | I | I | | ✓ I > MDL (KR) |
| ZF | 52 | F77618 - 56, 11 | | | 4 | | RE40X (DWL) |
| ZF | 53 | I - 77 | | | 1 | | ✓ |
| ZF | 54 | I - 56, 4 | | I | 4 | | ✓ |
| ZF | 55 | OP34966 - MB | | OP34966 | 1 | | ND |
| ZF | 56 | F77711 - 9, KR | | I | I | | ✓ |
| ZF 37483 | 48 | OP34864 - BS, KR | | OP34864 | | | ✓ (KR) |
| ZF 37484 | 49 | I - MS, KR | | I | I | | ~~NT~~ ✓ (W_IP29) |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid3_zf_log.xls NF rev. 08/09

Analyst's Signature: _____

Raw Data: ZF37473.D

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GZF1572-CC1572~~
Lab FileID: ZF37473.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\ZF37473.D Vial: 44
Acq On : 12 Nov 2010 10:13 am Operator: enoca
Sample : cc1572-1360 Inst : FID 3
Misc : op34985,gzf1572,30.0,,,1,1,soil Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FLPRO.M (Chemstation Integrator)
Title : TPH by FLPRO
Last Update : Thu Nov 11 17:59:07 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 44.336 | -10.8 | 112 | 0.00 | 7.03- 7.23 |
| 2 H | TPH (C8-C40) | 1360.000 | 1414.946 | -4.0 | 111 | 0.00 | 3.05-13.48 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ZF37430.D FLPRO.M Fri Nov 12 16:38:47 2010

5.6.32

5

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34966-MB | ZF37481.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GZF1572 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-9, F77741-10, F77741-11, F77741-12, F77741-13, F77741-14, F77741-15, F77741-16, F77741-17

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 99% | 47-111% |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/11/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID3-ZF |

GC FID3-ZF ANALYSIS LOG

| | |
|---|---|
| METHODS: | PL-PRO |
| ACQ. METHOD: | PL-PRO-F |
| PROC. METHOD: | |
| CALIB. DATE: | 11/11/10 |
| RUN BATCH: | GZF 1572 |

| | |
|---|---|
| ANALYST: | ENDC/A |
| MECL2 LOT #: | J 27503 |
| SIGNAL 1 SURR. AREA/CONC: | 47579 / 10 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| ZF 37485 | 54 | CC1572-1360 | PL-PRO | S3709 | 2.5 | | PASS 11/11/10 |
| ZF | 56 | OP34944-MB | | OP34944 | 1 | | ND |
| ZF | 57 | F77729-2,10 | | | 10 | | |
| ZF | 58 | F77618-36,40 | | OP34864 | 40x | | |
| ZF 37489 | 55 | CCC1572-1360 | | S3709 | 2.5 | | PASS |
| ZF | | | | | | | |
| ZF | | | | | | | |
| ZF | | | | | | | |
| ZF | | | | | | | |
| ZF | | | | | | | |
| ZF | | | | | | | |
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| ZF | | | | | | | |
| ZF | | | | | | | |
| ZF | | | | | | | |
| ZF | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid3_zf_log.xls NF rev. 08/09

Analyst's Signature: _____

Raw Data: ZF37485.D

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~CZF1572~~ CC1572
Lab FileID: ZF37485.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\ZF37485.D Vial: 55
Acq On : 12 Nov 2010 3:59 pm Operator: enoca
Sample : cc1572-1360 Inst : FID 3
Misc : op34864,gzf1572,1,,,1,1,wipe Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FLPRO.M (Chemstation Integrator)
Title : TPH by FLPRO
Last Update : Thu Nov 11 17:59:07 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 46.051 | -15.1 | 116 | 0.00 | 7.03- 7.23 |
| 2 H | TPH (C8-C40) | 1360.000 | 1527.054 | -12.3 | 119 | 0.00 | 3.05-13.48 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ZF37430.D FLPRO.M Fri Nov 12 16:38:47 2010

5.6.33

5

# Method Blank Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34944-MB | ZF37486.D | 1 | 11/12/10 | FEA | 11/05/10 | OP34944 | GZF1572 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-1, F77741-2, F77741-3, F77741-4, F77741-5, F77741-6, F77741-7, F77741-8

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 8.3 | 5.0 | mg/kg | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 95% | 47-111% |

Raw Data: ZF37489.D

# Continuing Calibration Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: ~~GZF1572~~-ECC1572
Lab FileID: ZF37489.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\1111PRO\ZF37489.D Vial: 55
Acq On : 12 Nov 2010 5:46 pm Operator: enoca
Sample : ecc1572-1360 Inst : FID 3
Misc : op34864,gzf1572,1,,,1,1,wipe Multiplr: 1.00
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FLPRO.M (Chemstation Integrator)
Title : TPH by FLPRO
Last Update : Thu Nov 11 17:59:07 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 45.760 | -14.4 | 115 | 0.00 | 7.03- 7.23 |
| 2 H | TPH (C8-C40) | 1360.000 | 1575.048 | -15.8 | 123 | 0.00 | 3.05-13.48 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
ZF37430.D FLPRO.M Sat Nov 13 11:54:13 2010

5.6.34 5

# Semivolatile Surrogate Recovery Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Method: FLORIDA-PRO Matrix: SO

Samples and QC shown here apply to the above method



| Lab Sample ID | Lab File ID | S1 [a] |
|---|---|---|
| F77741-1 | IJ71378.D | 108.0 |
| F77741-2 | IJ71242.D | 81.0 |
| F77741-3 | IJ71243.D | 90.0 |
| F77741-4 | IJ71244.D | 82.0 |
| F77741-5 | IJ71245.D | 98.0 |
| F77741-6 | IJ71379.D | 96.0 |
| F77741-7 | IJ71247.D | 86.0 |
| F77741-8 | IJ71254.D | 82.0 |
| F77741-9 | ZF37482.D | 85.0 |
| F77741-10 | IJ71355.D | 82.0 |
| F77741-11 | IJ71356.D | 81.0 |
| F77741-12 | IJ71357.D | 88.0 |
| F77741-13 | IJ71358.D | 90.0 |
| F77741-14 | IJ71359.D | 89.0 |
| F77741-15 | IJ71360.D | 91.0 |
| F77741-16 | IJ71363.D | 81.0 |
| F77741-17 | IJ71364.D | 92.0 |
| F77741-18 | LL33989.D | 81.0 |
| F77741-19 | LL33990.D | 96.0 |
| F77741-20 | LL33991.D | 93.0 |
| F77741-21 | IJ71502.D | 67.0 |
| F77741-22 | IJ71572.D | 105.0 |
| OP34944-BS | IJ71226.D | 91.0 |
| OP34944-MB | IJ71227.D | 88.0 |
| OP34944-MB | IJ71370.D | 89.0 |
| OP34944-MB | ZF37486.D | 95.0 |
| OP34944-MS | IJ71229.D | 83.0 |
| OP34944-MSD | IJ71230.D | 85.0 |
| OP34966-BS | IJ71262.D | 91.0 |
| OP34966-BS | IJ71339.D | 91.0 |
| OP34966-MB | IJ71263.D | 89.0 |
| OP34966-MB | IJ71340.D | 86.0 |
| OP34966-MB | ZF37481.D | 99.0 |
| OP34966-MS | IJ71352.D | 86.0 |
| OP34966-MSD | IJ71353.D | 80.0 |
| OP35004-BS | LL33963.D | 99.0 |
| OP35004-MB | LL33964.D | 90.0 |
| OP35004-MB | LL34010.D | 78.0 |
| OP35004-MS | LL33970.D | 112.0* |
| OP35004-MSD | LL33971.D | 99.0 |

# Semivolatile Surrogate Recovery Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Method: FLORIDA-PRO | Matrix: SO |
|---|---|

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 [a] |
|---|---|---|
| OP35012-BS | IJ71486.D | 77.0 |
| OP35012-MB | IJ71487.D | 84.0 |
| OP35012-MB | IJ71563.D | 95.0 |
| OP35012-MS | IJ71503.D | 80.0 |
| OP35012-MSD | IJ71504.D | 87.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = o-Terphenyl | 47-111% |

(a) Recovery from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2319-CC2307 | Injection Date: | 11/10/10 |
| Lab File ID: | IJ71225.D | Injection Time: | 00:28 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP34944-BS | IJ71226.D | 11/10/10 | 00:47 | 5.34 |
| OP34944-MB | IJ71227.D | 11/10/10 | 01:07 | 5.34 |
| F77723-3 | IJ71228.D | 11/10/10 | 01:27 | 5.34 |
| OP34944-MS | IJ71229.D | 11/10/10 | 01:47 | 5.34 |
| OP34944-MSD | IJ71230.D | 11/10/10 | 02:07 | 5.34 |
| ZZZZZZ | IJ71232.D | 11/10/10 | 02:47 | 5.34 |
| ZZZZZZ | IJ71233.D | 11/10/10 | 03:07 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2319-CC2307 | Injection Date: | 11/10/10 |
| Lab File ID: | IJ71236.D | Injection Time: | 04:06 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71240.D | 11/10/10 | 05:26 | 5.34 |
| F77741-2 | IJ71242.D | 11/10/10 | 06:06 | 5.34 |
| F77741-3 | IJ71243.D | 11/10/10 | 06:26 | 5.34 |
| F77741-4 | IJ71244.D | 11/10/10 | 06:46 | 5.34 |
| F77741-5 | IJ71245.D | 11/10/10 | 07:06 | 5.34 |
| F77741-7 | IJ71247.D | 11/10/10 | 07:46 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2319-CC2307 | Injection Date: | 11/10/10 |
| Lab File ID: | IJ71248.D | Injection Time: | 08:20 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71251.D | 11/10/10 | 09:20 | 5.34 |
| ZZZZZZ | IJ71253.D | 11/10/10 | 10:00 | 5.34 |
| F77741-8 | IJ71254.D | 11/10/10 | 10:20 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2319-CC2307 | Injection Date: | 11/10/10 |
| Lab File ID: | IJ71255.D | Injection Time: | 10:40 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71258.D | 11/10/10 | 12:23 | 5.34 |
| ZZZZZZ | IJ71259.D | 11/10/10 | 12:43 | 5.34 |
| F77745-8 | IJ71260.D | 11/10/10 | 13:03 | 5.34 |
| OP34966-BS | IJ71262.D | 11/10/10 | 13:50 | 5.34 |
| OP34966-MB | IJ71263.D | 11/10/10 | 14:11 | 5.34 |
| F77801-3 | IJ71264.D | 11/10/10 | 14:31 | 5.34 |
| ZZZZZZ | IJ71265.D | 11/10/10 | 14:52 | 5.34 |
| GIJ2319-ECC2307 | IJ71268.D | 11/10/10 | 15:53 | 5.35 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2321-ICC2321 | Injection Date: | 11/11/10 |
| Lab File ID: | IJ71333.D | Injection Time: | 17:29 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.35 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP34966-BS | IJ71339.D | 11/11/10 | 19:29 | 5.35 |
| OP34966-MB | IJ71340.D | 11/11/10 | 19:49 | 5.35 |
| ZZZZZZ | IJ71341.D | 11/11/10 | 20:09 | 5.35 |
| ZZZZZZ | IJ71342.D | 11/11/10 | 20:29 | 0.00 |
| ZZZZZZ | IJ71343.D | 11/11/10 | 20:49 | 0.00 |
| ZZZZZZ | IJ71344.D | 11/11/10 | 21:09 | 5.34 |
| ZZZZZZ | IJ71345.D | 11/11/10 | 21:29 | 5.34 |
| ZZZZZZ | IJ71346.D | 11/11/10 | 21:49 | 5.35 |
| ZZZZZZ | IJ71347.D | 11/11/10 | 22:09 | 5.35 |
| ZZZZZZ | IJ71348.D | 11/11/10 | 22:28 | 5.35 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2321-CC2321 | Injection Date: | 11/11/10 |
| Lab File ID: | IJ71349.D | Injection Time: | 22:48 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71351.D | 11/11/10 | 23:28 | 5.35 |
| OP34966-MS | IJ71352.D | 11/11/10 | 23:48 | 5.35 |
| OP34966-MSD | IJ71353.D | 11/12/10 | 00:08 | 5.34 |
| F77741-10 | IJ71355.D | 11/12/10 | 00:48 | 5.34 |
| F77741-11 | IJ71356.D | 11/12/10 | 01:08 | 5.34 |
| F77741-12 | IJ71357.D | 11/12/10 | 01:28 | 5.34 |
| F77741-13 | IJ71358.D | 11/12/10 | 01:47 | 5.34 |
| F77741-14 | IJ71359.D | 11/12/10 | 02:07 | 5.34 |
| F77741-15 | IJ71360.D | 11/12/10 | 02:27 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2321-CC2321 | Injection Date: | 11/12/10 |
| Lab File ID: | IJ71361.D | Injection Time: | 02:47 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77741-16 | IJ71363.D | 11/12/10 | 03:27 | 5.34 |
| F77741-17 | IJ71364.D | 11/12/10 | 03:47 | 5.34 |
| OP34939-MB | IJ71365.D | 11/12/10 | 04:06 | 5.34 |
| OP34939-MS | IJ71366.D | 11/12/10 | 04:26 | 5.34 |
| OP34939-MSD | IJ71367.D | 11/12/10 | 04:46 | 5.34 |
| ZZZZZZ | IJ71368.D | 11/12/10 | 05:06 | 5.34 |
| ZZZZZZ | IJ71369.D | 11/12/10 | 05:26 | 5.34 |
| OP34944-MB | IJ71370.D | 11/12/10 | 05:46 | 5.34 |
| ZZZZZZ | IJ71371.D | 11/12/10 | 06:06 | 5.34 |
| ZZZZZZ | IJ71372.D | 11/12/10 | 06:26 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2321-CC2321 | Injection Date: | 11/12/10 |
| Lab File ID: | IJ71373.D | Injection Time: | 06:45 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71376.D | 11/12/10 | 07:45 | 5.34 |
| ZZZZZZ | IJ71377.D | 11/12/10 | 08:05 | 5.34 |
| F77741-1 | IJ71378.D | 11/12/10 | 08:25 | 5.34 |
| F77741-6 | IJ71379.D | 11/12/10 | 08:46 | 5.34 |
| ZZZZZZ | IJ71380.D | 11/12/10 | 09:05 | 5.34 |
| GIJ2321-ECC2321 | IJ71381.D | 11/12/10 | 09:26 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2323-CC2321 | Injection Date: | 11/14/10 |
| Lab File ID: | IJ71481.D | Injection Time: | 01:31 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71483.D | 11/14/10 | 02:10 | 5.34 |
| ZZZZZZ | IJ71484.D | 11/14/10 | 02:30 | 5.33 |
| ZZZZZZ | IJ71485.D | 11/14/10 | 02:50 | 5.34 |
| OP35012-BS | IJ71486.D | 11/14/10 | 03:10 | 5.34 |
| OP35012-MB | IJ71487.D | 11/14/10 | 03:30 | 5.34 |
| ZZZZZZ | IJ71489.D | 11/14/10 | 04:10 | 5.34 |
| ZZZZZZ | IJ71492.D | 11/14/10 | 05:10 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2323-CC2321 | Injection Date: | 11/14/10 |
| Lab File ID: | IJ71493.D | Injection Time: | 05:29 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | IJ71500.D | 11/14/10 | 07:49 | 5.34 |
| ZZZZZZ | IJ71501.D | 11/14/10 | 08:09 | 5.34 |
| F77741-21 | IJ71502.D | 11/14/10 | 08:29 | 5.34 |
| OP35012-MS | IJ71503.D | 11/14/10 | 08:49 | 5.34 |
| OP35012-MSD | IJ71504.D | 11/14/10 | 09:09 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GIJ2324-CC2321 | Injection Date: | 11/16/10 |
| Lab File ID: | IJ71562.D | Injection Time: | 02:58 |
| Instrument ID: | GCIJ | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.34 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP35012-MB | IJ71563.D | 11/16/10 | 03:18 | 5.34 |
| ZZZZZZ | IJ71564.D | 11/16/10 | 03:38 | 5.34 |
| ZZZZZZ | IJ71565.D | 11/16/10 | 03:59 | 5.34 |
| ZZZZZZ | IJ71566.D | 11/16/10 | 04:19 | 5.34 |
| ZZZZZZ | IJ71567.D | 11/16/10 | 04:39 | 5.34 |
| ZZZZZZ | IJ71568.D | 11/16/10 | 04:59 | 5.34 |
| ZZZZZZ | IJ71569.D | 11/16/10 | 05:19 | 5.34 |
| ZZZZZZ | IJ71570.D | 11/16/10 | 05:38 | 5.34 |
| ZZZZZZ | IJ71571.D | 11/16/10 | 05:59 | 5.34 |
| F77741-22 | IJ71572.D | 11/16/10 | 06:18 | 5.34 |
| GIJ2324-ECC2321 | IJ71573.D | 11/16/10 | 06:38 | 5.34 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1275-CC1273 | Injection Date: | 11/15/10 |
| Lab File ID: | LL33961.D | Injection Time: | 12:12 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |

| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP35004-BS | LL33963.D | 11/15/10 | 12:58 | 5.76 |
| OP35004-MB | LL33964.D | 11/15/10 | 13:21 | 5.76 |
| F77803-13 | LL33965.D | 11/15/10 | 13:44 | 5.76 |
| ZZZZZZ | LL33967.D | 11/15/10 | 14:30 | 5.76 |
| ZZZZZZ | LL33968.D | 11/15/10 | 14:53 | 5.76 |
| F77914-1 | LL33969.D | 11/15/10 | 15:16 | 5.76 |
| OP35004-MS | LL33970.D | 11/15/10 | 15:39 | 5.76 |
| OP35004-MSD | LL33971.D | 11/15/10 | 16:02 | 5.76 |
| ZZZZZZ | LL33972.D | 11/15/10 | 16:25 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1275-CC1273 | Injection Date: | 11/15/10 |
| Lab File ID: | LL33985.D | Injection Time: | 21:21 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | LL33987.D | 11/15/10 | 22:06 | 5.76 |
| ZZZZZZ | LL33988.D | 11/15/10 | 22:29 | 5.76 |
| F77741-18 | LL33989.D | 11/15/10 | 22:51 | 5.76 |
| F77741-19 | LL33990.D | 11/15/10 | 23:14 | 5.76 |
| F77741-20 | LL33991.D | 11/15/10 | 23:37 | 5.76 |
| OP35025-BS | LL33992.D | 11/16/10 | 00:00 | 5.76 |
| OP35025-MB | LL33993.D | 11/16/10 | 00:22 | 5.76 |
| ZZZZZZ | LL33994.D | 11/16/10 | 00:45 | 5.76 |
| ZZZZZZ | LL33995.D | 11/16/10 | 01:08 | 5.76 |
| ZZZZZZ | LL33996.D | 11/16/10 | 01:31 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1276-CC1273 | Injection Date: | 11/16/10 |
| Lab File ID: | LL34005.D | Injection Time: | 10:10 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP35025-BS | LL34008.D | 11/16/10 | 11:18 | 5.76 |
| OP35025-MB | LL34009.D | 11/16/10 | 11:41 | 5.76 |
| OP35004-MB | LL34010.D | 11/16/10 | 12:04 | 5.76 |
| ZZZZZZ | LL34011.D | 11/16/10 | 12:26 | 0.00 |
| ZZZZZZ | LL34013.D | 11/16/10 | 13:12 | 5.76 |
| ZZZZZZ | LL34014.D | 11/16/10 | 13:35 | 5.76 |
| F77902-5 | LL34015.D | 11/16/10 | 13:58 | 5.76 |
| OP35025-MS | LL34016.D | 11/16/10 | 14:21 | 5.76 |
| OP35025-MSD | LL34017.D | 11/16/10 | 14:44 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GZF1572-CC1572 | Injection Date: | 11/12/10 |
| Lab File ID: | ZF37473.D | Injection Time: | 10:13 |
| Instrument ID: | GCZF | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 7.13 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | ZF37475.D | 11/12/10 | 11:05 | 7.13 |
| OP34864-BS | ZF37476.D | 11/12/10 | 11:41 | 7.13 |
| OP34864-MB | ZF37477.D | 11/12/10 | 12:21 | 7.13 |
| ZZZZZZ | ZF37479.D | 11/12/10 | 13:13 | 7.13 |
| ZZZZZZ | ZF37480.D | 11/12/10 | 13:39 | 7.13 |
| OP34966-MB | ZF37481.D | 11/12/10 | 14:06 | 7.13 |
| F77741-9 | ZF37482.D | 11/12/10 | 14:40 | 7.13 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GZF1572-CC1572 | Injection Date: | 11/12/10 |
| Lab File ID: | ZF37485.D | Injection Time: | 15:59 |
| Instrument ID: | GCZF | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 7.13 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP34944-MB | ZF37486.D | 11/12/10 | 16:26 | 7.13 |
| ZZZZZZ | ZF37487.D | 11/12/10 | 16:52 | 7.13 |
| ZZZZZZ | ZF37488.D | 11/12/10 | 17:19 | 0.00 |
| GZF1572-ECC157 | ZF37489.D | 11/12/10 | 17:46 | 7.13 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34944-MS | IJ71229.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| OP34944-MSD | IJ71230.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |
| F77723-3 | IJ71228.D | 1 | 11/10/10 | FEA | 11/05/10 | OP34944 | GIJ2319 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-1, F77741-2, F77741-3, F77741-4, F77741-5, F77741-6, F77741-7, F77741-8

| CAS No. | Compound | F77723-3 mg/kg | Q | Spike mg/kg | MS mg/kg | MS % | MSD mg/kg | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 9.9 | U | 32.6 | 23.2 | 71 | 24.1 | 73 | 4 | 53-107/35 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77723-3 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 83% | 85% | 79% | 47-111% |

Raw Data: IJ71352.D IJ71353.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34966-MS | IJ71352.D | 1 | 11/11/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| OP34966-MSD | IJ71353.D | 1 | 11/12/10 | FEA | 11/09/10 | OP34966 | GIJ2321 |
| F77801-3 | IJ71264.D | 1 | 11/10/10 | FEA | 11/09/10 | OP34966 | GIJ2319 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-9, F77741-10, F77741-11, F77741-12, F77741-13, F77741-14, F77741-15, F77741-16, F77741-17

| CAS No. | Compound | F77801-3 mg/kg | Q | Spike mg/kg | MS mg/kg | MS % | MSD mg/kg | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 10 U | | 33.6 | 27.3 | 81 | 25.7 | 75 | 6 | 53-107/35 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77801-3 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 86% | 80% | 77% | 47-111% |

Raw Data: IJ71503.D IJ71504.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35012-MS | IJ71503.D | 1 | 11/14/10 | FEA | 11/11/10 | OP35012 | GIJ2323 |
| OP35012-MSD | IJ71504.D | 1 | 11/14/10 | FEA | 11/11/10 | OP35012 | GIJ2323 |
| F77741-21 | IJ71502.D | 1 | 11/14/10 | FEA | 11/11/10 | OP35012 | GIJ2323 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-21, F77741-22

| CAS No. | Compound | F77741-21 mg/kg | Q | Spike mg/kg | MS mg/kg | MS % | MSD mg/kg | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 9.2 | U | 31.5 | 26.1 | 83 | 27.9 | 88 | 7 | 53-107/35 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77741-21 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 80% | 87% | 67% | 47-111% |

Raw Data: LL33970.D LL33971.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77741
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35004-MS | LL33970.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |
| OP35004-MSD | LL33971.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |
| F77914-1 | LL33969.D | 1 | 11/15/10 | MV | 11/11/10 | OP35004 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77741-18, F77741-19, F77741-20

| CAS No. | Compound | F77914-1 mg/kg | Q | Spike mg/kg | MS mg/kg | MS % | MSD mg/kg | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 7.50 | I | 29.5 | 35.4 | 95 | 30.5 | 78 | 15 | 53-107/35 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77914-1 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 112%* | 99% | 100% | 47-111% |

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

| | | | |
|---|---|---|---|
| **TO:** | **S. STOTLER-HARDY** | **DATE:** | **JANUARY 14, 2011** |
| **FROM:** | **A. COGNETTI** | **COPIES:** | **DV FILE** |

**SUBJECT:** **ORGANIC DATA VALIDATION- TRPH**
**CTO JM16, NAS KEY WEST**
**SAMPLE DELIVERY GROUP (SDG) – F77846**

**SAMPLES:** 6/Aqueous/TRPH

| | | |
|---|---|---|
| G01-MW-01-1010 | G01-MW-02-1010 | G01-MW-04-1010 |
| G01-MW-06-1010 | G01-MW-09-1010 | G01-MW-10-1010 |

OVERVIEW

The sample set for NAS KEY WEST, CTO JM16, SDG F77846 consists of six (6) aqueous environmental samples analyzed for total recoverable petroleum hydrocarbons (TRPH). There are no field duplicate pairs associated with this SDG.

The samples were collected by TetraTech on November 4 and 5, 2010 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using FL-PRO for TRPH analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • Initial/continuing calibrations
* • Laboratory method blank results
* • Blank Spike
* • Matrix Spike/Matrix Spike Duplicate
* • Surrogate Recoveries
* • Detection limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Notes:

Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** None.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti
Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01-1010 | | | G01-MW-02-1010 | | | G01-MW-04-1010 | | | G01-MW-06-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77886 | LAB_ID | F77886-4 | | | F77886-5 | | | F77886-6 | | | F77886-1 | | |
| FRACTION: PET | SAMP_DATE | 11/5/2010 | | | 11/5/2010 | | | 11/5/2010 | | | 11/4/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.495 | | | 0.14 | U | | 1.75 | | | 1.42 | | |

| PROJ_NO: 02607<br>SDG: F77886<br>FRACTION: PET<br>MEDIA: WATER | NSAMPLE | G01-MW-09-1010 | | | G01-MW-10-1010 | | |
|---|---|---|---|---|---|---|---|
| | LAB_ID | F77886-2 | | | F77886-3 | | |
| | SAMP_DATE | 11/4/2010 | | | 11/4/2010 | | |
| | QC_TYPE | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 2.79 | | | 0.964 | | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-01-1010 | | |
| Lab Sample ID: | F77886-4 | Date Sampled: | 11/05/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/06/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34029.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.495 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 101% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-02-1010 | | |
| Lab Sample ID: | F77886-5 | Date Sampled: | 11/05/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/06/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34032.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.14 U | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 89% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-04-1010 | | |
| Lab Sample ID: | F77886-6 | Date Sampled: | 11/05/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/06/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34033.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 1.75 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 103% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-06-1010 | | |
| Lab Sample ID: | F77886-1 | Date Sampled: | 11/04/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/06/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL33917.D | 1 | 11/13/10 | MV | 11/10/10 | OP34992 | GLL1273 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 1.42 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 97% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-09-1010 | | |
| Lab Sample ID: | F77886-2 | Date Sampled: | 11/04/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/06/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL33918.D | 1 | 11/13/10 | MV | 11/10/10 | OP34992 | GLL1273 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1040 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 2.79 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 81% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: LL33919.D

Accutest Laboratories

# Report of Analysis



3.3

| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-10-1010 | | |
| Lab Sample ID: | F77886-3 | Date Sampled: | 11/04/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/06/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL33919.D | 1 | 11/13/10 | MV | 11/10/10 | OP34992 | GLL1273 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.964 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 81% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# APPENDIX C

## SUPPORT DOCUMENTATION

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Centauri Labs **Job** F77886

**Site:** NAS Key West, Key West, FL **Report Date:** 11/18/2010 9:20:49 AM

6 Samples were collected on 11/04/2010 and 11/05/2010 and were received at Accutest SE on 11/06/2010 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of F77886. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Extractables by GC by Method FLORIDA-PRO

**Matrix:** AQ **Batch ID:** OP34992

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77799-6MS, F77799-6MSD were used as the QC samples indicated.

**Matrix:** AQ **Batch ID:** OP35025

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77902-5MS, F77902-5MSD were used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Date: November 18, 2010

Ellen Pampel, Inorganic QA (signature on file)

Thursday, November 18, 2010

F77886

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-11

| Project No: | Facility: | Project Manager: | Carrier: | Laboratory Name: |
|---|---|---|---|---|
| **112G02607** | **KEY WEST NAS** | **Shauna Stotler-Hardy** | **Federal Express** | **Accutest Laboratories SE<br>4405 Vineland Road C15<br>Orlando, FL 32811-7363** |
| Task No: | Turn Around Time: | Field Ops Leader: | Carrier/Waybill No. | Point of Contact: |
| **JM16** | **Standard** | **Gary Braganza** | | **Heather Wandry<br>407-425-6700** |

| | Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11/04/2010 | G01-MW-06-1010 | 13:45 | FL PRO | G01-MW-06 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 2 | 11/04/2010 | G01-MW-09-1010 | 12:25 | FL PRO | G01-MW-09 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 3 | 11/04/2010 | G01-MW-10-1010 | 11:10 | FL PRO | G01-MW-10 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 4 | 11/05/2010 | G01-MW-01-1010 | 11:40 | FL PRO | G01-MW-01 | GW | TRPH | 4°C | 1 | Glass - Amber | 1L | |
| 5 | 11/05/2010 | G01-MW-02-1010 | 10:35 | FL PRO | G01-MW-02 | GW | TRPH | 4°C | 1 | Glass - Amber | 1L | |
| 6 | 11/05/2010 | G01-MW-04-1010 | 09:28 | FL PRO | G01-MW-04 | GW | TRPH | 4°C | 1 | Glass - Amber | 1L | |

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By: **Gary Braganza** | Date: 11/05/2010 | Time: 13:21 | Received By: **Federal Express** | Date: 11/05/2010 | Time: 15:21 |
| 2. Relinquished By: FX | Date: | Time: | Received By: J.Cowell (ACSE) | Date: 11-6-10 | Time: 09:30 |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

Comments: 3.8

http://www.terragena.com/customer/ttnus/fieldforms.nsf/103a8b9cbce17b228525705d0071b21c?OpenForm&ParentUNID=AA... 11/5/2010

4.1
4

**F77886: Chain of Custody**
**Page 1 of 2**

# ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F77886 CLIENT: TETRATECH PROJECT: 112 60 9607

DATE/TIME RECEIVED: 11-6-10 10:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8731 0541 9536

## COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

## TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

## MISC. INFORMATION

NUMBER OF ENCORES ?

NUMBER OF 5035 FIELD KITS ? ____

NUMBER OR LAB FILTERED METALS ? ____

## TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR -0.2
- [ ] OBSERVED TEMPS: 4.0
- [ ] CORRECTED TEMPS: 3.8

## SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE 11-6-10 REVIEWER SIGNATURE/DATE 11/06/10

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1 4

**F77886: Chain of Custody**
**Page 2 of 2**

Accutest Laboratories

# Sample Summary

Centauri Labs

Job No: F77886

NAS Key West, Key West, FL
Project No: 112G02607

| Sample Number | Collected Date | Time | By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|---|
| F77886-1 | 11/04/10 | 13:45 | GB | 11/06/10 | AQ | Ground Water | G01-MW-06-1010 |
| F77886-2 | 11/04/10 | 12:25 | GB | 11/06/10 | AQ | Ground Water | G01-MW-09-1010 |
| F77886-3 | 11/04/10 | 11:10 | GB | 11/06/10 | AQ | Ground Water | G01-MW-10-1010 |
| F77886-4 | 11/05/10 | 11:40 | GB | 11/06/10 | AQ | Ground Water | G01-MW-01-1010 |
| F77886-5 | 11/05/10 | 10:35 | GB | 11/06/10 | AQ | Ground Water | G01-MW-02-1010 |
| F77886-6 | 11/05/10 | 09:28 | GB | 11/06/10 | AQ | Ground Water | G01-MW-04-1010 |

HOLDTIME

**SDG** F77886

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | MG/L | G01-MW-10-1010 | F77886-3 | NM | 11/04/2010 | 11/10/2010 | 11/13/2010 | 6 | 3 | 9 |
| TPH | MG/L | G01-MW-09-1010 | F77886-2 | NM | 11/04/2010 | 11/10/2010 | 11/13/2010 | 6 | 3 | 9 |
| TPH | MG/L | G01-MW-06-1010 | F77886-1 | NM | 11/04/2010 | 11/10/2010 | 11/13/2010 | 6 | 3 | 9 |
| TPH | MG/L | G01-MW-04-1010 | F77886-6 | NM | 11/05/2010 | 11/12/2010 | 11/16/2010 | 7 | 4 | 11 |
| TPH | MG/L | G01-MW-02-1010 | F77886-5 | NM | 11/05/2010 | 11/12/2010 | 11/16/2010 | 7 | 4 | 11 |
| TPH | MG/L | G01-MW-01-1010 | F77886-4 | NM | 11/05/2010 | 11/12/2010 | 11/16/2010 | 7 | 4 | 11 |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/12/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11/12/10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M.Walls |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 5078324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33866 | 1 | Blank | FL-PRO | J27503 | 1X | | BDL |
| LL 67 | 2 | ic1273-255 | | 53709 | 75:1000 | | Curve Pass |
| LL 68 | 3 | -340 | | | 10X | | |
| LL 69 | 4 | -680 | | | 5X | | |
| LL 70 | 5 | icc1273-1360 | | | 2:5 | | |
| LL 71 | 6 | ic1273-2040 | | | 3:5 | | |
| LL 72 | 7 | -2720 | | | 4:5 | | |
| LL 73 | 8 | -3400 | | | 1X | | |
| LL 74 | 9 | icv1273-1360 | | | 2:5 | | PASS |
| LL 75 | 10 | ccb | | J27503 | 1X | | BDL |
| LL 76 | 11 | op34950-bs | | 34950 | 1X | | ✓ |
| LL 77 | 12 | -mb | | | 1X | | BDL |
| LL 78 | 13 | F77803-2 | | | 1X | | BDL |
| LL 79 | 14 | -3 | | | 20X | | ✓ |
| LL 80 | 15 | -4 | | | 10X | | RR 100X |
| LL 81 | 16 | -5 | | | 1X | PDB | ✓ |
| LL 82 | 17 | -6 | | | 1X | PDB | ✓ |
| LL 83 | 18 | -10 | | | 10X | | RR 1X |
| LL 84 | 19 | -11 | | | 10X | PDB | ✓ |
| LL 85 | 20 | -12 | | | 1X | | RR 20X |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M.Walls

# Initial Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-ICC1273
Lab FileID: LL33870.D

Response Factor Report FID 4

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Initial Calibration

Calibration Files
255 =LL33867.D 340 =LL33868.D 680 =LL33869.D 1360=LL33870.D
2040=LL33871.D 2720=LL33872.D 3400=LL33873.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 1.241 | 1.274 | 1.270 | 1.316 | 1.313 | 1.296 | 1.345 | 1.294 E6 | 2.69 |
| 2)H TPH (C8-C40) | 1.304 | 1.291 | 1.216 | 1.229 | 1.225 | 1.194 | 1.226 | 1.241 E6 | 3.28 |

(#) = Out of Range

FL_PRO_F.M Mon Nov 15 11:51:19 2010

5.6.1 5

# Initial Calibration Verification



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-ICV1273
Lab FileID: LL33874.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1112FLPRO\LL33874.D Vial: 9
Acq On : 12 Nov 2010 10:52 am Operator: marthav
Sample : icv1273-1360 Inst : FID 4
Misc : OP34950,GLL1273,30.0,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 H | TPH (C8-C40) | 1360.000 | 1445.169 | -6.3 | 107 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 15:14:42 2010

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F M |
| CALIB. DATE: | 11/12/10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M-Walls |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 5078132 4/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33886 | 21 | cc1273-1360 | | 53709 | 2.5 | | pass |
| LL 87 | 22 | ccb | | J27503 | 1X | | BDL |
| LL 88 | 23 | F77803-13 | | 34950 | 1X | | Vial empty (Not enough RR 20X |
| LL 89 | 24 | op34950-ms | | | | | RR 20X |
| LL 90 | 25 | ↓ -msd | | | | | RR 20X |
| LL 91 | 26 | F77803-14 | | | | | RR 20X |
| LL 92 | 27 | -16 | | | 5X | | RR 1X |
| LL 93 | 28 | -17 | | | 1X | PDB | ✓ |
| LL 94 | 29 | -18 | | | 5X | PDB | ✓ |
| LL 95 | 30 | -19 | | | 4X | PDB | ✓ |
| LL 96 | 31 | -20 | | | 1X | PDB | ✓ |
| LL 97 | 32 | -21 | | | 10X | | RR 4X |
| LL 98 | 33 | cc1273-1360 | | 53709 | 2.5 | | pass |
| LL 99 | 34 | ccb | | J27503 | 1X | | BDL |
| LL 33900 | 35 | F77803-23 | | 34950 | 20X | | ✓ |
| LL 01 | 36 | -24 | | | 10X | | RR 100X |
| LL 02 | 37 | -25 | | | 1X | | RR 1X to verify carry over |
| LL 03 | 38 | -26 | | | | | RR 1X carry over |
| LL 04 | 39 | op34992-bs | | 34992 | 1 | | ✓ |
| LL 05 | 40 | ↓ -mb | ↓ | ↓ | ↓ | | mx 11/13/10 ✓ BDL |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M-Walls

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-CC1273
Lab FileID: LL33898.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1112FLPRO\LL33898.D Vial: 33
Acq On : 11-12-10 07:56:54 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP34950,GLL1273,30.3,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 39.254 | 1.9 | 96 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1332.068 | 2.1 | 99 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 11:50:51 2010

5.6.3

5

# Blank Spike Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34992-BS | LL33904.D | 1 | 11/12/10 | MV | 11/10/10 | OP34992 | GLL1273 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-1, F77886-2, F77886-3

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.655 | 77 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 77% | 38-122% |

Raw Data: LL33905.D

# Method Blank Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34992-MB | LL33905.D | 1 | 11/12/10 | MV | 11/10/10 | OP34992 | GLL1273 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-1, F77886-2, F77886-3

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 86% | 38-122% |

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M. Walter |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 5078/1324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 339006 | 41 | F77762-3 | | 34992 | 1X | | ✓ |
| LL 07 | 42 | -4 | | | | | BDL |
| LL 08 | 43 | -11 | | | | | ✓ |
| LL 09 | 44 | -14 | | | 10X | | RR 5CX |
| LL 10 | 45 | CC1273-136 | | 53709 | 2.5 | | PASS |
| LL 11 | 46 | ccb | | J27503 | 1X | | BDL |
| LL 12 | 47 | F77803-7 | | 34992 | | | ✓ |
| LL 13 | 48 | -22 | | | | | ✓ |
| LL 14 | 49 | F77799-5 | | | | | ✓ |
| LL 15 | 50 | 8 | | | | | ✓ |
| LL 16 | 51 | F77796-4 | | | | | ✓ |
| LL 17 | 52 | F77886-1 | | | | PDB | ✓ |
| LL 18 | 53 | -2 | | | | PDB | ✓ |
| LL 19 | 54 | -3 | | | | PDB | ✓ |
| LL 20 | 55 | F77807-1 | | | | | ✓ |
| LL 21 | 56 | 2 | | | | PDB | ✓ |
| LL 22 | 57 | CC1273-136 | | 53709 | 2.5 | | PASS |
| LL 23 | 58 | ccb | | J27503 | 1X | | BDL |
| LL 24 | 59 | F77809-1 | | 34992 | | | BDL |
| LL 25 | 60 | -2 | | | | | BDL |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-CC1273
Lab FileID: LL33910.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1112FLPRO\LL33910.D Vial: 45
Acq On : 13 Nov 2010 12:27 am Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP34992,GLL1273,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 33.294 | 16.8 | 82 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1164.220 | 14.4 | 86 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 11:50:52 2010

5.6.4

5

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-CC1273
Lab FileID: LL33922.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1112FLPRO\LL33922.D Vial: 57
Acq On : 11-13-10 04:59:42 AM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP34992,GLL1273,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 34.017 | 15.0 | 84 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1167.257 | 14.2 | 87 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 11:50:53 2010

5.6.5

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | H-Walls |
| MECL2 LOT #: | J275c3 |
| SIGNAL 1 SURR. AREA/CONC: | 5D781324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 339260 | 61 | F77809-3 | FL-PRO | 34992 | 1X | PDB | ✓ |
| LL 27 | 62 | ↓ -4 | ↓ | ↓ | ↓ | PDB | BDL |
| LL 28 | 63 | F77799-6 | | | | | BDL |
| LL 29 | 64 | OP34992-MS | | | | | ✓ |
| LL 30 | 65 | ↓ -MSD | | | | | ✓ |
| LL 31 | 66 | F77799-7 | | ↓ | ↓ | PDB | ✓ |
| LL ↓ 32 | 57 | ECC1273-13CC | ↓ | 53709 | 2.5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | 4.0 | 11-13-10 | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple. PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.



Analyst's Signature: H-Walls

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-ECC1273
Lab FileID: LL33932.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1112FLPRO\LL33932.D Vial: 57
Acq On : 11-13-10 08:46:52 AM Operator: marthav
Sample : ecc1273-1360 Inst : FID 4
Misc : OP34992,GLL1273,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 31.849 | 20.4 | 78 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1075.322 | 20.9 | 80 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 11:50:54 2010

5.6.6

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: ~~11-14-10~~ 11-15-10 | |
| COLUMN TYPE: DB-5 | |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: FID4-LL | |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL1275 |

| | |
|---|---|
| ANALYST: | H. Walls |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 41.097408/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33952 | 1 | CC1273-1360 | FL-PRO | 53709 | 2.5 | | PASS |
| LL 53 | 2 | CC1273-340 | | 53709 | 10X | | PASS |
| LL 54 | 3 | ccb | | J27503 | 1X | | BDL |
| LL 55 | 4 | op34950-mb | | 34950 | ↓ | | BDL |
| LL 56 | 5 | F77803-12 | | | 20X | | ✓ |
| LL 57 | 6 | -14 | | | 20X | | ✓ |
| LL 58 | 7 | -24 | | | 200X | | ✓ |
| LL 59 | 8 | op34992-mb | | 34992 | 1X | | BDL |
| LL 60 | 9 | F77762-14 | | | 5X | | ✓ |
| LL 61 | 10 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL 62 | 11 | ccb | | J27503 | 1X | | BDL |
| LL 63 | 12 | op35004-bs | | 35004 | | | ✓ |
| LL 64 | 13 | -mb | | | | | BDL |
| LL 65 | 14 | F77803-13 | | 34950 | 4X | PDB | ✓ |
| LL 66 | 15 | F77917-1 | | 35004 | 20X | | RR 500X |
| LL 67 | 16 | F77914-2 | | | 1X | | ✓ |
| LL 68 | 17 | -3 | | | | | ✓ |
| LL 69 | 18 | -1 | | | | | ✓ |
| LL 70 | 19 | op35004-ms | | | | PDB | RR to confirm result. |
| LL 71 | 20 | -MSD | | | | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: H. Walls

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1275-CC1273
Lab FileID: LL33952.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33952.D Vial: 1
Acq On : 11-15-10 08:47:17 AM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP34992,GLL1275,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 35.635 | 10.9 | 88 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1160.101 | 14.7 | 86 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 13:42:16 2010

5.6.7

5

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1275-CC1273
Lab FileID: LL33953.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33953.D Vial: 2
Acq On : 11-15-10 09:09:50 AM Operator: marthav
Sample : cc1273-340 Inst : FID 4
Misc : OP34992,GLL1275,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 10.000 | 9.248 | 7.5 | 94 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 340.000 | 338.058 | 0.6 | 96 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33868.D FL_PRO_F.M Mon Nov 15 13:55:01 2010

5.6.8

5

# Method Blank Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34992-MB | LL33959.D | 1 | 11/15/10 | MV | 11/10/10 | OP34992 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-1, F77886-2, F77886-3

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 95% | 38-122% |

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1275-CC1273
Lab FileID: LL33961.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33961.D Vial: 10
Acq On : 15 Nov 2010 12:12 pm Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP34992,GLL1275,1050,,,1,50,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.361 | -5.9 | 104 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1383.415 | -1.7 | 103 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 13:42:17 2010

5.6.9

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1275 |

| | |
|---|---|
| ANALYST: | M. Valle |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33972 | 21 | F77914-4 | FL-PRO | 35004 | 1X | | BDL |
| LL 73 | 22 | CC1273-1300 | | 53709 | 2.5 | | PASS |
| LL 74 | 23 | ccb | | J27503 | 1X | | BDL |
| LL 75 | 24 | F77914-5 | | 35004 | 10X | | RR 1X |
| LL 76 | 25 | ↓ 6 | | | 4X | | RR 1X |
| LL 77 | 26 | F77936-1 | | | 4X | | RR 1X |
| LL 78 | 27 | -2 | | | 1X | | ✓ |
| LL 79 | 28 | -3 | | | | | ✓ |
| LL 80 | 29 | -4 | | | | | ✓ |
| LL 81 | 30 | -5 | | | | | ✓ |
| LL 82 | 31 | -6 | | | | | ✓ |
| LL 83 | 32 | -7 | | | | | ✓ |
| LL 84 | 33 | ↓ -8 | | ↓ | ↓ | | ✓ |
| LL 85 | 34 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL 86 | 23 | ccb | | J27503 | 1X | | BDL |
| LL 87 | 36 | F77936-9 | | 35004 | | | ✓ |
| LL 88 | 37 | -10 | | | | | ✓ |
| LL 89 | 38 | -18 | | | | | BDL |
| LL 90 | 39 | -19 | | | | | ✓ |
| LL ↓ 91 | 40 | ↓ -20 | ↓ | ↓ | ↓ | PDB | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valle

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1275-CC1273
Lab FileID: LL33985.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33985.D Vial: 22
Acq On : 11-15-10 09:21:26 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35004,GLL1275,30.5,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 44.857 | -12.1 | 111 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1449.361 | -6.6 | 107 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Tue Nov 16 12:37:24 2010

5.6.10

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL1275 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 46097908/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33992 | 41 | bp35025-bs | FL-PRO | 35025 | 1X | | ✓ |
| LL 93 | 42 | ↓ -mb | | | | | MU 11-16-10 ~~PP~~ BDL |
| LL 94 | 43 | F77936-11 | | | | | ✓ |
| LL 95 | 44 | -12 | | | | | ✓ |
| LL 96 | 45 | ↓ -13 | | ↓ | ↓ | | ✓ |
| LL 97 | 46 | ccl1273-1360 | | 53709 | 2.5 | | pass |
| LL 98 | 47 | ccb | | J27503 | 1X | | BDL |
| LL ↓ 99 | 48 | F77936-14 | | 35025 | | | ✓ *RR samples |
| LL 34000 | 49 | F77946-7 | | | | | ✓ |
| LL 01 | 50 | -8 | | | | | ✓ |
| LL 02 | 51 | ↓ -9 | | | ↓ | | BDL |
| LL 03 | 52 | F77886-4 | | | 4X | | RR 1X |
| LL ↓ 04 | 53 | ↓ -5 | ↓ | ↓ | 1X | | BDL ↓ |
| LL | | | | | | | *RR samples due to viol. surr |
| LL | | | | | | | We cv present to approve samples |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

M. Valles 11-16-10

M. Valles 11-16-10

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valles

Raw Data: LL33992.D

# Blank Spike Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-BS | LL33992.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-4, F77886-5, F77886-6

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.726 | 85 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | 38-122% |

Raw Data: LL33993.D

# Method Blank Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MB | LL33993.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-4, F77886-5, F77886-6

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 111% | 38-122% |

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1275-CC1273
Lab FileID: LL33997.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33997.D Vial: 46
Acq On : 11-16-10 01:53:44 AM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1275,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.942 | -7.4 | 107 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1405.862 | -3.4 | 104 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Tue Nov 16 12:37:25 2010

5.6.11

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-16-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.m |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL1276 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 4905583/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34005 | 1 | CC1273-1360 | FL-PRO | 53709 | 2.5 | | PASS |
| LL 06 | 2 | CC1273-340 | | ↓ | 10X | | PASS |
| LL 07 | 3 | ccb | | J27503 | 1X | | BDL |
| LL 08 | 4 | op35025-bs | | 35025 | | | ✓ |
| LL 09 | 5 | ↓ -mb | | ↓ | | | BDL |
| LL 10 | 6 | op35004-mb | | 35004 | ↓ | PDB | BDL |
| LL 11 | 7 | F77917-1 | | ↓ | 50X | | ✓ |
| LL 12 | 8 | F77886-6 | | 35025 | 10X | PDB | MV 11-17-10 RR ~~HEX~~ 4X Surr ↑ |
| LL 13 | 9 | F77882-1 | | | 1X | | BDL |
| LL 14 | 10 | F77902-1 | | | | | ✓ |
| LL 15 | 11 | ↓ -5 | | | | PDB | ✓ |
| LL 16 | 12 | op35025-ms | | | | PDB | ✓ |
| LL 17 | 13 | ↓ -msD | | ↓ | ↓ | PDB | ✓ |
| LL 18 | 14 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL 19 | 15 | ccb | | J27503 | 1X | | BDL |
| LL 20 | 16 | F77902-2 | | 35025 | 4X | | RR 1X |
| LL 21 | 17 | -3 | | | 4X | | ✓ |
| LL 22 | 18 | -4 | | | 4X | PDB | ✓ |
| LL 23 | 19 | -6 | | | 4X | | ✓ |
| LL ↓ 24 | 20 | ↓ -7 | ↓ | ↓ | 4X | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34005.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34005.D Vial: 1
Acq On : 16 Nov 2010 10:10 am Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1276,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 40.856 | -2.1 | 101 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1352.947 | 0.5 | 100 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:47 2010

5.6.12 5

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34006.D



Evaluate Continuing Calibration Report

```
Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34006.D        Vial: 2
Acq On    : 16 Nov 2010  10:33 am                    Operator: marthav
Sample    : cc1273-340                               Inst    : FID 4
Misc      : OP35025,GLL1276,1000,,,1,1,water         Multiplr: 1.00
IntFile   : EVENTS.E

Method       : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title        : TPH by FL_PRO
Last Update  : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  25%     Max. Rel. Area : 150%
```

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 10.000 | 9.555 | 4.5 | 98 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 340.000 | 355.223 | -4.5 | 102 | 0.00 | 1.84-10.54 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
LL33298.D  FL_PRO_F.M  Wed Nov 17 13:06:27 2010

# Blank Spike Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-BS | LL34008.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-4, F77886-5, F77886-6

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.745 | 88 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | 38-122% |

Raw Data: LL34009.D

# Method Blank Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MB | LL34009.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |

5.1.4

5

The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-4, F77886-5, F77886-6

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | 38-122% |

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34018.D



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34018.D Vial: 14
Acq On : 11-16-10 03:07:36 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1276,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 43.029 | -7.6 | 107 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1405.713 | -3.4 | 104 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:48 2010

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11·16·10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11·12·10 |
| RUN BATCH: | GLL 1276 |

| | |
|---|---|
| ANALYST: | M·Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 4465583/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34025 | 21 | F77936-14 | FL-PRO | 35025 | 1X | | ✓ |
| LL 26 | 22 | F77946-7 | | | | | ✓ |
| LL 27 | 23 | 8 | | | | | ✓ |
| LL 28 | 24 | 9 | | | | | BDL |
| LL 29 | 25 | F77886-4 | | | | | ✓ |
| LL 30 | 26 | cc1273-1360 | | 53709 | 2:5 | | PASS |
| LL 31 | 27 | ccb | | J27503 | 1X | | BDL |
| LL 32 | 28 | F77886-5 | | 35025 | | | BDL |
| LL 33 | 29 | 6 | | | | PDB | ✓ |
| LL 34 | 31 | F77914-5 | | 35004 | | | ✓ |
| LL 35 | 32 | 6 | | | | | ✓ |
| LL 36 | 33 | F77936-1 | | | | | ✓ |
| LL 37 | 26 | cc1273-1360 | | 53709 | 2:5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | 4.0 | 11.17.10 | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M·Valles

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34030.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34030.D Vial: 26
Acq On : 11-16-10 07:43:48 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1276,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 42.890 | -7.2 | 106 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1392.445 | -2.4 | 103 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:49 2010

5.6.15

5

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-ECC1273
Lab FileID: LL34037.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34037.D Vial: 26
Acq On : 16 Nov 2010 10:24 pm Operator: marthav
Sample : ecc1273-1360 Inst : FID 4
Misc : OP35004,GLL1276,30.4,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 38.222 | 4.4 | 95 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1284.852 | 5.5 | 95 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:50 2010

5.6.16

5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-17-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1277 |

| | |
|---|---|
| ANALYST: | M. Valle |
| MECL2 LOT #: | J37503 |
| SIGNAL 1 SURR. AREA/CONC: | 41643253/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34038 | 1 | CC1273-1360 | FL-PRO | S3539 | 2.5 | | PASS |
| LL 39 | 2 | CC1273-340 | | S3539 | 10X | | PASS |
| LL 40 | 3 | ccb | | J37503 | 1X | | BDL |
| LL 41 | 4 | op35025-mb | | 35025 | 1X | | BDL |
| LL 42 | 5 | F77886-6 | | | 4X | PDB | ✓ |
| LL 43 | 6 | F77902-2 | | | 1X | PDB | ✓ |
| LL 44 | 1 | CC1273-1360 | | S3539 | 2.5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | m.v | 11-17-10 | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valle

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1277-CC1273
Lab FileID: LL34038.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1117FLPRO\LL34038.D Vial: 1
Acq On : 11-17-10 08:58:21 AM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1277,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 33.770 | 15.6 | 84 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1163.537 | 14.4 | 86 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:08:19 2010

5.6.17 5

Raw Data: LL34039.D

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1277-CC1273
Lab FileID: LL34039.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1117FLPRO\LL34039.D Vial: 2
Acq On : 11-17-10 09:20:52 AM Operator: marthav
Sample : cc1273-340 Inst : FID 4
Misc : OP35025,GLL1277,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 10.000 | 9.676 | 3.2 | 99 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 340.000 | 369.830 | -8.8 | 106 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33298.D FL_PRO_F.M Wed Nov 17 13:08:02 2010

5.6.18

5

# Method Blank Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MB | LL34041.D | 1 | 11/17/10 | MV | 11/12/10 | OP35025 | GLL1277 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-4, F77886-5, F77886-6

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 97% | 38-122% |

# Continuing Calibration Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1277-ECC1273
Lab FileID: LL34044.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1117FLPRO\LL34044.D Vial: 1
Acq On : 17 Nov 2010 11:15 am Operator: marthav
Sample : ecc1273-1360 Inst : FID 4
Misc : OP35025,GLL1277,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|
| 1 S | O-TERPHENYL | 40.000 | 39.491 | 1.3 | 98 | 0.00 | 5.72- 5.82 |
| 2 H | TPH (C8-C40) | 1360.000 | 1364.527 | -0.3 | 101 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:08:20 2010

5.6.19

5

Raw Data: LL33929.D LL33930.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP34992-MS | LL33929.D | 1 | 11/13/10 | MV | 11/10/10 | OP34992 | GLL1273 |
| OP34992-MSD | LL33930.D | 1 | 11/13/10 | MV | 11/10/10 | OP34992 | GLL1273 |
| F77799-6 | LL33928.D | 1 | 11/13/10 | MV | 11/10/10 | OP34992 | GLL1273 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-1, F77886-2, F77886-3

| CAS No. | Compound | F77799-6 mg/l | Q | Spike mg/l | MS mg/l | MS % | MSD mg/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.24 | U | 1.63 | 1.19 | 73 | 1.16 | 71 | 3 | 54-110/28 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77799-6 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 78% | 73% | 69% | 38-122% |

Raw Data: LL34016.D LL34017.D

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MS | LL34016.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| OP35025-MSD | LL34017.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| F77902-5 | LL34015.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77886-4, F77886-5, F77886-6

| CAS No. | Compound | F77902-5 mg/l | Q | Spike mg/l | MS mg/l | MS % | MSD mg/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.937 | | 1.63 | 2.35 | 86 | 2.05 | 68 | 14 | 54-110/28 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77902-5 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 93% | 82% | 100% | 38-122% |

# Semivolatile Surrogate Recovery Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Method: FLORIDA-PRO Matrix: AQ

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 [a] |
|---|---|---|
| F77886-1 | LL33917.D | 97.0 |
| F77886-2 | LL33918.D | 81.0 |
| F77886-3 | LL33919.D | 81.0 |
| F77886-4 | LL34029.D | 101.0 |
| F77886-5 | LL34032.D | 89.0 |
| F77886-6 | LL34033.D | 103.0 |
| OP34992-BS | LL33904.D | 77.0 |
| OP34992-MB | LL33905.D | 86.0 |
| OP34992-MB | LL33959.D | 95.0 |
| OP34992-MS | LL33929.D | 78.0 |
| OP34992-MSD | LL33930.D | 73.0 |
| OP35025-BS | LL33992.D | 94.0 |
| OP35025-BS | LL34008.D | 94.0 |
| OP35025-MB | LL33993.D | 111.0 |
| OP35025-MB | LL34009.D | 91.0 |
| OP35025-MB | LL34041.D | 97.0 |
| OP35025-MS | LL34016.D | 93.0 |
| OP35025-MSD | LL34017.D | 82.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = o-Terphenyl | 38-122% |

(a) Recovery from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1273-CC1273 | Injection Date: | 11/12/10 |
| Lab File ID: | LL33898.D | Injection Time: | 19:56 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | LL33900.D | 11/12/10 | 20:41 | 0.00 |
| OP34992-BS | LL33904.D | 11/12/10 | 22:12 | 5.76 |
| OP34992-MB | LL33905.D | 11/12/10 | 22:34 | 5.76 |
| ZZZZZZ | LL33906.D | 11/12/10 | 22:57 | 5.76 |
| ZZZZZZ | LL33907.D | 11/12/10 | 23:19 | 5.76 |
| ZZZZZZ | LL33908.D | 11/12/10 | 23:42 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1273-CC1273 | Injection Date: | 11/13/10 |
| Lab File ID: | LL33910.D | Injection Time: | 00:27 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | LL33912.D | 11/13/10 | 01:12 | 5.76 |
| ZZZZZZ | LL33913.D | 11/13/10 | 01:35 | 5.76 |
| ZZZZZZ | LL33914.D | 11/13/10 | 01:58 | 5.76 |
| ZZZZZZ | LL33915.D | 11/13/10 | 02:20 | 5.76 |
| ZZZZZZ | LL33916.D | 11/13/10 | 02:43 | 5.76 |
| F77886-1 | LL33917.D | 11/13/10 | 03:06 | 5.76 |
| F77886-2 | LL33918.D | 11/13/10 | 03:29 | 5.76 |
| F77886-3 | LL33919.D | 11/13/10 | 03:51 | 5.76 |
| ZZZZZZ | LL33920.D | 11/13/10 | 04:14 | 5.76 |
| ZZZZZZ | LL33921.D | 11/13/10 | 04:37 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1273-CC1273 | Injection Date: | 11/13/10 |
| Lab File ID: | LL33922.D | Injection Time: | 04:59 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | LL33924.D | 11/13/10 | 05:45 | 5.76 |
| ZZZZZZ | LL33925.D | 11/13/10 | 06:07 | 5.76 |
| ZZZZZZ | LL33926.D | 11/13/10 | 06:30 | 5.76 |
| ZZZZZZ | LL33927.D | 11/13/10 | 06:53 | 5.76 |
| F77799-6 | LL33928.D | 11/13/10 | 07:15 | 5.76 |
| OP34992-MS | LL33929.D | 11/13/10 | 07:38 | 5.76 |
| OP34992-MSD | LL33930.D | 11/13/10 | 08:01 | 5.76 |
| ZZZZZZ | LL33931.D | 11/13/10 | 08:24 | 5.76 |
| GLL1273-ECC127 | LL33932.D | 11/13/10 | 08:46 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1275-CC1273 | Injection Date: | 11/15/10 |
| Lab File ID: | LL33952.D | Injection Time: | 08:47 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP34950-MB | LL33955.D | 11/15/10 | 09:55 | 5.76 |
| ZZZZZZ | LL33956.D | 11/15/10 | 10:18 | 0.00 |
| ZZZZZZ | LL33957.D | 11/15/10 | 10:40 | 0.00 |
| ZZZZZZ | LL33958.D | 11/15/10 | 11:03 | 0.00 |
| OP34992-MB | LL33959.D | 11/15/10 | 11:26 | 5.76 |
| ZZZZZZ | LL33960.D | 11/15/10 | 11:49 | 0.00 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1275-CC1273 | Injection Date: | 11/15/10 |
| Lab File ID: | LL33985.D | Injection Time: | 21:21 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | LL33987.D | 11/15/10 | 22:06 | 5.76 |
| ZZZZZZ | LL33988.D | 11/15/10 | 22:29 | 5.76 |
| ZZZZZZ | LL33989.D | 11/15/10 | 22:51 | 5.76 |
| ZZZZZZ | LL33990.D | 11/15/10 | 23:14 | 5.76 |
| ZZZZZZ | LL33991.D | 11/15/10 | 23:37 | 5.76 |
| OP35025-BS | LL33992.D | 11/16/10 | 00:00 | 5.76 |
| OP35025-MB | LL33993.D | 11/16/10 | 00:22 | 5.76 |
| ZZZZZZ | LL33994.D | 11/16/10 | 00:45 | 5.76 |
| ZZZZZZ | LL33995.D | 11/16/10 | 01:08 | 5.76 |
| ZZZZZZ | LL33996.D | 11/16/10 | 01:31 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1276-CC1273 | Injection Date: | 11/16/10 |
| Lab File ID: | LL34005.D | Injection Time: | 10:10 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP35025-BS | LL34008.D | 11/16/10 | 11:18 | 5.76 |
| OP35025-MB | LL34009.D | 11/16/10 | 11:41 | 5.76 |
| OP35004-MB | LL34010.D | 11/16/10 | 12:04 | 5.76 |
| ZZZZZZ | LL34011.D | 11/16/10 | 12:26 | 0.00 |
| ZZZZZZ | LL34013.D | 11/16/10 | 13:12 | 5.76 |
| ZZZZZZ | LL34014.D | 11/16/10 | 13:35 | 5.76 |
| F77902-5 | LL34015.D | 11/16/10 | 13:58 | 5.76 |
| OP35025-MS | LL34016.D | 11/16/10 | 14:21 | 5.76 |
| OP35025-MSD | LL34017.D | 11/16/10 | 14:44 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1276-CC1273 | Injection Date: | 11/16/10 |
| Lab File ID: | LL34018.D | Injection Time: | 15:07 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | LL34021.D | 11/16/10 | 16:17 | 5.76 |
| ZZZZZZ | LL34022.D | 11/16/10 | 16:40 | 5.76 |
| ZZZZZZ | LL34023.D | 11/16/10 | 17:03 | 5.76 |
| ZZZZZZ | LL34024.D | 11/16/10 | 17:25 | 5.76 |
| ZZZZZZ | LL34025.D | 11/16/10 | 17:48 | 5.76 |
| ZZZZZZ | LL34026.D | 11/16/10 | 18:11 | 5.76 |
| ZZZZZZ | LL34027.D | 11/16/10 | 18:34 | 5.76 |
| ZZZZZZ | LL34028.D | 11/16/10 | 18:57 | 5.76 |
| F77886-4 | LL34029.D | 11/16/10 | 19:20 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1276-CC1273 | Injection Date: | 11/16/10 |
| Lab File ID: | LL34030.D | Injection Time: | 19:43 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77886-5 | LL34032.D | 11/16/10 | 20:29 | 5.76 |
| F77886-6 | LL34033.D | 11/16/10 | 20:52 | 5.76 |
| ZZZZZZ | LL34034.D | 11/16/10 | 21:15 | 5.76 |
| ZZZZZZ | LL34035.D | 11/16/10 | 21:38 | 5.76 |
| ZZZZZZ | LL34036.D | 11/16/10 | 22:01 | 5.76 |
| GLL1276-ECC127E | LL34037.D | 11/16/10 | 22:24 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77886
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1277-CC1273 | Injection Date: | 11/17/10 |
| Lab File ID: | LL34038.D | Injection Time: | 08:58 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP35025-MB | LL34041.D | 11/17/10 | 10:06 | 5.76 |
| ZZZZZZ | LL34043.D | 11/17/10 | 10:52 | 5.76 |
| GLL1277-ECC127E | LL34044.D | 11/17/10 | 11:15 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

**Tetra Tech NUS** **INTERNAL CORRESPONDENCE**

**TO:** **S. STOTLER-HARDY** **DATE:** **FEBRUARY 11, 2011**

**FROM:** **MICHELLE ALLEN** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – TRPH**
**CTO JM16, NAS KEY WEST**
**SDG F77902**

**SAMPLES:** 7/Aqueous /PET

| | | |
|---|---|---|
| G01-MW-01A-1010 | G01-MW-03-1010 | G01-MW-05-1010 |
| G01-MW-07-1010 | G01-MW-08-1010 | G01-MW-12-1010 |
| GKHMS-GW-FD04-1010 | | |

OVERVIEW

The sample set for CTO JM16 NAS Key West SDG F77902 consisted of seven (7) aqueous environmental samples including one (1) field duplicate sample. The aqueous samples were analyzed as indicated above for Total Recoverable Petroleum Hydrocarbons (TRPH). One field duplicate pair was associated with this sample delivery group (SDG): GKHMS-GW-FD04-1010/G01-MW-08-1010.

The samples were collected by TetraTech NUS on November 6 and 7, 2010 and analyzed by Accutest Laboratories SE. All analyses were conducted in accordance with Method FLORIDA-PRO analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times/Sample Preservation
* • Initial/Continuing Calibrations
* • Laboratory Method Blank Results
* • Blank Spike Recoveries
* • Matrix Spike Recoveries
* • Surrogate Recoveries
* • Field Duplicate Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

PET

No issues were identified.

NOTES

Samples G01-MW-07-1010, G01-MW-08-1010, G01-MW-12-1010, and GKHMS-GW-FD04-1010 were analyzed at a 4X dilution due to the higher concentrations of TPH (C8-C40) in the samples.

EXECUTIVE SUMMARY

**Laboratory Performance Issues:** None.

**Other Factors Affecting Data Quality:** Some samples were analyzed at a 4X dilution.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Data Validation Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

| PROJ_NO: 02607 | NSAMPLE | G01-MW-01A-1010 | | | G01-MW-03-1010 | | | G01-MW-05-1010 | | | G01-MW-07-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77902 | LAB_ID | F77902-1 | | | F77902-2 | | | F77902-5 | | | F77902-3 | | |
| FRACTION: PET | SAMP_DATE | 11/6/2010 | | | 11/6/2010 | | | 11/7/2010 | | | 11/6/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 199.0 | | | 199.0 | | | 199.0 | | | 199.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 0.246 | | | 1.35 | | | 0.937 | | | 1.46 | | |

| PROJ_NO: 02607 | NSAMPLE | G01-MW-08-1010 | | | G01-MW-12-1010 | | | GKHMS-GW-FD04-1010 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SDG: F77902 | LAB_ID | F77902-6 | | | F77902-4 | | | F77902-7 | | |
| FRACTION: PET | SAMP_DATE | 11/7/2010 | | | 11/6/2010 | | | 11/7/2010 | | |
| MEDIA: WATER | QC_TYPE | NM | | | NM | | | NM | | |
| | UNITS | MG/L | | | MG/L | | | MG/L | | |
| | PCT_SOLIDS | 199.0 | | | 199.0 | | | 199.0 | | |
| | DUP_OF | | | | | | | G01-MW-08-1010 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| TPH (C08-C40) | | 1.88 | | | 3.44 | | | 1.88 | | |

## APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-01A-1010 | | |
| Lab Sample ID: | F77902-1 | Date Sampled: | 11/06/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/09/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34014.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.246 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 104% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-03-1010 | | |
| Lab Sample ID: | F77902-2 | Date Sampled: | 11/06/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/09/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34043.D | 1 | 11/17/10 | MV | 11/12/10 | OP35025 | GLL1277 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 1.35 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 102% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-05-1010 | | |
| Lab Sample ID: | F77902-5 | Date Sampled: | 11/07/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/09/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34015.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.937 | 0.24 | 0.14 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 100% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-07-1010 | | |
| Lab Sample ID: | F77902-3 | Date Sampled: | 11/06/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/09/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34021.D | 4 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 1.46 | 0.95 | 0.57 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 90% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-08-1010 | | |
| Lab Sample ID: | F77902-6 | Date Sampled: | 11/07/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/09/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34023.D | 4 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 1.88 | 0.95 | 0.57 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 96% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | G01-MW-12-1010 | | |
| Lab Sample ID: | F77902-4 | Date Sampled: | 11/06/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/09/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34022.D | 4 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 3.44 | 0.95 | 0.57 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 100% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| Client Sample ID: | GKHMS-GW-FD04-1010 | | |
| Lab Sample ID: | F77902-7 | Date Sampled: | 11/07/10 |
| Matrix: | AQ - Ground Water | Date Received: | 11/09/10 |
| Method: | FLORIDA-PRO SW846 3510C | Percent Solids: | n/a |
| Project: | NAS Key West, Key West, FL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | LL34024.D | 4 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| Run #2 | | | | | | | |

| | Initial Volume | Final Volume |
|---|---|---|
| Run #1 | 1050 ml | 1.0 ml |
| Run #2 | | |

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 1.88 | 0.95 | 0.57 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 93% | | 38-122% |

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

# APPENDIX C

## SUPPORT DOCUMENTATION

# eData

Monday, November 8, 2010

Support | Logout

F77902

eDATAOFFICE

- eData Home
- Office Home
- Build Project
- My Projects
- Archived Projects
- Print Reports
- PDF GW Report
- About eData

TETRA TECH NUS, INC

CHAIN OF CUSTODY
NUMBER: ED00000142-13

| | | | | |
|---|---|---|---|---|
| Project No: **112G02607** | Facility: **KEY WEST NAS** | Project Manager: **Shauna Stotler-Hardy** | Carrier: **Federal Express** | Laboratory Name: **Accutest Laboratories SE 4405 Vineland Road C15 Orlando, FL 32811-7363** |
| Task No: **JM16** | Turn Around Time: **Standard** | Field Ops Leader: **Gary Braganza** | Carrier/Waybill No. | Point of Contact: **Heather Wandry 407-425-6700** |

| | Date | Sample ID # | Time | Analysis | Loc ID | Matrix | Description | Preservative | Container Count | Container Type | Container Reqs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11/06/2010 | G01-MW-01A-1010 | 10:31 | FL PRO | G01-MW-01A | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 2 | 11/06/2010 | G01-MW-03-1010 | 10:01 | FL PRO | G01-MW-03 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 3 | 11/06/2010 | G01-MW-07-1010 | 11:38 | FL PRO | G01-MW-07 | GW | TRPH | 4°C | 1 | Glass - Amber | 1L | |
| 4 | 11/06/2010 | G01-MW-12-1010 | 12:32 | FL PRO | G01-MW-12 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 5 | 11/07/2010 | G01-MW-05-1010 | 09:35 | FL PRO | G01-MW-05 | GW | TRPH | 4°C | 6 | Glass - Amber | 1L | Run MS/MSD |
| 6 | 11/07/2010 | G01-MW-08-1010 | 11:15 | FL PRO | G01-MW-08 | GW | TRPH | 4°C | 2 | Glass - Amber | 1L | |
| 7 | 11/07/2010 | GKHMS-GW-FD04-1010 | 00:00 | FL PRO | QC | GW | TRPH | 4°C | 1 | Glass - Amber | 1L | |

2.6
18

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By: **Gary Braganza** | Date: 11/08/2010 | Time: 14:55 | Received By: **Federal Express** | Date: 11/08/2010 | Time: 15:55 |
| 2. Relinquished By: | Date: | Time: | Received By: | Date: 11/9/10 | Time: ~~1500~~ 0900 |
| 3. Relinquished By: | Date: | Time: | Received By: | Date: | Time: |





**F77902: Chain of Custody**
**Page 1 of 2**

# HOLDTIME

**SDG** F77902

| SORT | UNITS | NSAMPLE | LAB_ID | QC_TYPE | SAMP_DATE | EXTR_DATE | ANAL_DATE | SMP_EXTR | EXTR_ANL | SMP_ANL |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | MG/L | GKHMS-GW-FD04-1010 | F77902-7 | SUR | 11/07/2010 | 11/12/2010 | 11/16/2010 | 5 | 4 | 9 |
| TPH | MG/L | GKHMS-GW-FD04-1010 | F77902-7 | NM | 11/07/2010 | 11/12/2010 | 11/16/2010 | 5 | 4 | 9 |
| TPH | MG/L | G01-MW-12-1010 | F77902-4 | SUR | 11/06/2010 | 11/12/2010 | 11/16/2010 | 6 | 4 | 10 |
| TPH | MG/L | G01-MW-12-1010 | F77902-4 | NM | 11/06/2010 | 11/12/2010 | 11/16/2010 | 6 | 4 | 10 |
| TPH | MG/L | G01-MW-08-1010 | F77902-6 | SUR | 11/07/2010 | 11/12/2010 | 11/16/2010 | 5 | 4 | 9 |
| TPH | MG/L | G01-MW-08-1010 | F77902-6 | NM | 11/07/2010 | 11/12/2010 | 11/16/2010 | 5 | 4 | 9 |
| TPH | MG/L | G01-MW-07-1010 | F77902-3 | SUR | 11/06/2010 | 11/12/2010 | 11/16/2010 | 6 | 4 | 10 |
| TPH | MG/L | G01-MW-07-1010 | F77902-3 | NM | 11/06/2010 | 11/12/2010 | 11/16/2010 | 6 | 4 | 10 |
| TPH | MG/L | G01-MW-05-1010 | F77902-5 | SUR | 11/07/2010 | 11/12/2010 | 11/16/2010 | 5 | 4 | 9 |
| TPH | MG/L | G01-MW-05-1010 | F77902-5 | NM | 11/07/2010 | 11/12/2010 | 11/16/2010 | 5 | 4 | 9 |
| TPH | MG/L | G01-MW-03-1010 | F77902-2 | SUR | 11/06/2010 | 11/12/2010 | 11/17/2010 | 6 | 5 | 11 |
| TPH | MG/L | G01-MW-03-1010 | F77902-2 | NM | 11/06/2010 | 11/12/2010 | 11/17/2010 | 6 | 5 | 11 |
| TPH | MG/L | G01-MW-01A-1010 | F77902-1 | SUR | 11/06/2010 | 11/12/2010 | 11/16/2010 | 6 | 4 | 10 |
| TPH | MG/L | G01-MW-01A-1010 | F77902-1 | NM | 11/06/2010 | 11/12/2010 | 11/16/2010 | 6 | 4 | 10 |

# SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Centauri Labs **Job** F77902

**Site:** NAS Key West, Key West, FL **Report Date:** 11/23/2010 9:04:39 AM

7 Samples were collected on 11/06/2010 and 11/07/2010 and were received at Accutest SE on 11/09/2010 properly preserved, at 2.8 Deg. C and intact. These Samples received an Accutest job number of F77902. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

## Extractables by GC by Method FLORIDA-PRO

**Matrix:** AQ **Batch ID:** OP35025

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F77902-5MS, F77902-5MSD were used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Date: November 23, 2010

Ellen Pampel, Inorganic QA (signature on file)

**Tuesday, November 23, 2010**

Raw Data: LL33993.D

# Method Blank Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MB | LL33993.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77902-1, F77902-2, F77902-3, F77902-4, F77902-5, F77902-6, F77902-7

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 111% | 38-122% |

# Method Blank Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MB | LL34009.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77902-1, F77902-2, F77902-3, F77902-4, F77902-5, F77902-6, F77902-7

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 91% | 38-122% |

# Method Blank Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MB | LL34041.D | 1 | 11/17/10 | MV | 11/12/10 | OP35025 | GLL1277 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77902-1, F77902-2, F77902-3, F77902-4, F77902-5, F77902-6, F77902-7

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| | TPH (C8-C40) | ND | 0.25 | 0.15 | mg/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 97% | 38-122% |

# Blank Spike Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-BS | LL33992.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1275 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77902-1, F77902-2, F77902-3, F77902-4, F77902-5, F77902-6, F77902-7

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.726 | 85 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | 38-122% |

# Blank Spike Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-BS | LL34008.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77902-1, F77902-2, F77902-3, F77902-4, F77902-5, F77902-6, F77902-7

| CAS No. | Compound | Spike mg/l | BSP mg/l | BSP % | Limits |
|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.85 | 0.745 | 88 | 54-110 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 84-15-1 | o-Terphenyl | 94% | 38-122% |

# Matrix Spike/Matrix Spike Duplicate Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| OP35025-MS | LL34016.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| OP35025-MSD | LL34017.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |
| F77902-5 | LL34015.D | 1 | 11/16/10 | MV | 11/12/10 | OP35025 | GLL1276 |



The QC reported here applies to the following samples: Method: FLORIDA-PRO

F77902-1, F77902-2, F77902-3, F77902-4, F77902-5, F77902-6, F77902-7

| CAS No. | Compound | F77902-5 mg/l | Q | Spike mg/l | MS mg/l | MS % | MSD mg/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| | TPH (C8-C40) | 0.937 | | 1.63 | 2.35 | 86 | 2.05 | 68 | 14 | 54-110/28 |

| CAS No. | Surrogate Recoveries | MS | MSD | F77902-5 | Limits |
|---|---|---|---|---|---|
| 84-15-1 | o-Terphenyl | 93% | 82% | 100% | 38-122% |

# Semivolatile Surrogate Recovery Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Method: FLORIDA-PRO Matrix: AQ

Samples and QC shown here apply to the above method

| Lab Sample ID | Lab File ID | S1 [a] |
|---|---|---|
| F77902-1 | LL34014.D | 104.0 |
| F77902-2 | LL34043.D | 102.0 |
| F77902-3 | LL34021.D | 90.0 |
| F77902-4 | LL34022.D | 100.0 |
| F77902-5 | LL34015.D | 100.0 |
| F77902-6 | LL34023.D | 96.0 |
| F77902-7 | LL34024.D | 93.0 |
| OP35025-BS | LL33992.D | 94.0 |
| OP35025-BS | LL34008.D | 94.0 |
| OP35025-MB | LL33993.D | 111.0 |
| OP35025-MB | LL34009.D | 91.0 |
| OP35025-MB | LL34041.D | 97.0 |
| OP35025-MS | LL34016.D | 93.0 |
| OP35025-MSD | LL34017.D | 82.0 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| S1 = o-Terphenyl | 38-122% |

(a) Recovery from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1275-CC1273 | Injection Date: | 11/15/10 |
| Lab File ID: | LL33985.D | Injection Time: | 21:21 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| ZZZZZZ | LL33987.D | 11/15/10 | 22:06 | 5.76 |
| ZZZZZZ | LL33988.D | 11/15/10 | 22:29 | 5.76 |
| ZZZZZZ | LL33989.D | 11/15/10 | 22:51 | 5.76 |
| ZZZZZZ | LL33990.D | 11/15/10 | 23:14 | 5.76 |
| ZZZZZZ | LL33991.D | 11/15/10 | 23:37 | 5.76 |
| OP35025-BS | LL33992.D | 11/16/10 | 00:00 | 5.76 |
| OP35025-MB | LL33993.D | 11/16/10 | 00:22 | 5.76 |
| ZZZZZZ | LL33994.D | 11/16/10 | 00:45 | 5.76 |
| ZZZZZZ | LL33995.D | 11/16/10 | 01:08 | 5.76 |
| ZZZZZZ | LL33996.D | 11/16/10 | 01:31 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1276-CC1273 | Injection Date: | 11/16/10 |
| Lab File ID: | LL34005.D | Injection Time: | 10:10 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP35025-BS | LL34008.D | 11/16/10 | 11:18 | 5.76 |
| OP35025-MB | LL34009.D | 11/16/10 | 11:41 | 5.76 |
| OP35004-MB | LL34010.D | 11/16/10 | 12:04 | 5.76 |
| ZZZZZZ | LL34011.D | 11/16/10 | 12:26 | 0.00 |
| ZZZZZZ | LL34013.D | 11/16/10 | 13:12 | 5.76 |
| F77902-1 | LL34014.D | 11/16/10 | 13:35 | 5.76 |
| F77902-5 | LL34015.D | 11/16/10 | 13:58 | 5.76 |
| OP35025-MS | LL34016.D | 11/16/10 | 14:21 | 5.76 |
| OP35025-MSD | LL34017.D | 11/16/10 | 14:44 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1276-CC1273 | Injection Date: | 11/16/10 |
| Lab File ID: | LL34018.D | Injection Time: | 15:07 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| F77902-3 | LL34021.D | 11/16/10 | 16:17 | 5.76 |
| F77902-4 | LL34022.D | 11/16/10 | 16:40 | 5.76 |
| F77902-6 | LL34023.D | 11/16/10 | 17:03 | 5.76 |
| F77902-7 | LL34024.D | 11/16/10 | 17:25 | 5.76 |
| ZZZZZZ | LL34025.D | 11/16/10 | 17:48 | 5.76 |
| ZZZZZZ | LL34026.D | 11/16/10 | 18:11 | 5.76 |
| ZZZZZZ | LL34027.D | 11/16/10 | 18:34 | 5.76 |
| ZZZZZZ | LL34028.D | 11/16/10 | 18:57 | 5.76 |
| ZZZZZZ | LL34029.D | 11/16/10 | 19:20 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# GC Surrogate Retention Time Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

| | | | |
|---|---|---|---|
| Check Std: | GLL1277-CC1273 | Injection Date: | 11/17/10 |
| Lab File ID: | LL34038.D | Injection Time: | 08:58 |
| Instrument ID: | GCLL | Method: | FLORIDA-PRO |



| | S1 [a] RT |
|---|---|
| Check Std | 5.76 |

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | S1 [a] RT |
|---|---|---|---|---|
| OP35025-MB | LL34041.D | 11/17/10 | 10:06 | 5.76 |
| F77902-2 | LL34043.D | 11/17/10 | 10:52 | 5.76 |
| GLL1277-ECC127[illegible] | LL34044.D | 11/17/10 | 11:15 | 5.76 |

Surrogate Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

# Initial Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-ICC1273
Lab FileID: LL33870.D

Response Factor Report FID 4

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Initial Calibration

Calibration Files
255 =LL33867.D 340 =LL33868.D 680 =LL33869.D 1360=LL33870.D
2040=LL33871.D 2720=LL33872.D 3400=LL33873.D

| Compound | 255 | 340 | 680 | 1360 | 2040 | 2720 | 3400 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| 1)S O-TERPHENYL | 1.241 | 1.274 | 1.270 | 1.316 | 1.313 | 1.296 | 1.345 | 1.294 E6 | 2.69 |
| 2)H TPH (C8-C40) | 1.304 | 1.291 | 1.216 | 1.229 | 1.225 | 1.194 | 1.226 | 1.241 E6 | 3.28 |

(#) = Out of Range

FL_PRO_F.M Mon Nov 15 11:51:19 2010

5.6.1 5

# Initial Calibration Verification



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1273-ICV1273
Lab FileID: LL33874.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1112FLPRO\LL33874.D Vial: 9
Acq On : 12 Nov 2010 10:52 am Operator: marthav
Sample : icv1273-1360 Inst : FID 4
Misc : OP34950,GLL1273,30.0,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Fri Nov 12 11:30:18 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | | ----------NA---------- | | | | |
| 2 | H | TPH (C8-C40) | 1360.000 | 1445.169 | -6.3 | 107 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33870.D FL_PRO_F.M Mon Nov 15 15:14:42 2010

5.6.2

5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1275-CC1273
Lab FileID: LL33985.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33985.D Vial: 22
Acq On : 11-15-10 09:21:26 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35004,GLL1275,30.5,,,1,1,soil Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 44.857 | -12.1 | 111 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1449.361 | -6.6 | 107 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Tue Nov 16 12:37:24 2010

5.6.3

5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1275-CC1273
Lab FileID: LL33997.D



Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1115FLPRO\LL33997.D Vial: 46
Acq On : 11-16-10 01:53:44 AM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1275,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 42.942 | -7.4 | 107 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1405.862 | -3.4 | 104 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Tue Nov 16 12:37:25 2010

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34005.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34005.D Vial: 1
Acq On : 16 Nov 2010 10:10 am Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1276,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 40.856 | -2.1 | 101 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1352.947 | 0.5 | 100 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:47 2010

5.6.5

5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34006.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34006.D Vial: 2
Acq On : 16 Nov 2010 10:33 am Operator: marthav
Sample : cc1273-340 Inst : FID 4
Misc : OP35025,GLL1276,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 10.000 | 9.555 | 4.5 | 98 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 340.000 | 355.223 | -4.5 | 102 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33298.D FL_PRO_F.M Wed Nov 17 13:06:27 2010

5.6.6

5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34018.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34018.D Vial: 14
Acq On : 11-16-10 03:07:36 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1276,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 43.029 | -7.6 | 107 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1405.713 | -3.4 | 104 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:48 2010

5.6.7

5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1276-CC1273
Lab FileID: LL34030.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1116FLPRO\LL34030.D Vial: 26
Acq On : 11-16-10 07:43:48 PM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1276,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 42.890 | -7.2 | 106 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1392.445 | -2.4 | 103 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:05:49 2010

5.6.8

5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1277-CC1273
Lab FileID: LL34038.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1117FLPRO\LL34038.D Vial: 1
Acq On : 11-17-10 08:58:21 AM Operator: marthav
Sample : cc1273-1360 Inst : FID 4
Misc : OP35025,GLL1277,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 33.770 | 15.6 | 84 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1163.537 | 14.4 | 86 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:08:19 2010

5.6.9

5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1277-CC1273
Lab FileID: LL34039.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1117FLPRO\LL34039.D Vial: 2
Acq On : 11-17-10 09:20:52 AM Operator: marthav
Sample : cc1273-340 Inst : FID 4
Misc : OP35025,GLL1277,1000,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 10.000 | 9.676 | 3.2 | 99 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 340.000 | 369.830 | -8.8 | 106 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33298.D FL_PRO_F.M Wed Nov 17 13:08:02 2010

5.6.10 5

# Continuing Calibration Summary



Job Number: F77902
Account: CTLMDF Centauri Labs
Project: NAS Key West, Key West, FL

Sample: GLL1277-ECC1273
Lab FileID: LL34044.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\1117FLPRO\LL34044.D Vial: 1
Acq On : 17 Nov 2010 11:15 am Operator: marthav
Sample : ecc1273-1360 Inst : FID 4
Misc : OP35025,GLL1277,1050,,,1,1,water Multiplr: 1.00
IntFile : EVENTS.E

Method : C:\MSDCHEM\1\METHODS\FL_PRO_F.M (Chemstation Integrator)
Title : TPH by FL_PRO
Last Update : Tue Nov 16 11:06:00 2010
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Drift | Area% | Dev(min) | RT Window |
|---|---|---|---|---|---|---|---|---|
| 1 | S | O-TERPHENYL | 40.000 | 39.491 | 1.3 | 98 | 0.00 | 5.72- 5.82 |
| 2 | H | TPH (C8-C40) | 1360.000 | 1364.527 | -0.3 | 101 | 0.00 | 1.84-10.54 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
LL33297.D FL_PRO_F.M Wed Nov 17 13:08:20 2010

5.6.11 5

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11/12/10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11/12/10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M.Walls |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 50781324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33866 | 1 | Blank | FL-PRO | J27503 | 1X | | BDL |
| LL 67 | 2 | ic1273-255 | | 53709 | 75:100 | | Curve Pass |
| LL 68 | 3 | -340 | | | 10X | | |
| LL 69 | 4 | -680 | | | 5X | | |
| LL 70 | 5 | icc1273-1360 | | | 2:5 | | |
| LL 71 | 6 | ic1273-2040 | | | 3:5 | | |
| LL 72 | 7 | -2720 | | | 4:5 | | |
| LL 73 | 8 | -3400 | | | 1X | | |
| LL 74 | 9 | icv1273-1360 | | | 2:5 | | PASS |
| LL 75 | 10 | ccb | | J27503 | 1X | | BDL |
| LL 76 | 11 | OP34950-bs | | 34950 | 1X | | ✓ |
| LL 77 | 12 | -mb | | | 1X | | BDL |
| LL 78 | 13 | F77803-2 | | | 1X | | BDL |
| LL 79 | 14 | -3 | | | 20X | | ✓ |
| LL 80 | 15 | -4 | | | 10X | | RR 100X |
| LL 81 | 16 | -5 | | | 1X | PDB | ✓ |
| LL 82 | 17 | -6 | | | 1X | PDB | ✓ |
| LL 83 | 18 | -10 | | | 10X | | RR 1X |
| LL 84 | 19 | -11 | | | 10X | PDB | ✓ |
| LL 85 | 20 | -12 | | | 1X | | RR 20X |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M.Walls

**ACCUTEST LABORATORIES SE**

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

**GC FID4-LL ANALYSIS LOG**

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M-Valle |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 50781324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33886 | 21 | cc1273-1360 | | 53709 | 2.5 | | pass2 |
| LL 87 | 22 | ccb | | J27503 | 1X | | BDL |
| LL 88 | 23 | F77803-13 | | 34950 | 1X | | Vial Empty (Not enough RR 20X |
| LL 89 | 24 | op34950-ms | | | | | RR 20X |
| LL 90 | 25 | ↓ -msd | | | | | RR 20X |
| LL 91 | 26 | F77803-14 | | | ↓ | | RR 20X |
| LL 92 | 27 | -16 | | | 5X | | RR 1X |
| LL 93 | 28 | -17 | | | 1X | PDB | ✓ |
| LL 94 | 29 | -18 | | | 5X | PDB | ✓ |
| LL 95 | 30 | -19 | | | 4X | PDB | ✓ |
| LL 96 | 31 | -20 | | | 1X | PDB | ✓ |
| LL 97 | 32 | ↓ -21 | | ↓ | 10X | | RR 4X |
| LL 98 | 33 | ~~CC1360~~ CC 1273-1360 | | 53709 | 2.5 | | PASS |
| LL ↓ 99 | 34 | ccb | | J27503 | 1X | | BDL |
| LL 33900 | 35 | F77803-23 | | 34950 | 20X | | ✓ |
| LL 01 | 36 | -24 | | | 10X | | RR 100X |
| LL 02 | 37 | -25 | | | 1X | | RR 1X to verify carry over |
| LL 03 | 38 | ↓ -26 | | ↓ | ↓ | | RR 1X carry over |
| LL 04 | 39 | op34992-bs | | 34992 | 1 | | ✓ |
| LL ↓ 05 | 40 | ↓ -mb | ↓ | ↓ | ↓ | | mx 11-13-10 ✓ BDL |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M-Valle

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 50781324/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 339006 | 41 | F77762-3 | | 34992 | 1X | | ✓ |
| LL 07 | 42 | -4 | | | | | BDL |
| LL 08 | 43 | -11 | | | | | ✓ |
| LL 09 | 44 | -14 | | | 10X | | RR 50X |
| LL 10 | 45 | CC1273-136C | | 53709 | 2.5 | | PASS |
| LL 11 | 46 | ccb | | J27503 | 1X | | BDL |
| LL 12 | 47 | F77803-7 | | 34992 | | | ✓ |
| LL 13 | 48 | -22 | | | | | ✓ |
| LL 14 | 49 | F77799-5 | | | | | ✓ |
| LL 15 | 50 | 8 | | | | | ✓ |
| LL 16 | 51 | F77796-4 | | | | | ✓ |
| LL 17 | 52 | F77886-1 | | | | PDB | ✓ |
| LL 18 | 53 | -2 | | | | PDB | ✓ |
| LL 19 | 54 | -3 | | | | PDB | ✓ |
| LL 20 | 55 | F77807-1 | | | | | ✓ |
| LL 21 | 56 | 2 | | | | PDB | ✓ |
| LL 22 | 57 | CC1273-136C | | 53709 | 2.5 | | PASS |
| LL 23 | 58 | ccb | | J27503 | 1X | | BDL |
| LL 24 | 59 | F77809-1 | | 34992 | | | BDL |
| LL 25 | 60 | -2 | | | | | BDL |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valles

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-12-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1273 |

| | |
|---|---|
| ANALYST: | H-Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | SD78132 4/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 333926 | 61 | F77809-3 | FL-PRO | 34992 | 1X | PDB | ✓ |
| LL 27 | 62 | ↓ -4 | ↓ | ↓ | ↓ | PDB | BDL |
| LL 28 | 63 | F77799-6 | | | | | BDL |
| LL 29 | 64 | op34992-ms | | | | | ✓ |
| LL 30 | 65 | ↓ -msd | | | | | ✓ |
| LL 31 | 66 | F77799-7 | | ↓ | ↓ | PDB | ✓ |
| LL ↓ 32 | 57 | ccc1273-1360 | ↓ | S3709 | 2.5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | 4/5 | 11-13-10 | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: H-Valles

ACCUTEST LABORATORIES SE *MW 11/15/10

| | |
|---|---|
| DATE: ~~11-14-10~~ | 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1275 |

| | |
|---|---|
| ANALYST: | Y. Valls |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 41.0979/8/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33952 | 1 | CC1273-1360 | FL-PRO | S3709 | 2.5 | | PASS |
| LL 53 | 2 | CC1273-340 | | S3709 | 10X | | PASS |
| LL 54 | 3 | ccb | | J27503 | 1X | | BDL |
| LL 55 | 4 | op34950-mb | | 34950 | ↓ | | BDL |
| LL 56 | 5 | F77803-12 | | \| | 20X | | ✓ |
| LL 57 | 6 | \| -14 | | \| | 20X | | ✓ |
| LL 58 | 7 | ↓ -24 | | ↓ | 200X | | ✓ |
| LL 59 | 8 | op34992-mb | | 34992 | 1X | | BDL |
| LL 60 | 9 | F77762-14 | | ↓ | 50X | | ✓ |
| LL 61 | 10 | CC1273-1360 | | S3709 | 2.5 | | PASS |
| LL 62 | 11 | ccb | | J27503 | 1X | | BDL |
| LL 63 | 12 | op35004-bs | | 35004 | \| | | ✓ |
| LL 64 | 13 | ↓ -mb | | ↓ | ↓ | | BDL |
| LL 65 | 14 | F77803-13 | | 34950 | 4X | PDB | ✓ |
| LL 66 | 15 | F77917-1 | | 35004 | 20X | | RR 500X |
| LL 67 | 16 | F77914-2 | | \| | 1X | | ✓ |
| LL 68 | 17 | \| -3 | | \| | \| | | ✓ |
| LL 69 | 18 | ↓ -1 | | \| | \| | | ✓ |
| LL 70 | 19 | op35004-ms | | \| | \| | PDB | RR to confirm result. |
| LL ↓ 71 | 20 | ↓ -MSD | ↓ | ↓ | ↓ | | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL1275 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33972 | 21 | F77914-4 | FL-PRO | 35004 | 1X | | BDL |
| LL 73 | 22 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL 74 | 23 | ccb | | J27503 | 1X | | BDL |
| LL 75 | 24 | F77914-5 | | 35004 | 10X | | RR 1X |
| LL 76 | 25 | ↓ 6 | | | 4X | | RR 1X |
| LL 77 | 26 | F77936-1 | | | 4X | | RR 1X |
| LL 78 | 27 | -2 | | | 1X | | ✓ |
| LL 79 | 28 | -3 | | | | | ✓ |
| LL 80 | 29 | -4 | | | | | ✓ |
| LL 81 | 30 | -5 | | | | | ✓ |
| LL 82 | 31 | -6 | | | | | ✓ |
| LL 83 | 32 | -7 | | | | | ✓ |
| LL 84 | 33 | ↓ -8 | | ↓ | ↓ | | ✓ |
| LL 85 | ~~23~~ 37 | CC1273-1360 (MM 11-16-10) | | 53709 | 2.5 | | PASS |
| LL 86 | 23 | ccb | | J27503 | 1X | | BDL |
| LL 87 | 36 | F77936-9 | | 35004 | | | ✓ |
| LL 88 | 37 | -10 | | | | | ✓ |
| LL 89 | 38 | -18 | | | | | BDL |
| LL 90 | 39 | -19 | | | | | ✓ |
| LL ↓ 91 | 40 | ↓ -20 | ↓ | ↓ | ↓ | PDB | ✓ |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M. Valles

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-15-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1275 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 46097908/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 33992 | 41 | bp35025.bs | FL-PRO | 35025 | 1X | | ✓ |
| LL 93 | 42 | -mb | | | | | MU 11-16-10 ~~BDL~~ |
| LL 94 | 43 | F77936-11 | | | | | ✓ |
| LL 95 | 44 | -12 | | | | | ✓ |
| LL 96 | 45 | -13 | | | | | ✓ |
| LL 97 | 46 | ccc1273-136 | | 53709 | 2.5 | | PASS |
| LL 98 | 47 | ccb | | J27503 | 1X | | BDL |
| LL 99 | 48 | F77936-14 | | 35025 | | | ✓ *RR samples |
| LL 340001 | 49 | F77946-7 | | | | | ✓ |
| LL 01 | 50 | -8 | | | | | ✓ |
| LL 02 | 51 | -9 | | | | | BDL |
| LL 03 | 52 | F77886-4 | | | 4X | | RR 1X |
| LL 04 | 53 | -5 | | | 1X | | BDL |
| LL | | | | | | | *RR samples due to vial issue |
| LL | | | | | | | We were present to approve samples |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

4-Valles 11-16-10

4-V 11-16-10

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

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Analyst's Signature: 4-Valles

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-16-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F.m |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL1276 |

| | |
|---|---|
| ANALYST: | M. Valles |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 4965583/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34005 | 1 | CC1273-1360 | FL-PRO | 53709 | 2.5 | | PASS |
| LL 06 | 2 | CC1273-340 | ↓ | ↓ | 10X | | PASS |
| LL 07 | 3 | ccb | | J27503 | 1X | | BDL |
| LL 08 | 4 | op35025-bs | | 35025 | \| | | ✓ |
| LL 09 | 5 | ↓ -mb | | ↓ | \| | | BDL |
| LL 10 | 6 | op35004-mb | | 35004 | ↓ | PDB | BDL |
| LL 11 | 7 | F77917-1 | | ↓ | 50X | | ✓ |
| LL 12 | 8 | F77886-6 | | 35025 | 10X | PDB | mv 11-17-10 RR ~~1X~~ 4X Surr ↑ |
| LL 13 | 9 | F77882-1 | | \| | 1X | | BDL |
| LL 14 | 10 | F77902-1 | | \| | \| | | ✓ |
| LL 15 | 11 | ↓ -5 | | \| | \| | PDB | ✓ |
| LL 16 | 12 | op35025-ms | | \| | \| | PDB | ✓ |
| LL 17 | 13 | ↓ -msd | | ↓ | ↓ | PDB | ✓ |
| LL 18 | 14 | CC1273-1360 | | 53709 | 2.5 | | PASS |
| LL 19 | 15 | ccb | | J27503 | 1X | | BDL |
| LL 20 | 16 | F77902-2 | | 35025 | 4X | | RR 1X |
| LL 21 | 17 | \| -3 | | \| | 4X | | ✓ |
| LL 22 | 18 | \| -4 | | \| | 4X | PDB | ✓ |
| LL 23 | 19 | \| -6 | | \| | 4X | | ✓ |
| LL ↓ 24 | 20 | ↓ -7 | ↓ | ↓ | 4X | | ✓ |

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Analyst's Signature: M. Valles

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11·16·10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11·12·10 |
| RUN BATCH: | GLL 1276 |

| | |
|---|---|
| ANALYST: | M-Valls |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 4965 5083/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34025 | 21 | F77936-14 | FL-PRO | 35025 | 1X | | ✓ |
| LL 26 | 22 | F77946-7 | | | | | ✓ |
| LL 27 | 23 | 8 | | | | | ✓ |
| LL 28 | 24 | 9 | | | | | BDL |
| LL 29 | 25 | F77886-4 | | | | | ✓ |
| LL 30 | 26 | CC1273-1360 | | 53709 | 2:5 | | PASS |
| LL 31 | 27 | ccb | | J27503 | 1X | | BDL |
| LL 32 | 28 | F77886-5 | | 35025 | | | BDL |
| LL 33 | 29 | 6 | | | | PDB | ✓ |
| LL 34 | 31 | F77914-5 | | 35004 | | | ✓ |
| LL 35 | 32 | 6 | | | | | ✓ |
| LL 36 | 33 | F77936-1 | | | | | ✓ |
| LL 37 | 26 | CC1273-1360 | | 53709 | 2:5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | 4.0 | 11·17·10 | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

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Analyst's Signature: M-Valls

ACCUTEST LABORATORIES SE

| | |
|---|---|
| DATE: | 11-17-10 |
| COLUMN TYPE: | DB-5 |
| AMOUNT INJECTED: | 1 ul |
| INSTRUMENT: | FID4-LL |

GC FID4-LL ANALYSIS LOG

| | |
|---|---|
| METHODS: | FL-PRO |
| ACQ. METHOD: | FL-PRO-F |
| PROC. METHOD: | FL-PRO-F-M |
| CALIB. DATE: | 11-12-10 |
| RUN BATCH: | GLL 1277 |

| | |
|---|---|
| ANALYST: | M-Valle |
| MECL2 LOT #: | J27503 |
| SIGNAL 1 SURR. AREA/CONC: | 41042503/40 |
| SIGNAL 2 SURR. AREA/CONC: | |

| DATA FILE | ALS # | SAMPLE ID | SAMPLE METHOD | OP BATCH | DF | MANUALLY INTEGRATED PEAKS RATIONALE, PEAK # | COMMENTS |
|---|---|---|---|---|---|---|---|
| LL 34038 | 1 | CC1273-1360 | FL-PRO | S3539 | 2.5 | | PASS |
| LL 39 | 2 | CC1273-340 | | S3539 | 10X | | PASS |
| LL 40 | 3 | ccb | | J27503 | 1X | | BDL |
| LL 41 | 4 | op35025-mb | | 35025 | 1X | | BDL |
| LL 42 | 5 | F77886-6 | | | 4X | PDB | ✓ |
| LL 43 | 6 | F77902-2 | | | 1X | PDB | ✓ |
| LL 44 | 1 | CC1273-1360 | | S3539 | 2.5 | | PASS |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | MU | 11-17-10 | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |
| LL | | | | | | | |

Manual Integration Rationale SOP QA029: MP Missed Peak, OP Overlapping Peak, SP Split Peak, PDB Poorly Defined Baseline, BR Baseline Ripple, PII Poor Instrument Integration
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gcfid4_ll_log.xls NF rev. 08/09

Analyst's Signature: M-Valle

# NAS KEY WEST
# WATER DATA
# F77902

| FRACTION | CHEMICAL | G01-MW-08-1010 | UNITS | GKHMS-GW-FD04-1010 | RPD | D |
|---|---|---|---|---|---|---|
| PET | TPH (C08-C40) | 1.88 | MG/L | 1.88 | 0.00 | 0.00 |

**Current RPD Quality Control Limit: 30 %.**
**Shaded cells indicate RPDs that exceed the applicable quality control limit.**

# APPENDIX I

# REFERENCES

07-DEC-2010 16:23 ScreenScan

BRAVO BATTERY, LEFT, WINS TROPHY [illegible]

# Missile Battalion has 50th birthday

Members of the 6th Battalion (HAWK) 65th Artillery and their families celebrated the battalion's 50th anniversary recently with a picnic at the Naval Base Beach Patio.

Organized in 1917 at Fort Grant, Canal Zone, as the Seventh Company, Fort Grant, the battalion has had nine name changes and has won nine battle streamers for campaigns in World War I and World War II.

The first streamers were for the St. Mihiel, Meuse-Argonne and Lorraine campaigns. Those from World War II include the Aleutian Islands, Normandy, Northern France, Ardennes-Alsace, Rhineland and Central Europe.

The battalion arrived in Key West in October, 1962, and occupied positions here with all units operational in the air defense of the Southeastern United States during the Cuban crisis.

In April, 1963, the battalion was assigned permanently to the Key West area and received the Meritorious Unit Commendation and a tenth battle streamer for its efforts in the Cuban crisis.

Lt. Col. Martin J. Small, commanding officer of the 6th Battalion, opened the anniversary ceremonies with an address to the troops and their families.

Following this, the four firing batteries and the Headquarters Battery battled each other in volleyball, softball, tug-of-war and other events.

Bravo Battery, commanded by Capt. Robert Carley, was the overall winner and received a trophy from Lt. Col. Small.

## DEATHS

### GERALD J. PENDERGAST

ISLAMORADA— Gerald J. Pendergast, 61-year-old motel and restaurant owner, died Friday afternoon at Miami Springs Hospital following surgery performed earlier in the day.

Pendergast built Jerry's Sunset Inn in Islamorada in 1961

★ Gerald J. Pendergast ★

and operated catering services for National Airlines at Miami, Tampa and Palm Beach.

He is survived by a wife, Mrs. Carol Pendergast, who operates the Islamorada motel, three sons, two daughters and 11 grandchildren.

His sons are Jerry, Jimmy and Bill Pendergast, all of Miami. Daughters are Mrs. Jean Mosier, Miami, and Sister Maria Regis, who is at a Catholic Convent in Pennsylvania.

Funeral services will be held at 10:30 a.m. Monday morning at Slade Funeral Home in Hialeah.

### MRS. ELIZABETH LOUISE GODWIN

Word has been received of the death of Mrs. Elizabeth Louise Godwin, 34, in Gig Harbor, Washington.

Mrs. Godwin is survived by her husband, Richard Godwin; two daughters, Patti and Deanna Godwin; one son, Richard Louis Godwin, all of Gig Harbor; her grandmother, Mrs. Minnie Williams of Key West; two aunts, Mrs. Emilian Pinder of Key West and Mrs. Louise [illegible] of Summerland Key; [illegible] John H. Williams Jr. of [illegible] and [illegible] of [illegible], Alaska. [illegible]

## Injured seaman is brought here

A 17-year-old British merchant seaman who suffered severe injuries in a fall down the hatch of his ship was airlifted to Key West by a Coast Guard helicopter early this morning.

The Coast Guard reported that Colin M. Kirkcaldy, 17, from the tanker [illegible], had dropped 40 feet down the hatch of his ship and broke his leg, his [illegible] and suffered possible back injuries.

The helicopter picked up Kirkcaldy when his ship was [illegible] miles south of the Marquesas and flew him to the Key West International Airport where a waiting [illegible] ambulance rushed him to the De Poo Hospital for treatment.

[illegible]

## VFW Post transacts business

[illegible]

"It is knowledge and experience that we could not possibly have had in any other way," stated Jones. [illegible] on the [illegible] program, he stated [illegible] the program should [illegible] as a very worthwhile Youth Americanism project.

Jones volunteered to spearhead a move [illegible] Boys Staters, to [illegible] young men to be selected, about the procedures at State, in order to help them bring some honors to Key West.

Several applications for membership were presented. Recruits Theodore Schmidt, and William Hawkins were then inducted into Post membership, both of these expressing their pleasure at having been accepted into Post 3911 membership.

Brief, concise reports on the 5th District meeting at Hollywood, and the [illegible] School of Instruction at North Miami, were presented by Commander [illegible], who had attended both sessions as a representative of the Post.

A committee was appointed to effect preliminary plans for the forthcoming District meeting in October, in order to have complete plans readied in plenty of time.

Refreshments [illegible] free to all [illegible] dance, with [illegible] that [illegible] would [illegible]

[illegible]

---

[illegible] game

ord

[illegible] ding, $15.
[illegible] for failing to [illegible] David Brown, Joann Hrenblo,
[illegible] failure to yield
[illegible] speeding, $21.
[illegible], driving while [illegible] and license re[illegible]
[illegible], DWI, $150 and three months.
[illegible] DWI, $150 and three months.
[illegible], assault and bat[illegible]
[illegible] DWI, $150 and three months.
[illegible] failure to yield
[illegible] vehicle, drunk and resisting arrest, [illegible], escape, $100.

## [illegible]a joins [illegible]llege [illegible]ere

[illegible] has rejoined the Florida Keys Junior [illegible] during the past year [illegible] Florida State [illegible] a grant from [illegible] Science Foundation [illegible] of ten junior col[illegible] in mathematics [illegible] as California [illegible] the institute and [illegible] of graduate study [illegible] to their back[illegible]

[illegible] the entire field [illegible] has been under[illegible] changes in curricu[illegible] in scope and new [illegible] teaching, according [illegible] Rothgeber, presi[illegible] This has been [illegible] in the elemen[illegible] secondary schools and [illegible] is also being [illegible] mathematics. It [illegible] unusual for a high [illegible] to enter college [illegible] with a greater know[illegible] new approach to [illegible] than the teacher who [illegible] him in college. [illegible] some of the [illegible] interest [illegible] and mathematics [illegible] attempting to aid col[illegible] to expand their [illegible] in the new [illegible] mathematics which have [illegible]

07-DEC-2010 17:00 ScreenScan

THE SOUTHERNER
KEY WEST, FLORIDA, THURSDAY
VOL. LXXXIII No. 255

*Looking South*

# Brief Glances

SAN JUAN, Puerto Rico (AP)—The Cuban crisis is taking its toll on Puerto Rico's multi million dollar tourist industry.

Seven hotels reported about 100 unexpected checkouts since Monday night, when President Kennedy announced the naval blockade of Communist Cuba.

Last year 446,000 tourists brought Puerto Rico $65.5 million in revenue. Substantially larger revenue had been anticipated for this season.

— • —

Recent news releases over television and radio emanating from out of town sources claim the Florida Keys have been blockaded and motels taken over by the military forces, said Chamber of Commerce members yesterday.

The irresponsible reporting following the Monday night speech of President Kennedy's seven - point program of action against Communist Cuba has alarmed and kept away prospective visitors here, said Sam Golan, and other board members.

Philip Murphey, immediate past president of the chamber, revealed at the meeting that the county commission agreed Tuesday to provide funds to refute the rumors by concentrated radio broadcasts from two stations in Miami.

Golan reported that gas station attendants in the Homestead and Miami area were passing the misinformation along to tourists and he added that motels in Homestead are full as a result.

Newly - elected chamber president Zeke O'Farrell, who took over his responsibilities with vigor yesterday, will contact Governor Farris Bryant, Miami's television stations and Chambers of Commerce to tell them the true story of conditions here and ask their cooperation in informing the public that at present Monroe County is doing business as usual.

The Florida Development Commission in Tallahassee has been alerted to refute the rumors and is at present informing the public of this on a national scale.

— • —

SAN SEBASTIAN, Spain (AP)—

*City Cooperation Pledged*

# Army Leases Wickers Field For $1 A Year

City action to facilitate the military build - up in the Key West area was taken along several lines last night by the Key West City Commission.

The major steps taken include: Granting a 12 - month, $1 per year lease to the Army Corps of Engineers for Wickers Field.

Offering space in the Greene Street City Hall for a public information office for news media.

Passing a resolution to the effect that Key West will cooperate 100 per cent with the military and directing a telegram be sent to President Kennedy telling him that Key West fully supports his decision in the Cuban crisis.

Mayor C. B. Harvey made a statement to the citizens of the city asking them to remain calm and be assured of their safety. "If real danger develops, the commission and civil defense will keep the people informed," announced the mayor.

All these steps were taken with general consent of the commissioners — with the exception of offering the city hall for the benefit of the visiting newsmen. Commissioners Terry Lee Garcia and John DePoo voted no. DePoo said the news media usually set up their own organizations and would probably do so in this action without any help from the city.

"How about the city commission meetings and city court?" asked DePoo.

The commission seemed a bit concerned over leasing Wickers Field as it apparently had scanty information on what the intended use is.

Harvey asked, "Are they going to build anything there?"

"Just a rocket base," quipped Garcia.

The terms didn't strike the commissioners as too favorable but the situation offered — as Commissioner Harry Knight noted — "no choice." The field had been

**Following action on leasing Wickers Field to the Army at last night's city commission meeting, the city this morning agreed to the use of Smathers Beach for a 30-day period.**

# Casa Marina Turned Over To Military

Key West's biggest luxury resort hotel, the Casa Marina, was leased this morning to the U. S. Army and troops will be moving in at 2 p. m., it was learned from Sam Hyman, owner of the hotel.

Hyman said the entire hotel, the grounds, cabana club, and servants quarters across the street, will be occupied.

He estimated there would be "about 500 men" going into the Casa Marina today. Under a barracks style arrangement, however, Hyman pointed out the resort could accommodate 1,000.

The lease, he said, is for one year, with the "usual" 30 - day cancelation clause.

The financial terms of the lease were not revealed.

Asked if the Army was considering leasing the 175 vacant units in Poinciana, Hyman said they were, but nothing final has been done about it.

The Casa Marina has 185 rooms and has been closed to business this past summer, although Hyman stated he had intended to open in December and "had about 70 reservations" which he will divert to the Town House Motor Inn.

Meanwhile, Army trucks have shifted to Wickers Field but not in great force. There were 10 moved in last night while families in the neighborhood watched interestedly.

In a phone call this morning to

# U.S. Le... Pass Q...

EN ROUTE TO WICKERS FIELD... and was routed to Wickers Field ... terested group of observers gets a ... were stationed in the ball park.—AP ...

*Emergency Plans Made*

# CD Is Ready For Tr...

By KAY KERSEY

"The Civil Defense organization for Monroe County is in direct 24-hour communication with the Navy," said Civil Defense director Bill Warner today. "The civilian population of the keys and Navy families will receive the same instructions simultaneously in case an emergency does arise," he added.

In Warner's news conference this morning he compared the precarious situation here in regard to Cuba to that of a hurricane warning and said that people should

However, the ... director said that ... tion for people ... of their daily lives ... tant military ... should be eating ... fears rather than ... preparation.

Instructions ... locally from the ...

The ...

07-DEC-2010 17:01 ScreenScan

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The Florida Development Commission in Tallahassee has been alerted to refute the rumors and is at present informing the public of this on a national scale.

— • —

SAN SEBASTIAN, Spain (AP)— Fulgencio Batista, Cuba's dictator before Fidel Castro, believes time is working in his favor.

Found Wednesday kneeling in the Jesuit monastery of Loyola, Batista said he had spent three hours praying for peace.

He said, "It is with deep emotion that I am following the affair of Cuba. I profoundly hope that the political directors of the world will be able to effect a happy solution to resolve the Cuba crisis."

Batista, who fled before Castro Jan. 1, 1959, said, "Time is working in my favor. They will realize that I was right."

— • —

Charles Helberg, owner of the

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"Just a rocket base," quipped Garcia.

The terms didn't strike the commissioners as too favorable but the situation offered — as Commissioner Harry Knight noted — "no choice." The field had been already occupied.

City Manager Bazel Crowe informed the commission that the military was seeking additional land and wanted a lease for Smathers Beach. He said a short term lease for the beach would be offered.

Commissioner Jay Stricker suggested wangling in a clause in leases giving rights to use the beach when the military wasn't putting it to use.

DePoo suggested the telegram be sent to President Kennedy and Crowe was directed to send it today.

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Meanwhile, Army trucks have shifted to Wickers Field but not in great force. There were 10 moved in last night while families in the neighborhood watched interestedly.

In a phone call this morning to the Pentagon The Citizen learned through the Press Office, there, that as far as was known there would be no public information officer dispatched to Key West.

The 200 newsmen, cameramen and technicians currently roaming the streets of the city looking for any kind of news lead will continue to do so without any official source of information.

Three missiles, apparently of the Nike variety, were observed today from the highway at Boca Chica.

The missiles are in their temporary launching sites and can be seen poking skyward.

EN ROUTE TO WICKERS FIE... and was routed to Wickers F... tourist group of observers ... were stationed in the hall par...

*Emergency Plans Made*

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In Warner's news conference this morning he compared the precarious situation here in regard to Cuba to that of a hurricane warning and said that people should take much the same precautions in storing a reasonable amount of food and water.

Automobile tanks should be kept full of gas, candles and flashlight batteries are on the list of necessities for every family should the occasion arise, he said.

Warner assures the public that everything that can be done in their behalf is being done, and that plans have been firmed in the past year and a half include an intensive evacuation by sea, road and sky for... and Navy families should ... tremity call for such ...

07-DEC-2010 17:28 ScreenScan

# Army Missile Batallion To Re

The U. S. Army's 6th Missile Battalion, based at the Casa Marina Hotel, will settle in Key West permanently, The Citizen learned today from Congressman Dante B. Fascell.

The Department of the Army, said Fascell from Washington, made the decision this morning which will also implement the shifts of two other battalions and an air defense artillery group to Homestead.

Col. Marvin Nolte, commanding the Key West battalion, said the word has gone in the families of 300 men in the 6th "to move to Key West from Ft. Meade, Maryland."

The 6th Missile Battalion arrived in force in Key West last October at the time of the Cuban crisis. Various detachments are spread through the keys.

This announcement makes Key West now has a full representation of all services in the armed forces — Navy, Army, Marines, Air Force and Coast Guard.

The Army said the movement of the battalion from their former home bases effectively establishes a permanent air defense area for the Miami - Homestead - Key

Key West, Florida has the most equable climate in the country, with an average range of only 14° Fahrenheit


# The Key W

THE SOUTHERNMOST NEWS

KEY WEST, FLORIDA, FRIDAY, MARCH

VOL. LXXXIV No. 76


# MIG Jets Shoot At Merch

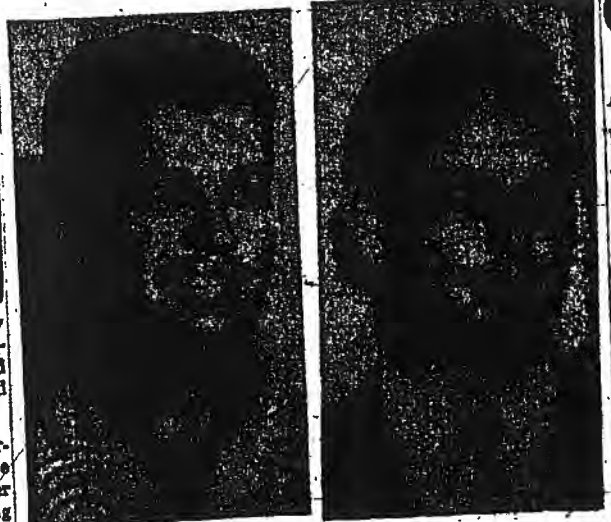
## Here and There

**FORMER PRESIDENT** Harry Truman has promised to "embarrass" Senator John M. Spottswood by visiting him at an unspecified date.

In wishing Spottswood "an overwhelming majority" in his race for the State Senate, the former chief executive wrote concerning the race, "I will promise not to embarrass you — but, if you are nominated and elected I will embarrass you in this way — I'll come to see you."

— o —

**THERE WILL BE NO** Royal Castle at the corner of Duval and Caroline Streets, nor any place within the area designated for preservation of old island architecture by the meeting between the Old Island Restoration Foundation, the new director Public Works Board and the city commission.



LOOKS PROBABLE—With Sheriff John M. Spottswood on his way to Tallahassee today, possibly to take the oath of office as the county's new senator this weekend, the hottest prospect for the $10,000 yearly post appeared to be front-runner Kermit Lewin (left), prominent in civic and business circles. On the right, Chief Investigator Bobby Brown was strongly rumored today for the slot as Chief Deputy in the department, a post vacated some three years ago by Rene Raisle.

## Congressmen Ask To Aid Bereft Wives

CHARLESTON, W.Va. (AP) — Two U. S. senators and a representative have been asked to aid two families who were left without means of support when a pair of American fliers disappeared on a reported secret mission over Cuba in December 1961.

The two, Robert Thompson, 28, of Charleston, W.Va., and Robert Swanner, 26, of Miami, left Ft. Lauderdale, Fla., Dec. 14, 1961 in a twin-engine private plane after telling friends they had been hired for a leaflet-dropping mission over Cuba.

The most positive word so far on their fate came recently when a refugee, brought from Cuba aboard the mercy ship Christy Lykes, told newsmen he had seen the plane crash after it had been hit by Cuban antiaircraft [illegible]

The case is reminiscent of the [illegible] involving four former American airmen who were shot down over Cuba while flying B26 bombers in the Bay of Pigs invasion in April

*Water Board Action Questioned*

## Insurance Bid

*U.S. Blasted For*

## Ship D Pay

07-DEC-2010 17:29 ScreenScan

# atallion To Be Permanently

Various detachments are spread through the keys.

This announcement means Key West now has a full representation of all services in the armed forces — Navy, Army, Marines, Air Force and Coast Guard.

The Army said the movement of the battalion from their former home bases effectively establishes a permanent air defense area for the Miami - Homestead - Key West circuit.

The 6th Missile Battalion of the 65th Artillery, in Key West, is in charge of the Hawk missile batteries which, during the crisis, poked their deadly noses over the waters of the Florida Straits from their positions on Smathers Beach.

In Homestead, said the Army, the 2nd Battalion of the 52nd Artillery, manning the Nike-Hercules missile emplacements will be stationed.

This battalion was home - based in Ft. Worth, Tex.

The 5th Battalion of 15th Artillery, manning Hawk missiles, will also be stationed in Homestead. They were once based at Ft. Lewis, Wash., a few miles away from Seattle.

Joining these in the Miami area, will be the 13th Air Defense Artillery Group, [illegible] said.

Navy [illegible] of the Air [illegible] cludes the Army, Navy ment and the Air Force ment.

On the way to the Homestead-Key West [illegible] said the Army, will be the 2nd Hawk Battery of the talion, temporarily ba


# Key West Citizen

THE SOUTHERNMOST NEWSPAPER IN THE U. S. A.

KEY WEST, FLORIDA, FRIDAY, MARCH 29, 1963


# ool At Merchant Ship Near

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The most positive word so far on their fate came recently when a refugee, brought from Cuba aboard the mercy ship Shirley Lykes, told newsmen he had seen the plane crash after it had been hit by Cuban antiaircraft fire, killing [illegible] pilots.

★ ★ ★ ★ ★ ★

*U.S. Blasted For Exile Action*

# Ship Damage Pay Wanted

By REINHOLD G. ENSZ

MOSCOW (AP) — The Soviet Union today demanded that the United States pay damages for a Cuban exile commando raid that crippled the Soviet freighter Baku three days ago.

A note delivered to the U.S. Embassy also threatened to take unspecified measures to protect Soviet shipping from attacks by anti-Castro guerrillas operating in Cuban waters.

The U.S. government has said repeatedly it is doing all it can to discourage such raids by Cuban exile groups.

But Moscow's note charged that the Baku and other attacks on Soviet vessels "are not accidental and isolated actions, but planned [illegible] such protest this week. In both notes, the Soviets accused the United States of giving support to the exiles.

Today's note said on this point:

"The Soviet government has already called the attention of the government of the U.S.A. to the fact that, without the furnishing of American arms and ships and the provision by the U.S.A. of other forms of support to groups of traitors to the Cuban people, they could not accomplish their criminal plans."

To this accusation, the semiofficial Havana paper Revolucion added the charge today that the commando raid against the Baku followed an American reconnaissance mission over the port of [illegible] by U.S. aircraft.

## Crew Of F Describes

By Joe [illegible]

MIAMI (AP) — [illegible] Floridian said today two [illegible] built MIG jet fighters sprayed bow and stern of the vessel [illegible] miles off the Cuban coast and Miami.

The attack was filmed [illegible] bodied seaman, but he [illegible] Navy intelligence officers [illegible] vessel as she approached Miami.

★ ★ ★

## Council Meet Called On [illegible] Cuba Tensio

Washington [illegible] dent [illegible] committee [illegible]

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# ermanently Based Here

les missile emplacements will be stationed.

This battalion was home based in Ft. Worth, Tex.

The 8th Battalion of 15th Artillery, manning Hawk missiles, will also be stationed in Homestead. They were once based at Ft. Lewis, Wash., a few miles away from Seattle.

Joining these in the Miami area, will be the 18th Air Defense Artillery Group, from Ft. Meade, Md.

Nolte mentioned today that [illegible] of the 6th Missile Battalion, includes the 287th Ordnance Detachment and the 35th Signal Detachment.

On the way to the Miami-Homestead-Key West defense sector, said the Army, will be units of the 2nd Hawk Battery of the 8th Battalion, temporarily based at Patrick and [illegible] Air Force Bases.

Army units in Key West were [illegible] Wickers Field but have since moved to the Rest Beach section near Roosevelt Blvd. and Bertha Street.

There have been unconfirmed rumors within the last few weeks that the Army might buy the Casa Marina from its present owner, Sam Hyman, but there has never been a definite transaction.

# st Citizen

R IN THE U. S. A.

**Weather Summary**

Fair and warm. Low tonight, 72. High tomorrow, 84. Tomorrow's tides: High 12:49 a. m., 12:20 p. m. Low 5:51 a. m., 7:16 p. m. NEly to Ely winds 10 - 15 mph.

d 29, 1963 PRICE FIVE CENTS

# ant Ship Near Cuba

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*usted For Exile Action*

# ip Damage y Wanted

HOLD G. ENSZ

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# Crew Of Floridian Describes Attack

By JOE McGOWAN JR.

MIAMI (AP) — Crewmen of the merchant ship Floridian said today two 600-mile-an-hour Russian-built MIG jet fighters sprayed cannon fire close to the bow and stern of the vessel Thursday as she cruised 20 miles off the Cuban coast and 175 miles southeast of Miami.

The attack was filmed by Jack Nelson, able-bodied seaman, but he turned his film over to U. S. Navy intelligence officers who boarded the 400-foot vessel as she approached Miami under U. S. fighter escort.

Chief Mate Harold Keane also photographed the MIGS in action but said the Navy men also asked for and took his film.

"I could see the wink of the guns," Nelson said, as he aimed his camera at the Russian-built planes swooping in toward the ship on one of three cannon-firing runs.

A distress call from the Florid-

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# Council Meet Called On New Cuba Tension

By LEWIS GULICK

WASHINGTON (AP) — President Kennedy called the executive

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# Missile Battalion

...olit second timing by the ...ted States Army (HAWK) ...ile units is a major factor ... the stalwart air defense of ...es and air bases around the ...rld.

...ombining their special skills ...er the critical eye of Lt. ... Joseph E. Muckerman II, ...talion commander, Battery ...f the 6th Battalion (HAWK) ...h Artillery, is participating in ... annual Integrated Unit ...ining (IUT).

The training, a grueling four ...ys of evaluation, is held at the ...cGregor Guided Missile Range ... New Mexico. The evaluation ...ogram is required by the ...my Air Defense Command to ...sure top operational efficiency ... its missile units.

IUT is programmed to test ...e efficiency of the missilemen ... the areas of preparedness, ...perational readiness and firing.

At the McGregor site, mem...ers of A Battery, commanded ...y Capt. James M. McDonald, ...will obtain the required equip...ment for the evaluation. During ...he following four days, the unit ...will be allowed eight hours to ...heck the components of the ...HAWK system before an Air De...fense inspection team evaluates ...he units operational readiness.

Once the operational readiness ...evaluation is complete, the bat...tery will launch two missiles. ...The unit is then graded on oper...ational and firing procedures ...during the launching period.

The operational efficiency of ...these units remains one of the ...major deterents in the country's ...defense against attack by en...

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MISSILE REPRIMAND

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Once the operational readiness evaluation is complete, the bat- ery will launch two missiles. The unit is then graded on oper- ational and firing procedures during the launching period.

The operational efficiency of these units remains one of the major deterents in the country's defense against attack by en- emy planes.

Members of the Key West unit will return to their battalion headquarters Sunday after com- pleting their training and spend- ing several days in El Paso, Texas.

# Service Notes

**Lt. Jerry W. Baber**

The Air Force son of a Key West, Fla., couple has entered the Air University's Squadron Officer School, Maxwell AFB, Ala.

First Lieutenant Jerry W. Baber, son of Major and Mrs


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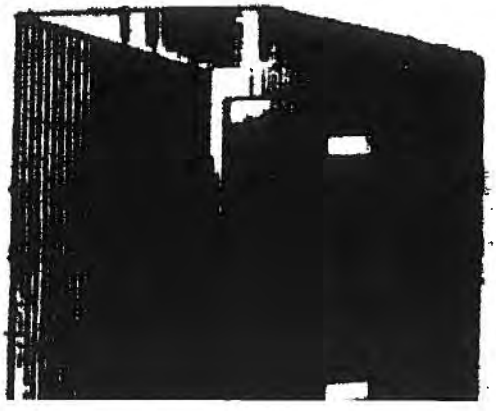
## POSSIBLE FEDERAL TAX DEDUCTIO

Federal Income Tax depreciation or ex may be available if business equipment used in your trade or business or if you who is required to work at home. You m circumstances also be entitled to an i against your Federal Income Tax for cost. Consult your tax adviser for more i



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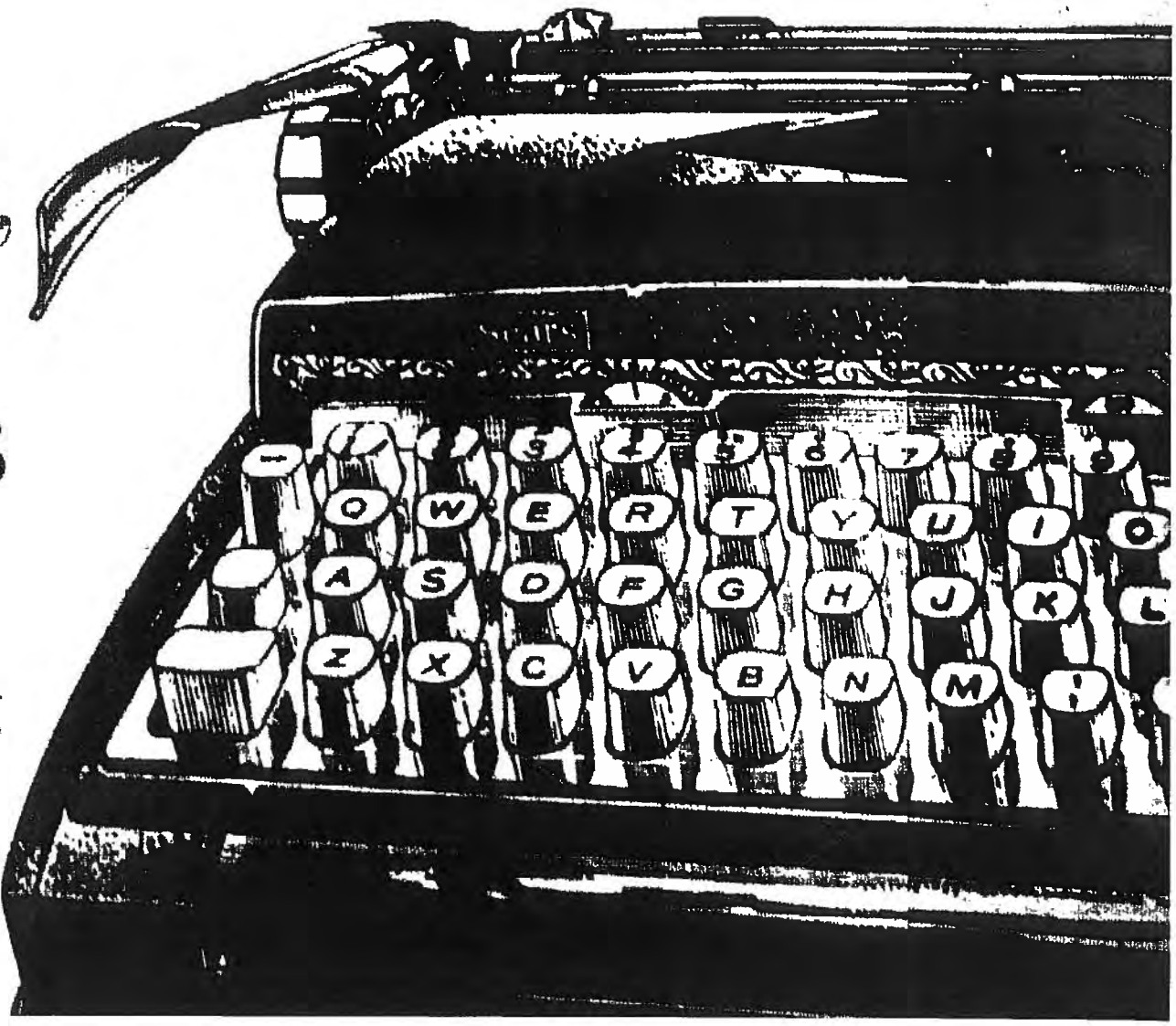

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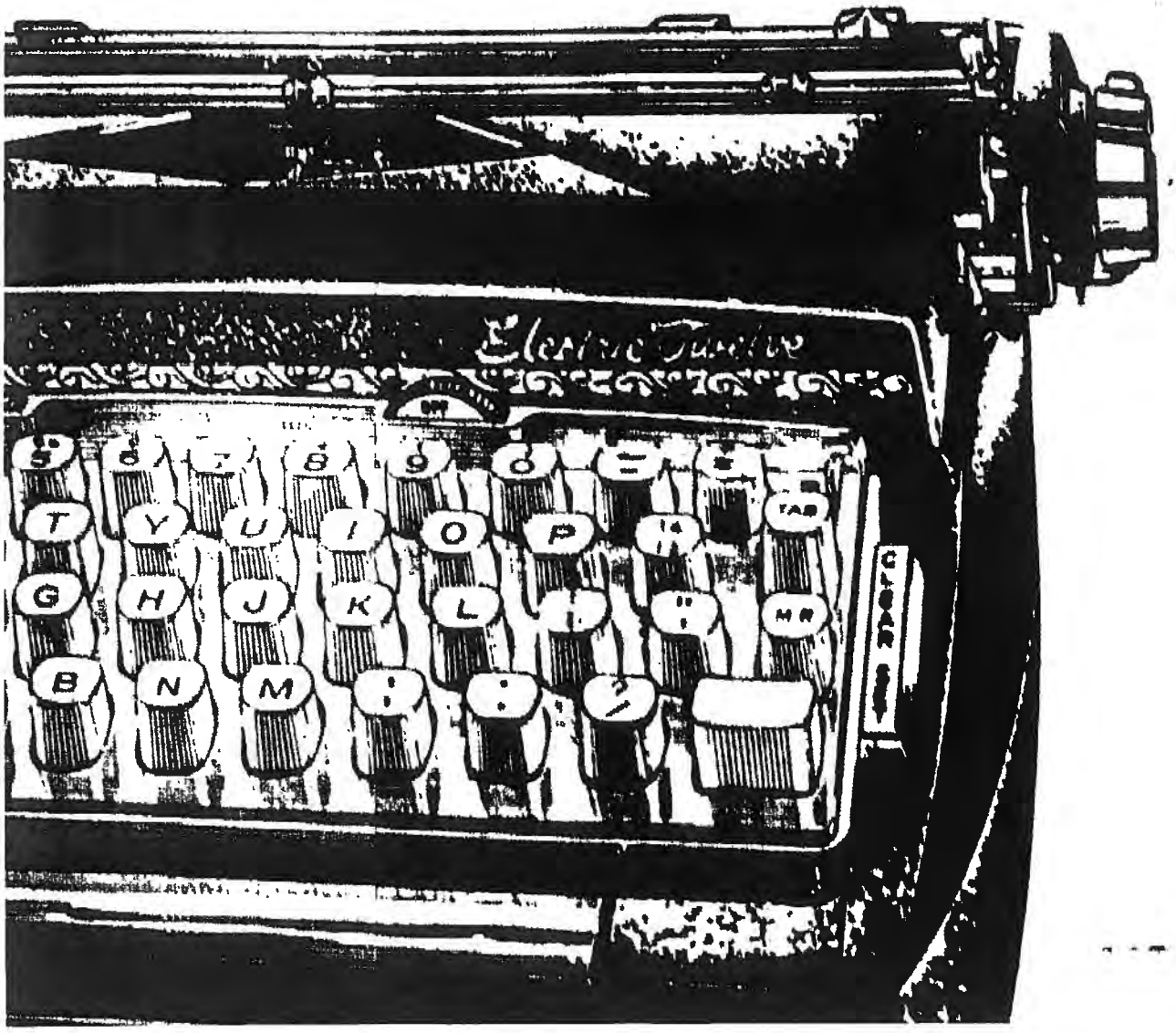
# Unit Training Cou

# Office Supply Sale



DEMONSTRATION AND HONORS — The Army missile site on Geiger Key was the scene of decommissioning ceremonies, bottom photo, led by Lt. Col. John Williamson, commander of the 1st Battalion of the 65th Air Defense Artillery. Williamson said in the ceremony today that he was only decommissioning the site and not the battery which is being transferred to Ft. Bliss, Texas. The site had been named after Florentino Roque who died in Vietnam on Oct. 2, 1966. A bronze plaque bearing his son's name was presented to Florentino's father, Antonio Roque, in center of top photo by by Williamson left, as Capt. Paul Milner, Battery commander, observes.

# Mistrial Motion Mars Last Of Doctors Suits

By MARK ANDREWS
Citizen Staff Writer

A motion for mistrial interrupted this morning's opening statements in the wrongfully refused to renew Colra's policy and had promptly cancelled Davidson's as a result of "the political situation" among doctors in Key West.

lack of physicians' peer review in Key West.

Davidson was informed his policy was cancelled because

*MISSING ARTILLERY — Three U.S. Army air defense missile launchers, which were parked and left sitting for a month in a Jacksonville trucking company's parking lot during the independent truckers' strike, were towed Sunday by Jacksonville Police to an auto salvage yard for safekeeping. Army officials had not known the launchers were missing. They were on their way from Key West to Ft. Blisss at El Paso, Texas. (UPI)*

# Army Missile Launchers 'Lost'

A flatbed trailer carrying three U.S. Army Improved-Hawk missile launchers from Key West to their new home at Ft. Bliss, Texas, was left sitting for a month in Jacksonville trucking company's parking lot during the independent trucker's strike, but no one apparently knew it was missing.

Jacksonville Police had the trailer towed away Sunday thinking the launchers might be stolen, but on Monday officials of Lightning Trucking Co. called the police to see if anyone knew the whereabouts of their cargo. They were returned to the trucking firm for final shipment to El Paso.

Capt. Roming, an Army Public Affairs Officer in Homestead, told the Citizen that the trailer carrying three launchers left Key West April 24 for Ft. Bliss, the new home of the First Battalion, 65th Air Defense Artillery, which is the Army unit that had operated the missiles at Boca Chica Naval Air Station.

On June 7, the trailer was consigned to Dealers' Transit Co., Capt. Roming said. It was taken to Jacksonville the next day where it was parked in the unfenced parking lot of Lightning Trucking Co. Just about that time the independent truckers' strike got underway and the missile launchers were left outside since no freight was being moved and the firm's warehouses were already full.

Trucking company officials apparently knew the launchers were there the whole time, but didn't bother to let the Army know. Meanwhile, Army personell in Texas did not know their launchers were overdue.

Capt. Roming explained that a government bill of lading would have been sent out form Key West to Ft. Bliss on the day the launchers were shipped out. After taking a week for the paperwork to reach the right office in Texas, the bill of lading would have been held for a period of 30 days, the Army spokesman said, before Ft. Bliss personnel started to expect the launchers.

The launchers, which did not hold any missiles and are unclassified, were valued at $[illegible]

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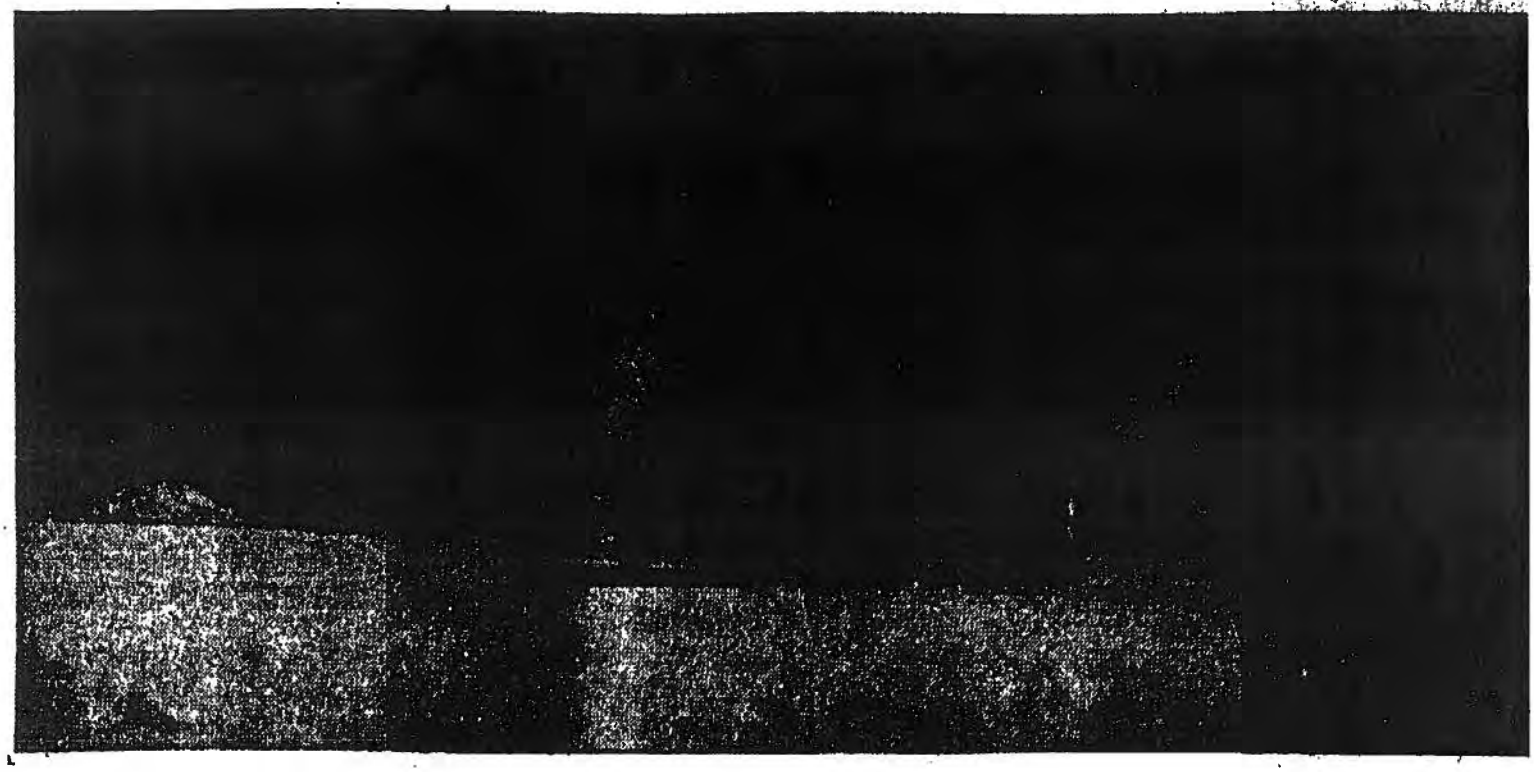
# Army's HAWK Missile



**FILLING AND LEVELING OPERATIONS UNDER WAY FOR HAWK MISSILE SITE AT A**

**. . . Key West Air Defense Command was set up during 1962 Cuban Crisis—and now t**

The Army's Sixth HAWK Missile Battalion is obviously here to stay.

The permanent nature of the installion is evident by the fact construction is proceeding rapidly on a $3.3 million missile complex spread from Key West to Boca Chica. Completion of the project is scheduled for next year.

The air - defense unit moved into the Keys during the 1962 missile crisis and has since been stationed here on a temporary basis.

The new facilities will be a far cry from the original sandbagged emplacements hastily erected to counter the threat posed by Russian weapons in Cuba, just 90 miles across the Florida Straits in Cuba.

On completion, personnel will be moved from their quarters in the old Casa Marina Hotel to air conditioned barracks being constructed at the Boca Chica Naval Air Station. Also located at the air station will be headquarters of the Key West Air Defense Command, the 35th Signal Detachment, and headquarters and maintenance shops of the Third Army Logistic Support Facility now housed in temporary quarters at the Poinciana Shopping Center on Duck Avenue.

Plans call for four missile firing batteries, each consisting of a raised and contoured installation divided into missile, fire control and administrative areas.

Officials say the sites will be "attractive as well as functional."

Filling and leveling is already under way at the missile sites at Geiger Key, Boca Chica and Key West International Airport. Work will begin shortly at the final battery site on Fleming Key.

Awarded the contract for the huge project was the Allen M. Campbell Co. of Clearwater. Construction is under the supervision of Lt. Cmdr. Marshall N. Whitehurst, Naval Air Station resident engineer.

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# sile Battalion Digs In

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Crisis—and now they're here to stay.

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*Pick Up Broken Threads Of Life*

## Hilda Victims Are Returning Slowly

NEW ORLEANS, La. (AP) — Thousands of families were back to pick up the pieces of their hurricane-shattered homes in coastal Louisiana today and more were going despite warnings to wait.

They didn't care about lack of electricity, water, sewage, telephones or other conveniences.

Some slipped in by back flattened by Hurricane Hilda last week.

Fishermen, businessmen, housewives, oil field workers, trappers and others wanted to get to the job of restoring their possessions to some semblance of what they were before the storm's onslaught.

A. L. Stansbury, owner of a sporting goods and liquor store

## It's On The

**CITY**

William R. Hardesty, vagrancy, drunk and disorderly, fighting, $40.

Michael E. Markiewicz, speeding, $15.

Edward Rogowski, reckless driving, $15.

James H. Williams, speeding, $20.

Fined $15 each for fighting: Minnie White, Bobby Wright.

Donald Francis, public nuisance, $15.

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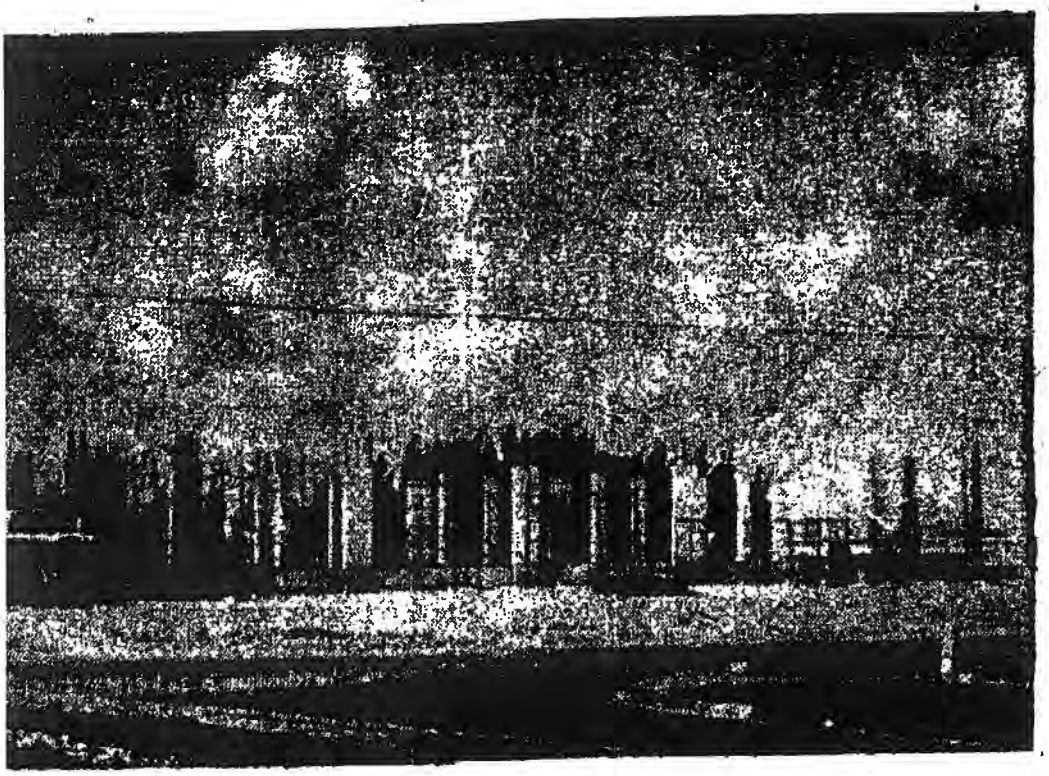

—Citizen Staff Photos, Jack Burke.

**F HEADQUARTERS AT BOCA CHICA NAVAL AIR STATION**
**ing more than $3 million into four Key West area anti-aircraft installations.**

## The Record

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Kathryn B. Steed vs. W. R. Steed Jr., divorce, decree pro confesso.

Mildred Smith vs. James W. Smith, divorce, decree pro confesso.

Dolores M. Poplawski vs. Stephen J. Poplawski, divorce, decree pro confesso.

Julius Schwartzberg vs. Harry A. Berry, suit for equitable relief, final decree.

Earl E. Lofland vs. Jessie T. Grafton, J. S. Hess Jr., and the

## OIRF Seeks Membership Renewals

Merchants, motel and restaurant owners who profited by the record season Key West enjoyed last winter, can insure another good year by taking $25 memberships in Old Island Restoration Foundation, headquarters said today.

Membership gives the contributor advertising space in the

08-DEC-2010 17:54 ScreenScan

# HAWK missile battalion dedicates four batteries

The 6th Battalion (HAWK) 65th Artillery Sunday afternoon dedicated its four firing batteries to four Key West Army men who lost their lives in Vietnam and also re-named the batteries after the four men, Peter Knight, Richard Recupero, Florentino Roque, Eckwood Solomon.

The solemn ceremonies took place at the "A" battery site on Fleming Key before a large crowd of Key Westers, many of whom stood because the stands and extra seating provided filled up early.

The wives and children of Knight, Recupero, and Solomon and the parents of Roque occupied special seats and each group of survivors arrived in an Army car and was escorted by a 6th Battalion officer.

Edward B. Knight, the principal speaker, paid tribute to the four fallen heroes, saying that they have demonstrated that America will remain the "land of the free as long as it is also the home of the brave."

Knight contrasted their patriotism and supreme sacrifices with those who advocate a "let well enough alone" policy and also those who burn draft cards and refuse to serve their country. He said the deaths of these four must not be in vain and called upon all citizens to take inspiration from them and renew our individualism, our industriousness, and our patriotic enthusiasm.

Lt. Col. Joseph E. Muckerman II, Commanding Officer of the Battalion, eulogized the Key Westers "who had given their all in the cause of freedom." He declared that henceforth Battery "A" would be known as the Eckwood Solomon HAWK Missile Site in honor of Capt. Eckwood Solomon; Battery "B" would be known as the Richard Recupero site in honor of Pfc. Richard Recupero, Battery "C" would be called the Florentino Roque site, in honor of Specialist Four Florentino Roque, and the Battery "D" site would be designated the Peter Knight site in honor of Major Peter Knight.

Capt. Jack Sutherland, battery chaplain, unveiled the Fleming Key marker dedicated to Capt. Solomon in the presence of his widow. Similar markers at the other batteries were later unveiled in the presence of the other surviving wives and parents.

Father Robert Nilon gave the invocation, Rabbi Nathan Zwitman pronounced the benediction, Major Grover Burdette, Battalion Executive Officer, presided an Army color guard stood at attention, and the Fleet Sonar School Choir sang and the Key West High School Band played.

Rear Admiral Frederick J. Brush, Commander Key West Force, Capt. John N. Myers, Commanding Officer of the Naval Air Station and Claude (Duke) Freeman, chairman of the Chamber of Commerce's Military Affairs Committee sat with Lt. Col. Muckerman and Major Burdette at the speaker's stand.

The Military Affairs Committee had provided the bronze plates for the site markers.

# Erroneous reports spiked by boosters

Mr. and Mrs. W. Winston McLaughlin 1516 19th Street at Sunrise Drive, Key West, are right on the ball as boosters for the island and bearers of the standard of truth.

They received the May 22 issue of the Daily News Record, Harrisonburg, Va., with a column, "Massanutten Musings," by Herbert Garst, in which it was said

Then for good measure, the McLaughlins touched on the subject of hurricanes and how facts were distorted as to the state of Key West during Alma of June, 1966 and Inez of October of that year.

"As we ate our lunch during Alma, we heard on our radio via one of the national networks, that Key West was under water

## (LEGAL NOTICE)

NOTICE OF CALLING FOR BIDS
NOTICE IS HEREBY GIVEN
TO WHOM IT MAY CONCERN

# MILSITE RECON

**Military Site Reclamation and Conversion**

Army

2 July 1993

Tom Hambright
Monroe County Library
700 Fleming St.
Key West, FL 33040

Dear Mr. Hambright:

Thanks for spending some time with me on the phone this week, and for sharing some of your recollections from Hawk days in the Keys. As a Cold War military historian with a special interest in CONUS surface-to-air missile [SAM] installations, I'm trying to learn as much as possible about Florida's SAM batteries, temporary or permanent. So, anything you can provide me in terms of text or photographs would be greatly appreciated. [Sonny Hardin, long-time NAS Key West-er, told me that numerous Hawk photos were in files stored in old ammo bunkers near the station's front gate; is he correct?]

Now, as promised, here for your files is some of the material I've collected on Florida's Hawk and Nike batteries.

Big things first -- I got the ARADCOM report on Florida's post-Cuban crisis SAM defenses from the Army's Center for Military History in Washington, DC. The Center has, I believe, at least two other reports on Florida's SAM defenses (of earlier vintage, I think; cited in the report); so, you might want to contact the Center about getting copies of those. Be advised that it took two years for the Army to get this report reviewed and cleared for release to me!

Finally, also enclosed are some site rosters and maps. I prepared the site rosters of the Key West and Homestead-Miami Defenses; if you spot any errors, or if you have any additional information about any of the sites (e. g., what the Navy is doing with the former Nike battery on Key Largo; the street address for the Casa Marina Hotel), I'd like to learn about it. The large Homestead-Miami map is colored to show the locations of individual Nike and Hawk sites -- the separate launch (missile) and control (radar) sites of the Nike-Hercules batteries are marked in blue and green, respectively; the Hawk sites are red. The last set of maps are ARADCOM maps showing the disposition of units in the Key West and Homestead-Miami Defenses; if any of the maps is illegible, I should be able to find some clearer copies.

Well, that should do it for now. Thanks very much for your interest and assistance. I look forward to hearing from you.

Sincerely,

Michael Binder

Enclosures

Michael S. Binder • 6107 Palo Pinto Avenue, Dallas TX 75214-3615 • (214) 361-3270/827-4891

[redacted] UNCLASSIFIED

HEADQUARTERS

UNITED STATES ARMY AIR DEFENSE COMMAND

# ARADCOM's FLORIDA DEFENSES IN THE AFTERMATH OF THE CUBAN MISSILE CRISIS 1963 - 1968 (U)

(OCMH Monograph ARAD 6 M)

by

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and

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31 December 1968

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# ARADCOM's FLORIDA DEFENSES

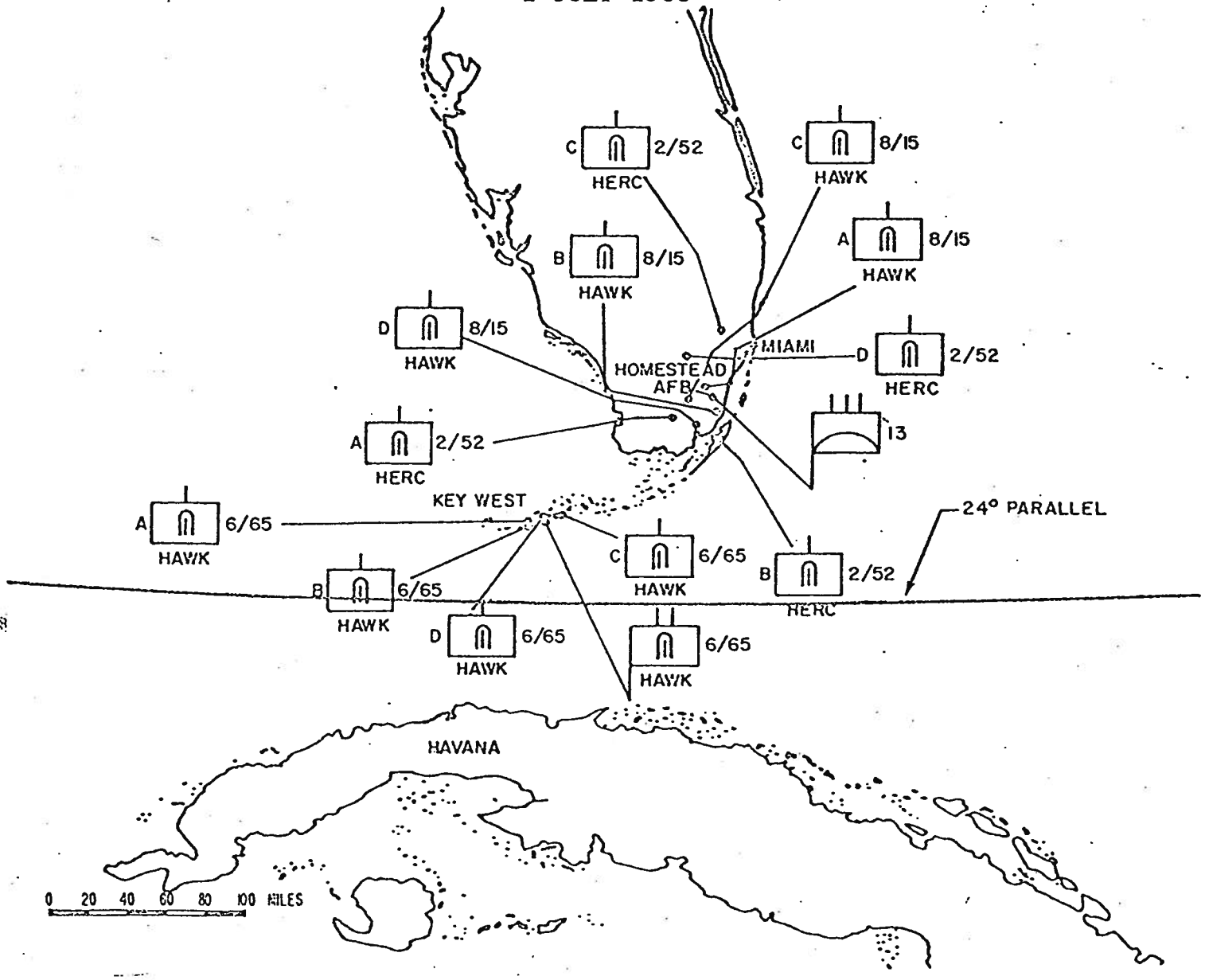
# IN THE

# AFTERMATH OF THE CUBAN MISSILE CRISIS

# 1963 - 1968

MAP 1

ARADCOM's FLORIDA DEFENSES
AS OF
1 JULY 1968



Homestead AFB"[4] on 5 December, it departed for whence it so suddenly came on 15-17 December. Considering the fact that Castro's capabilities for air attack against Florida were known -- at least to NORAD -- to feature supersonic and near-supersonic MIG aircraft,[5] the military value of this battery's brief contribution to the air defense effort in Florida appears, in retrospect, to have been primarily psychological.[6]

Headquarters and Headquarters Battery (HHB) of the 13th Artillery Group (AD), a Strategic Army Corps (STRAC) unit from Fort George G. Meade, Maryland, was alerted for movement to Florida at 0400 hours on 28 October, and arrived by rail at Homestead AFB on 30 October.[7] By 8 November the Group had moved to Princeton, about four miles north of Homestead AFB, whence it exercised "supervision," under the operational control of ARADCOM's 2d Region, of all four of the ADA units dispatched to Florida.[8]

The 8th Battalion (HAWK), 15th Artillery, a STRAC unit attached to the 4th Infantry Division at Fort Lewis, Washington, received its orders for movement to several field locations in Florida on 25 October.[9] Battery "B" arrived on site at Patrick AFB, near Cape Canaveral (now Cape Kennedy) on 1 November. Little more than

24 hours later, Battery "D" arrived at MacDill AFB, near Tampa, and the rest of the battalion (HHB and Batteries "A" and "C") at Homestead AFB, with all units of the battalion reporting attainment of operational status within 24 hours of arrival.

Three line batteries[10] and HHB of the 2d Battalion (Nike-Hercules), 52d Artillery, another STRAC unit, entrained for Florida from Fort Bliss, Texas on 28 October, and arrived at Homestead AFB on the 31st. The unit's missiles, with HE (high explosive) warheads only,[11] arrived the next day. By 14 November, all units of the battalion had achieved operational status.

The 6th Battalion (HAWK), 65th Artillery, a unit of the joint STRIKE Command which had been stationed at Fort Meade since August 1962, received orders for a temporary change of station (TCS) to Key West on 20 October, two days before President Kennedy's quarantine challenge to Khrushchev; but owing largely to poor performance by the rail carrier, the movement (continued by road from Homestead AFB to Key West) was not completed until 26 October.[12] The unit's missiles arrived shortly thereafter, and by 29 October the battalion's Army Air Defense Command Post (AADCP) and four firing batteries

Florida as a tropical tourist trap has posed special problems by generating an inordinately high volume of official visitations to these units and defenses -- particularly, and predictably, in the wintertime.[15]

4. (U) The HAWK System.

The Florida defenses present yet another feature unique within ARADCOM: the HAWK weapon system, with its distinctive characteriestics, capabilities, requirements and problems.[16] This circumstance in turn has compelled special considerations -- in mission assignment as well as in operational, logistical, and personnel matters -- hitherto foreign to a command armed solely with the Nike Hercules system.

5. (U) The Continuing Importance of Florida.

The importance of effective air defense for the southeastern United States did not vanish with the turnaround of Khrushchev's missile-laden freighters or the general exodus of U. S. troops from emergency assembly areas in Florida. If the current concern in the Congress for the future air defense of the area can be viewed as a valid index of that importance, it has in fact been enhanced since that fateful fall of 1962.[17] As the Army component of the joint Continental Air

[9]All information in this subparagraph is drawn from the unclassified unit history of the 8/15 Arty, pp. 2-3. Hereafter cited as 8/15 History.

[10]Btry "B" was participating in Project HOLECARD on Johnston Island in the Pacific at the time of the rest of the battalion's move to Florida. It did not join its parent unit there until 25 Jun 63. Unless otherwise indicated, the information in this subparagraph comes from the unclassified and unpaginated unit history of the 2/52 Arty, hereafter cited as 2/52 History.

[11]According to an Interv of 26 Jul 68 with Lt. Col. Fred I. Baker, Jr., Asst S-3 of the 13th Arty Gp at the time of the 2/52 Arty's move to Florida, nuclear warheads were not moved because of likely difficulties in providing adequate security for them on "temporary" field sites. According to ARADCOM Commanders Conference Brochure (S), 20-22 Apr 65, p. 81, the 2/52's war reserve of nuclear warheads was not to be moved on site until eight weeks after occupancy of permanent sites, i.e., the summer of 1965.

[12]All information in this subparagraph is drawn from a report (C) of the 6/65 Arty, sub: The Role of the 6th Missile Battalion (HAWK) 65th Artillery in the Cuban Crisis, 1 May 63, pp. 2-8. Hereafter cited as 6/65 in Cuban Crisis.

[13]Two classified (S) ARADCOM monographs by Jean Martin on the Cuban missile crisis and the Florida ADA units, to which the present study is a sequel, collectively cover the period indicated in detail: ARADCOM in the Cuban Crisis, September-December 1962, and The Florida Units, January-December 1963.

[14]According to an Interv of 14 May 68 with SFC Thomas L. Hurley, S-4 Sgt of the 6/65 Arty, the effects of coral (as well as salt air) on issue footwear are such as to render boots and shoes unsalvageable after seven to nine months' wear.

[15]According to an informal fact sheet provided the writer on 15 May 68 by the 13th Arty Gp, there were some 148 visits to the Group and its subordinate units, by a total of 465 individuals from 20 separate agencies, during the period 1 May 67 through 1 May 68.

[16]See Appendix C for a classified (C) description of HAWK system characteristics.

[17]See the statement of Lt. Gen. Alfred D. Starbird, SENTINEL System Manager, Department of the Army (DA) before the House Defense Appropriations Sub-committee, as released on 29 Jun 68 and published in The Washington News of that date.

11. (C) Developments in the Key West Defense.

As an homogeneous HAWK defense, Key West had fewer problems in the field of command and control than Homestead-Miami, with its mixed HAWK-Hercules weapon systems. Also contributing to the defense's comparative freedom from complications in this field was the fact that NORAD, for reasons which lie beyond the classification limits of this study, has always eschewed the possibility of SAGE-directed control of air defense operations off the littoral of southern Florida.[18] The NORAD Control Center (NCC), established at Key West in 1963 thus operates in a manual rather than automatic mode, obviating for the 6/65 those problems of SAGE compatability which so plagued the 13th Group's AADCP at Richmond NAS.

This is by no means to say that Key West did not have its problems or major developments in the field of command and control. The most relevant topics under these headings are three in number: the AADCP-NCC collocation problem; the ill-starred effort to replace the AADCP's AN/TSQ-38 with an AN/GSG-9; and the replacement of the TSQ-38 by a Missile Mentor (AN-TSQ-51).

The 6/65 in 1962 brought to Florida, as did the 8/15, an AN/TSQ-38 as its FDS. Because there has

never been a requirement for SAGE compatability at the Key West Defense, this equipment, which was not replaced until 1968, proved adequate to local needs and functioned "extremely satisfactorily."[19] The rub came in collocating the AADCP with the manual NCC at Boca Chica NAS, a step necessary to rapid correlation of target information prior to engagement by the HAWK fire units.

The obstacles to such collocation, which took some 41 months to overcome, were interservice as well as technical in nature. For one thing, the building which housed the NCC had been "conceived and funded by the Navy prior to the Cuban crisis and originally was intended for exclusive Navy use."[20] The assignment of ADA to Key West, on either a temporary or permanent basis, had thus been understandably unforeseen by Navy planners, and the superimposition of ARADCOM as well as NORAD requirements upon those of the Navy combined to put a high premium upon the limited space available within the building. ARADCOM could not expect to eject the Navy from its own premises; on the other hand, both the Navy and NORAD accepted, at least in principle, the need for AADCP-NCC collocation.

The long road out of this impasse led through conferences, surveys, correspondence (which in one case reached a total of some 14 indorsements over a period of 15 months[21]), proposals, and counter-proposals from July 1963, when the collocation question was raised by Hq 2d ARADCOM Region, to December 1966, when collocation was physically achieved.[22]

The eventual solution saw a miniscule enclave (measuring 8 feet by 8½ feet) provided in the NCC proper for three or four AADCP personnel[23] and two remote consoles of the TSQ-38 FDS. This left residual administrative, maintenance, and communications requirements of the AADCP which -- after Navy rejection of a "permanent gypsy camp"[24] concept embodying use of vans for the necessary facilities -- were met by Army-funded Navy construction of an AADCP support building near the NCC.[25] Indeed, as the CG of ARADCOM's 5th Region observed, "it would seem that since July 1963 an inordinate amount of time /had/ been consumed in determining what would appear to be the solution to a relatively simple problem."[26]

The abortive effort to replace Key West's TSQ-38 with a reconfigured version of the BIRDIE-5 system was triggered in the spring of 1966 by tentative plans at

DA and DOD to redeploy the defense's field army-type FDS to Southeast Asia.[27] From this point of departure began an experiment which ended as an operational and financial fiasco.

Using a BIRDIE-5 rendered available by the phase-out of ARADCOM's Lincoln-Offutt Defense in Nebraska, the Martin Company, under contract from the U. S. Army Missile Command (MICOM), reconfigured the BIRDIE-5 into a prototype AN/GSG-9 which hopefully would meet the special requirements of the Key West Defense.[28] This BIRDIE-9 was installed at Key West in August 1966 and underwent testing by MICOM and the Test and Evaluation Command, Army Materiel Command (AMC), throughout a six-month period ending 3 Febuary 1967.[29] Fortunately, the tried-and-true TSQ-38 was not removed from Key West and was thus available when these tests found the bastardized BIRDIE to be "operationally unacceptable."[30] ARADCOM, never enthusiastic about this MICOM-sponsored experiment, succeeded in restoring the TSQ-38 to at least temporary grace.[31] The Martin Company's original cost estimate for this venture, it is of more than parenthetical interest to note, had been "between $110,000 and $150,000";[32] the eventual actual cost proved to be some $1,900,000.[33]

As these /BOD/ dates slipped and slipped, I was sure that all my staff and I were going to have dog crates, with dogs, in our back yards for two or more months. Fortunately for me, after many frantic messages . . . ARADCOM changed the schedule for arrival of the dogs.[25]

16. (C) Problems and Costs.

Other than Hurricane Cleo, which hit Florida in August 1964, numerous and varied problems help to account for the delay in meeting scheduled BOD's. These problems can be lumped into three general categories: acquisition of privately owned real estate; medical requirements; and unforeseen height obstructions.

The problem of land acquisition -- "a critical factor in establishing the completion date for construction"[26] -- on occasion had many facets. A case in point was site HM-03, the future home of Battery "C" of the 2/52, near Coral City. The above-ground magazines made necessary by the swampy terrain would in turn require purchase or easement of considerable acreage in order to comply with quantity-safety distance criteria for Nike Hercules missiles.[27] Although most of the proposed site was used only for cattle-grazing, the realtor-owner in December 1963 objected, through Senator Spessard L. Holland of Florida, that he had "future plans" for "a suburban development in the

Permanent Tactical Site of Battery "C", 6/65,

on Geiger Key, Florida

action, long procurement leadtime, and . . . lack of repair parts for the rebuild program at depot level."[41] As previously stated, this situation caused Lt. Gen. Robert Hackett, then CG ARADCOM, to generate "at least 24 items of correspondence"[42] in 1966, but in 1967 General Hackett could only reiterate that "our HAWK units are experiencing great difficulties in obtaining repair parts" as a function in large part of "increased world-wide demands."[43] Although Chart 20 shows that the situation was improving as 1968 drew to a close, the record in this critical area of HAWK repair-parts availability was such that one could only hope, with General Hackett, that this improvement was not a "one-time affair."[44]

The adverse effects of Florida's climate upon ADA equipment -- particularly the HAWK system[45] -- were felt immediately upon arrival of the units during the Cuban crisis of 1962, and constant, gradually successful struggle against this baleful natural handicap was a leitmotiv of their experience after that time. Heat, humidity, salt air -- these tropical tourist delights produced serious problems for the air-conditioning equipment and the missiles of the HAWK system, as well as radomes and the AN/TSQ-51 FDS.

The gravity of the failure of air-conditioning equipment in HAWK units soon after their arrival in Florida was underlined by the CO of the 6/65 in his after-action report: "The operational capability of a (HAWK) firing battery depends upon an operational Battery Control Central (BCC) and the BCC depends upon its air conditioner."[46] After about four weeks of continuous operation[47] the "overrated quality"[48] of materials and components used in the air conditioners was shown up and the equipment broke down. No repair parts were available in the supply system;[49] temporary replacements were obtained only by stripping conditioners from the vans of supporting Ordnance detachments;[50] and a lasting solution was arrived at only through modification or eventual replacement of each HAWK equipment air conditioner in the Florida area.[51]

A more chronic and complex problem was presented by the vulnerability of the HAWK missile to moisture contamination and corrosion -- a problem intensified by the close proximity of the missiles to salt water.[52]

In 1963 this problem was attacked by "maintenance personnel from ARADCOM, Third Army, Redstone Arsenal, and Raytheon" who "tried changing desiccant, adding desiccant, coating parts with rust-resisting solutions,

taping missile openings and seams, "and various other methods, none of which was successful."[53] Periodic purging of the guidance package with nitrogen by July 1963 emerged as a helpful maintenance practice,[54] but the problem remained throughout the following year, during which such local modifications as rubber "O" rings and clear-lacquer sealers, suggested by the Raytheon manufacturer, were applied.[55] In April 1965 a complete exchange of missiles for reconfigured models, which belatedly featured adequate sealing, greatly alleviated the corrosion problem,[56] but special procedures, such as use of a 150-watt "hot closet" dehumidifier, were still necessary as the unending struggle against corrosion continued in 1968.[57]

The Raytheon Company's somewhat porous radome also posed problems for the Florida HAWK units.[58] At Key West the ever-helpful Navy in 1964 recoated these fiberglass bubbles, effectively eliminating the problem,[59] and similar measures by TUSALOG aided the 8/15 at Homestead-Miami.[60]

Saline micro-corrosion of the AN/TSQ-51 FDS, which uses ambient air for cooling, was a serious problem for the Homestead-Miami Defense from installation of the system in March 1967 through 1968, when

the problem was getting worse and no final solution was yet in sight.[61] Saline micro-crystals got into the system's circuitry through ambient-air cooling, distorting voltages and seriously affecting system reliability. Despite "hundreds of hours" spent on the problem by representatives of the Hughes manufacturer and MICOM, as well as submission of two equipment-improvement reports by the 13th Group, the problem remained serious as 1968 drew to a close. Lacking test equipment, Group personnel could only conduct a ceaseless search for the saline crystals, a search which did not await scheduled maintenance but went on all the time. Here, as in other problem areas of maintenance in Florida, there was no substitute for "the most obvious preventive measure . . . hard work."[62]

29. (C) Interservice Agreements.

Given the absence of a major Army installation in Florida and the distance of over 500 airline miles between the Florida ADA units and Fort Stewart, the nearest big Army post in Georgia, the permanent assignment of these units to ARADCOM probably would have been impossible without the support provided by other services, specifically the Air Force and Navy. With

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Appendix B

HAWK System Characteristics*

1. (U) The HAWK Missile.

a. It is 14" in diameter, 16½ ft long, and weighs approximately 1295 lbs.

b. The warhead is 120 lbs HE. The lethal radius of this warhead is in excess of 25 ft.

c. The horizontal range of the missile is about 17 nm on a 3 square meter target.

d. Can handle individual targets up to 50,000 ft on a 3 square meter target.

e. The speed of the missile is approximately Mach 2.2.

2. (U) Radars. The radars consist of the following:

a. [redacted]

b. [redacted]

c. [redacted]

d. [redacted]

* As set forth in Incl 8 to Memo (S), Brig. Gen. Kenneth I. Curtis, G-3 ARADCOM to Brig. Gen. Thomas K. McGhee, Director of Operations, NORAD, sub: Air Defense for Southeastern United States, 18 Oct 62, ADGC.

3. (U) Launchers. There are six HAWK launchers to the battery. Each launcher is capable of launching three missiles. The launchers can be re-loaded rapidly and the battery can maintain a sustained firing rate of one missile every 30 seconds. They can be fired individually or in ripples.

4. (U) One battery can handle two widely separated targets simultaneously.

5. [redacted]

6. (U) Area to position a HAWK battery - 3 to 5 acres.

7. (U) Time of emplacement (complete battery) - 23 minutes.

8. (U) Transportable by helicopter and standard Army vehicles.**

9. (U) Assault Phase Firing Unit consisting of:

1 CW Acquisition Radar

1 Illuminator

3 Launchers (3 missiles each)

1 Assault Fire Control Console

Time to emplace - 7 minutes.

** Towed version. Self-propelled version of launcher has a combat-loaded weight of 28,300 lbs. Florida HAWK units are equipped with towed version.

Key West Defense

13th Arty Gp (AD)/47th Arty Bde (AD)

| Site No. | Installation/Location | Acreage | Radar Data | Launch Sections | Missile/ Service Life | Current Owner | Current Use(s) |
|---|---|---|---|---|---|---|---|
| KW 10 | NW corner of Boca Chica Key S of Long Point | | | 6 | **HAWK** 9 Apr 65 - ~April 1979 | U.S. Navy | preserved for future Army reuse |
| KW 15 | N of US1 and Saddlebunch No 2 Channel, Saddlebunch Keys | | | 6? | **HAWK** ~Oct 62 - ~Mar 65 | U.S. Navy | communications site |
| KW 18 | NAS Key West, Boca Chica Key | | **AADCP:** TSQ-38/ TSQ-51 FPS-67 [USAF] | xxx | Dec 66 - ~April 79 | U.S. Navy | Navy personnel ofc, barracks, warehouse; dismantling JSS radar? |
| KW 24 | SW end of Geiger Key | | QRA bty | 6 | **HAWK** 4 Mar 65 - ~April 79 | U.S. Navy | preserved for future Army reuse |
| KW 65 | N of Key West Intl A/P, Key West Island | | SMFU | 6 | **HAWK** 23 Apr 65 - ~April 79 | U.S. Navy | preserved for future Army reuse |
| KW 80 | N end of Fleming Key | | | 6 | **HAWK** 20 Mar 65 - ~April 79 | U.S. Army | Special Forces training facility |
| KW 95 | Casa Marina Hotel [Reynolds St.] | | **AADCP:** TSQ-38 GSS-7 FPS-75 HHB 6/65 | xxx | Oct 62 - ~ Dec 66 | private interests | luxury resort hotel |

# BATTALION HISTORY 1961-1965

The 6th Missile Battalion (HAWK), 65th Artillery was activated at Fort Bliss, Texas, 22 December 1961. An intensive training program followed and was completed in June 1962. The Battalion achieved an enviable training record during this period by destroying 15 out of 16 targets during missile firings at McGregor Guided Missile Range. By 15 August 1962, movement of the Battalion was completed to Fort George G. Meade, Maryland, where the unit was assigned to the Strategic Army Corps with the mission of being able to furnish air defense in any part of the world, if needed.

In October 1962, at the beginning of the Cuban crisis, the Battalion was ordered to Key West, Florida, and given the mission of providing air defenses for the Florida Keys. A rapid movement by rail and motor convoy followed and air defense missile sites suddenly appeared in Key West. Battery A was stationed at Fleming Key on the US Naval Station. Battery B was first located on the Monroe County Beach, but was later moved to its present location at the Key West International Airport. Battery C was located at the US Naval Air Station, Boca Chica, but was subsequently moved to Bay Point, Saddlebunch Keys. Battery D was stationed at US Naval Air Station, Boca Chica. The Battalion Headquarters was established in the Casa Marina Hotel.

Since October 1962, the Battalion, an integral part of the North American Air Defense Command, has continued to furnish air defense to the Key West area.

# THE HAWK MISSILE SYSTEM

The HAWK Missile System is a reliable, mobile, and accurate system that was designed for destroying low-altitude, high-speed aircraft as well as medium- or high-altitude aircraft.

The four basic tasks which must be accomplished in any Air Defense system are detection, identification, tracking and target kill. Medium- or High-Altitude detection is accomplished by the Pulse Acquisition Radar.

Low-Altitude target detection is accomplished by the Continuous Wave Acquisition Radar. This particular radar can differentiate between moving objects (targets) and stationary objects (buildings, mountains, etc.).

Once target acquisition is completed, the High Power Illuminator Radar is manually moved to the target azimuth and begins to search for the target. Once it finds the target it begins to track or follow the target. This is called "lock on." When the target comes within range a missile is fired in the general direction of the target. The target is bathed or "illuminated" by transmitted energy from the High Power Illuminator Radar, and the missile uses this reflected energy to determine its own guidance commands. A receiver in the missile "locks on" to the reflected energy from the target and enables the missile to follow the target despite target evasive action. The missile follows this reflected energy until it is within killing range of the target. Automatic detonation of the warhead within the missile destroys the target.

## Pulse Acquisition Radar

The Pulse Acquisition Radar detects moving targets and furnishes target range and azimuth to the Battery Control Central. The antenna rotates one complete revolution every 3 seconds, and scans 360 degrees. Transmitted energy from the radar is reflected from the target and displayed as target video in the Battery Control Central.

## Continuous Wave Acquisition Radar

The Continuous Wave Acquisition Radar employs the doppler principle and transmits and receives a beam of energy to detect targets. The antenna rotates through 360 degrees. Targets moving through this beam reflect the energy which is displayed as target video in the Battery Control Central. Since the Continuous Wave Acquisition Radar rotates synchronously with the Pulse Acquisition Radar, the composite displays of target video can be easily correlated.

## High Power Illuminator Radar

The High Power Illuminator Radar automatically tracks the target, keeps the target illuminated with energy, and provides data to the Battery Control Central, launchers, and missiles. The missile utilizes reflected energy from the target to compute guidance commands. There are two separate antennas--one for transmitting and one for receiving. Two of these radars are found in each battery.

## Range Only Radar

The Range Only Radar is used during an electronic counter-measure (ECM) or "jamming" environment. As the name suggests, this radar provides only range data. It is a pulse-type, quick-response radar that operates on a frequency different from the other radars in the system. When the radar is activated it is slaved to the appropriate High Power Illuminator Radar and presents a range video signal to the Battery Control Central.

## Launcher

The Launcher receives tactical data from the Battery Control Central and positioning data from the High Power Illuminator Radar. As the illuminator radar antenna moves while automatically tracking the target, the three-place launcher automatically aims the missiles in Azimuth and Elevation. Three seconds after a fire command from the Battery Control Central the missile is launched.

## Missile

The HAWK, a semi-active homing missile, is propelled by a solid fuel rocket motor. It is 16 feet, 6 inches long, weighs 1,295 pounds, and has a dart configuration. There are three basic functional systems: propulsion, guidance, and warhead. The front body section consists of the radome, target tracking antenna with positioning system, guidance section and electrical power unit. The rear section consists of a warhead section, rocket motor, elevon section and four wing assemblies.

## Battery Control Central

Battery Control Central is the "brains" of the HAWK system. Systems within the Battery Control Central enable the Tactical Control Officer to detect, identify, evaluate, track, and kill hostile aircraft. With all equipment remoted to the Battery Control Central, it takes five people in the van to control the battery and run the Air Defense Mission.

MONROE COUNTY PUBLIC LIBRARY

# C Battery has highest SNAP score

Thirty-six members of C Battery, 6th Battalion (HAWK), 65th Artillery recently returned to Key West with the highest SNAP score ever attained by a HAWK U. S. Army Defense Command unit.

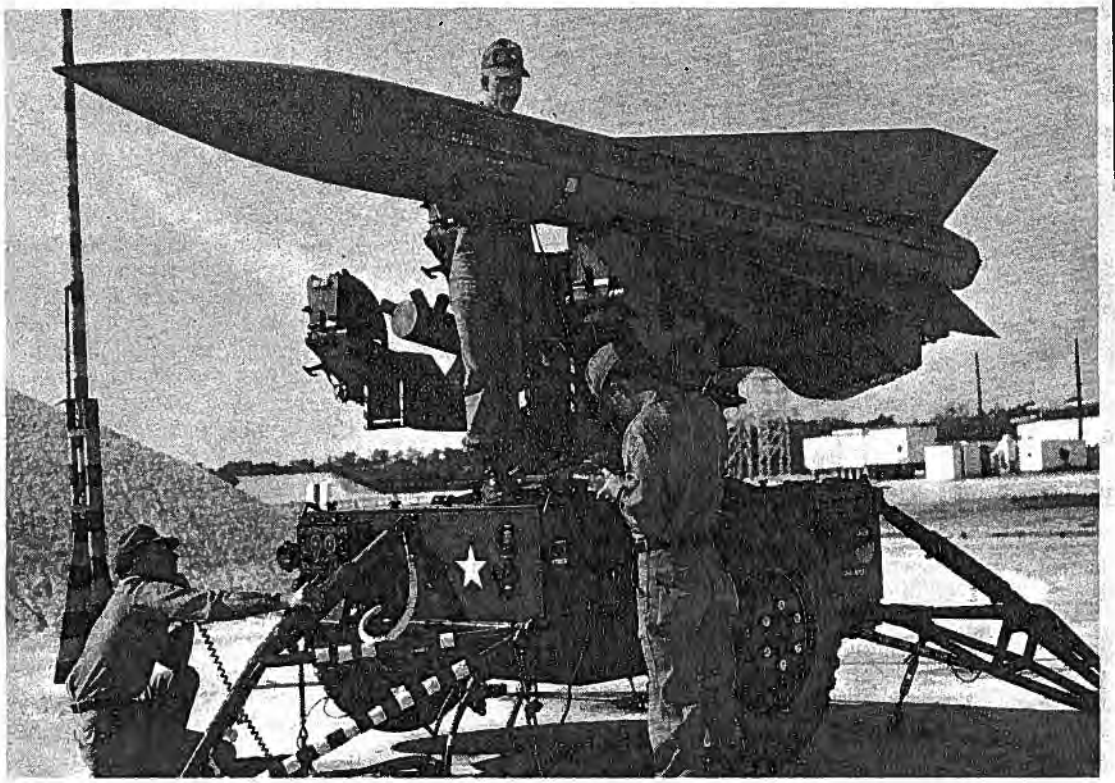
SNAP is Short Notice Annual Practice and within 48 hours after receiving the word, C Battery flew to Fort Bliss, Texas and on to McGregor Range, New Mexico, where they piled up 1970 out of a possible 2,000 inspection points, scoring 98.5 per cent on the inspection.

The battery left here on a Saturday night, rested on Sunday and during the next few days were evaluated on missile assembly, operational readiness, first and second firing phases and overtime, safety and use and misuse of tools.

SNAP provides missilemen with confidence in their equipment and in their own ability, helps maintain an individual state of preparedness, and a successful participation such as this one instills pride and keeps morale high

Official U. S. Navy Photos, G. P. Cavalero, PH2

HAWKMEN OF C BATTERY SET INSPECTION RECORD . . . front and center is Lt. Paul Moss, Battery Commander.



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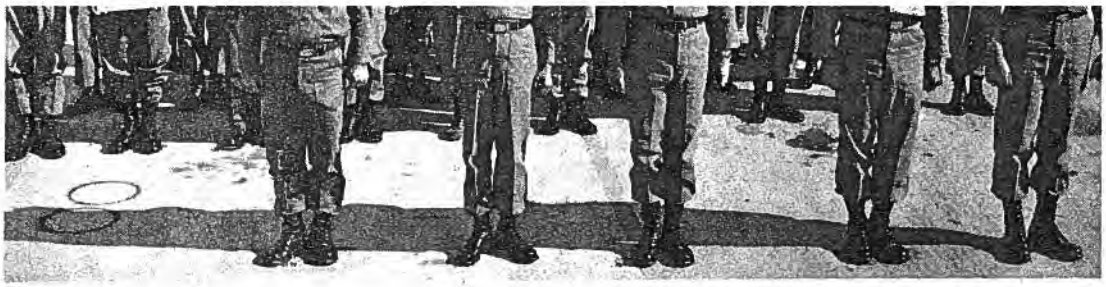
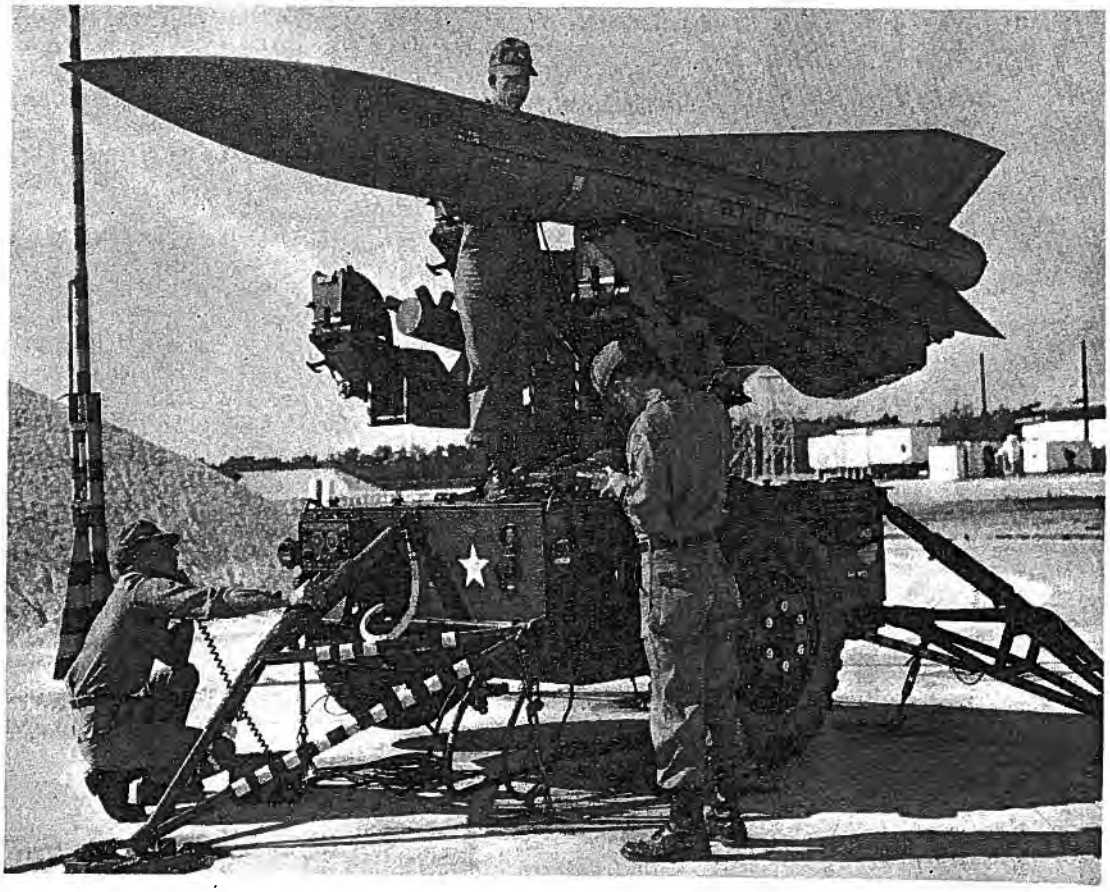


Official U. S. Navy Photos, G. P. Cavalero, PH2

HAWKMEN OF C BATTERY SET INSPECTION RECORD . . . front and center is Lt. Paul Moss, Battery Commander.



PART OF MISSILE CHECK FOR SNAP INSPECTION . . . from left, SSgt. T. Gentry, S4 R. Vandenbossche, S5 H. Wolfe.

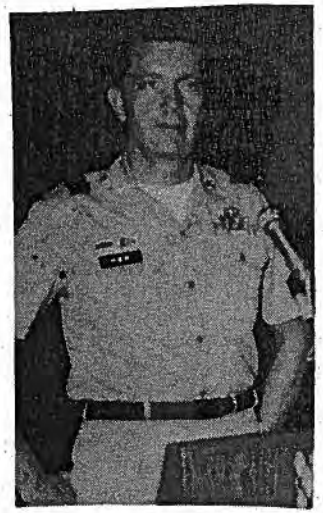
# Temporary Bolstering Of Army Forces Told

The Army's local contingent of over 750 men, plus dependents, will be boosted somewhat by a group coming in shortly as a training unit for the new improved electronic HAWK system which the 1-65th will adapt in the next six months.

Lt. Col. Robert Kee, Army CO, told members of the Military Affairs Committee (MAC) at their monthly breakfast meeting at the BOQ that the new improved HAWK system would be one of two HAWK Battalions in the Army to have the new capability.

"It is a totally automated system and cuts the firing time to a matter of seconds. With targets now of considerably greater speed there is less time for defensive reaction," stated the officer.

He added that Key West would see and hear a great deal of heavy traffic of trucks and other vehicles coming into the area very shortly. Also the build-up of civilians will be added to the military contingent. "All of this," Lt. Col. Kee said, "should be completed by February."



*Lt. Col. Robert Kee*

The HAWK, meaning 'Homing All the Way Killer," missile and Army units have been in Key West since the 1962 Cuban Crisis.

Lt. Col. Kee gave the listeners a short slide film regarding the history of HAWK in Key West and then showed a movie of the new electronic firing prodecure illustrating the incredible accuracy of the device.

The solid state electronics plates, plus the target illuminating capability, makes for fast repair of gear and deadly honing in on the speediest of targets.

"There are changes in every major piece of equipment," he added.

Capt. Hoover thanked members of the NAS Fire Department, the City Fire Department, his own Marines and the many civilians who not only helped in fighting the Barracks fire this week but also showed much concern for the men whose personal effects were wiped out in the disaster.

# Tourists Still Coming as Army Digs In

By STEPHEN TRUMBULL And BOB RENO
Herald Staff Writers

KEY WEST — Stepped up defense preparations in this front line American city present a series of cockeyed contrasts.

Kids on bicycles peddled past GI's digging machine-gun emplacements around anti-aircraft missile installations on the beaches.

Home folks and tourists, taking advantage of the first day of bracing weather after the hot summer, parked nearby and some took pictures. An officer told one newsman there was no objection to photographing the equipment but "don't pose any soldiers so their unit identification will show."

**It was Navy Day, a traditional day of open house and massed plane fly - overs in this town. But there was scarcely a plane in the cloudless blue sky. Presumably they are being kept ready behind the guarded gates for a far more grim eventuality.**

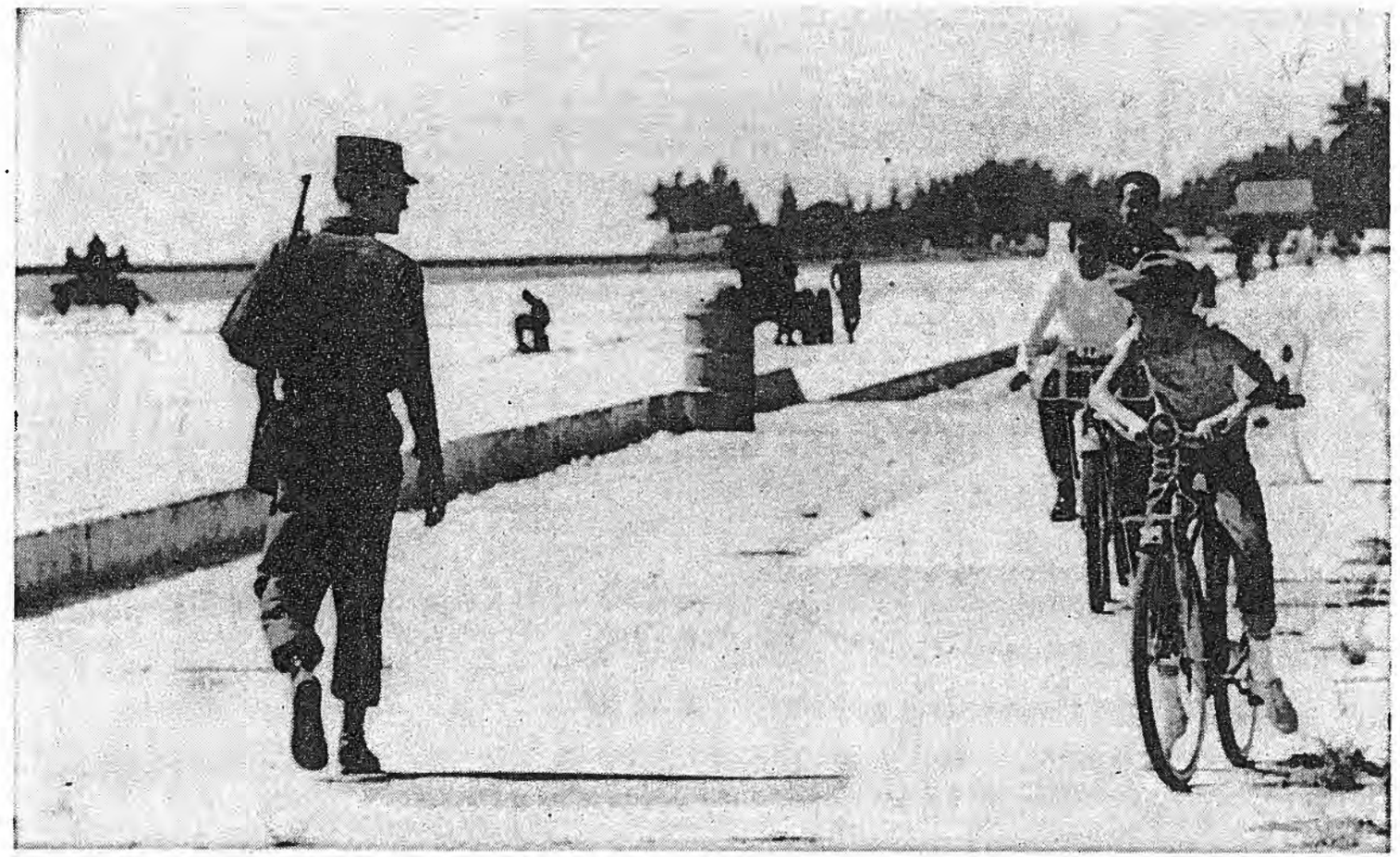
Newsmen couldn't put a foot inside the Navy property but tourists continue to ride through the Naval station on the Conch sightseeing train and past the now vacant submarine pens. For them there was only the normal requirement of turning their cameras over to the driver while in the station.

GIs not swinging shovels —a distasteful tool not yet replaced in this push-button era —stood about marveling at the blue water and the palm trees rattling their fronds in an invigorating breeze.

**nobody — was going to paw through his mail.**

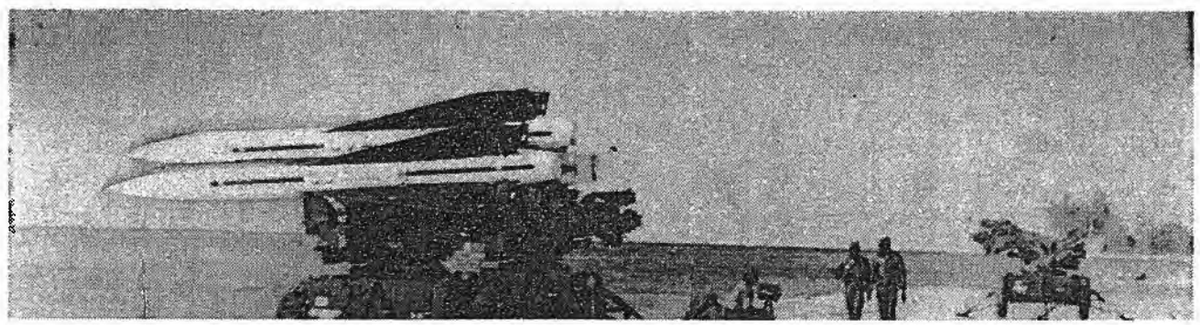
Nobody did.

The townsmen here listen attentitively to civil defense advice and then ask one another just what in the so-and-so they could do about an atomic blast. Except for the beaches, this town virtually sets on rock. There are no holes in which to hide.



—Herald Staff Photos by DOUG KENNEC

**Key West Kids Make Bicycle-Ride Inspection of Military Installations At Beach**



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GIs not swinging shovels —a distasteful tool not yet replaced in this push-button era —stood about marveling at the blue water and the palm trees rattling their fronds in an invigorating breeze.

**"Man, is this something!" said Charles Andrews, a very youthful Army private whose hometown is Providence, R.I. "Back home I'd have everything I own on."**

Informed it was really a cool day compared to the past week, he flatly refused to believe it.

Although such an admission comes hard from a Texan, his buddy, Pvt. Paul Lemmer of Houston, also admitted that "This is pretty nice."

Both were tremendously impressed with the cheers and shouts of welcome that had come from civilians along the streets as their unit came in.

**"That never happened to us before," said Andrews. "Sure makes a fellow feel good. And in a Navy town at that!"**

The youths obviously had been security - indoctrinated. They would go for chit-chat, but they volunteered positively no information about the identity of their units, its strength, or its mission here.

Lemmer was a little teed off because he brought a snappy outfit of civilian clothes with him, and the order is "stay in uniform." The uniform of the day is combat fatigues, definitely unglamorous.

No liberty has been given to any military personnel late in the afternoon, but reports were current that small parts of some units would be allowed to go downtown later in the evening, providing the picture doesn't change suddenly.

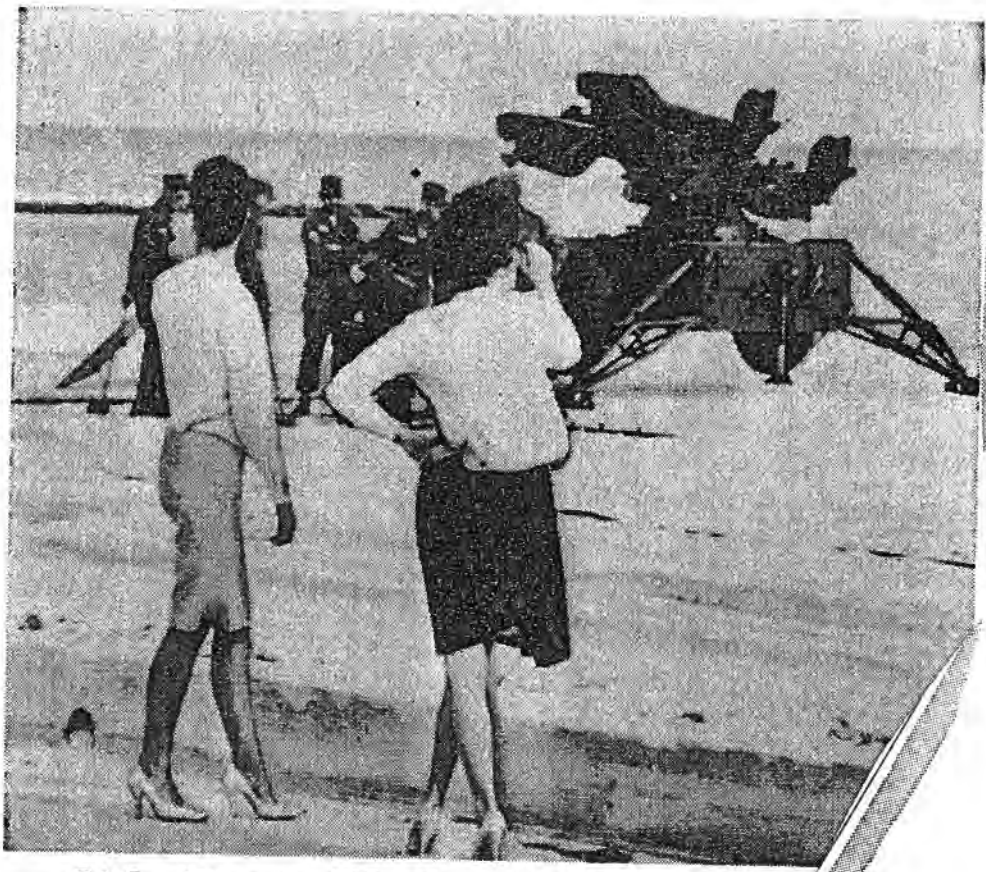
**The bistros along Duval St. will cheer if this is true. With most of the Navy at sea and the remainder on standby alert it's been pretty slow in the thirst-quenching trade here since Monday.**

Cobwebs have gathered in the city jail cells reserved for the exuberant and there is little fresh ink on the police blotter.

The motels are doing slightly better since newspapers gave the lie to rumors of travel and tourist restrictions here. Some rooms have been taken by Air Force officers, but there are still vacancy signs all over town.

The toughness of security

## Beach At Key West Bristles With Newly Installed M



## Girls Watch Missiles, Soldiers Watch

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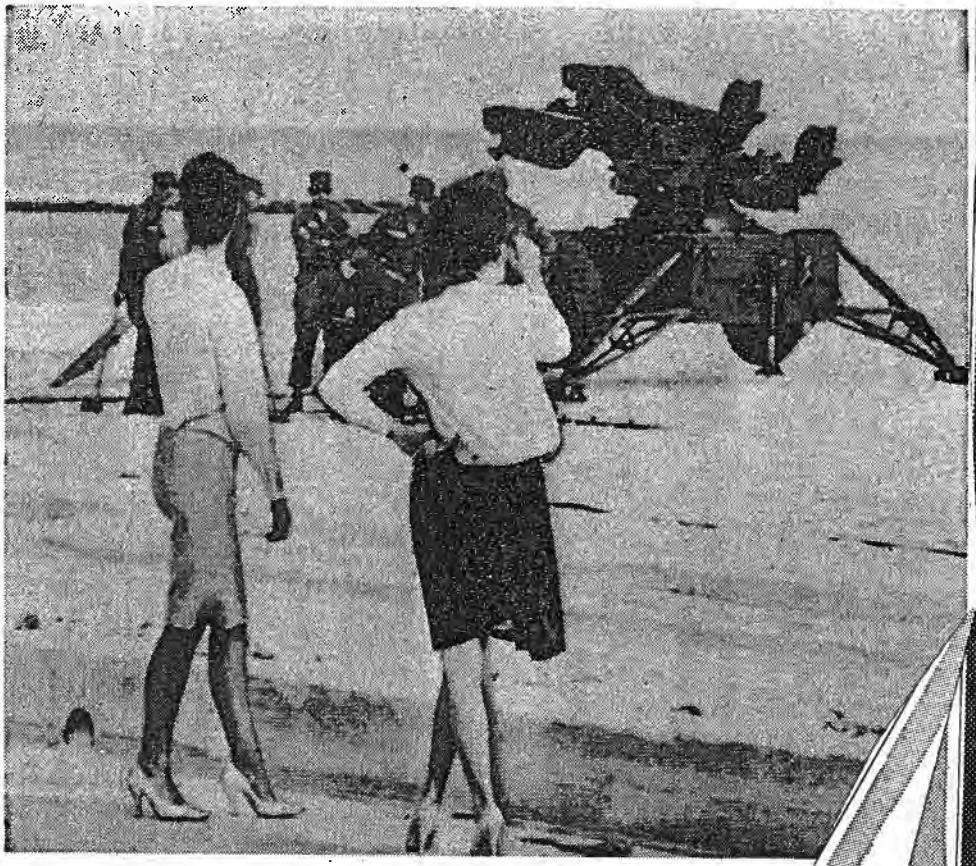
The toughness of security measures around the Navy installation led to one smile-producing story Saturday. It illustrated the old wheeze, "the mail must go through."

**As the story goes, mailman Charley Fry was ordered to step down from his mail truck and open it for a security search as he came to the gates of Boca Chica Naval Air Station. He blew his stack, informed the guards that he worked for the same government and that nobody — but**

## Beach At Key West Bristles With Newly Installed



## Girls Watch Missiles, Soldiers Watch

The Miami Herald

Section C

hursday, Nov. 29, 1962 Keys Complete State News

***Or Until Castro Goes***

# Army Missile Troops In Key West to Stay

## *They Won't Go With Other Units*

Herald Bureau

KEY WEST — Army troops in Key West supporting missile batteries are expected to become a permanent part of the local military scene.

Despite the defense department's announcement Tuesday of a withdrawal of troops from

**day with three bands—one for each block.**

Local Army and Air Force men are being invited along with the thousands of Navy servicemen regularly stationed at the Naval base.

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# With Other Units

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**Meanwhile, the city of Key West which leased its baseball stadium to the Army for a dollar a year at the height of the Cuban crisis began to wonder when it might get it back.**

A 200 man force of Air Force men at Marathon are also expected to remain. The force is part of the Air Force's security service charged with maintaining security in armed forces communications.

Unlike the combat-ready troops based in other parts of South Florida during the Cuban crisis, the Army units at Key West are strictly "support troops." An Army spokesman said during President Kennedy's visit Monday that they are here to maintain, guard and operate if necessary the anti-aircraft missile batteries stationed at four spots in the area.

**There was no official word Wednesday from Rear Adm. R. Y. McElroy, commander of all the mi[illegible] in the area, as to whether the batteries will follow the rest of the Army out of Florida or if they will remain a permanent part of Key West's defenses.**

The beginning of the Cuban crisis more than a month ago found Key West almost totally lacking in ground based anti-aircraft defenses. There were no anti-aircraft ground to air missiles in the area and anti-aircraft guns have not been seen in the area for years.

Now the missiles are based next to Key West International Airport, at Boca Chica Naval Air Station, across the highway from the air station and at Saddlebunch Key.

**Troops supporting the missiles are being housed at the Casa Marina Hotel which was leased by the Army. The hotel is also the Army's area headquarters. At Wicked Stadium, the city baseball park, the Army is maintaining a motor pool and equipment depot.**

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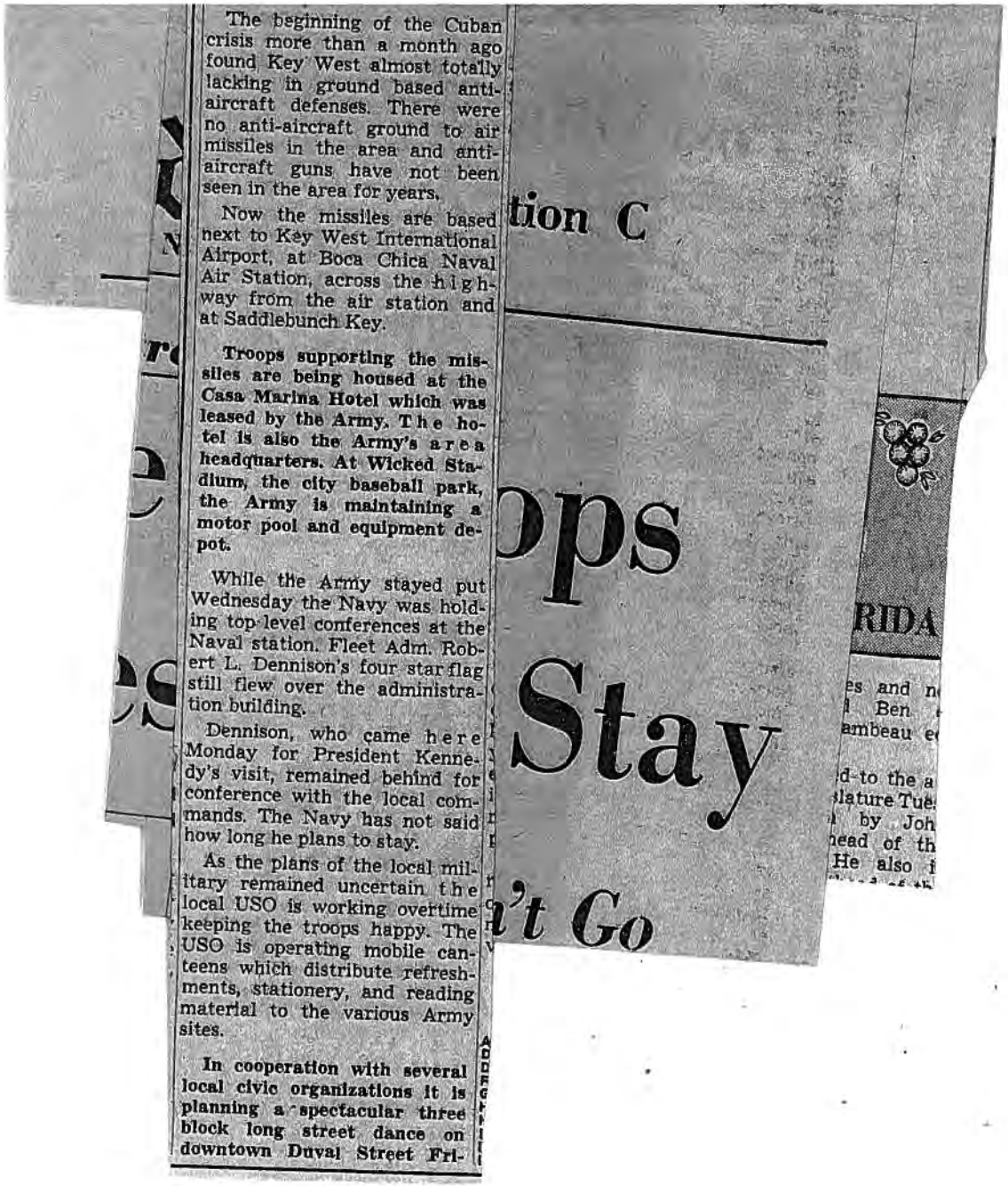
Army

Troops Score



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As the plans of the local military remained uncertain the local USO is working overtime keeping the troops happy. The USO is operating mobile canteens which distribute refreshments, stationery, and reading material to the various Army sites.

**In cooperation with several local civic organizations it is planning a spectacular three block long street dance on downtown Duval Street Fri-**

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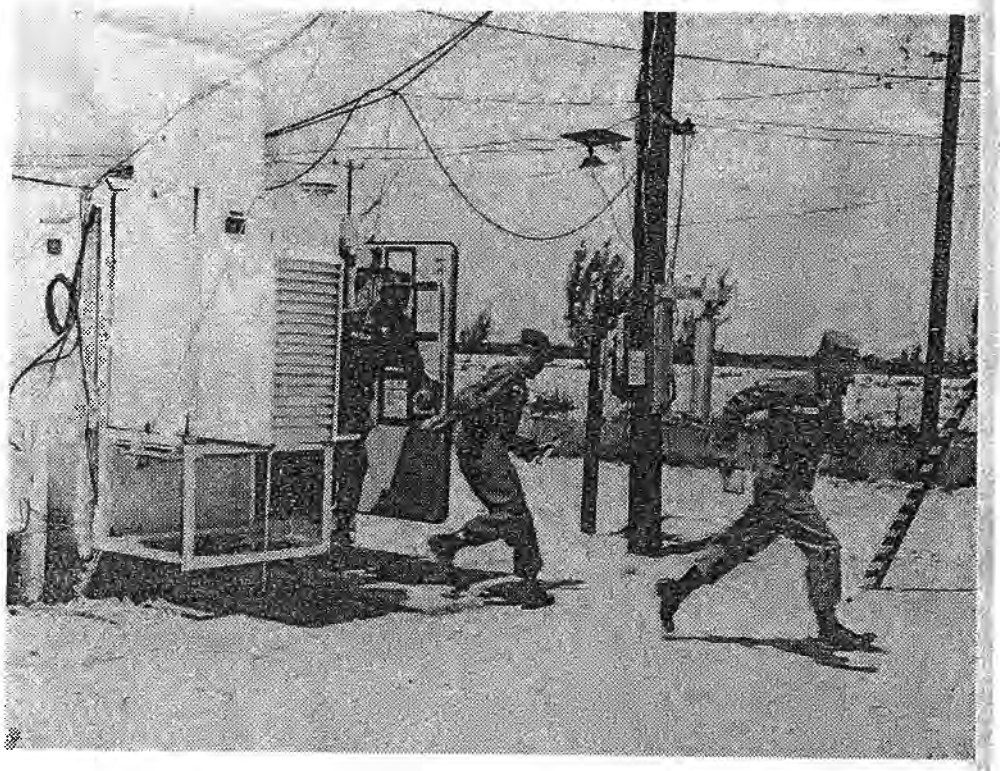
Miami Herald 1/17/1965



—U.S. Navy Photos

**Missilemen Sprint to Their Positions During Crew Drill**
***. . . all drills are carried out is if they were regular alerts***

# *Army's Here to Stay --At Permanent Sites*

MONROE COUNTY
PUBLIC LIBRARY

By FLORENCE RABON
Herald Correspondent

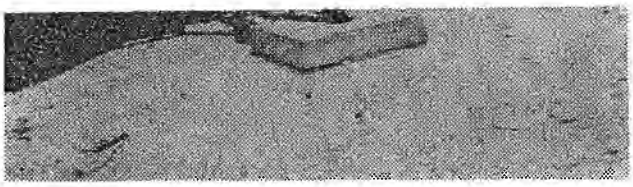
KEY WEST — With four permanent HAWK missile sites under construction in the lower Keys, it looks like the Army is here to stay. At least that's what an Army spokesman says.

The history of the Army in Key West has been one of moves — in and out. Dating back to pre-Civil War days and the famous old Ft. Taylor site, the Army was strengthened during the day of the Spanish-American War when more troops were billeted in the fort and Army barracks which is now the site of a Navy housing project, Peary Court.

**In the early months of World War II, the Army was moved out again and this historic city went back to being a full-time Navy town.**

Since the Cuban crisis of 1962, the HAWK missiles have been on temporary sites. Rapidly being completed are permanent locations at International Airport (Old Salt Ponds), Boca Chica, Fleming and Geiger Keys.

The construction program



## Soldiers Checking Out a Missile

***. . . HAWK means Homing All the Way Killer***

Since the Cuban crisis of 1962, the HAWK missiles have been on temporary sites. Rapidly being completed are permanent locations at International Airport (Old Salt Ponds), Boca Chica, Fleming and Geiger Keys.

The construction program is being done at the cost of some 3½ million dollars. Each site will have a central barracks and headquarters. Alert crews will sleep and live at each.

When the sites are completed the temporary headquarters at the Casa Marina Hotel will be returned to the owners.

**Missilemen of the HAWK batteries are on constant alert to intercept low flying aircraft and the name HAWK means Homing All the Way Killer.**

They are a part of the Air Defense Command of South Florida (ARADCON). Their weapons have a range from 30,000 feet down to tree top level and they can detect aircraft on their radarscope which operates around the clock.

Each HAWK firing battery is a self-contained unit having its own radar for target detection as well as a substantial complement of ready missiles. Their operators are trained in both operation and maintenance.

The economic impact of the Army presence in the Keys has been great. The annual payroll is more than ¾ million dollars. Their men and 37 officers, most of them married, live in rented homes and motels. Their commanding officer is Lt. Col. Harry N. Roller, a career Army man.

## Temporary Billets Being Occupied by Army Missilemen

***. . . will be replaced at four sites by permanent structures***

*Under the authority of the National Historic Preservation Act (NHPA), as amended, and the Archaeological Resources Protection Act (ARPA), the ICRMP is not for public release due to the specific site locations included.*

Final Document

# Integrated Cultural Resource Management Plan for Naval Air Station Key West, Florida 2003-2008

Contract Number DACA01-02-D-0001
Task Order 26

Prepared for

**Naval Air Facility Key West**
Key West, Florida

Prepared by

**US Army Corps of Engineers, Mobile District**
Mobile, Alabama

With technical assistance from

**Brockington and Associates, Inc.**
Atlanta, Georgia

**July 2003**

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overview findings and recommendations (Greenhorne & O'Mara, Inc. 1991). The 1991 HARP Plan was funded by Naval Facilities Engineering Command (NAVFAC).

Also in 1991, USACE, Mobile District archaeologists conducted archaeological and historical investigations at the nineteenth century U.S. Army post and military cemetery at Peary Court (USACE, Mobile District 1991). With the exception of the post's military cemetery, little of significance was found at Peary Court.

In anticipation of updating the 1991 HARP plan, the USACE, Mobile District conducted additional architectural and archaeological studies at the installation. In 1995, the USACE, Mobile completed an architectural inventory, including all buildings and structures pre-dating 1946 and Cold War-era buildings and structures (USACE, Mobile District 1995). An additional architectural inventory and a Phase 1 archaeological survey was completed in 1996 for the U.S. Naval Branch Medical Clinic at Key West (USACE, Mobile District 1996). The archaeological survey of all installation lands was completed in 1997 (Butler 1997) and the report of those investigations was reviewed and approved by the Florida State Historic Preservation Office (SHPO). SHPO review comments for previous cultural resources studies at NAS Key West are provided in Appendix A.

Brockington and Associates, Inc. (Atlanta, Georgia) updated the 1991 HARP Plan in 1998, under a general services contract with the USACE, Mobile District (DACW01-94-D-0010, Delivery Order No. 17). The Florida SHPO reviewed and approved the 1998 HARP Plan on 2 April 1998. Much of the technical and logistical information in the current ICRMP was abstracted from the 1998 HARP Plan.

Between 1998 and 2000, the USACE, Mobile District examined 21 historic buildings, objects, and structures documented in the 1998 HARP plan and developed a Building Maintenance Plan (USACE, Mobile District 2000). During their on-site visit, preparers of this plan documented physical conditions of each property through photography and completion of condition assessment checklists. The Building Maintenance Plan is currently under review by NAS Key West personnel.

### 4.2.1 Results of Archeological Studies at NAS Key West

During the 1997 NAS Key West archaeological survey, Butler (1997) identified, located, and evaluated all prehistoric and historic archaeological sites within the boundaries of all government fee-owned lands at Naval Air Station, Key West, Monroe County, Florida. This project was designed to comply with Section 110 of the NHPA and to provide management information for the 1998 revision of the HARP Plan. The archaeological survey followed Florida survey and evaluation guidelines as developed by the Florida SHPO.

Butler (1997) surveyed the Main Facilities at Boca Chica Field ( Boca Chica Key), the Naval Communications Station (Saddlebunch Key), three Hawk Missi e Sites (Key West, Boca Chica Key and Geiger Key), Truman Annex (Key West), Poinc ana Housing and White Street Trailer Park (Key West), and the International Missile Batte y and East Battery (Key West). Archaeological potential for these areas ranged from very low to extremely high.

Other areas considered for survey included Trumbo Point Ani ex, Fleming Key, Sigsbee Park Annex, and Peary Court. Trumbo Point, Fleming Key, and S gsbee Park Annex consist of dredge spoil created in the late 1940s to 1960s. The Florida SH PO agreed that no archaeological survey of these areas was necessary and they were exclud d from the project scope. Previous archaeological investigations conducted at Peary Court b USACE, Mobile District archaeologists (USACE, Mobile District 1991) identified no int ct archaeological deposits, and no archaeological site numbers were assigned. However, th USACE, Mobile District investigated a nineteenth century military cemetery (previously t ought moved) and found intact human remains. The USACE, Mobile District recommend d preservation in place of the cemetery, and a Memorandum of Agreement (MOA) was nade between the Navy and the Florida SHPO outlining cemetery preservation and maint nance needs.

Butler (1997) identified seven sites and one archaeologically se sitive area. After intensive field investigations, he found that three previously recor ed sites (8MO3, 8MO1267, and 8MO1268) no longer exist. Site 8MO3 was a stone ( rcle recorded by Goggin in 1944. Avocational archaeologist Bill Fournier excavated sit 8MO1267 (Boca Chica Mounds) in the 1950s and 1960s, and Carr and Fay (1990) rep rted that the site subsequently had been inadvertently bulldozed. Site 8MO1268 was prehistoric shell midden on an island northwest of Boca Chica Key, recorded in 1968 by Felton and Tesar; Butler searched several islands and found no shell middens on Navy pr perty.

Butler (1997) recommended Phase 2 investigations at two sites (8MO1448, 8MO1477). Site 8MO1488 is a reported sixteenth century Spanish vessel, riginally found in 1974 but documented by Muir et al. (1991) and recorded in 1992 by Jim Dunbar. The 1991 report by Muir et al. indicates that at least a portion of the "Channel Wre k" site is on NAS Key West property. Butler's (1997) terrestrial survey did not investiga e this site, but he recommended relocation and preservation of this vessel.

Butler recorded site 8MO1477, a small coral mound, during his su vey. He suggested that this site could be a World War II-era pushpile or a shallow well from a late nineteenth/early twentieth century occupation, but recommended archa logical testing to determine site function and significance.

Butler (1997) documented two significant sites (8MO206 an 8MO1478). Site 8MO206, Fort Zachary Taylor, is listed on the National Register of Histc ic Places and was

previously cor lered eligible under Criterion A (significant events). Butler conducted archaeological vestigations in the large sand coverface of the fort; this portion of the property is un( the control of NAS Key West. Based on results of these investigations, Butler recom ıded the site potentially eligible for the NRHP under Criterion D (archaeologica esearch potential). He recommended intensive archaeological testing to definitively ev ate this resource. Butler (1997) also found intact surface and subsurface archaeological ıtures, representing a late nineteenth/early twentieth century house site, at site 8MO1478. utler recommended that the Navy avoid and preserve this site.

During ıtler's survey, one archaeologically sensitive area (the Antenna Field on Whitehead Sp ıt Truman Annex) could not be investigated. The original Key West lighthouse, a C l War barracks compound, and a late nineteenth century cannon battery were located this area. This area contains hazardous materials and archaeological excavations we not permitted. Despite removal and replacement of approximately two feet of soil across tl area in 1994, Butler (1997) stated that high potential exists for significant archaeological leposits. He recommended archaeological monitoring of future contamination anup efforts at this location.

On Ma 6, 1999, Mobile District archaeologists Dottie Gibbens and Jason Burns conducted an e luation of Butler's site 8MO1477. Their investigations revealed modern asphalt fragme mixed with the coral rock. Gibbens and Burns determined that this site is actually a "moc ı cultural manifestation, clearly associated with repair and maintenance of the aircraft tax ays and runways at Boca Chica Field" (10 June 1999 letter from Hugh McClellan [Ch , Environment and Resources Branch, USACE, Mobile] to George W. Percy [Florida PO]; see Appendix D). The Florida SHPO concurred with this evaluation and agreed that ı further management actions were required at 8MO1477.

**Table 4-1.** Ma ged Archaeological Resources at NAS Key West.

| Site | | cation | Site Name/ Description | NRHP Evaluation | Recommendation |
|---|---|---|---|---|---|
| 8MO206 | Tru | n Annex | Fort Taylor coverface | Listed | Phase 2 testing evaluation |
| 8MO1448 | Bo cha | Chica l | Spanish shipwreck | Underwater site, not evaluated | Ascertain site location; Phase 2 testing evaluation |
| 8MO1478 | Bo | Chica Key | 19-20th century house site | Eligible | Preservation in place |
| Antenna Field | Ke Tru | est- n Annex | Whitehead Spit/Antenna Field | Hazmat area, not evaluated | Archaeological monitoring during cleanup |

### 4.2.2 Results of Architectural Inventories and Asses ients at NAS Key West

The first architectural survey of NAS Key West was conducted he early 1990s as a result of an initial historic resources assessment recommending an inv ory of World War II and earlier buildings, structures, sites, and objects at the installatio USACE, Mobile District 1989). A 1995 architectural inventory documented and evaluat these resources as well as post-1945 resources that might meet the criteria of exceptio significance and qualify as Cold War properties (USACE, Mobile District 1995). An arc ectural inventory and archaeological survey of the U.S. Naval Branch Medical Clinic at K West resulted in recommendation of this station as a NRHP eligible district (USACE, M le District 1996). One year later, the U.S. Navy, Southern Division, Naval Facilities Eng eering Command and the Florida SHPO executed a Memorandum of Agreement for demo on of 11 buildings at the medical clinic.

USACE, Mobile District historic resources staff began preparati of the first draft of a Building Maintenance Plan (BMP) in March 1998. In July 1999, or te meetings were held with representatives of the Florida SHPO to inspect historic prope s included in this plan. At that time, meeting participants noted modifications to sev l of the historic properties that had occurred since the 1998 inspections. Subsequent to ese meetings, the U.S. Navy decided to place all real property at the Medical Clinic (e pt the new clinic building and Building L-8, the ca. 1928 Yates House) under the juris tion of NAS Key West. In addition, some properties have been excessed to the City of K West and others removed from consideration for transfer from Navy control. With two ex ptions, the current draft (USACE, Mobile District 2000) of the BMP includes individual p perty descriptions reflecting the current real property inventory. Structure 292 (a World ar II Battery) and Building A-132 (a 1944 aircraft hangar currently used as a firehouse fc Boca Chica Field) were documented using Level II Historic America Building Survey (H S) standards and been removed from the inventory in preparation for demolition.

Currently, eighteen (18) significant architectural resources at NAS Key st are listed or are considered to be eligible for the NRHP. The U.S.S. Maine Memorial City of Key West Cemetery is listed on the NRHP. The remaining resources have been de mined eligible for the NRHP. These resources include: Structure F-26 (World War I munitions storage station); the Geiger Key Hawk Missile site; five officers' quarters (L-A -B, L-C, L-D, L-G), the Yates House (L-8; returned to NAS Key West jurisdiction), a fl ole (L-33), and a seawall (L-43) at the Navy Branch Medical Clinic; a seaplane han (C-1) and three seaplane ramps (C-2067, C-2068, C-2069) at Trumbo Point; senior offi 's quarters (C-A) at Trumbo Point; a Spanish-American War battery (Structure 283) with r additions; and a ca. 1900 battery (Battery Covington) retaining wall. These resources e summarized in Table 4-2. Current (October 2002) photographs of these resources are p ided in Appendix C.

**Table 4-2.** Significant Architectural Resources at NAS Key West.

| Resource | | Facility | Property Type | Historic Function | Date | NRHP Status |
|---|---|---|---|---|---|---|
| U.S.S. Maine Mem | l | Key West | Object | Monument | 1898 | Listed |
| Structure F-26 | | Fleming Key | Structure | Ammo storage | 1940s | Eligible |
| Hawk Missile Site | | Geiger Key | Site/Structures | Missile site | 1960s | Eligible |
| Quarters L-A | | Medical Clinic | Building | Officer Housing | 1942 | Eligible |
| Quarters L-B | | Medical Clinic | Building | Officer Housing | 1942 | Eligible |
| Quarters L-C | | Medical Clinic | Building | Officer Housing | 1942 | Eligible |
| Quarters L-D | | Medical Clinic | Building | Officer Housing | 1939 | Eligible |
| Quarters L-G | | Medical Clinic | Building | Officer Housing | 1939 | Eligible |
| Yates House L-8 | | Medical Clinic | Building | Officer Housing | 1928 | Eligible |
| Flagpole L-33 | | Medical Clinic | Object | Flagpole | 1942 | Eligible |
| Sea Wall L-43 | | Medical Clinic | Structure | Sea Wall | 1942-45 | Eligible |
| Building C-1 | | Trumbo Point Annex | Building | Seaplane Hangar | 1940 | Eligible |
| Quarters C-A | | Trumbo Point Annex | Building | Officer Housing | 1941 | Eligible |
| Seaplane Ramp C-2 | | Trumbo Point Annex | Structure | Seaplane Ramp | 1920s | Eligible |
| Seaplane Ramp C-2 | | Trumbo Point Annex | Structure | Seaplane Ramp | 1920s | Eligible |
| Seaplane Ramp C-2 | | Trumbo Point Annex | Structure | Seaplane Ramp | 1920s | Eligible |
| Battery Seminole/S 283 | ture | Truman Annex | Structure | Battery | 1900/1940s | Eligible |
| Battery Covington Wall | ining | Truman Annex | Structure | Retaining Wall | ca. 1900 | Eligible |

NAVAL AIR STATION KEY WEST, FLORIDA

# INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN

## 2007 - 2016

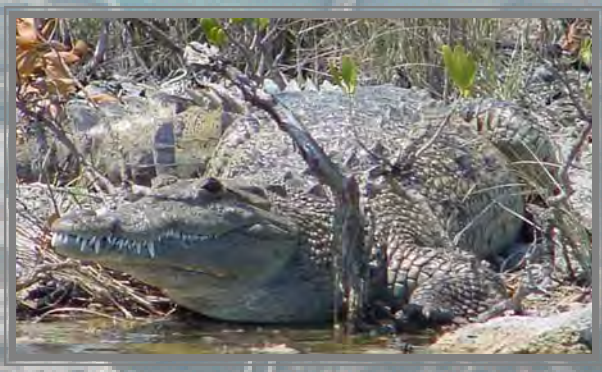

Photo: Florida Fish and Wildlife Conservation Commission

# Integrated Natural Resources Management Plan for Naval Air Station Key West Florida

December 2007

Prepared By:

**Department of the Navy**
Naval Facilities Engineering Command Southeast

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# 2 HISTORY AND ORGANIZATION

## 2.1 Location, History, and Military Mission

NAS Key West is comprised of 6,249 acres of land distributed over fourteen (14) properties, as defined in this INRMP, located in the Florida Keys, Monroe County, Florida (Figure 2-1). Fourteen of the properties are located in the Lower Florida Keys within a seven-mile radius from the primary Boca Chica Field, on Boca Chica Key approximately 6.8 miles northeast of downtown Key West. Boca Chica Field encompasses 3,912 acres and consists of an airfield, administrative and industrial facilities, and recreational areas. The only property located outside the Lower Keys is a 68-acre, primarily undeveloped site in Key Largo. Location and mission/function information for each of the fourteen properties of NAS Key West is included in Table 2-1.

The U.S. Navy has maintained a presence at the southernmost point in the continental United States (i.e., Key West, Florida) for more than 125 years. In 1823, the first naval base in Key West was established to combat piracy in South Florida. Expansion of the base occurred in stages, between 1823 to 1917, and coincided with periods of military activity during the Mexican War, the Spanish-American War, and World War I. The first recorded naval flight from Key West took place on 22 September 1917, and on 18 December 1917 Naval Air Base Key West was commissioned. Construction of a small coastal air patrol station began 13 July 1917 on Trumbo Point Annex. Seaplane training began for student flight officers on 8 January of the following year, therein, launching the station's reputation as the premier training site for Naval aviators.

NAS Key West pilots developed naval aviation antisubmarine warfare technology. During World War I, the base was used primarily for antisubmarine patrol operations and as a flight training station. At the end of the war, the base was decommissioned and many of the buildings were destroyed, although the land holdings remained property of the United States government. At the onset of World War II, the base was re-opened to support Naval destroyers and PBY aircraft. Satellite facilities, including Meacham Field and a runway at Boca Chica were developed. On 15 December 1940, the seaplane base was designated a Naval Air Station. In

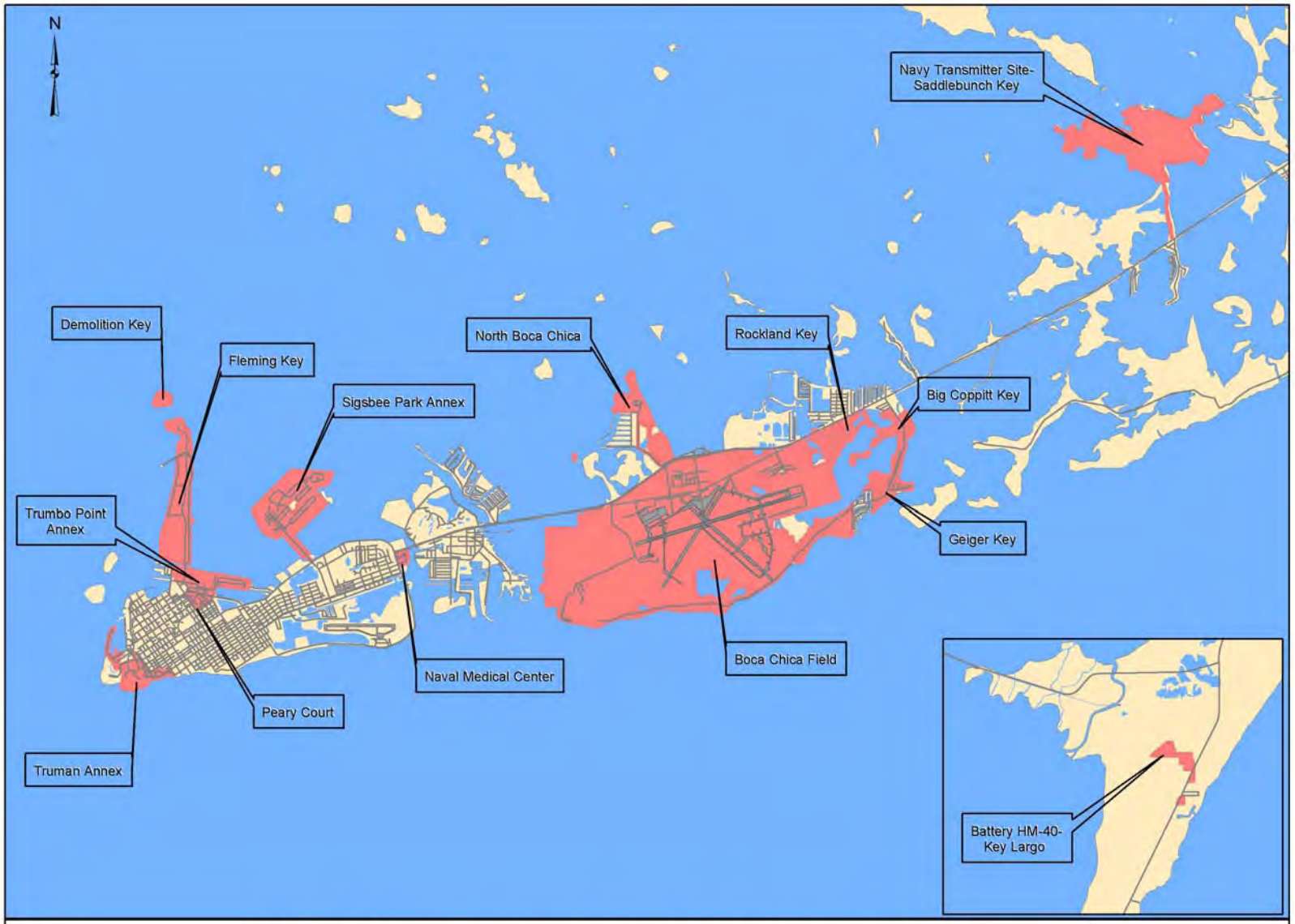



Figure 2-1 Location Map - NAS Key West, Florida

May 1945, the satellite fields were disestablished and combined into one aviation facility, NAS Key West.

After WWII, NAS Key West was retained as a training facility. During the subsequent Cuban missile crisis, operational and reconnaissance flights were flown in support of the blockade around Cuba. In March 1979, a decision was made to keep NAS Key West as a fully operational Naval Air Station.

NAS Key West's present-day mission is to provide pilot training facilities and services, as well as access to superior airspace and training ranges for tactical aviation squadrons. It is one of the primary range complexes in which aircrews of the U.S. Atlantic Fleet train. The NAS Key West Range Complex consist of an at-sea Operating Area (OPAREA) that includes surface and subsurface waters; offshore special use airspace (warning areas); a submerged surface target; and other special-use airspace. The Key West Range Complex encompasses 25,498 square nautical miles of ocean within the OPAREA. The primary operation conducted at the Key West Range Complex is Anti-Air Warfare (AAW), specifically, Air Combat Maneuver (ACM). The range complex provides critical support for Navy operational readiness training.

In addition, the range includes a Tactical Combat Training System (TCTS) – one of only four located on the East Coast of the United States – that is used for air-to-air combat training. The TCTS range includes specialized equipment both within the range and at NAS Key West to assist pilots in performing and assessing various training scenarios. This is vital in the training process for pilots to assess and learn from practiced maneuvers. As such, NAS Key West serves as the Navy's premier East Coast pilot training facility for tactical aviation squadrons. The mild tropical-maritime climate of the Key West area makes this an ideal area for year-round pilot training activities. In fact, the weather is suitable for flying approximately 360 days per year or 99% of the time. This ensures that squadrons that make the commitment to deploy to this area for training can accomplish their requirements with little or no loss of opportunity and expense.

Ideal weather throughout the year allows the Navy to complete necessary readiness requirements during fixed training windows. In addition, because many aviation-related assets are already in place, NAS Key West serves as an ideal operating base for opposition and aggressor forces that conduct operations during readiness exercises. Designated airspace and a TCTS are heavily utilized in the Key West area by military assets in training evolutions.

Active and reserve Navy fighter/strike fighter communities, Chief of Naval Training (CNATRA) units, Fleet Replacement Squadrons (FRSs), Department of Homeland Security, foreign allies, and other military service users all come to NAS Key West to take advantage of the airspace, weather, and facilities to accomplish pilot training. Specifically, over 20 types of fixed- and rotary-wing aircraft typically deploy to NAS Key West for various durations. The most common of these aircraft include F-5's, F-15s, F-16s, F/A-18s, T-45s, and E-2/C-2s (Navy 2007).

**Table 2-1**

**NAS Key West Property Location And Mission/Function**

| Property | Acreage | Location | Directions | Mission/Function |
|---|---|---|---|---|
| Demolition Key | 24 | North Fleming Key | 2000 feet N of Fleming Key. | Both islands are used by the Navy as weapons areas for Special Operations ground training using net explosive weight of ≤ 5 lbs. |
| Fleming Key | 264 | Fleming Key | 2 mi. N of the Southernmost Point Monument. | Non-residential IR site. Consists of Navy Research Laboratory, 200-acre weapons magazine, Special Forces Area, and City of Key West wastewater treatment plant. |
| Truman Annex | 157 | Key West | East of the Southernmost Point Monument. | Mixed Use area. Consists of Joint Interagency Task Force (JIATF) South, BEQ housing and recreational areas. |
| Trumbo Point Annex | 135 | Key West | 1.75 mi. NE of the Southernmost Point Monument. | Mixed Use area. U.S. Coast Guard utilizes port facilities. Consists of a small fuel farm, helicopter pad, C-1 hanger, military housing, Visitors lodging with 300-500 rooms, water recreation park, and undesignated paved areas. |
| Peary Court Annex | 28 | Key West | 0.25 mi. S of Trumbo Point Annex. | Residential area. 24-acre area with 50 houses. |
| Sigsbee Park Annex | 352 | Key West | Dredgers Key, 1.25 mi. E of Fleming Key. | Residential area and facilities. Microwave Radio Tower at eastern tip of Key. Consists of Navy housing, Commissary, Exchange, 93 site R/V campground, youth center, picnic sites, 3 boat ramps, fueling facilities, boat rentals, marina, playing fields, tennis courts. |

**Table 2-1**

**NAS Key West Property Location And Mission/Function**

| Property | Acreage | Location | Directions | Mission/Function |
|---|---|---|---|---|
| Navy Branch Health Clinic | 15 | Key West | SE of the intersection of US1 and South Roosevelt Boulevard, W of Cow Key Channel. | Naval branch medical clinic primarily for active duty members and civil service personnel. |
| Boca Chica Field | 3958 | Boca Chica Key | 6.8 mi. NE of the Southernmost Point Monument. | To train Navy pilots and support for Naval aviation activities and units of the operating forces. Light industrial use and transient housing area. Consists of 3 runways, fuel farm, auto hobby shop, administrative facilities, playing fields, ball courts, bowling alley, fitness center, picnic areas, 83 to 103-slip marina, and 3 miles of oceanfront beach. |
| North Boca Chica | 86 | North Boca Chica Key | 0.5 mi. NE of NAS Key West. | Mixed Use area and former IR site. Pistol range, wastewater treatment plant, hazardous waste facility, supply barn and administrative offices. bunkers used for storage. NOAA Radar with several buildings from inactive missile site, one building currently used. |
| Geiger Key | 164 | Geiger Key | 2.25 mi. SE of NAS Key West. | Multiple-use management for research, recreation, and wildlife habitat. There is also an inactive missile site. |
| Big Coppitt Key | 48 | Big Coppitt Key | 1.25 mi. N of Geiger Key, 1.5 mi. NE of Rockland Key | Former army antenna facility, service roads, weapons area. |
| Rockland Key | 336 | Rockland Key | 1.5 mi. E of NAS Key West. | Air Installations Compatible Use Zones (AICUZ) with some residential use. |

**Table 2-1**

**NAS Key West Property Location And Mission/Function**

| Property | Acreage | Location | Directions | Mission/Function |
|---|---|---|---|---|
| Navy Computer and Telecommunications Station (NCTS) | 615 | Saddlebunch Key | At MM 15 follow the dirt road 1.5 mi. N of US1. | Supports frequency transmitters for various voice, telegraphy and data radio transmissions. |
| Battery HM-40/Key Largo Site | 68 | Key Largo | Approximately 113 mi. NE from Key West. 7 mi. N on Card Sound Road from fork at US1. | Inactive missile site. |

# 3 EXISTING ENVIRONMENT

## 3.1 Climate and Air Quality

The Florida Keys climate is classified as subtropical marine, characterized by mild winters with hot, humid, but breezy summers. Key West has a year round average temperature of approximately 77 degrees Fahrenheit (º F) and receives an average of approximately 40 inches of rainfall per year (see Table 3-1). The temperature difference between summer and winter is only 14º F. The nearness of the Gulf Stream, combined with the effects of the Gulf of Mexico, tend to mitigate advancing cold fronts. Easterly tradewinds and sea breezes suppress the summer heat. January is typically the coldest month of the year, with an average temperature of 69.4º F. The month of July is typically the hottest of the year with an average temperature of 84.0º F.

Hurricane season in Florida extends from June through November; however, the frequency of hurricanes in the Gulf of Mexico is greatest during the months of August, September, and October. The majority of hurricanes approach Key West from the south and east, with their effects felt on the south, east, and west sides of the island; however severe hurricanes have struck Key West from all directions. An estimated 75 percent (%) of all damage from annual hurricanes is due to tidal flooding. The probability that a hurricane (winds exceeding 73 miles per hour) or a great hurricane (winds exceeding 125 miles per hour) will occur in a 50-mile segment of the U.S. coastline near Key West is 13% and 4%, respectively.

The Clean Air Act (CAA) is the primary federal statute governing the control of air pollution. The Clean Air Act (CAA) designates six pollutants as criteria pollutants for which National Ambient Air Quality Standards (NAAQSs) have been declared to protect public health and welfare: particulate matter ($PM_{10}$ and $PM_{2.5}$), carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, and ozone. Areas that do not meet NAAQSs are designated as “nonattainment” for those criteria pollutants exceeding their respective NAAQS. Nonattainment status is further classified by the extent to which the standard is exceeded.

**Table 3-1**

**Average Temperatures and Rainfall in the Key West Vicinity (1945-1991)**

| Month | Average Temp (ºF) | Average Low Temp (ºF) | Average High Temp (ºF) | Average Rainfall (inches) |
|---|---|---|---|---|
| January | 69.4 | 64.4 | 74.3 | 2.1 |
| February | 70.0 | 65.1 | 74.8 | 1.6 |
| March | 73.2 | 68.4 | 78.1 | 1.7 |
| April | 77.2 | 72.7 | 81.5 | 2.0 |
| May | 80.1 | 75.6 | 84.2 | 3.3 |
| June | 82.8 | 78.4 | 86.9 | 4.8 |
| July | 84.0 | 79.5 | 88.5 | 3.6 |
| August | 84.0 | 79.2 | 88.7 | 5.0 |
| September | 82.9 | 78.1 | 87.8 | 6.4 |
| October | 79.7 | 75.4 | 84.0 | 4.6 |
| November | 75.2 | 70.7 | 79.5 | 2.5 |
| December | 70.9 | 66.2 | 75.6 | 2.0 |
| **Average/Total** | **77.4** | **72.7** | **81.9** | **39.7** |

Source: Buttle and Tuttle, Ltd. 1996-1998.
Key:
Temp. = Temperature.
°F = degrees Fahrenheit.

The CAA, as amended, requires Federal actions to conform to an approved State Implementation Plan (SIP). The SIP is designed to achieve or maintain an attainment designation for air pollutants as defined by the NAAQSs. The General Conformity Rule (40 CFR Parts 51 and 93) implements these requirements for Federal actions occurring in air quality nonattainment areas.

NAS Key West is located in Monroe County, which is not in violation of any of the six criteria air pollutants of the NAAQS as established by the CAA (EPA 2005). Because of the excellent air dispersion characteristics and non-industrialized nature of Monroe County, most pollutants are not routinely measured. The closest monitoring stations are in Miami-Dade County, and these stations have documented attainment status for particulate matter and ozone (FDEP 2005).

Air quality is regulated nationally by the EPA, the standards of which have been documented in Title 40 Part 50 (Subchapter C-Air Programs) of the CFR. On the State level, FDEP has authority to regulate air quality in the State of Florida.

Currently, air pollutant emissions at NAS Key West are generated from stationary and mobile sources. Stationary sources include surface coating, fuel storage and handling, fire-fighting training facilities, and miscellaneous small stationary combustion sources. Mobile sources include aircraft, motor vehicles, and ground support equipment. Military aircraft operations are the most significant source of air pollutant emissions at NAS Key West.

## 3.2 Land Use

NAS Key West has a number of noncontiguous properties located in Key West, Boca Chica Key, Big Coppitt Key, Rockland Key, Geiger Key, Demolition Key, Dredgers Key, Fleming Key, Saddlebunch Key, and Key Largo. These properties include the Boca Chica Field, Sigsbee Park, Trumbo Point Annex, Truman Annex, and others totaling approximately 6,249 acres of land.

Land use among the Installations that make up NAS Key West is based on the operational needs and military mission requirements. Land use at NAS Key West ranges from "high intensity," well-developed areas used for operational functions, to "low intensity" areas that serve as buffers from surrounding non-military lands. Airfields, administrative and training facilities, public works, housing, medical facilities, and other mission operations occur within the high intensity areas at each Installation, while the low intensity land use areas include natural resources such as forests, ponds, wetlands, and other unique habitats. The following is a brief description of the major NAS Key West facilities.

**Demolition Key (24 acres).** This land is a separate Navy-owned island located immediately north of Fleming Key, and used for demolition of explosives. It consists of two undeveloped spoil islands. The southern key consists primarily of red mangrove and saltwort within the interior. The northern key consists of a dense fringe of red and black mangrove with an almost pure stand of Australian pine and some Brazilian pepper in the interior. There is a bunker used for weapons observation and ordnance training. The natural communities in this area support important bird rookeries. Nearshore waters support seagrass and hard-bottom communities.

**Fleming Key (264 acres).** This Navy-owned island is located immediately north of Trumbo Point Annex. The north area contains a Navy Research Laboratory, 200-acre weapons magazine and a Special Forces area. The central portion consists of an old landfill and vacant parcels of land that appear to have been developed in the past. The south end is a leased area which consists of the City of Key West Wastewater Treatment Plant. The shoreline of the Gulf of

Mexico on the western side of Fleming Key consists mainly of mangroves with a mix of some Brazilian pepper and Australian pine. The F-26 Bunker is located on the north end and is considered a significant cultural resource. Nearshore waters support seagrass and hard-bottom communities.

**Truman Annex (157 acres).** This annex is bound on the south by the Atlantic Ocean; to the north-northeast by residences and commercial, warehouse and light industrial buildings; and to the west-northwest by Fort Zachary Taylor State Historic Site. The property includes bachelors enlisted quarters (BEQ) housing, a patio beach, numerous recreational areas (e.g., playing field, etc.) and historic sites. The property also contains building rooftops that support identified least or roseate tern nesting colonies. This property also contains historic sites. Nearshore waters support seagrass and hard-bottom communities.

**Trumbo Point Annex (135 acres).** This annex is bound on the north by the Gulf of Mexico; to the south by residences and commercial, warehouse and light industrial buildings; to the west by Key West Bight; and to the east by Garrison Bight. This property includes military housing, visitors quarters (VQ) lodging, recreational areas (e.g. ball courts, water fun park, tennis courts, etc.), and historic and potential geologic sites. In addition, the United States Coast Guard utilizes port facilities in this area and the City of Key West Port Authority Transit Association (PATA) leases land on the southeast side. The only area consisting of native vegetation is a mangrove fringe used to buffer the residential area from the coast. This property also contains historic sites. Nearshore waters support seagrass and hard-bottom communities.

**Peary Court Annex (28 acres).** This housing facility, located in the City of Key West adjacent to and south of Trumbo Point Annex, is used for residential and recreational purposes. Fifty houses are located on a 24-acre area. An area in the center of the property is leased to a credit union. Grounds are maintained and landscaped with several species of hardwood trees; no natural communities are present.

**Sigsbee Park Annex (352 acres).** This facility is located on Dredgers Key, which is surrounded by the Gulf of Mexico to the north, east, and west, and the Salt Pond Keys to the south. It is connected to Key West with a manmade causeway. Sigsbee Park houses MWR facilities, marina, public works operations, family housing, and community support services, including the Navy Exchange, a commissary, and the Sigsbee school. The western 40 acres of the site are tidal wetlands, consisting predominantly of red mangrove, with black and white mangroves. The property contains building rooftops that support identified least and/or roseate tern nesting habitat. Nearshore waters support seagrass and hard-bottom communities.

**Navy Branch Health Clinic (15 acres).** The Medical Clinic is located on the east end of the City of Key West. It is bound by Navy housing to the north, south, and west, and by Cow Key Channel to the east. The property also contains a naval branch medical clinic primarily for active duty members and civil service personnel and a deactivated multi-story hospital facility. This property also contains historic sites. Nearshore waters support seagrass and hard-bottom communities.

**Boca Chica Key (3,958 acres).** This property is the site of Boca Chica Field. The primary land uses of the airfield are the three runways and the associated safety clear zones that include large expanses of mowed apron areas, open water lagoons and wetland habitats; some which support endangered species (e.g., Lower Key marsh rabbit). The area located to the north of the runway includes air operations buildings, transient housing, administrative buildings and recreational facilities. In addition to airfield operations, Boca Chica contains a weapons area to the west-southwest of the airfield. This area contains a few buildings but is primarily

undeveloped because it is encumbered by safety requirements during explosive ordinance handling activities (i.e., Explosive Safety Quantity Distance arcs). The Boca Chica Marina is located on the western side of the Key and includes a recreational beach, boat slips and a mooring area. The natural communities on Boca Chica Key include more than 2,000 undeveloped acres consisting of tidal mangroves, transitional wetlands, hardwood hammocks, and coastal zones. Nearshore waters support seagrass, hard-bottom, and patch reef communities.

**North Boca Chica (86 acres).** This site is located on the north end of Boca Chica Key, northeast of the Airfield and is bordered to the south by U.S. Highway 1 and to the north, east, and west by mangrove fringe and the Gulf of Mexico. This area consists of administrative offices, a hazardous waste storage facility, a wastewater treatment facility (injection well), a supply barn, abandoned bunkers used for storage, a pistol range, a NOAA radar site and several buildings associated with an abandoned missile site. The natural communities within this area include mangrove areas, transitional areas, and coastal zones providing habitat for the endangered marsh rabbit. Nearshore waters support seagrass and hard-bottom communities.

**Geiger Key (164 acres)**. This property is located southeast of Boca Chica Field and contains an inactive Hawk missile site that was transferred to the Navy. The property north of the residential community consists primarily of higher areas are developed for residential purposes. The property south of the residential community consist of wetlands which include mangrove areas, coastal zones, and transitional areas. These areas contain habitat for the endangered marsh rabbit. Nearshore waters support seagrass and hard-bottom communities.

**Big Coppitt Key (48 acres).** This property is located north of Geiger Key and is bordered by residential homes and businesses to the north, by the oceanfront to the east and west, and by oceanfront and wetlands to the south. A two acre site on the northwest corner of the property contains a former army antenna facility and a few associated buildings. A canal runs through the center of the property east of Geiger road and fill road accesses a borrow pit and fill pad on the western side. The natural areas surrounding these disturbed areas consist of mangroves, transitional areas and coastal zones. Least terns have been observed nesting on the fill pad on the western side of the property. Nearshore waters support seagrass and hard-bottom communities.

**Rockland Key (336 acres).** This property located east of Boca Chica Field and is bound by the coast and some undeveloped land areas. The natural area is comprised of 75% tidal swamp, 15% coastal rock barren, and 10% lowland hammock. There are some uncontrolled land ownership patterns and unauthorized residential use (i.e. squatters). Nearshore waters support seagrass and hard-bottom communities.

**Naval Computer and Telecommunications Station/Saddlebunch Key (615 acres).** This facility is located on Saddlebunch Key, which is approximately seven miles east of Boca Chica Field. Except for the narrow fill pad for the access road and relatively small areas associated with buildings and antennas, this key is in natural condition. The natural areas consist of extensive tidal swamp, the Five Mile Creek, limited areas of hammock, and saltmarsh that supports the federally endangered silver rice rat and Lower Keys marsh rabbit. Nearshore waters support seagrass and hard-bottom communities.

**Battery HM-40/Key Largo Site (68 acres).** This facility is located in Key Largo, approximately 113 miles northeast of Key West. The site was used as a Navy Hawk missile site, but is currently an undeveloped area within Crocodile Lake National Wildlife Refuge. The natural communities consist of hardwood hammocks and tidal mangroves. These communities provide habitat for the American crocodile, Key Largo wood rat, Key Largo cotton mouse, Schauf swallowtail butterfly and the Eastern indigo snake. The area is also designated as

critical habitat for the American crocodile. Nearshore waters support seagrass and hard-bottom communities.

## 3.3 Physiography, Geology, and Topography

The Florida Keys are a series of low limestone islands that extend 140 mi southwest of the mainland. Elevations in the islands rarely exceed 5 ft above sea level. A narrow shelf is present along the Atlantic Coast, where the seafloor drops sharply into the Straits of Florida. The Atlantic Coast is bathed in the clear, tropical waters of the Florida Current which is favorable to the development of coral reefs several miles offshore of the keys.

The Florida Keys are assigned to the Gold Coast-Florida Bay District where Pleistocene limestone and limestone cap rocks are prevalent. This province has also been referred to as the southern zone of the coastal lowlands, the Florida Plateau. This eustatically formed archipelago is then subdivided into three island groups of limestone or carbonate sand and mud: 1) Coral Reef Keys, the northern linear island chain of coral rock with a living coral reef offshore; 2) Oolitic Keys or "western keys," the southern chain of east-west aligned keys (including the Key West area) of oolitic limestone with Pleistocene and Holocene coral reef tracts to the southeast and south; and 3) Dry Tortugas, shoals, and islands of bioclastic carbonate sand and mud.

All of the Lower Keys are composed of Miami oolite. These formations are soft, white to yellow, stratified to massive, cross-bedded and are constituted of pure calcium carbonate which may contain shell fragments and minor quartz sand. Its major constituents are tiny oolids, which are spherical calcareous grains with concentric structure and cemented to form oolitic rock.

Key Largo Limestone underlies the Miami Oolite on all of the Lower Keys. Its major constituents are the cemented remains of ancient coral reefs and a subsidiary amount of fossils or coral, shell algae and echinids. Unconsolidated to consolidated Miocene sediments of the Tamiami, Hawthorn, and Tampa formations, Oligocene Suwannee Limestone, and Eocene Avon Park Formation underlie recent and Pleistocene deposits. The Pleistocene Miami Limestone is about 100,000 years old. The oolitic facies of this formation overlie the Key Largo Limestone Formation. This formation probably originated as an east-west mound of unstable oolite in a high-energy environment at the shelf margin where sediments were stirred up and deposited over the southern portion of the active reef.

The topography at NAS Key West is flat with elevations averaging 4 to 5 feet above mean sea level (MSL). The airfield elevation (highest point of the runway system) at Boca Chica is 6 feet above MSL. Large interior areas at Boca Chica range from 0 to 2 feet below sea level. The elevation on Truman Annex ranges between 5 and 10 feet above MSL.

## 3.4 Soils

The soils in the Key West area belong to the Rock Island or Urban Land Association (USDA 1995). These soils have been created as a result of dredge and fill activities or have accumulated as a result of the physical and chemical weathering of the parent oolitic limestone. The soils consist of sand, shell, and limestone fragments mixed with small amounts of marine sediments. These unconsolidated soils are very permeable and, therefore, despite the flat topography, drainage is good. The original soils in the Key West area are mostly entisols, dominated by level, very poorly drained organic soils underlain by limestone. Soils found at the NAS Key West are described in Table 3-2.

**Table 3-2**

**Soils of NAS Key West**

| Map Unit | Soil | Hydric Soils | Series Description |
|---|---|---|---|
| **Demolition Key** | | | |
| 7 | Udorthents, Urban land complex. | ---- | No description |
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| **Fleming Key** | | | |
| 5 | Islamorada muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Lithic Troposaprists. Very poorly drained soil, moderately deep to rippable coral or oolitic limestone bedrock |
| 7 | Udorthents, Urban land complex. | ----- | No description. |
| **Truman Annex** | | | |
| 11 | Urban Land | ----- | No description. |
| **Trumbo Point Annex** | | | |
| 11 | Urban Land | ----- | No description. |
| **Peary Court Annex** | | | |
| 11 | Urban Land | ----- | No description. |
| **Sigsbee Park Annex** | | | |
| 11 | Urban Land | ----- | No description. |
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| **Navy Branch Medical Center** | | | |
| 11 | Urban Land | ----- | No description. |
| **Boca Chica Field** | | | |
| 3 | Matecumbe muck, occasionally flooded, 0-1% slopes | ----- | Euic, isohyperthermic Lithic Tropofolists. Moderately well drained soils, very shallow to rippable coral or oolitic limestone bedrock |
| 5 | Islamorada muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Lithic Troposaprists. Very poorly drained soils, moderately deep to rippable coral or oolitic limestone bedrock |

**Table 3-2**

**Soils of NAS Key West**

| Map Unit | Soil | Hydric Soils | Series Description |
|---|---|---|---|
| 6 | Key Largo muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Typic Troposaprists. Very poorly drained soils, deep to rippable coral or oolitic limestone bedrock |
| 7 | Udorthents, Urban land complex. | ----- | No description. |
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| 19 | Saddlebunch marl, occasionally flooded, 0-1% slopes | ----- | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Somewhat poorly drained soils, shallow to rippable coral or oolitic limestone bedrock. |
| **North Boca Chica** | | | |
| 7 | Udorthents, Urban land complex. | ----- | No description. |
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| **Geiger Key** | | | |
| 5 | Islamorada muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Lithic Troposaprists. Very poorly drained soils, moderately deep to rippable coral or oolitic limestone bedrock |
| 6 | Key Largo muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Typic Troposaprists. Very poorly drained soils, deep to rippable coral or oolitic limestone bedrock |
| 7 | Udorthents, Urban land complex. | ----- | No description. |
| 8 | Rock outcrop-Cudjoe complex, tidal | Hydric | No description |
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| **Big Coppitt Key** | | | |
| 3 | Matecumbe muck, occasionally flooded, 0-1% slopes | ----- | Euic, isohyperthermic Lithic Tropofolists. Moderately well drained soils, very shallow to rippable coral or oolitic limestone bedrock |

**Table 3-2**

**Soils of NAS Key West**

| Map Unit | Soil | Hydric Soils | Series Description |
|---|---|---|---|
| 5 | Islamorada muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Lithic Troposaprists. Very poorly drained soils, moderately deep to rippable coral or oolitic limestone bedrock |
| 7 | Udorthents, Urban land complex. | ----- | No description. |
| 12 | Rock oucrop-Cudjoe complex, frequently flooded | Hydric | No description. |
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| **Rockland Key** | | | |
| 3 | Matecumbe muck, occasionally flooded, 0-1% slopes | ----- | Euic, isohyperthermic Lithic Tropofolists. Moderately well drained soils, very shallow to rippable coral or oolitic limestone bedrock |
| 5 | Islamorada muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Lithic Troposaprists. Very poorly drained soils, moderately deep to rippable coral or oolitic limestone bedrock |
| 6 | Key Largo muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Typic Troposaprists. Very poorly drained soils, deep to rippable coral or oolitic limestone bedrock |
| 7 | Udorthents, Urban land complex. | ----- | No description. |
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| **Naval Computer and Telecommunications Station/Saddlebunch Key** | | | |
| 5 | Islamorada muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Lithic Troposaprists. Very poorly drained soils, moderately deep to rippable coral or oolitic limestone bedrock |
| 6 | Key Largo muck, tidal, <1% slopes | Hydric | Euic, isohyperthermic Typic Troposaprists. Very poorly drained soils, deep to rippable coral or oolitic limestone bedrock |
| 7 | Udorthents, Urban land complex. | ----- | No description. |

**Table 3-2**

**Soils of NAS Key West**

| Map Unit | Soil | Hydric Soils | Series Description |
|---|---|---|---|
| 15 | Cudjoe marl, tidal, 0-1% slopes | Hydric | Loamy, carbonatic, isohyperthermic, shallow Tropic Fluvaquents. Poorly drained soil, shallow to rippable coral or oolitic limestone bedrock |
| **Battery HM-40/Key Largo Site** | | | |
| 2 | Pennekamp gravelly muck, 0-2% slopes, extremely stony | ----- | Loamy-skeletal, carbonatic, isohyperthermic Lithic Rendolls. Well drained soils, shallow to rippable coral limestone bedrock. |

Source: USDA 1995

# 3.5 Hydrology

## Watersheds and Hydrology

Monroe County is located within the Florida Bay-Florida Keys Watershed, which encompasses approximately 2043 square miles. During the period of December through April, the Florida Keys receive approximately 25% of the total annual precipitation, which has averaged 38.5 inches over the last 40 years. The bulk of the annual rainfall, approximately 53%, falls in the period of June through October. Rainfall runoff from Key West is carried to the tidal waters by overland flow or storm drains that cover approximately 50% of the island; however, much of the rainfall percolates directly into the porous limestone.

The Lower Florida Keys are subject to mixed semidiurnal tides (i.e., generally two high and two low tides per day) with a mean range of 1.3 feet (0.4 meters) and spring tide range of 1.8 feet (0.5 meters). During flood tide, the tidal current flows toward the Gulf of Mexico, and during ebb tide, the current direction is toward the Atlantic Ocean. Tidal flats occur at approximately sea level and are subject to daily tidal inundation. Portions of this area are inundated most of the time. Some of the areas are covered with mangroves. The mangrove swamps are either flooded with each tide, or if cut off from tidal action, remain permanently wet. There are also some narrow strips of beach and adjacent coastal dunes.

## Water Quality

The waters surrounding the Florida Keys are designated by the State of Florida as Class III, Outstanding Florida Waters (OFW; Chapter 62-302, Florida Administrative Code [FAC]). This water classification essentially prohibits any significant decrease in ambient water quality. OFW's are designated to ensure greater protection with the intent of maintaining existing good water quality. Waters that are not in a federally or state-managed area may be designated as "special water" OFW's if certain requirements are met, including a public process of designation. The designation of "special water" may be made by the Environmental Regulation Commission if the waters are of exceptional recreational or ecological significance and if the environmental, social, and economic benefits of the action outweigh the environmental, social, and economic costs. The FKNMS is designated as a "special water" OFW and contains approximately 3,670 square miles (9,500 $km^2$) of water and submerged lands (Florida Marine

Research Institute [FMRI] 2000; FDEP 2005). Because of the OFW designation, direct surface water discharges of pollutants have either been eliminated or are being phased out.

The degradation of water quality over the past two decades has been a major concern for the residents of the Florida Keys. Primary pollutants include pollution from stormwater runoff, improper wastewater treatment, marinas that improperly dispose of boater waste, landfill sites, hazardous material spills, pesticides and herbicides, and external influences. In response, Congress directed the EPA, in conjunction with the Department of Commerce, to develop a Water Quality Protection Program (WQPP). The WQPP for the Florida Keys consists of four interrelated components: corrective actions, monitoring, research/special studies, and public education and outreach.

## Estuarine and Marine Waters

NAS Key West property accounts for approximately 27 miles of shoreline that lies adjacent to the Florida Keys National Marina Sanctuary (FKNMS). Marine waters in close proximity to NAS Key West include Hawk Channel, Boca Chica Channel, Garrison Bight Channel, Man of War Harbor, Northwest Channel, Florida Bay, and the Gulf of Mexico. Tidal ranges in the Keys are low; the mean tidal range is 1.3 feet with a spring tide range of 1.6 feet. The tidal current is toward the Gulf of Mexico during flood and toward the Atlantic Ocean during ebb. Low elevations in the Keys make it necessary to consider tidal surge in site design and construction. Hurricane tidal surges for a 100-year storm and a 500-year storm are estimated at 8 feet MSL and 12 feet MSL, respectively.

The four main types of benthic habitat found within the Florida Keys, and in the vicinity of NAS Key West, are corals, seagrasses, hard bottom, and bare substrate. Benthic habitats in the Lower Keys as determined by aerial photography are dominated by seagrasses, and to a lesser extent by hard bottom, corals, and bare substrate (Florida Marine Research Institute [FMRI] 2000). Benthic habitats in the waters surrounding Key West, Fleming Key, Dredgers Key, Boca Chica Key, North Boca Chica Key, Rockland Key, Big Coppitt Key, Geiger Key, and the Saddlebunch Keys consist of moderate to dense continuous seagrass beds, interspersed with hard bottom areas containing a perceptible coverage of seagrass (Figures 3-1, 3-2, 3-3). Areas of sparse, continuous seagrass beds and dense seagrass patches are scattered throughout water

Figure 3-1

Benthic Habitats
Naval Medical Center, Sigsbee, Perry Court, Trumbo Point, Fleming Key, Truman Annex
NAS Key West, Florida
Legend
Patch Reefs - Individual
Patch Reefs - Aggregated
Continuous Seagrass - Moderate to Dense
Continuous Seagrass - Sparse
Continuous Seagrass - Dense Patches in a Matrix of Sparse Seagrass (<50 %)
Patchy Seagrass - Moderate to Dense with Blowouts
Patchy Seagrass - Dense Patches in a Matrix of Hardbottom
Patchy Seagrass - Predominantly Sand and-or Mud with Small, Scattered Seagrass Patches (<50 %)
Patchy Seagrass - Predominantly Macroalgae Cover with Scattered Seagrass Patches
Hardbottom - Soft Corals, Sponges, Algae
Hardbottom - Perceptible Seagrass (<50 %)
Bare Substrate - Carbonate Sand
Bare Substrate - Carbonate Mud
Bare Substrate - Organic Mud
Inland Water
Unknown Bottom
0
2,500
5,000
Feet

Figure 3-2

Benthic Habitats
Navy Branch Health Clinic, Sigsbee, Perry Court, Trumbo Point, Fleming Key, Truman Annex
NAS Key West, Florida
Legend
Patch Reefs - Individual
Patch Reefs - Aggregated
Continuous Seagrass - Moderate to Dense
Continuous Seagrass - Sparse
Continuous Seagrass - Dense Patches in a Matrix of Sparse Seagrass (<50 %)
Patchy Seagrass - Moderate to Dense with Blowouts
Patchy Seagrass - Dense Patches in a Matrix of Hardbottom
Patchy Seagrass - Predominantly Sand and-or Mud with Small, Scattered Seagrass Patches (<50 %)
Patchy Seagrass - Predominantly Macroalgae Cover with Scattered Seagrass Patches
Hardbottom - Soft Corals, Sponges, Algae
Hardbottom - Perceptible Seagrass (<50 %)
Bare Substrate - Carbonate Sand
Bare Substrate - Carbonate Mud
Bare Substrate - Organic Mud
Inland Water
Unknown Bottom
0
2,500
5,000
Feet

Figure 3-3

Benthic Habitats
Saddlebunch Antenna Facility
NAS Key West, Florida
Legend
Patch Reefs - Individual
Patch Reefs - Aggregated
Continuous Seagrass - Moderate to Dense
Continuous Seagrass - Sparse
Continuous Seagrass - Dense Patches in a Matrix of Sparse Seagrass (<50 %)
Patchy Seagrass - Moderate to Dense with Blowouts
Patchy Seagrass - Dense Patches in a Matrix of Hardbottom
Patchy Seagrass - Predominantly Sand and-or Mud with Small, Scattered Seagrass Patches (<50 %)
Patchy Seagrass - Predominantly Macroalgae Cover with Scattered Seagrass Patches
Hardbottom - Soft Corals, Sponges, Algae
Hardbottom - Perceptible Seagrass (<50 %)
Bare Substrate - Carbonate Sand
Bare Substrate - Carbonate Mud
Bare Substrate - Organic Mud
Inland Water
Unknown Bottom
0
1,000
2,000
Feet

bodies in the vicinity of Boca Chica Key, Stock Island, and Key West. The lagoons located directly south of the Boca Chica Field, north of Old Boca Chica Road, contain a predominantly macroalgae cover with scattered seagrass patches. Several individual patch reefs are located south of Geiger Key and Boca Chica Key, and some aggregated patch reefs are located directly south of the Old Boca Chica Road.

Waters of the Florida Keys are utilized for several recreational activities including boating, diving, sport fishing, and recreational fishing in addition to commercial fishing. Between 20% and 30% of Keys visitors, scuba dive or snorkel at one of several dive spots including the Key Largo National Marine Sanctuary, John Pennekamp Coral Reef State Park, or Looe Key National Marine Sanctuary. Recreational fishing in the Keys contributes approximately $500 million annually to the local economy. The "marine life" fishery generates $30 million annually, and supplies small fishes, live rock and invertebrates to aquaria. Commercial fishing is the fourth largest industry in the region, and the Keys provide habitat for approximately 90% of the region's commercially important species during at least one stage of their life history. Shrimp, stone crab, spiny lobster, snapper, grouper, king mackerels, and Spanish mackerels dominate commercial landings.

## Wetlands

Wetlands are generally considered to be transitional zones between the terrestrial and aquatic environment. These areas are characterized by physical, chemical and biological features indicative of hydrological conditions. Currently, wetlands are regulated at the federal level by the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) of 1977. Wetlands are defined by the USACE as "*…those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.*"

Jurisdictional wetland boundaries have not been delineated for NAS Key West using the USACE 1989 Wetland Delineation Manual. Currently, the best source of data for identifying wetland communities at NAS Key West and in the Florida Keys has been through a joint program of the EPA and ACOE, in cooperation with the USFWS, SFWMD, FFWCC, FMRI and

Monroe County. This program, known as the Florida Keys Advance Identification of Wetlands Program (ADID), has created an inventory and map of wetlands in the Keys utilizing a Geographic Information System (GIS). It classifies land cover into 15 types, based on photo-interpretation of 1991 Digital Orthophoto Quarter-Quadrangle (DOQQs) maps.

### Wetland Permits

NAS Key West occasionally undertakes activities to maintain or renovate existing facilities, such as the Boca Chica Marina Expansion and the Fleming Key Shoreline Stabilization. These activities may require state and/or federal permits, such as Florida Department of Environmental Protection (FDEP) Environmental Resource Permits (Chapter 62-340 F.A.C.) or USACE permits (CWA Section 404/Rivers and Harbors Act Section 10). The FDEP and the South Florida Water Management District (SFWMD) have an Interagency Operating Agreement that divides responsibilities for processing environmental resource permit applications in accordance with the type of activity involved. Each project must be reviewed in accordance with this operating agreement to determine the correct permitting agency. The Florida environmental resource permit program administered by the FDEP/SFWMD regulates any dredging, filling, or construction in, on, or over waters and wetlands. Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) prohibits the obstruction or alteration of navigable waters of the United States without a permit from the USACE. Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) prohibits the discharge of dredged or fill material into waters of the United States without a permit from the USACE. If it is determined that wetland impacts are unavoidable, mitigation in the form of the creation of wetlands, or the restoration or enhancement of previously degraded ones, may be required under state and or/federal permits.

## Groundwater

The Biscayne Aquifer (commonly referred to as the Surficial Aquifer), and the Floridan Aquifer (a confined artesian aquifer), are the two main aquifers that underlie the Florida Keys. The Biscayne Aquifer is the primary system, and is considered one of the most productive and permeable in the world. However, because of its excessive chloride content in the Florida Keys, the Biscayne Aquifer is a nonpotable water source, although water from the aquifer is used for numerous other nonpotable water uses. The freshwater lens averages 5 feet (1.5 meters) below the center western half of Key West. The lens contains 20 to 30 million gallons (75.7 to 113.5

million liters) of freshwater depending on the season. The layer of freshwater beneath Key West is subject to salt water intrusion through the porous Key Largo limestone formation underlying the less porous Miami oolite limestone formation which forms the Key West Island. The fresh water is also exposed to pollution from exfiltrating sewer lines leading from the sewer system to Hawk Channel. No known source of potable artesian water exists in Key West.

## 3.6 Coastal and Marine Resources

### Flora

#### Near Shore Habitats

The Florida Keys region is dominated by three coastal marine habitats: mangroves, sea grass and coral reef. The near-shore, land/water interface, is dominated by the mangrove community (mangrove forest, scrub mangrove and buttonwood). Seagrass is the principal marine benthic vegetation in the Florida Keys region and is present in various levels of cover. Approximately 70% of the FKNMS consists of seagrass. Coral is present in different forms throughout the Lower Keys. There are patch reefs, coral reefs, and hardbottom coral communities throughout the FKNMS. These habitats cover approximately 27% of the benthos in the FKNMS (Florida International University, 2002).

#### Mangrove Community Habitat

Mangroves represent a major coastal wetland habitat in the Florida Keys region. Collectively, four species comprise the "mangrove" forest: the red (*Rhizophora mangle* L.), black (*Avicennia germinans*), and white (*Laguncularia racemosa*) mangroves, and the buttonwood tree (*Conocarpus erectus* L.). These species singularly or in combinations occupy wide ranges in the coastal zone from regularly flooded tidal regimes to higher elevations that may receive tidal waters only several times per year or during storm events. The growth of mangroves appears to be limited to estuarine systems and more inland areas that are subject to saline intrusions. A classification system for mangrove types based on gross differences in topography, surface hydrology, and salinity exists. A brief description of the mangrove types as summarized from Gilmore and Snedaker (1993) follows. This description is provided because the different forest types have somewhat different functional roles and fauna that utilize them.

***Mangrove fringe forests*** occur along sheltered coastlines with exposure to open water of lagoons and bays. The tree canopy foliage forms a vertical wall and these forests are almost exclusively dominated by red mangroves. The characteristics of this mangrove habitat type are related to the patterns of tidal inundation through which detrital materials and propagules (any portion of a plant, such as a bud or other offshoot, that aid in dispersal of the species and from which a new individual may develop) are exported from the system during ebb tides. These fringe forests commonly have a shoreline berm or an interior wrack line (i.e., build up of detritus). This is a very important habitat type for fishery organisms because of the presence of abundant food and refuge provided by the mangrove prop-roots, and has been more frequently studied relative to its links with adjacent systems than most other mangrove forest types (Thayer and Sheridan 1999).

***Overwash mangrove islands*** are ecologically similar to fringe forests because of their high frequency of tidal inundation, but here the entire area is completely covered by tidal waters on almost every tidal cycle. Because of the overwash phenomenon, there is an infrequent build up of a detrital berm or the development of a shoreline berm. Gilmore and Snedaker (1993) indicate that there is a high incidence of bird rookeries on overwash islands, presumably due to the limited habitat for predators and scavengers.

***Riverine mangrove forests*** occur in riverine areas that have estuarine water exchange and are considered to be the most productive forest type of the five described. This high productivity is attributed to the reduced salinity and the fact that freshwater runoff from land provides mineral nutrients required for growth. This high production provides organic detrital material to the adjoining low-salinity system, and also is an important habitat for fishery organisms (Ley 1992).

***Basin mangrove forests*** exist in inland topographic depressions that are not flushed by all high tides. This habitat type may experience seasonal periods of hypersaline soil water which can limit mangrove growth and induce mortality. These habitat types are normally dominated by black mangroves, but invasion by Australian pine (*Casuarina equisetifolia*) and Brazilian pepper (*Schinus terebinthifolius*) is very common. Odum *et al.* (1982) notes that this habitat type provides an extreme habitat in which few aquatic species can live because of the commonly low oxygen levels and presence of generally high levels of hydrogen sulfide. However, Gilmore and Snedaker (1993) suggest that because of the large aerial extent of the basin mangrove habitat

type, they probably contribute the largest absolute quantity of organic detritus to Florida's nearshore waters, and that this export occurs on a highly seasonal basis.

***Dwarf mangrove forests*** occur in areas where nutrients, freshwater inflow, and tidal activity limit the growth of the plant. All of the species can exist in a dwarf form. These marginal habitats have received little attention relative to their role as fishery habitat.

*Threats to Mangrove Ecosystems*

While much of the total U.S. mangrove forest area is protected under the jurisdictions of parks, sanctuaries, and refuges (Gilmore and Snedaker 1993, Thayer *et al.* in press), this coastal habitat and resource is being progressively diminished by a variety of natural and anthropogenic (human-caused) actions such as removal for coastal development, deprivation of freshwater from upland watersheds, severe freezes, clearing for charcoal production, oil spills and water pollution, competitive exclusion by exotic tree species (e.g., Australian pine, Brazilian pepper), illegal cutting or removal, coastal erosion, and mosquito control activities. The majority of these threats have been discussed and/or documented by Odum *et al.* (1982) and Gilmore and Snedaker (1993).

Mangroves are considered resilient and display characteristics of some "pioneer species" in that they have broad tolerances to environmental factors, rapid growth and maturity, continuous or almost continuous flowering and propagule production, high propagule outputs in a wide range of environmental conditions, and adaptations for short and long distance dispersal by tides (Cintron-Molero 1992). Even with these characteristics, mangroves are both sensitive and vulnerable to disturbance. Odum *et al.* (1982) point out, however, that one of the adaptations of mangroves, the aerial root system, is also one of the plant's most vulnerable components because of their susceptibility to clogging, prolonged flooding, and boring damage from invertebrates. They note that any process that coats the aerial roots with fine sediments or covers them with water for long periods has the potential of being a destructive agent. Diking, impounding, and long-term flooding, as has occurred in mosquito control situations, has caused considerable damage, as have spraying of herbicides and inundation by oil spills.

*Ecological Roles and Function*

The relatively high primary productivity of mangrove ecosystems and the associated biological processes provide many goods and services that are of direct or indirect benefit to the

public and to the urban and industrial environment. In Asia and South America, mangroves have been managed for lumber, firewood, and charcoal. Mangrove habitats, particularly riverine, overwash and fringe forests, provide shelter for larval, juvenile, and adult fish and invertebrates and dissolved and particulate organic detritus to estuarine food webs. Because of this linkage, both as habitat and as food resources, mangroves are important exporters of material to coastal systems as well as to terrestrial systems (e.g., through bird use as a rookery and feeding on fish). They help shape local geomorphic processes and are important in the diversity of landforms that provide shelter, foraging grounds, and nursery areas for terrestrial organisms. The root system binds sediments, thereby contributing to sedimentation and sediment stabilization.

Based on the physical configuration, hydrologic nature, and information received from the South Atlantic Fishery Management Council (SAFMC 1998), much of the mangrove habitat found at NAS Key West can be considered as *mangrove basin* type.

### Seagrass Habitat

Seagrass habitat is found within many of the NAS Key West maritime areas, especially within several of the estuarine lagoons at Boca Chica Field. The east and west lagoons contain seagrass ranging from sparse to moderate cover. The most recent assessment of seagrass coverage can be found in the National Oceanic and Atmospheric Administration (NOAA) 1998 aerial surveys. The Navy is planning on updating these aerial surveys in the future. Project 6 in this INRMP involves the quantitative mapping of seagrass and coral resources within NAS Key West maritime facilities with updates to occur every five years.

Out of the estimated 250,000 flowering plants existing today, only about 60 species have adapted to life in the marine environment (den Hartog 1970). Collectively, this group is referred to as submerged aquatic vegetation (SAV) or seagrasses. Taxonomically, seagrasses are divided into two families and 12 genera (den Hartog 1971, Phillips and Meinez 1988). At least 13 species of seagrass occur in United States waters, with the exception of Georgia and South Carolina where highly turbid freshwater discharges, suspended sediments and large tidal amplitude combine to prevent their permanent establishment. In the remainder of the south Atlantic region there are six genera of seagrasses represented by eight species, ranging in size from the three smallest, paddle grass (*Halophila decipiens*), star grass (*Halophila engelmannii*) and Johnson's seagrass (*Halophila johnsonii*), to the relatively larger genera, eelgrass (*Zostera*

*marina*), widgeongrass (*Ruppia maritima*), shoal grass (*Halodule wrightii*), manatee grass (*Syringodium filiforme*) and turtle grass (*Thalassia testudinum*).

Paddle grass, star grass, Johnson's seagrass, shoal grass, manatee grass and turtle grass all occur in Florida and may be found in protected inland waters as well as oceanic environments. In southeast Florida, all of the seagrasses occur within protected coastal lagoons and in the Intracoastal Waterway (ICW). Beginning around the Palm Beach area and continuing south through the FKNMS, paddle grass is found on offshore sandy sediments to a depth of approximately 98 feet (30 meters). Open ocean meadows of shoal grass and turtle grass begin just south of Virginia Key in Biscayne Bay and continue through the Florida Keys National Marine Sanctuary (FKNMS) in water depths up to approximately 98 to 131 feet (30 to 40 meters). Several species of seagrass are found in Florida's coastal waters. In shallow-water areas on the Gulf side of the Lower Keys, turtle-grass (*Thalassia testudinum*) is the most common and most densely growing seagrass. The presence of the less common *Halophila spp*. has been documented only in the Lower Keys, where it has been found in relative abundance in the deep-water (24-30 meters) areas between Rebecca Shoal and the Dry Tortugas (FMRI 2000). The majority of seagrass biomass is distributed in the subtidal zone; however, all of the species, with the exception of paddle grass can be found growing in the intertidal zone where they may experience periods of exposure and desiccation.

*Threats to Seagrass Systems*

Like all other organisms and habitats in estuarine-near shore environments, seagrasses occur at the end of all watershed inputs: the juncture between riverine inflow and oceanic inputs as well as the interface between land and sea. This situation makes them extremely susceptible to perturbations by natural processes as well as being susceptible to damage by human activities. In the south Atlantic region, seagrasses experience natural disturbances such as bioturbation (stingray foraging), storm or wave-related scour (tropical storms and surges), and disease or disease-associated perturbations (Labyrinthula), as well as man-related impacts (Short and Wyllie-Echeverria 1996). Especially problematic are excessive epiphytic loads and smothering by transient macroalgae, both of which are often associated with nutrient enrichment. Excessive nutrient discharges and suspended sediments can also disrupt seagrass systems by causing water column algal blooms that diminish the amount of light available for bottom-dwelling seagrasses (Dennison et al. 1993). Often, nutrient enrichment will have detrimental effects that cascade up

and down the food webs of seagrass meadows by diminishing the dissolved oxygen concentrations, forming toxic concentrations of hydrogen sulfide and diminishing the ability of a meadow to filter and stabilize sediments, thus altering the water column environment for filter feeders and primary producers. Subtidal seagrasses have suffered little damage from oil spills whereas impacts on intertidal beds have been significant (Durako et al. 1993, Kenworthy et al. 1993). Oil spill related impacts on the seagrass-associated fauna can range from smothering to lowered stress tolerance, reduced market values and incorporation of carcinogenic and mutagenic substances into the food chain. Other well-known impacts such as dredge and fill operations are no longer a primary cause of major losses of seagrass habitat due to the recognition of their ecological role and vigilance of State and Federal regulatory activities relative to permits. This human-related impact, although still present, is now being replaced by that associated with propeller scouring (Sargent et al. 1995) and some fishing gear-related impacts (Fonseca et al. 1984). This physical damage is long-lasting and often results in sediment destabilization and continued habitat loss.

The increasing number of small boats traversing estuarine and coastal waters has made the prop-scarring impacts more widespread, and there has been a recognized need in some regions for both enhanced management of these systems and increased awareness by the boating public. Water quality and, in particular, water clarity are now considered among the most critical factors in the maintenance of healthy SAV habitats. In the past few years, it has become increasingly evident that, with few exceptions, seagrasses generally require light intensities reaching the leaves of 15 to 25% of the surface incident light (Kenworthy and Fonseca 1996, Gallegos and Kenworthy 1996, Onuf 1996). However, water transparency standards historically have been based on light requirements of phytoplankton which typically require only 1% of surface light (Kenworthy and Haunert 1991). Many factors act to reduce water column transparency, with excess suspended solids and nutrients being considered to be among the most important and most controllable through watershed management practices. The loss of seagrasses, regardless of the cause, leads to several undesirable, and often difficult to reverse, situations that reflect on aquatic vascular plant ecological values. Losses can and have led to reduced sediment binding and water motion baffling capability of the habitat allowing sediments to be more readily resuspended and moved (Fonseca 1996). The physical ramification includes

increased shoreline erosion (e.g., as occurred in some areas after the seagrass die-off in the 1930's) and water column turbidity.

## Fauna

Several marine species regularly utilize lower Florida Keys oceanic and estuarine habitats. Among these are federally managed fish species, marine mammal species, and sea turtles. Sea turtles and federally listed coral are also listed in the Section 3.8 (Threatened & Endangered Species).

### Sea Turtles

Five species of sea turtles are known to inhabit the waters in Monroe County and throughout the State of Florida. The loggerhead sea turtle (*Caretta caretta)* is the most common sea turtle in South Florida. Habitat for this reptile is relatively uncertain, as they seem to occupy and utilize a variety of marine habitats; consequently, no critical habitat has been designated for this species (USFWS 1999). Nesting season in the Florida Keys begins on April 15 and ends on October 31 (Save A Turtle, Inc. 2004). Loggerhead sea turtles are migratory animals, and breeding females may migrate hundreds of miles to the ideal beaches of Florida in order to nest (USFWS 1999). Approximately 80% of all loggerhead sea turtle nesting sites occur on the east coast of Florida in Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward Counties (NMFS and USFWS 1991).

Save-a-Turtle, Inc. has compiled nesting data for Boca Chica Key from 1986 to the present. The public beach area (south of Old Boca Chica Road) consists mostly of rocky shoreline with some sandy beach sections (Barham 2005e) and is considered nesting beach habitat. Portions of this shoreline are owned by the Navy, Monroe County, and the State of Florida. Surveys have been completed for this area, but they were sporadic, as surveys were not conducted during some years. All sea turtle activity for this area is considered to be from loggerhead turtles; however, no nests have been documented. Table 3-3 provides data on sea turtle nesting for the Boca Chica Key public beach area.

**Table 3-3**
**Loggerhead Sea Turtle Nesting Data**
**Boca Chica Key, Florida**

| Year | Nests | False Crawls |
|---|---|---|
| 1986 | 0 | 0 |
| 1987 | 0 | 3 |
| 1988 | 0 | 0 |
| 1989 | 0 | 2 |
| 1990 | 0 | 0 |
| 1991 | 0 | 1 |
| 1992 | 0 | 2 |
| 1993 | 0 | 1 |
| 1994 | 0 | 0 |
| 1995 | 0 | 0 |
| 1996 | 0 | 0 |
| 1997 | 0 | 0 |
| 1998 | No survey | No survey |
| 1999 | 0 | 0 |
| 2000 | No survey | No survey |
| 2001 | 0 | 1 |
| 2002 | 0 | 0 |
| 2003 | No survey | No survey |
| 2004 | 0 | 0 |
| 2005 | 4* | 0* |
| 2006 | 0 | 0 |

Source: Wells 2004.
*
**Although the survey recorded 4 nests, there were no nest evaluations done. Therefore, these nests could have been false crawls*

*Note: False crawls* are defined as an area on a nesting beach where a female has noticeably crawled onshore but failed to dig a nest.

## Coral Reefs

The Florida reef tract is the most extensive living reef system in North America, and the third largest system in the world (FKNMS n.d.). The reef system extends from Looe Key Reef to Cosgrove Shoal, south of the Marquesas (FMRI 2000). All but the northernmost extent of this reef tract lies within the boundaries of the FKNMS, which also includes Boca Chica Key (NOAA 1996). Hundreds of marine species are found within the Florida reef tract, including sponges, jellyfish, firecorals, anemones, false corals, stony corals, and octocorals (NOAA 1996). The rigidity of coral reefs helps protect the shoreline from destructive tropical storm waves. Reefs provide habitats for hundreds of species of marine organisms, including commercially important finfish and shellfish.

Various coral and hardbottom benthic habitats occur immediately adjacent to Boca Chica Field. The predominant community found in the waters adjacent to the airfield is considered hardbottom. In relation to Boca Chica Field, this hardbottom community is found all along the

southern edge of the Field in open water, as well as adjacent to Runway 25. Further away from the airfield, it occurs from the northwest to the northeast, along with various seagrass communities. In the open water south of Boca Chica Field, both aggregated patch reefs and individual patch reefs occur. Patch reefs are discrete coral communities that are typically dome-shaped and circular, although they may form a line. They may range in size from tens to thousands of square meters and occur in depths of 3.3 feet to 65.6 feet (1 to 20 m; USACE 2003). Aggregated patch reefs are clustered patch reefs that individually are too close together to map separately, and individual patch reefs are distinctive single patch reefs. These patch reef habitats are found between 1,476 and 2,132 feet (450 and 650 meters) offshore of Boca Chica Field.

- Executive Order 13089 (*Coral Reef Protection of June 11, 1998*) provides Federal protection for coral reefs. In response to this Executive Order, the EPA and NOAA funded a coral reef monitoring project that the FMRI implemented in 1996. Data from this project indicated a 38% decline in coral cover within the FKNMS, and a reduction in coral species diversity at most sites between 1996 and 1999. Since 1999, coral cover has not declined significantly; however, coral cover does not seem to be increasing either, which could indicate a lack of resilience in the FKNMS coral reefs. Major contributors to coral reef decline in the Florida Keys include degraded water quality, physical impacts, and over-fishing (FKNMS n.d.). In addition, the scleractinian corals *Acropora cervicornis* (staghorn) and *Acropora palmate* (elkhorn) have recently been listed as threatened under the ESA. Pursuant to the National Defense Authorization Act of 2004, Public Law 108 -136, the Navy deems that this INRMP provides a conservation benefit to staghorn and elkhorn corals and has therefore determined that a critical habitat exclusion for these species is warranted for the nearshore environments owned and controlled by the Navy (Appendix C). These species of coral are particularly vulnerable to oceanic perturbations, and if any are found to exist adjacent to NAS Key West maritime facilities, they must be protected. Of this date, none of these two threatened species have been found adjacent to NAS Key West maritime facilities. The Navy conducted benthic marine surveys for several NASKW maritime areas in spring 2006. These areas include three finger piers perpendicular to Pier D-1 and located at Trumbo Point. In addition, the seawall along the Naval Research Laboratories (NRL) in the

Fleming Key area was quantitatively assessed. In addition, the Navy assessed the following NASKW maritime areas in the fall of 2006: Fleming Key Dock, Fleming Key Special Operations Area, Boca Chica Weapons Hammock Area, Mole and Truman Harbor Area, and the Trumbo Point Area. Neither assessment observed any threatened coral (*Acropora* spp.) colonies attached to, or in the vicinity of, any Navy owned maritime property.

## Fish & Essential Fish Habitat

There are 88 species of fish that occur in the waters proximate to the NAS Key West that are federally managed by the South Atlantic Fisheries Management Council (SAFMC). In addition, the National Marine Fisheries Service (NMFS) manages all the 'highly migratory species' and has developed fisheries management plans for each of these. Several of the SAFMC managed species have Essential Fish Habitat (EFH) listed for them, and future projects that may adversely affect any of these species would require consultation with the NMFS. The Magnuson-Stevens Fishery Conservation and Management Act of 1996 (MSFCMA) requires that the NMFS, the regional fishery management councils, and the Secretary of Commerce to describe and identify essential fish habitat (EFH) for important marine and anadromous fish habitat for species listed in federal Fishery Management Plans. EFH includes all waters and substrate necessary to fish for spawning, breeding feeding, or growth to maturity and extends from offshore habitats to inland areas to where the salt-water influence subsides. The EFH Final Rule defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The following definitions apply for interpreting the definition of the EFH rule:

- "Waters" include aquatic areas and their physical, chemical, and biological properties that are used by fish and invertebrates and, where appropriate, may include areas historically used by fish and invertebrates;
- "Substrate" includes sediment, hard bottom, structures underlying the waters, and biological communities;
- "Necessary" means the habitat required to support a sustainable fishery and a healthy ecosystem; and

- "Spawning, breeding, feeding, or growth to maturity" covers species' full life cycle.

Fish habitat is the geographic area where the species occurs at any time during its life. This area can be described by ecological characteristics, location, and time. EFH includes waters and substrate that focus on distribution (e.g., coral reefs, marshes, or submerged aquatic vegetation [SAV]), and other characteristics that are less distinct, such as turbidity zones, water quality, and salinity gradients. Habitat use may change or shift over time due to climatic change, human activities and impacts, and/or other factors such as change with life history stage, species abundance, competition from other species, and environmental variability in time and space. The type of habitat available, its attributes, and its functions are important to species productivity, diversity, health, and survival.

The MSFCMA requires federal agencies to consult with NMFS when any activity proposed to be permitted, funded, or undertaken by a federal agency may adversely affect EFH. Affects to EFH were considered when preparing this INRMP, and no projects considered within are expected to adversely affect EFH. Moreover, implementation of the INRMP would be expected to improve water quality and estuarine and marine habitats.

In 2006, a comprehensive Essential Fish Habitat Assessment was completed in support of the *Environmental Impact Statement for the Restoration of Clearzones and Stormwater Drainage Systems at Boca Chica Field, NASKW*. This assessment included a functional evaluation of mangrove habitat within the airfield clearzones. The assessment concluded that due to the physical configuration, hydrologic nature and information presented previously from the SAFMC (1998), much of the mangrove habitat found at NAS Key West is the '*mangrove basin*' type. Based on field surveys and data presented in Sections 4, 5, and 6 of this assessment (Navy 2006), extreme variations in salinities throughout the lagoon system indicate minimal tidal exchange and suggests that the estuarine assemblage utilizing these environments is limited to euryhaline, tolerant species. The federally managed species most likely to be present adjacent to NAS Key West maritime facilities are members of the snapper-grouper fishery management plan (FMP) as many of these species are likely to be found in shallow, near-shore mangrove habitat.

## Marine Mammals

All of the marine mammals that may potentially occur within the NAS Key West area are federally protected under the Marine Mammal Protection Act (MMPA). The MMPA protects marine mammals within the territorial waters of the US, on the US Exclusive Economic Zone and on the high seas. The act prohibits marine mammal takes unless a permit is secured from the NMFS.

Approximately 29 species (Table 3-4) of marine mammals (baleen whales, toothed whales, and manatees) are found within the Gulf of Mexico. Many of these species are present within the Lower Keys region. For a current list and information on marine mammals that utilize the Key West area, please consult the Navy Marine Resource Assessment for the Gulf of Mexico (Navy 2007b).

**TABLE 3-4 – Marine Mammals Species Found in the Gulf of Mexico**

| | Scientific Name | Status | Occurrence[1] |
|---|---|---|---|
| **Order Cetacea** | | | |
| Suborder Mysticeti (baleen whales) | | | |
| Family Balaenidae (right whales) | | | |
| North Atlantic right whale | *Eubalaena glacialis* | Endangered | Extralimital |
| Family Balaenopteridae (rorquals) | | | |
| Humpback whale | *Megaptera novaeangliae* | Endangered | Extralimital |
| Minke whale | *Balaenoptera acutorostrata* | | Rare |
| Bryde's whale | *Balaenoptera edeni* | | Regular |
| Sei whale | *Balaenoptera borealis* | Endangered | Extralimital |
| Fin whale | *Balaenoptera physalus* | Endangered | Rare |
| Blue whale | *Balaenoptera musculus* | Endangered | Extralimital |
| Suborder Odontoceti (toothed whales) | | | |
| Family Physeteridae (sperm whale) | | | |
| Sperm whale | *Physeter macrocephalus* | Endangered | Regular |
| Family Kogiidae (pygmy sperm whales) | | | |
| Pygmy sperm whale | *Kogia breviceps* | | Regular |
| Dwarf sperm whale | *Kogia sima* | | Regular |
| Family Ziphiidae (beaked whales) | | | |
| Cuvier's beaked whale | *Ziphius cavirostris* | | Regular |
| Gervais' beaked whale | *Mesoplodon europaeus* | | Rare |
| Sowerby's beaked whale | *Mesoplodon bidens* | | Extralimital |
| Blainville's beaked whale | *Mesoplodon densirostris* | | Regular |
| Family Delphinidae (dolphins) | | | |
| Rough-toothed dolphin | *Steno bredanensis* | | Regular |
| Bottlenose dolphin | *Tursiops truncatus* | | Regular |
| Pantropical spotted dolphin | *Stenella attenuata* | | Regular |

| | | | |
|---|---|---|---|
| Atlantic spotted dolphin | *Stenella frontalis* | | Regular |
| Spinner dolphin | *Stenella longirostris* | | Regular |
| Clymene dolphin | *Stenella clymene* | | Regular |
| Striped dolphin | *Stenella coeruleoalba* | | Regular |
| Fraser's dolphin | *Lagenodelphis hosei* | | Regular |
| Risso's dolphin | *Grampus griseus* | | Regular |
| Melon-headed whale Pygmy killer whale | *Peponocephala electra Feresa attenuata* | | Regular |
| False killer whale | *Pseudorca crassidens* | | Regular |
| Killer whale | *Orcinus orca* | | Regular |
| Short-finned pilot whale | *Globicephala macrorhynchus* | | Regular |
| **Order Sirenia** | | | |
| Family Trichechidae (manatees) | | | |
| West Indian manatee | *Trichechus manatus* | Endangered | Extralimital* |

Source: Navy2007b

[1] **Regular** = A species that occurs as a regular or normal part of the fauna of an area regardless of its abundance
**Rare** = A species that only occurs in an area sporadically
**Extralimital** = A species that does not normally occur in an area and occurrence is considered to be beyond the normal range of the species even though one or more occurrence records exist

* The extralimital designation for this species specifically applies to the offshore area formally considered as the GOMEX MRA study area

There is no critical habitat within the lower Florida Keys for the West Indian Manatee (*Trichechus manatus)*, due to low freshwater input to the region. However, the species may utilize the shallows adjacent to base maritime areas, especially the marina and shallow approach channels. Base personnel utilizing the Boca Chica marina should be made aware of the potential for manatees and reminded to adhere to 'no wake zones' within shallow areas. Signage should be displayed where appropriate. All base personnel should be made aware of marine mammal law and should stay clear of all marine mammals when they are spotted in and around NAS Key West waters.

# 3.7 Terrestrial Resources

## Flora

### Vegetative Communities

Prior to colonization and development, the biological environment of NAS Key West was considerably different than it is today. Historically, the Keys were dominated by subtropical vegetative communities that are typical of the South Florida environment. Today, these

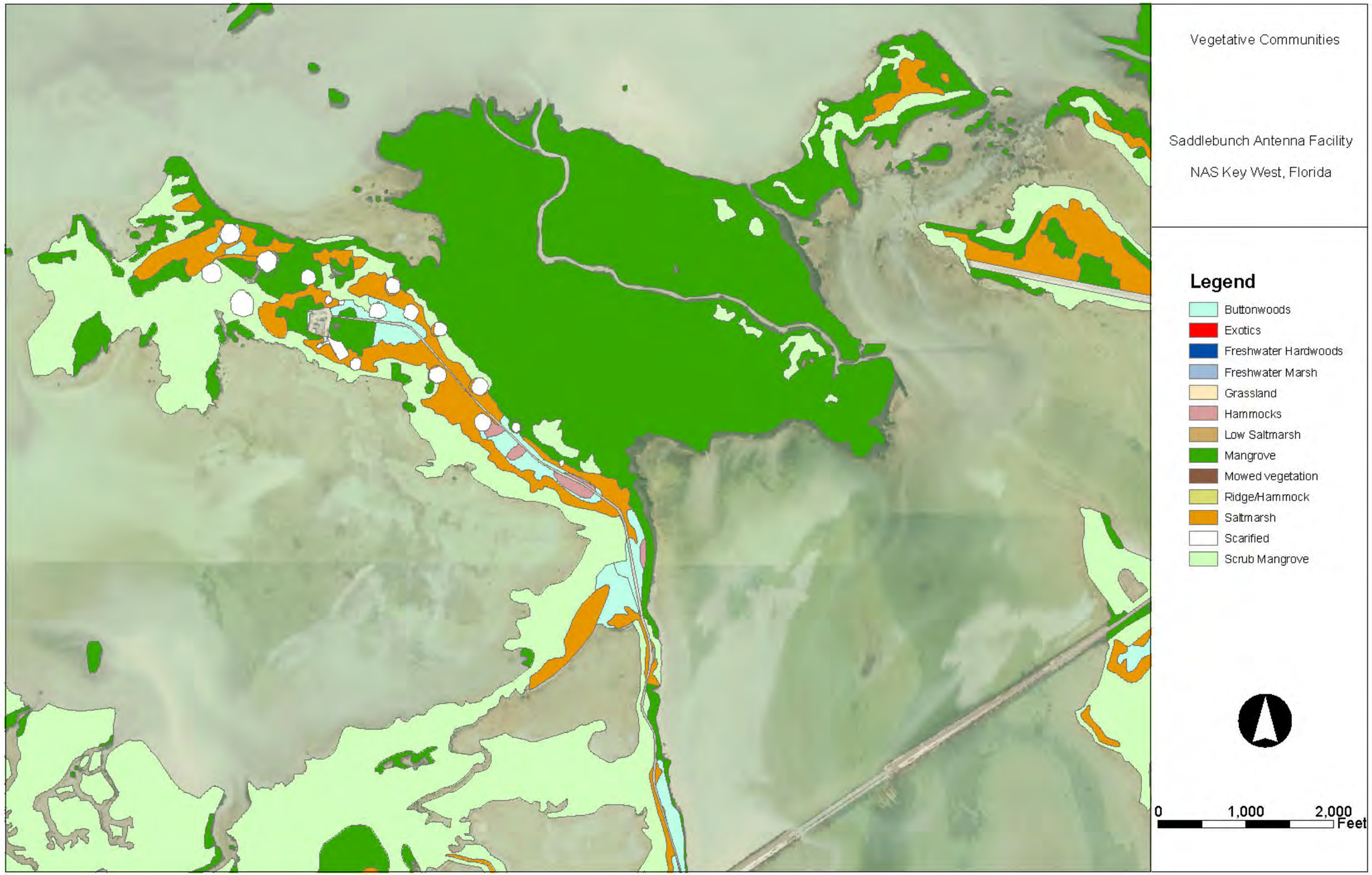
communities are found only scattered throughout NAS Key West. Terrestrial vegetative communities that characterize the Florida Keys and the majority of vegetative communities at NAS Key West include tropical hardwood hammocks, grasslands, buttonwoods, salt marsh, freshwater marsh, and mangrove forests.

Several spatial databases mapping terrestrial habitats are available for the Florida Keys. The Advanced Identification of Wetlands GIS layer is currently the source of spatial terrestrial habitat data used by NAS Key West which classifies land cover in the Florida Keys into 15 types Figures 3-4 and 3-5).

Figure 3-4

Vegetative Communities
Boca Chica, Rockland, Big Coppitt and Geiger Keys
NAS Key West, Florida
Legend
Buttonwoods
Exotics
Freshwater Hardwoods
Freshwater Marsh
Grassland
Hammocks
Low Saltmarsh
Mangrove
Mowed vegetation
Ridge/Hammock
Saltmarsh
Scarified
Scrub Mangrove
0
2,000
4,000
Feet

Figure 3-5


Vegetative Communities
Saddlebunch Antenna Facility
NAS Key West, Florida
Legend
Buttonwoods
Exotics
Freshwater Hardwoods
Freshwater Marsh
Grassland
Hammocks
Low Saltmarsh
Mangrove
Mowed vegetation
Ridge/Hammock
Saltmarsh
Scarified
Scrub Mangrove
0
1,000
2,000
Feet

## Natural Communities

Florida Natural Areas Inventory (FNAI) performed ecological surveys including a natural areas survey on the properties of Naval Air Station Key West from January through December, 2004 to supersede the previous 1994 ecological survey completed by FNAI. The natural communities surveyed were classified as described in the *Guide to the Natural Communities of Florida* developed by the FNAI and identified as collectively constituting the original, natural biological associations of Florida. A Natural Community (NC) is defined as a distinct and reoccurring assemblage of populations of plants, animals, fungi and microorganisms naturally associated with each other and their physical environment. Natural Communities are characterized and defined by a combination of physiognomy, vegetation structure and composition, topography, land form, substrate, soil moisture condition, climate, and fire. They are named for their most characteristic biological or physical feature.

Seventy five occurrences of five natural community types were identified on the properties at NAS Key West. Site specific descriptions of these natural communities are provided below.

***Tidal swamp***. On NAS Key West, tidal swamp covers by far the greatest area. These tidal areas have relatively low plant species diversity and are dominated by three mangrove species, red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), and white mangrove (*Laguncularia racemosa*). The relative abundance of these species, their density, average height, degree of canopy closure and the diversity of associated herbaceous species varies from site to site. Buttonwood (*Conocarpus erectus*) may infrequently be included with the mangroves, but they tend toward a more scrub-like growth habit, occurring more frequently as a transition species as the tidal swamp grades into adjacent communities. The herbaceous species commonly found in Lower Keys tidal swamps are saltwort (*Batis maritima*), moonvines (*Ipomoea alba*), perennial glasswort (*Sarcocornia perennis*), key grass (*Monanthochloe littoralis*), Carolina sealavender (*Limonium carolinianum*), and sea oxeye daisy (*Borrichia frutescens*). In general, the herbaceous plants gradually increase in frequency as the community transitions into adjacent communities such as coastal rock barren, salt marsh or rockland hammock. Inclusions of saltmarsh are present within some of the mapped tidal swamp areas.

Tidal swamp communities are highly variable depending on the extent of tidal influence, salinity and substrate. Zones of vegetation typically develop along these environmental gradients. Red mangrove dominates the lowest or deep water zone, black mangrove the intermediate zone, and white mangrove and buttonwood the highest least tidally influenced zone. These typical zones are obvious at only a few sites on NAS Key West property; most of the tidal swamps in study area are composed of a mosaic of mangrove

species. Additional site specific tidal swamp descriptions are provided for each of the NAS Key West properties that support this community in the 2005 FNAI report.

***Coastal Rock Barren***. Coastal rock barren is an ecotonal community between tidal swamp and inland communities occurring along rocky coastlines in the Florida Keys. They are generally characterized as flat rocklands with much exposed and eroded limestone and are sparsely vegetated with stunted, xeric and halophytic shrubs, cacti, algae, and herbs. Coastal rock barrens are among the most endangered natural communities in Florida. Though they cover far less area of Navy land than the tidal swamps, the coastal rock barrens exhibit more variation than do the tidal swamp communities. The structure and composition vary with soils/substrates, salinity, and topography and range from sparsely vegetated rocky or marl flats to moderately dense shrub thickets on shallow organic soil.

Buttonwood is the dominant plant found in coastal rock barren. It varies from stunted sprawling multi-stemmed shrubs to 30 ft tall trees. Other typical species are saffron plum (*Sideroxylon celastrinum*), blackbead (*Pithecellobium keyense*), black torch (*Erithalis fruticosa*), bay cedar (*Suriana maritima*), randia (*Randia aculeata*), wild dilly (*Manilkara jaimiqui*), poisonwood (*Metopium toxiferum*), sea grape (*Coccoloba uvifera*), joewood (*Jacquinia keyensis*), rhacoma (*Crossopetalum rhacoma*), Spanish stopper (*Eugenia foetida*), Christmas berry (*Lycium carolinianum*), oxeye daisy species (*Borrichia frutescens* and *B. arborescens*), annual and perennial glassworts (*Salicornia bigelovii* and *Sarcocornia perennis*), key grass, saltgrass (*Distichlis spicata*), seashore dropseed (*Sporobolus virginicus*), cordgrass and saltmarsh fringe rush (*Fimbristylis spadicea*). Two rare plants are predominately found in coastal rock barren: manchineel (*Hippomane mancinella*) and Porter's broom spurge (*Chamaesyce porteriana* var. *scoparia*).

Coastal rock barrens also may be referred to as salt marshes, cactus barrens, or buttonwood perimeter zones. A marsh-like structure is often present where the surface rock/substrate has been disturbed. These areas often support gulf cordgrass (*Spartina spartinae*) and seashore dropseed, but are rarely inundated. Examples of this altered community are present around the Boca Chica Field.

***Beach Dune***. Beach dune is characterized as a wind-deposited, foredune and wave-deposited upper beach that are sparsely to densely vegetated with pioneer species, especially sea oats (*Uniola paniculata*). Very little of this community type naturally occurs in the Keys and even less on NAS Key West property; there are only two small areas, both on Boca Chica off the Old Boca Chica Road Coast. Both of these areas have some ruderal components, but nevertheless are important natural areas. The threats to this community are storm damage, borrow and fill, clearing, vegetation trampling, and outright development.

***Coastal Berm***. Coastal berm applies to a variety of plant associations that develop on ridges of storm deposited sand, shells, and debris. These associations include dense thickets of large shrubs and small trees, hammocks, or sparse shrubby vegetation with spiny xerophytic plants. In the Lower Keys on NAS Key West the coastal beach berm occurs occasionally in two general forms. One type of berm may be characterized as rather ephemeral, consisting of loosely deposited shell and marl sands forming small, low (a foot high, more or less) ridges which will partly define salt ponds or flats in a lagoon

setting, or will occur along outer edges of scrub mangroves or the rock barrens of these lagoons. In this form they will generally support scrub buttonwood and black or white mangroves, Christmas berry, sea purslane (*Sesuvium* sp.), key grass and saltgrass and/or seashore dropseed, sea oxeye, and bay cedar or sea grape or even 7-year apple (*Genipa clusiifolia*) and joewood. The second general form has a broader mound to several feet high made up of long-term deep storm deposits of shell/marl sands and detritus over rocky substrate adjacent to the rock barren or within or behind the mangrove communities. These soft ridges support large, old, diverse and xeric populations of buttonwood, saffron plum, prickly pear (*Opuntia* sp.), sea grape, cordgrass, poisonwood, Jamaican caper (*Capparis cynophallophora*), blackbead, and other woody and/or thorny shrubs and trees.

***Rockland Hammock***. Rockland hammock is a hardwood forest on upland sites where limestone is very near the surface and is often exposed. Vegetation can be similar to that of the coastal berms, but is typically more diverse and has a more developed canopy. Rockland hammock is the climax community and the most tree rich community in the Keys. Canopy species on NAS Key West include Jamaican dogwood (*Piscidia piscipula*), gumbo limbo (*Bursera simaruba*), poisonwood, buttonwood, sea grape, blolly (*Guapira discolor*), pigeon plum (*Coccoloba diversifolia*), black ironwood (*Krugiodendron ferreum*), inkwood (*Exothea paniculata*), willow bustic (*Sideroxylon salicifolium*), Spanish stopper, white stopper (*Eugenia axillaris*), darling plum (*Reynosia septentrionalis*), Keys thatch palm (*Thrinax morrisii*), Florida thatch palm (*Thrinax radiata*), wild dilly, black torch, blackbead, locustberry (*Byrsonima lucida*), rhacoma, and torchwood (*Amyris elemifera*). Additionally, wild tamarind (*Lysiloma latisiliquum*) and mahogany (*Swietenia mahagoni*) are present at Battery HM-40. Most of these species also make up the continuous understory, shrub and groundcover layers, with the addition of randia, saffron plum, and lancewood (*Ocotea coriacea*).

The Navy's rockland hammocks are found on Big Coppitt, Rockland Key, Boca Chica Field, Saddlebunch Key, north Boca Chica, and north Key Largo.

## Invasive and Exotic Plants

FNAI completed field surveys from January to December, 2004 to identify invasive and exotic plant species on properties at NAS Key West. The Florida Exotic Plant Pest Council's most recent version of the Florida Invasive Plant Species List was used to identify which species to consider for this survey (FLEPPC, 2003). Australian pine (*Casuarina equisetifolia*), Brazilian pepper (*Schinus terebinthifolius*), latherleaf (*Colubrina asiatica*), Lead tree (*Leucaena leucocephala*), sisal hemp (*Agave sisalana*) and melaleuca (*Melaleuca quinquenervia*) pose the greatest threat to natural areas and other vegetated areas on NAS Key West.

Two thousand three hundred and fifty three occurrences of 47 invasive exotic species were documented on NAS Key West. Occurrences small in size that could be adequately represented without delineating an area are mapped as a point. Polygons were created for larger

and more expansive infestations. It should be noted that polygons don't necessarily indicate a more severe condition, but merely provide a more accurate means of visual representation (Figures 3-6 – 3-8). The severity is represented by the count and density data for each occurrence. Twenty two of these species are ranked as Category I by FLEPPC; twenty are ranked as Category II; six are not currently ranked, but may be considered for ranking and merited recording (Table 3-5). Rank definitions are provided below the table.

Figure 3-6

Invasive and Exotic Plants
Navy Branch Health Clinic, Sigsbee, Perry Court, Trumbo Point, Fleming Key, Truman Annex
NAS Key West, Florida
Legend
Invasive and Exotic Plants
0
1,800
3,600
Feet

Figure 3-7

Invasive and Exotic Plants
Boca Chica, Rockland, Big Coppitt and Geiger Keys
NAS Key West, Florida
Legend
Invasive and Exotic Plants
0
2,000
4,000
Feet

Figure 3-8

Invasive and Exotic Plants
Saddlebunch Antenna Facility
NAS Key West, Florida
Legend
Invasive and Exotic Plants
0
750
1,500
Feet

**Table 3-5. Invasive Exotic Plants documented on Navy Properties in the Florida Keys**

| Species | Common Name | Occurrences | EPPC Rank |
|---|---|---|---|
| *Acacia auriculiformis* | earleaf acacia | 2 | Category I |
| *Agave sisalana* | sisal hemp | 8 | Category II |
| *Agave sp.* | Agave | 9 | Category II |
| *Albizia lebbeck* | woman's tongue | 30 | Category I |
| *Bauhinia variegata* | Orchid tree | 6 | Category I |
| *Calophyllum antillanum* | Santa Maria | 9 | Category I |
| *Casuarina equisetifolia* | Australian pine | 362 | Category I |
| *Colubrina asiatica* | Latherleaf | 33 | Category I |
| *Cryptostegia madagascariensis* | Madagascar rubbervine | 4 | Category II |
| *Eugenia uniflora* | Surinam cherry | 1 | Category I |
| *Ficus microcarpa* | laurel fig | 54 | Category I |
| *Flacourtia indica* | governor's plum | 4 | Category II |
| *Hibiscus tiliaceus* | Mahoe | 5 | Category II |
| *Hylocereus undatus* | night-blooming cereus | 4 | N* |
| *Jacquinia arborea* | Braceletwood | 3 | N* |
| *Jasminum fluminense* | Brazilian jasmine | 15 | Category I |
| *Kalanchoe pinnata* | life plant | 77 | Category II |
| *Lantana camara* | Lantana | 5 | Category I |
| *Leucaena leucocephala* | Lead tree | 152 | Category II |
| *Manilkara zapota* | Sapodilla | 10 | Category I |
| *Melaleuca quinquenervia* | Melaleuca | 38 | Category I |
| *Melia azederach* | Chinaberry | 1 | Category I |
| *Neyraudia reynaudiana* | Burma reed | 2 | Category I |
| *Panicum maximum* | Guinea grass | 2 | Category II |
| *Pennisetum purpureum* | Napier grass | 3 | Category I |
| *Pennisetum setaceum* | green fountaingrass | 1 | Category II |
| *Phoenix dactylifera* | date palm | 1 | Category II |
| *Phoenix reclinata* | Senegal date palm | 1 | Category II |
| *Phoenix sp.* | date palm | 57 | Category II |
| *Pteris vittata* | Chinese brake fern | 4 | Category II |
| *Ptychosperma elegans* | solitaire palm | 1 | Category II |
| *Ricinus communis* | castor bean | 3 | Category II |
| *Sansevieria hyacinthoides* | bowstring hemp | 57 | Category II |
| *Scaevola sericea* | beach naupaka | 50 | Category I |
| *Schefflera actinophylla* | umbrella tree | 151 | Category I |
| *Schinus terebinthifolius* | Brazilian pepper Brazilian pepper | 703 | Category I |
| *Sesbania sericea* | Sesban | 56 | N* |
| *Syngonium podophyllum* | arrowhead vine | 2 | Category I |
| *Tabebuia heterophylla* | trumpet tree | 112 | N* |
| *Tamarindus indica* | edible tamarind | 4 | N* |
| *Terminalia catappa* | tropical almond | 56 | Category II |
| *Thespesia populnea* | seaside mahoe | 113 | Category I |
| *Tradescantia fluminensis* | wandering Jew | 3 | Category I |
| *Tradescantia spathacea* | oyster plant | 73 | Category I |

| | | | |
|---|---|---|---|
| *Tribulus cistoides* | Puncturevine | 2 | Category II |
| *Washingtonia robusta* | Washington palm | 62 | N* |
| *Wedelia trilobata* | Wedelia | 2 | Category II |
| * The Florida Keys Invasive Exotic Task Force (FKIETF) lists *Hylocereus* as Category II and *Tabebuia* as Category III on the to-be-watched list. *Sesbania sericea* is likely to be listed soon by FLEPPC and FKIETF as a Category II invasive. *Washingtonia* has been listed by FKIETF in the past, but its current invasion into natural areas appears very slow and it is not listed. *Tamarindus* and *Jacquinia* are invading hammocks on NAS KeyWest; these species deserve monitoring at the least, but are currently not listed, nor are they likely to be listed anytime soon (*Tamarindus* has been found in Cudjoe hammock as well). | | | |

**FLEPPC Category I -** Invasive exotics that are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. *This definition does not rely on the economic severity or geographic range of the problem, but on the documented ecological damage caused.*
**FLEPPC Category II -** Invasive exotics that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species. *These species may become ranked Category I, if ecological damage is demonstrated*

## Fauna

The unique natural communities on NAS Key West provide habitat for a variety of mammal, bird, reptile and invertebrate species. These communities provide important nesting and roosting areas and offer prime foraging habitat for many migratory and resident birds such as passerines, raptors, shorebirds and wading birds. These communities also provide habitats for the general spectrum of native frogs, snakes, and lizards, native tree snails, and most of the few native mammal species found in the Keys (raccoon, Lower Keys marsh rabbit, Silver rice rat, Key Largo woodrat, Key Largo cotton mouse).

FNAI conducted rare animal survey which focused primarily on breeding birds and the Keys mole skink (*Eumeces egregious egregious*) on NAS Key West properties from April through August 2004. The FNAI report provides a list of those rare birds identified such as prairie warbler (*Dendroica discolor paludicola*) Cuban yellow warbler (*Dendroica petechia gundlachi*), mangrove cuckoo (*Coccyzus minor*) black-whiskered vireo (*Vireo altiloquus*) and white-crowned pigeon (*Columba leucocephala*). The natural communities remaining on NAS Key West properties provide important summer habitats as well as winter and stopover habitats for breeding and migrant birds including neotropical species. The Keys mole skink was not observed on NAS Key West.

## 3.8 Threatened and Endangered Species

Table 3-6 provides a list of Federal and State listed threatened and endangered species that occur, or have the potential to occur on NAS Key West, including the 34 state and federal listed plant species observed on NAS Key West during the FNAI 2005 survey. Occupied and potential habitats occurring on NAS Key West property for certain rare, threatened and endangered species are depicted in Figures 3-9 – 3-11. Section 4.3 (Threatened and Endangered Species) provides the current status, survey information, and habitat conditions for each of the threatened and endangered species that occur, is likely to occur, and/or is actively managed on NAS Key West.

**TABLE 3-6 Federal & State Listed Candidate, Threatened And Endangered Species That Occur Or Potentially Occur On NAS Key West**

| SPECIES | | STATUS | | |
|---|---|---|---|---|
| COMMON NAME | SCIENTIFIC NAME | USFWS/ NOAA | FFWCC | Known to Occur |
| **Mammals** | | | | |
| Key Largo Woodrat | *Neotoma floridana smalli* | E | E | |
| Silver Rice Rat | *Oryzomys palustris natator* | E | E | ✓ |
| Key Largo Cotton Mouse | *Peromyscus gossypinus allapaticola* | E | E | |
| Lower Keys Marsh Rabbit | *Sylvilagus palustris hefneri* | E | E | ✓ |
| West Indian Manatee | *Trichechus manatus* | E | E | ✓ |
| **Birds** | | | | |
| White-crowned Pigeon | *Columba leucocephalus* | | T | ✓ |
| Peregrine Falcon | *Falco peregrinus* | | E | ✓ |
| Bald Eagle | *Haliaeetus leucocephalus* | T | T | ✓ |
| Least Tern | *Sterna Antillarum* | | T | ✓ |
| Roseate Tern | *Sterna dougallii dougallii* | T | T | ✓ |
| **Reptiles & Amphibians** | | | | |
| American Crocodile | *Crocodylus Acutus* | E | E | ✓ |
| Eastern Indigo Snake | *Drymarchon Corais Couperi* | T | T | |
| Green Sea Turtle | *Chelonia mydas* | E | E | |
| Hawksbill Sea Turtle | *Eretmochelys imbricata* | E | E | |
| Leatherback Sea Turtle | *Dermochelys coriacea* | E | E | |
| Loggerhead Sea Turtle | *Caretta caretta* | T | T | ✓ |
| Key Ringneck Snake | *Diadophis puctatus acricus* | | T | |
| Lower Keys Brown Snake | *Storeria dekayi victa* | | T | |
| Rim Rock Crowned Snake | *Tantilla oolitica* | | T | |
| Lower Keys Ribbon Snake | *Thamnophis sauritus sackenii* | | T | |
| **Fish** | | | | |
| Smalltooth Sawfish | *Pristis pectinata* | E | E | |
| **Invertebrates** | | | | |
| Elkhorn Coral | *Acropora palmata* | T | | |
| Miami Blue Butterfly | *Cyclargus thomasi bethunebakeri* | C | E | |
| Schaus Swallowtail Butterfly | *Heraclides aristodemus ponceanus* | E | E | |
| Staghorn Coral | *Acropora cervicornis* | T | | |
| Stock Island Tree Snail | *Orthalicus reses (not incl. nesodryas)* | T | E | |

**TABLE 3-6(CONT.)**

| Plants | | | | |
|---|---|---|---|---|
| Cinnecord, Tamarindillo | *Acacia choriophylla* | | E | ✓ |
| Barbed-Wire Cactus | *Acanthocereus tetragonus* | | T | ✓ |
| Seaside Ageratum | *Ageratum littorale* | | E | ✓ |
| Sea Lavender | *Argusia gnaphalodes* | | E | ✓ |
| Blodgett's Wild Mercury | *Argythamnia blodgettii* | C | E | ✓ |
| Pine Pink Orchid | *Bletia purpurea* | | T | ✓ |
| Locustberry | *Byrsonima lucida* | | T | ✓ |
| Wild Cinnamon | *Canella winterana* | | E | ✓ |
| Garber's Spurge | *Chamaesyce garberi* | E | E | ✓ |
| Porter's Sandmat | *Chamaesyce porteriana* | | E | ✓ |
| Silver Palm | *Coccothrinax argentata* | | T | ✓ |
| Curacao Bush | *Cordia globosa* | | E | ✓ |
| Rhacoma, Maidenberry | *Crossopetalum rhacoma* | | T | ✓ |
| Milkbark | *Drypetes diversifolia* | | E | ✓ |
| Red Stopper | *Eugenia rhombea* | | E | ✓ |
| Caribbean Princewood | *Exostema caribaeum* | | E | ✓ |
| Wild Cotton | *Gossypium hirsutum* | | E | ✓ |
| Lignum-Vitae | *Guaiacum sanctum* | | E | ✓ |
| Manchineel | *Hippomane mancinella* | | E | ✓ |
| Joewood | *Jacquinia keyensis* | | T | ✓ |
| Wild Dilly | *Manilkara jaimiqui* | | T | ✓ |
| Prickly Pear Cactus | *Opuntia stricta* | | T | ✓ |
| Smooth Devil's Claw | *Pisonia rotundata* | | E | ✓ |
| Long-Stalked Stopper | *Psidium longipes* | | T | ✓ |
| Bahama Wild Coffee | *Psychotria ligustrifolia* | | E | ✓ |
| Bahama Brake Fern | *Pteris bahamensis* | | T | ✓ |
| Inkberry, Half-Flower | *Scaevola plumieri* | | T | ✓ |
| Florida Boxwood | *Schaefferia frutescens* | | E | ✓ |
| Mahogany | *Swietenia mahagoni* | | T | ✓ |
| Silver Thatch Palm | *Thrinax morissii* | | E | ✓ |
| Green Thatch Palm | *Thrinax radiata* | | E | ✓ |
| Twisted Airplant | *Tillandsia flexuosa* | | T | ✓ |
| Giant Airplant | *Tillandsia utriculata* | | E | ✓ |
| West Indian Trema | *Trema lamarckianum* | | E | ✓ |

SOURCE: USFWS & FFWCC 2006, FNAI 2005

**STATUS**

C = Candidate
E = Endangered
T = Threatened
PT = Proposed Threatened

✓ denotes species are known to occur on NAS Key West Property-(all plants listed were observed during FNAI surveys)

Figure 3-9

Rare,
Threatened and Endangered
Species Habitats
Naval Medical Clinic, Sigsbee,
Perry Court, Trumbo Point,
Fleming Key, Truman Annex
NAS Key West, Florida
Legend
Potential Tern Nesting Habitat
Potential Sea Turtle Nesting Habitat
0
1,800
3,600
Feet

Figure 3-10

Rare,
Threatened and Endangered
Species Habitats
Boca Chica, Rockland,
Big Coppitt and Geiger
Keys
NAS Key West, Florida
Legend
Lower Keys Marsh Rabbit Habitat
Occupied
Potential
Potential Tern Nesting Habitat
Potential Sea Turtle Nesting Habitat
Bald Eagle Nest
Blodgett's wild mercury
Blodgett's wild mercury
Garber's spurge
0
2,000
4,000
Feet

Figure 3-11

Rare,
Threatened and Endangered
Species Habitats
Saddlebunch Antenna Facility
NAS Key West, Florida
Legend
Lower Keys Marsh Rabbit Habitat
Occupied
Potential
Silver Rice Rat Habitat
0
1,000
2,000
Feet

# Key West HISTORY

October, 1962

#11

The Cuban Missle Crisis

## JFK VISITS TROOPS, INSPECTS DEFENSES

**On November 26, 1962 - the Monday following Thanksgiving in a year all of Key West had much to be thankful for - President John F. Kenanedy flew into Boca Chica to observe first-hand the troops and emplacements in the Keys.**

## FOUND IN DALLAS
### Now Back in Key West
**The lost 8mm film of JFK's motorcade along Duval Street**

Full Story on Page 14

# MISSILES ON THE BEACH

**by Joseph Butler**

It was on Tuesday, October 23, 1962, that Key Westers awoke to find the military had taken over their island. HAWK missiles aboard their launchers were parked on the sand beside A1A, soldiers were stringing triple strands of barbed wire along Smathers Beach, there was an army encampment on Rest Beach, and the military had commandeered the airport. "It was like an armed camp had sprung up overnight," said *Citizen* managing editor Margaret Foresman.

Rumors had been flying for weeks that a military build-up was expected as part of an annual Caribbean exercise, but no one had anticipated anything on this level. Just like no one had expected to hear what President Kennedy had told the country

**See MISSILES on Page 3**

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# Missile crisis brings Army back to Key West

By James E. Brooks

During the summer of 1962, Key West's military footprint grew after intelligence sources confirmed Soviet shipments of medium range bombers to Cuba and construction of surface-to-surface missile sites. So began one of the biggest military confrontations of the Cold War since the days of the Berlin Airlift.

In addition to Soviet merchant ships laden with shrouded cargo containers, there were other intelligence indicators hinting at something out-of-the-ordinary. Cuban military aggressiveness was on the rise. NAS Key West-based, anti-submarine warfare aircraft, S-2 "Trackers," were victims of unprecedented harassment. On Aug. 30, a Cuban patrol boat shot at a lone S-2. Eight days later, a Cuban Air Force, Russian-built, MiG 17 made a simulated attack on a pair of S-2 aircraft halfway between Key West and Cuba. As international relations between the United States and Cuba unraveled, the Pentagon planned to rid Cuba of Russian nuclear missiles. Defending Key West from a preemptive air attack was part of the plan.

The Key West of the early 1960s was vastly different from today's beachfront and honky-tonk tourist destination. The Navy was the Southernmost City's largest employer boasting a thriving submarine base and air station. The Navy's sonar school continued a tradition of graduating trained submarine and "tin can" sailors in the fine art of anti-submarine warfare - a military warcraft that was growing in importance exponentially as ballistic submarines began to enter the U.S. and Soviet fleets.

Besides being a "Navy" town, Key West was viewed as an important strategic location as history proved time and again. Fort Taylor and the Martello Towers were built to defend the harbor and city from enemy warships capable of cannon-fire bombardment. The lessons learned from the War of 1812 and the burning of Washington, D.C. by the British led to a series of coastal forts. In the era, the Army manned the forts and provided the necessary "force protection." Almost a century later, the Army had all but disappeared from Key West as technology made forts obsolete and an unchallenged Navy eliminated any military threats in the Caribbean region. However, Castro's invitation to Krushchev for a Soviet military alliance seriously upset the security balance.

Key West was perhaps more anxious than the rest of the nation about an impending confrontation. Any conflict between the United States, Cuba and the Soviet Union would literally put the city on the front lines of the fighting. Warfare had changed since the days when Key West's brick forts were needed to protect the harbor and city. Attacks were most likely to come from jet aircraft and bombers. The responsibility for defending U.S. soil still belonged to the U.S. Army.

Two days before President Kennedy announced to the nation the presence of Russian nuclear missile sites on Cuba, the Army ordered the 6th Battalion (HAWK), 65th Artillery to deploy to Key West and defend the Southernmost City and southeastern Florida from air attack. Aerial defenses had evolved considerably since World War II. Back then, barrage balloons and anti-aircraft guns were the weapons of choice. In the modern era of the early 1960s, missiles joined the Army's air defense system.

Within hours of receiving orders, hundreds of Army soldiers boarded trains and were heading south to Homestead. From there, truck convoys brought the soldiers and their equipment to Key West snarling traffic on the narrow Overseas Highway. The missile defense system was ready for action by October 29, just nine days after receiving orders. For the Army, the time required to move and be ready to fight from four separate firing batteries and an Army Air Defense Command Post (AADCP) to coordinate the

See ARMY on Page 12


QUICK GUIDE
To Key West's Museums & Historic Attractions
*Page 13*


# Where Were You in '62?

by ML McCarthy

Flung far out to sea at the end of a 150-mile string of tropical islands, and only 90 miles from Havana (but 5,863 miles from Moscow) is the island of Key West.

In 1962, the island's population was 33,956 (about 10,000 more than today's) while the entire U.S. population was only 186.5 million. Although Key West's residents had experiences that were unique to living on an island at the end of the road, they also shared the universal American experience of pop culture. On October 16 - two days following the U-2 over flight of Cuba that signaled the beginning of the crisis - a blissfully unaware public celebrated (or mourned) the New York Yankees' defeat of the San Francisco Giants in the seventh game of the World Series.

Issuing from jukebox speakers and the ubiquitous portable transistor radios were hits like *Danke Schoen* by Wayne Newton, the bossa nova masterpiece *The Girl from Ipanema*, and Lesley Gore's tale of teenage girl angst - *It's My Party*. Grammy winner for 1962's Record of the Year was *Moon River* and Album of the Year went to Judy Garland's *Judy at Carnegie Hall*.

On television, new shows premiering that fall included *The Jetsons, The Beverly Hillbillies*, and *McHale's Navy*. On October 1, Johnny Carson's *Tonight Show* premiered from New York City, with Carson, announcer Ed McMahon and band leader Skitch Henderson filling a five-night-a-week block of time that was an hour and forty-five minutes long.

Hollywood was as busy as usual in '62. Some of the great movies released that year were *To Kill a Mockingbird, Lawrence of*

See '62 on Page 3


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# A Cold War Primer

**1941-1945** The Soviet Union is an ally of the United States during WWII. As the war ends, Germany and Berlin are partitioned, with sections of each coming under Russian influence.

**1946** Churchill first invokes the phrase "Iron Curtain" in a March speech at Westminster College in Fulton, Missouri. After his introduction by President (and soon-to-be part-time Key Wester) Harry Truman, the Prime Minister receives an honorary degree, then gives the speech that - in retrospect - is considered the start of the Cold War.

**1948** The Berlin Blockade is the first major crisis of the Cold War - when the USSR blocks access to sectors of Berlin, hoping to gain practical control over the city, the Allies respond with the Berlin Airlift and drop 4,000 tons of supplies per day.

**1949** China declares itself Communist and Russia announces development of the atomic bomb.

**1950** The Korean War begins, Senator Joseph McCarthy starts to purge alleged Communists from the entertainment industry, and the United States develops the hydrogen bomb.

**1953** On March 5, Josef Stalin dies and Nikita Khrushchev succeeds him in power. In the United States, Julius and Ethel Rosenberg are put to death as Communist spies.

**1955** In response to the West's acceptance of West Germany as a member of NATO, eight Eastern European countries, including Russia and East Germany, form the Warsaw Pact - a collective defense organization.

**1956** A student-led revolution in Hungary captures the world's attention before it is crushed in three weeks' time by the Soviet Union.

**1957** The Soviets launch Sputnik, then later in the year send a dog - Laika - into space.

**1958** Boris Pasternak, author of *Dr. Zhivago* - the book that gave birth to the dissident movement in Russia - wins the Nobel Prize for Literature and is forced by his government to turn it down.

**1959** Fidel Castro and his revolutionaries triumphantly take power in Cuba while Khrushchev and U.S. Vice President Richard Nixon have their famous "kitchen debates"at a Florida contractor's model home built in the middle of Moscow - Nixon touts US accomplishments like dishwashers and Pepsi-Cola while Khrushchev calls them unnecessary luxuries. Later that year, on a visit to the U.S., Khrushchev is denied a visit to Disneyland.

**1960** Khrushchev famously bangs his shoe on the podium at the UN during arguments on colonialism.

**1961** On January 20, John Fitzgerald Kennedy takes the oath of office as President of the United States. The Berlin Wall is erected, the Soviets put a man into space, and the Bay of Pigs invasion that April fails embarassingly.

**1962** In the spring, the first person is killed while trying to escape from East Berlin by climbing over the Wall. By fall, tensions between Russia and the United States have reached a boiling point.

**Much animosity grew between the USSR and the United States in the years between 1946, when Winston Churchill coined the phrase "Iron Curtain," and 1962. If possible, Khrushchev seemed more evil than Stalin, promising to "bury" us and banging his shoe on the podium at the United Nations. Russia was winning the space race, and China and Cuba had both declared themselves Communist. By the spring of 1962, when the first person was killed attempting to escape from East Berlin, the US had faced failure at the Bay of Pigs. By fall, tensions between Russia and the US had reached a boiling point.**

**This is where those tensions almost boiled over - the front lines of the Cuban Missile Crisis. The cloudy, eastward flowing waters separating the Florida Keys from Cuba are the Florida Straits. To the top right of the photo, out from the tip of Florida and toward the Earth's horizon, are the Bahamas.**

**Those lines were drawn on October 22, 1962, when President Kennedy used CIA photographs to prove that Khrushchev - despite his vehement denials - was secretly constructing offensive missile bases along Cuba's northern coast. Meanwhile, mobile missile launchers carrying nuclear-tipped ballistic missiles that could be fired in a sub-orbital arc kept moving along the back roads of Cuba. Not only could the missiles reach all the way to Washington, D.C., some were aimed directly at our military installation at Guantanamo Bay. And while Castro was imploring Khrushchev to "liquidate the imperialist enemy once and for all," the United States had three thousand nuclear warheads aimed at the USSR.**

**To counter the missile threat, Kennedy ordered the US Army to deploy a defensive line of HAWK anti-aircraft missiles along the southern coast of the Lower Keys, from Homestead to Key West. Kennedy also announced a naval quarantine (or a "do not cross" line) above the Bahamas to stop and search any Soviet ships suspected of carrying supplies, troops and/or missiles headed to Cuba via the Florida Straits. The residents of the sleepy, Navy town at the end of the road in the Florida Keys were about to get a rude awakening.**

# MISSILES

**From Page 1**

on television the night before (read the president's speech in its entirety on page 6.) But nothing had really happened "overnight."

Although tension between the United States and Cuba had been high since Castro had taken control of the government in January of 1959 and aligned with Russia, and although that tension had increased following the failed Bay of Pigs invasion in April of 1961, this particular chapter in the saga of the two countries (three, including the USSR) had started on October 14. That was when a U-2 reconnaissance plane overflight of Cuba, piloted by Major Richard Heyser, took 928 photos that revealed suspicious construction at San Cristobal in Western Cuba.

By October 17 (Wednesday), the CIA's National Photographic Intelligence Center had reviewed the photographs and identified objects they believed to be medium range ballistic missiles. The CIA notified the State Department and National Security Adviser McGeorge Bundy. By midnight, Bundy was briefing Secretary of Defense Robert McNamara. At 8:30 on Thursday morning, Bundy was making his presentation to President Kennedy. That night the president convened a meeting of the nine members of the National Security Council and five other key advisers in a group he formally named the Executive Committee of the National Security Council - EXCOMM. They had much to consider, and all was compounded by the speech given on September 11 by Andrei Gromyko, the Soviet Foreign Minister, stating that "an attack on Cuba could mean war with the U.S.S.R."

**Continued on Page 4**

## '62

**From Page 1**

*Arabia, Dr. No, Whatever Happened to Baby Jane*, and *The Longest Day*. The hit romcom of 1962 was *Boys Night Out*, starring James Garner, Kim Novak and Tony Randall. If *Boys Night Out* were a product of 2010 Hollywood it could star - matched age for age - Ryan Reynolds and Beyonce as the courtship couple, Owen Wilson as the fuddy-duddy buddy, and Sarah Jessica Parker in the cougarish role originally played by Zsa Zsa Gabor. Key West loved its movies and supported three indoor theatres on Duval Street - the Monroe, the Strand and the San Carlos. Admission was 30 cents and a bag of popcorn cost a dime. Out on Stock Island, the two drive-in theatres next-door to one another were the Islander and the Riviera.

Over at City Hall, the search was underway for a new city manager at a salary of $11,000 per year. *The Citizen* was an afternoon paper, coming out every day but Saturday. It cost a nickel, and the Sunday edition cost a dime. On Saturday, to fill the void, locals read *The Coral Tribune*.

In addition to a number of small neighborhood stores, the main grocery stores were Fausto's, the Gulfstream, and Kwik Chek. Grocery prices from 1962 are flabbergastingly low, including ten pounds of potatoes for 29 cents and the same price for a pound of bacon. And there's an explanation for why the entire world seemed to smoke cigarettes - a carton of regular cigarettes sold for $2.19, and it was a dime more if you wanted king size.

During the crisis you could catch up on the latest news and rumors at the barbershop (flat top haircuts, all the rage then, were $1.50) or the beauty parlor (wash and set, $2.00.) There was a bowling alley on South Roosevelt Boulevard and a race car track on Stock Island. A popular hangout was the skating rink on Southard Street between Whitehead and Duval.

At the appliance store, a color TV cost $400 (or $2,846 in today's dollars.) The minimum wage was $1.25 an hour. At the Two Friends Bar on Front Street, a girl could get a job as a waitress for $60 a week plus tips. And, a cold beer at Duffy's was 35 cents.

You could live well back then - there were plenty of jobs and the cost of living was low. A first-class postage stamp was only four cents. And if you had to visit New York City, one-way fare from Key West to the Big Apple via Miami was $45.00.

Besides, the island's economy was growing thanks to an expanding military buildup. Key West had three active Naval installations that pumped $10,000,000 each year into the local economy: Boca Chica Air Station (above Stock Island but not shown in the aerial photo), the Seaplane Base (today's Trumbo), and the Key West Naval Base (today's Truman Annex.) Together they employed 12,000 officers and enlisted personnel. Easily a third of the county's school children were military dependants, and wives often worked in town. Key West and the military had a long history that had developed into a comfortable relationship.

Key West in 1962 - of the world at large, yet in its own private world as well. A unique - and suddenly frightening - place to be that October. □

October 20, 1962

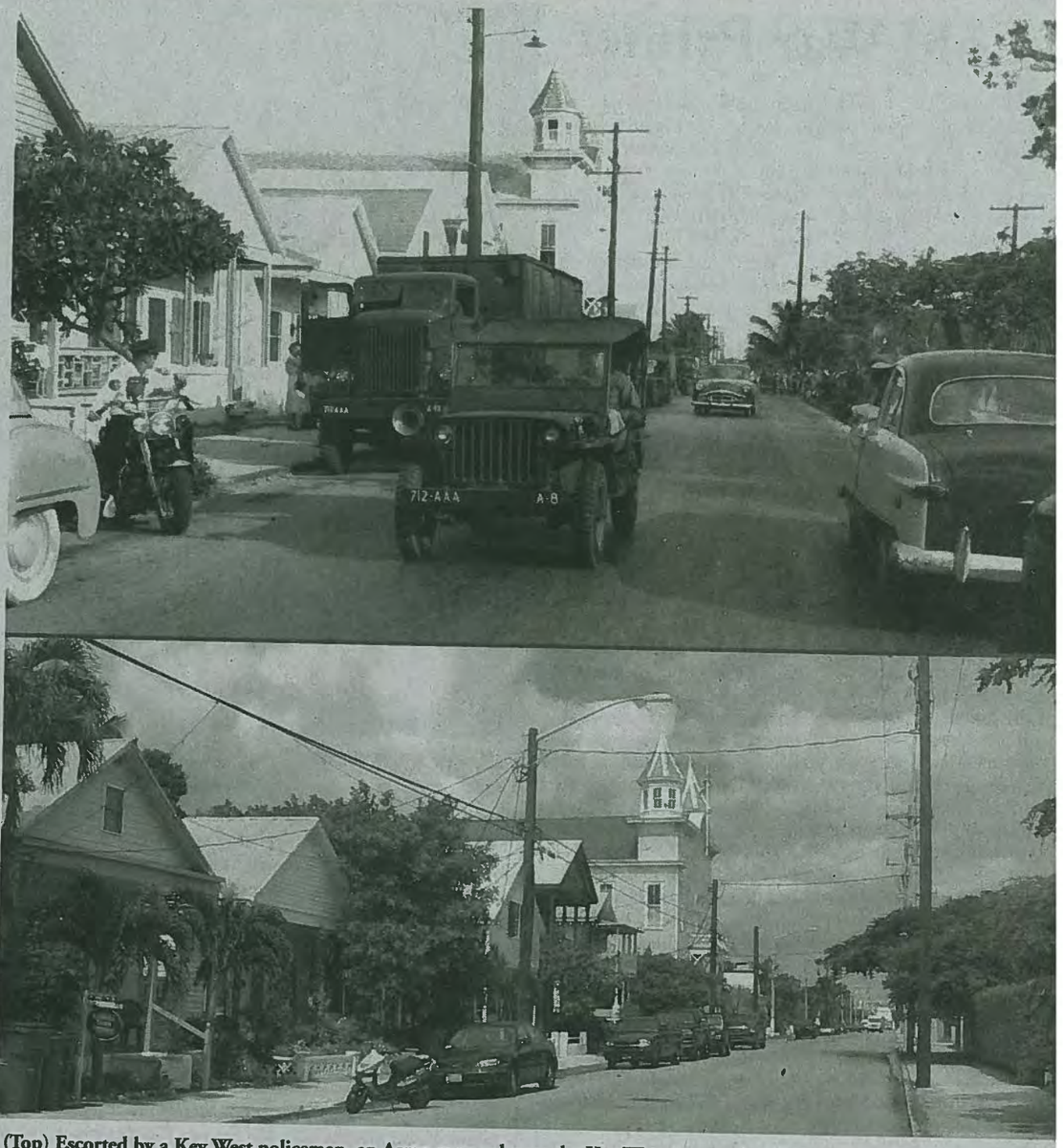
# Saturday Night in Paradise

Standing on the corner of Southard and White Streets is the Florida State Militia Armory and Drill Hall. On that Saturday, the traffic going to and from the Armory was considerably out of the ordinary. Convoys of trucks were heading to and from the building, over and over, back and forth, well into the night. Residents couldn't help but wonder what was going on. Why were the convoys escorted by Key West police?

On the other side of the world, about the same time the Army trucks were seen on White Street, both the US and the USSR detonated (at their respective Pacific test sites) above ground 20-kiloton nuclear bombs as a warning to each other. And the talks continued in Washington.

Back in Key West, October 20th was just another Saturday night in paradise. The Riviera and Islander Drive-In theatres were the favorite date spots - where raging-hormoned teenagers (today's boomers) could escape the scrutiny of parents, teachers, clergy and other authority figures. On this site, pent-up passions were released, along with the latest celluloid epics. Located side-by-side on Stock Island, the theatres are fondly remembered as the Passion Pits (and are now home to newly constructed workforce housing.)

After the movies, Elvis' *Return to Sender* was likely to be blasting from the AM radio in the car while you waited for a carhop to bring the food at Pizio's, where teens and sailors would congregate a la *American Graffiti*. Pizio's served up hot food, hot chicks and hot cars 24-hours a day. Located at the intersection of North Roosevelt and First Street, today the historical site is occupied by a Circle K. Southernmost Shell occupies the opposite corner.



(Top) Escorted by a Key West policeman, an Army convoy leaves the Key West Armory heading south on White Street. (Abov
Today, the Armory is home to The Studios of Key West, which rents space to Key West artists and writers. The building, original
built in 1900 as a drill hall and armory for the Florida militia, was the only wood-framed government structure in the Keys.

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The hottest spot for teenagers was Pizio's Drive-In restaurant at the corner of N. Roosevelt and First Street. Always a busy spot, th parking lot would be full to overflowing on weekends when cars would circle continuously and everyone was there to see and be seen

(Above) The 1962 Key West High School Majorettes. From left to right: Patty Motto, Sheila Robinson, Sharon Hopey, Bernadette Parks, Rose Marie Barrera, Darlene Lovell, Judy Sawyer. (Below) The 1962 KWHS National Honor Society. From left to right, front row: Linda Ford, Moraima Hernandez, Norma Forns, Dory Lanier, Susan Cassidy, Betty Perone, Jan Salas, Donna Ramelli, Nina Dowling, Pamela Pope, Martha Starak. Second row: Marguerita Lones, Jean Coen, Jeanne Collins, Julie Taylor, Sandra Dreschsler, Martha Wallace, Tony Cates, Laura Lee Wills, Kathy Zurhorst, Annette Sykes. Third row: Steve Barre, Leonard Bone, Mike Gardner, John Davis, Ed Swift, Sammy Biow.

**The scene at the Key West Airport on Sunday, October 21st, was a busy one. Construction workers were rapidly building a new control tower on the roof of the terminal building. Within twenty-four hours the job was done.**

October 21, 1962

# Suddenly on Sunday...

The island city awoke to the sight of convoys of US Army trucks moving about town. Military jets were constantly making take-offs and landings at Boca Chica. All the hotels were suddenly full with arriving military personnel. Yet there was no mention in Sunday's *Citizen* about the military's urgent strengthening and none of the officials in town would answer questions.

However, there was a lot going on out at the airport. Mid-afternoon George Faraldo, the FAA representative, was told to report to the airport immediately. Could he finish some Sunday projects around the house, he asked? No, just go to the port, he was told. Upon a ing, Faraldo was stunned to a new control tower under c struction. Key West had b lobbying for years for the g ernment to build a much nee control tower at the airp Within twenty-four ho through Sunday night and i the dark on Monday night, FAA built them one "to har the great influx of Marine Navy jet squadrons in the ar Before this day in 1962, the port was used to dealing w only one scheduled flight i town each day, and only flight out.

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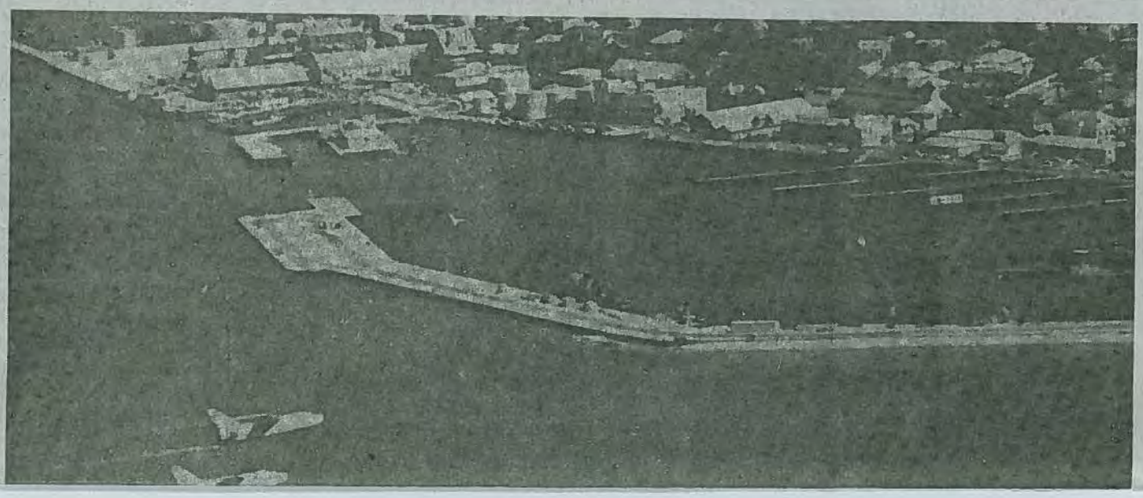

October 22, 1962

# Monday... Rumors of War

On Monday, almost every naval ship and submarine stationed at the Key West Naval Base had silently slipped away from port - and the harbor had been full of shipping of every description, including destroyers and subs plus small transports and supply craft. One submarine remained at the dock. She had been in minor overhaul alongside the pier, with her propellers removed. In the haste to make ready, the propellers were accidentally reinstalled backwards. As they tried pulled out at the same time - a that was alarming. Only one d stroyer remained in port.

Then the afternoon issue *The Citizen* hit the street. T headline splashed across the fro page informed Key Westers th President Kennedy had request television time that night to a dress the nation on "a subject the highest national urgency Said one previously skeptic young man, addressing the ha penings around town, "now w knew this was real."

**The empty submarine pens at the Key West Naval Base on October 22. Mallory Square is at the top left of the photo and the familiar roofline of the Custom House is just to the right of the entrance to the man-made harbor.**

third" became "all back two-thirds," "all back FULL," and the submarine drove forward and plowed slowly into the seawall. The accident may have brought a touch of levity to the Naval personnel who witnessed it, but residents only knew that almost every ship and submarine had a rapt American public, the last destroyer slipped past the breakwater - heading out, no doubt on his stated mission to blockade all shipping into Cuba. At the end of the president's speech, our country was at a state of DEFCON 3 alert.

**Continued on Page 7**


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Weather Summary

KEY WEST, FLORIDA, MONDAY, OCTOBER 22 1962

PRICE FIVE CENTS

# President To Address Nation Tonight

# Local Scene Is Alive With Signs Of Military Buildup

*This is the transcript of President Kennedy's speech as seen and heard by Key Westers on Monday, October 22, 1962*

## Good evening, my fellow citizens

This Government, as promised, has maintained the closest

tions, and my own public warn-

in a world where only the actual firing of weapons represents a sufficient challenge to a nation's security to constitute maximum peril. Nuclear weapons are so destructive and ballistic missiles are so swift, that any substantially increased possibility of their use or any sudden change in their deployment may well be regarded as a definite threat to peace.

For many years, both the Soviet Union and the United States, recognizing this fact, have deployed strategic nuclear weapons with great care, never upsetting the precarious status quo which insured that these weapons would not be used in the absence of some vital challenge. Our own strategic missiles have never been transferred to the territory of any other nation under a cloak of secrecy and deception; and our history -- unlike that of the Soviets since the end of World War II -- demonstrates that we have no desire to dominate or conquer any other nation or impose our system upon its people. Nevertheless, American citizens have become adjusted to living daily on the bull's-eye of Soviet missiles located inside the U.S.S.R. or in submarines.

In that sense, missiles in Cuba add to an already clear and present danger -- although it should be noted the nations of Latin America have never previously been subjected to a poten-

weapons, be turned back. This quarantine will be extended, if needed, to other types of cargo and carriers. We are not at this time, however, denying the necessities of life as the Soviets attempted to do in their Berlin blockade of 1948.

Second: I have directed the continued and increased close surveillance of Cuba and its military buildup. The foreign ministers of the OAS [Organization of American States], in their communiqué of October 6, rejected secrecy on such matters in this hemisphere. Should these offensive military preparations continue, thus increasing the threat to the hemisphere, further action will be justified. I have directed the Armed Forces to prepare for any eventualities; and I trust that in the interest of both the Cuban people and the Soviet technicians at the sites, the hazards to all concerned of continuing this threat will be recognized.

Third: It shall be the policy of this nation to regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviet Union on the United States, requiring a full retaliatory response upon the Soviet Union.

Fourth: As a necessary military precaution, I have reinforced our base at Guantanamo, evacuated today the dependents of our

nuclear weapons. We have proposed the elimination of all arms and military bases in a fair and effective disarmament treaty. We are prepared to discuss new proposals for the removal of tensions on both sides, including the possibilities of a genuinely independent Cuba, free to determine its own destiny. We have no wish to war with the Soviet Union -- for we are a peaceful people who desire to live in peace with all other peoples.

But it is difficult to settle or even discuss these problems in an atmosphere of intimidation. That is why this latest Soviet threat -- or any other threat which is made either independently or in response to our actions this week-- must and will be met with determination. Any hostile move anywhere in the world against the safety and freedom of peoples to whom we are committed, including in particular the brave people of West Berlin, will be met by whatever action is needed.

Finally, I want to say a few words to the captive people of Cuba, to whom this speech is being directly carried by special radio facilities. I speak to you as a friend, as one who knows of your deep attachment to your fatherland, as one who shares your aspirations for liberty and justice for all. And I have watched and the American people have

ute nothing to your peace and well-being. They can only undermine it. But this country has no wish to cause you to suffer or to impose any system upon you. We know that your lives and land are being used as pawns by those who deny your freedom. Many times in the past, the Cuban people have risen to throw out tyrants who destroyed their liberty. And I have no doubt that most Cubans today look forward to the time when they will be truly free -- free from foreign domination, free to choose their own leaders, free to select their own system, free to own their own land, free to speak and write and worship without fear or degradation. And then shall Cuba be welcomed back to the society of free nations and to the associations of this hemisphere.

My fellow citizens, let no one doubt that this is a difficult and dangerous effort on which we have set out. No one can foresee precisely what course it will take or what costs or casualties will be incurred. Many months of sacrifice and self-discipline lie ahead -- months in which both our patience and our will be tested, months in which many threats and denunciations will keep us aware of our dangers. But the greatest danger of all would be to do nothing.

The path we have chosen for the present is full of hazards,

buildup on the island of Cuba. Within the past week, unmistakable evidence has established the fact that a series of offensive missile sites is now in preparation on that imprisoned island. The purpose of these bases can be none other than to provide a nuclear strike capability against the Western Hemisphere.

Upon receiving the first preliminary hard information of this nature last Tuesday morning at 9 A.M., I directed that our surveillance be stepped up. And having now confirmed and completed our evaluation of the evidence and our decision on a course of action, this Government feels obliged to report this new crisis to you in fullest detail.

The characteristics of these new missile sites indicate two distinct types of installations. Several of them include medium range ballistic missiles, capable of carrying a nuclear warhead for a distance of more than 1,000 nautical miles. Each of these missiles, in short, is capable of striking Washington, D. C., the Panama Canal, Cape Canaveral, Mexico City, or any other city in the southeastern part of the United States, in Central America, or in the Caribbean area.

Additional sites not yet completed appear to be designed for intermediate range ballistic missiles -- capable of traveling more than twice as far -- and thus capable of striking most of the major cities in the Western Hemisphere, ranging as far north as Hudson Bay, Canada, and as far south as Lima, Peru. In addition, jet bombers, capable of carrying nuclear weapons, are now being uncrated and assembled in Cuba, while the necessary air bases are being prepared.

This urgent transformation of Cuba into an important strategic base -- by the presence of these large, long-range, and clearly offensive weapons of sudden mass destruction -- constitutes an explicit threat to the peace and security of all the Americas, in flagrant and deliberate defiance of the Rio Pact of 1947, the traditions of this nation and hemisphere, the joint resolution of the 87th Congress, the Charter of the United Na-

contradicts the repeated assurances of Soviet spokesmen, both publicly and privately delivered, that the arms buildup in Cuba would retain its original defensive character, and that the Soviet Union had no need or desire to station strategic missiles on the territory of any other nation.

The size of this undertaking makes clear that it has been planned for some months. Yet, only last month, after I had made clear the distinction between any introduction of ground-to-ground missiles and the existence of defensive antiaircraft missiles, the Soviet Government publicly stated on September 11 that, and I quote, "the armaments and military equipment sent to Cuba are designed exclusively for defensive purposes," that there is, and I quote the Soviet Government, "there is no need for the Soviet Government to shift its weapons for a retaliatory blow to any other country, for instance Cuba," and that, and I quote their government, "the Soviet Union has so powerful rockets to carry these nuclear warheads that there is no need to search for sites for them beyond the boundaries of the Soviet Union."

That statement was false.

Only last Thursday, as evidence of this rapid offensive buildup was already in my hand, Soviet Foreign Minister Gromyko told me in my office that he was instructed to make it clear once again, as he said his government had already done, that Soviet assistance to Cuba, and I quote, "pursued solely the purpose of contributing to the defense capabilities of Cuba," that, and I quote him, "training by Soviet specialists of Cuban nationals in handling defensive armaments was by no means offensive, and if it were otherwise," Mr. Gromyko went on, "the Soviet Government would never become involved in rendering such assistance."

That statement also was false.

Neither the United States of America nor the world community of nations can tolerate deliberate deception and offensive threats on the part of any nation, large or small. We no longer live

of Communist missiles -- in an area well known to have a special and historical relationship to the United States and the nations of the Western Hemisphere, in violation of Soviet assurances, and in defiance of American and hemispheric policy -- this sudden, clandestine decision to station strategic weapons for the first time outside of Soviet soil -- is a deliberately provocative and unjustified change in the status quo which cannot be accepted by this country, if our courage and our commitments are ever to be trusted again by either friend or foe.

The 1930's taught us a clear lesson: aggressive conduct, if allowed to go unchecked and unchallenged, ultimately leads to war. This nation is opposed to war. We are also true to our word. Our unswerving objective, therefore, must be to prevent the use of these missiles against this or any other country, and to secure their withdrawal or elimination from the Western Hemisphere.

Our policy has been one of patience and restraint, as befits a peaceful and powerful nation which leads a worldwide alliance. We have been determined not to be diverted from our central concerns by mere irritants and fanatics. But now further action is required, and it is under way; and these actions may only be the beginning. We will not prematurely or unnecessarily risk the costs of worldwide nuclear war in which even the fruits of victory would be ashes in our mouth; but neither will we shrink from that risk at any time it must be faced.

Acting, therefore, in the defense of our own security and of the entire Western Hemisphere, and under the authority entrusted to me by the Constitution as endorsed by the Resolution of the Congress, I have directed that the following initial steps be taken immediately:

First: To halt this offensive buildup a strict quarantine on all offensive military equipment under shipment to Cuba is being initiated. All ships of any kind bound for Cuba from whatever nation or port will, if found to contain cargoes of offensive

ditional military units to be on a standby alert basis.

Fifth: We are calling tonight for an immediate meeting of the Organ[ization] of Consultation under the Organization of American States, to consider this threat to hemispheric security and to invoke articles 6 and 8 of the Rio Treaty in support of all necessary action. The United Nations Charter allows for regional security arrangements, and the nations of this hemisphere decided long ago against the military presence of outside powers. Our other allies around the world have also been alerted.

Sixth: Under the Charter of the United Nations, we are asking tonight that an emergency meeting of the Security Council be convoked without delay to take action against this latest Soviet threat to world peace. Our resolution will call for the prompt dismantling and withdrawal of all offensive weapons in Cuba, under the supervision of U.N. observers, before the quarantine can be lifted.

Seventh and finally: I call upon Chairman Khrushchev to halt and eliminate this clandestine, reckless, and provocative threat to world peace and to stable relations between our two nations. I call upon him further to abandon this course of world domination, and to join in an historic effort to end the perilous arms race and to transform the history of man. He has an opportunity now to move the world back from the abyss of destruction by returning to his government's own words that it had no need to station missiles outside its own territory, and withdrawing these weapons from Cuba by refraining from any action which will widen or deepen the present crisis, and then by participating in a search for peaceful and permanent solutions.

This nation is prepared to present its case against the Soviet threat to peace, and our own proposals for a peaceful world, at any time and in any forum -- in the OAS, in the United Nations, or in any other meeting that could be useful -- without limiting our freedom of action. We have in the past made strenuous efforts to limit the spread of

your nationalist revolution was betrayed -- and how your fatherland fell under foreign domination. Now your leaders are no longer Cuban leaders inspired by Cuban ideals. They are puppets and agents of an international conspiracy which has turned Cuba against your friends and neighbors in the Americas, and turned it into the first Latin American country to become a target for nuclear war -- the first Latin American country to have these weapons on its soil.

These new weapons are not in your interest. They contrib-

most consistent with our character and courage as a nation and our commitments around the world. The cost of freedom is always high, but Americans have always paid it. And one path we shall never choose, and that is the path of surrender or submission.

Our goal is not the victory of might, but the vindication of right; not peace at the expense of freedom, but both peace and freedom, here in this hemisphere, and, we hope, around the world. God willing, that goal will be achieved.

Thank you and good night.

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# The Miami Herald

Tuesday, October 23, 1962 — No. 326 — Florida's Most Complete Newspaper — 52nd Year — 56 Pages — 5 Cents

FLORIDA KEYS EDITION

# Kennedy Orders Blockade Of War Weapons to Cuba

**Escorted by Key West poiice, a convoy of military vehicles approach the intersection of Truman & White Streets.**

October 23, 1962

## Tuesday... Preparing for War

This was the day Key West awoke to find missiles on the beach. But that wasn't the only shocking change - an as-yet unidentified "branch" of the armed forces had requested use of Wickers Field, the city-owned ballpark on Flagler Avenue between Kennedy and Glenn Archer Streets. Since the field was surrounded by a 10-foot concrete block wall, Key Westers were speculating that the field might become a compound for prisoners of war or enemy aliens. But after the City Commission met on Wednesday night, it was announced that the Army Corps of Engineers would be leasing Wickers Field for $1 per year and would use the field primarily as a parking lot for their trucks. (Harry Knight, founder of today's Prudential Knight Realty, was one of the commissioners at the time.)

Along US1, guards were now stationed at each end of the 43 bridges linking the Keys to protect against sabotage. Concurrently, young Navy and Marine Corps officers kept arriving at Key West International Airport in 4- and 5-passenger private planes. The city police force was using its squad cars to run a taxi service for the officers to the Navy Air Station at Boca Chica. In just a few days' time, the military population of Key West had grown from 3,000 to 12,000 personnel. HAWK missiles now stood at six sites throughout the city as "short-range protection against low-flying aircraft." An Air Force fighter squadron arrived, as did a number of Marine squadrons, and the number of aircraft at Boca Chica Naval Air Station more than doubled.

Back on Smathers Beach, the naivete of the soldiers immediately became evident when they had to scramble to save the missiles when the first tide came in and started to wash the sand away. All foxholes had to be dug again. But the soldiers learned quickly - the provisions supply office was soon inundated with requests for food packed in watertight packages.

In Washington, a letter arrived from Nikita Khrushchev calling the US actions regarding Cuba a "serious threat" to world peace. And the talks continued.

**Continued on Page 8**

**Soldiers keep busy unrolling barbed wire at Smathers Beach while men in the background ready HAWK missile launchers with the missiles pointed towards Cuba.**

**This photo of "relaxed" soldiers made the front page of the *Miami Herald* that day, although there was nothing relaxed about the operation on Smathers Beach.**

## DEFCON What?

**It's a countdown, not a count *up*,** Hollywood often gets it wrong. DEFCON, for "defense readiness condition," was developed by the Joint Chiefs of Staff in 1959 as a way of maintaining a uniform readiness level among all branches of the armed forces. There are five levels of readiness, and, in the least-threatening of times, we maintain a level of DEFCON 5 - that's the current level in October of 2010.

**DEFCON 4** indicates that there is an increased level of intelligence and security, level 3 indicates an increase in preparedness above the norm, level 2 an even greater increase.

**We have gone to a level of DEFCON 3** three times in our history. The first was announced by President John F. Kennedy during his televised speech to the American public on the night of October 22, 1962. The second time was during the Yom Kippur War in 1973. And the third time the United States went on DEFCON 3 alert was on September 11, 2001.

**The more chilling level of DEFCON 2** has, thankfully, been reached only once - the Strategic Air Command was put at this level on October 23, 1962 and remained at high alert until November 15. The rest of the armed forces maintained DEFCON 3 throughout the Cuban Missile Crisis.

**DEFCON 1** - code named "cocked pistol" - is the maximum level of preparedness and reflects the highest possibility of nuclear attack.

October 24, 1962

## Wednesday...

On Wednesday, the military decided they needed to secure a place to stay. The "biggest luxury resort hotel," the Casa Marina, was leased to the Army and troops were set to move in at 2:00 p.m. on Thursday. The Casa Marina had 185 rooms and, as usual, had been closed through the summer. The 70-or-so reservations on the books for the winter months were diverted downtown to the Town House Motor Inn (now known, as it was originally, as the La Concha.) Business at other motels in town was surprisingly steady - any thoughts that a wholesale exodus of tourists might take place following Kennedy's speech were proven wrong. The manager of the Santa Maria reported, "our tourists are staying put at present, although the majority of guests are commercial businessmen at this time. The Santa Maria is housing members of the press from the New York Herald Tribune, the Ft. Lauderdale News, the Miami News, and representatives of NBC and the Associated Press." The owners of the Ocean View Motel on South Street said, "we have lost no tourists due to the present alert, in fact some are coming in. Our guests all have one thing in common, they say, 'It's about time we took decisive action against Communist Cuba'."

While talks continued in Washington and cat-and-mouse was played between there and Moscow, an interesting voice was heard from exile in San Sebastian, Spain - that of Fulgencio Batista, Cuba's dictator before Castro had taken power. Batista was found by reporters kneeling in the Jesuit monastery of Loyola where he said he had spent three hours praying for peace. He said, "It is with deep emotion that I am following the affair of Cuba. I profoundly hope that the political directors of the world will be able to effect a happy solution to resolve the Cuba crisis," Batista, who had fled Cuba on January 1, 1959, prior to Castro's victorious entry into Havana, then added, "Time is working in my favor. They will realize that I was right."

Unfortunately, Batista wasn't the only Cuban exile with stars in his eyes. Ramon Rodriguez, who had lived in Key West for a year, said, "I expect to be back in Havana by Christmas." Most of the Key West Cubans felt the Castro regime would collapse under the US actions.

The state of alert was lowered to DEFCON 2.

**Continued on Page 10**

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(Top) Taken after the crisis ended, this picture shows a gated Casa Marina. By then, the barbed wire had been removed from the top of the fence. On the right side of the photo, notice the missile in the background above the parked cars. (Above) A different photo taken after the crisis with a closer look at the HAWK missile - and it appears the Casa Marina is armed to the teeth. Though actually on static display, the missile isn't aimed toward Cuba but appears poised to take out rival La Concha.

# TOURISM IN CRISIS

On October 23rd, the Cuban Missile Crisis had yet to take over every inch of every newspaper in the US and the *Miami Herald* ran an entertaining little article entitled "A Little Train That Grows Into A Big Business" about the Conch Tour Train. In a charming nod to the home-grown business started by Bill and Olive Kroll, the *Herald's* Keys Correspondent, Florence Rabon, acknowledged the Conch Train's upcoming fifth anniversary and announced that a new train would soon be added to the thriving business - bringing the total to four. The company boasted a staff of seven in 1962, although Bill continued to drive one of the trains and Olive handled the office work assisted by Mary Anne Causey. Rabon informed us that "both girls are pinch-hit drivers if an emergency arises."

It was mentioned that between 60 and 75 thousand persons were riding the trains each year, and that the tour went through the Naval base and drove past "all the historical points such as the Convent, Martello Towers, Old Mallory Square, oldest house and many others, while the driver treats them to the story of each."

In actuality, by that Tuesday in Key West, newspapermen and other civilians were barred from entering the Navy Station, but the Conch Tour Train was still allowed in. And the word coming out from hotels and motels was "all is well."

But it wasn't. Not by the end of the week it wasn't. It was in an effort to get tourists to "come on down" that Mayor Harvey orchestrated the man-on-the-street interviews on the Today show that Friday morning. And it was in that spirit that an article entitled "Keys Disturbed by Tourist Lag" appeared on page three of the New York Times that Sunday, October 28th. It seems someone at the Chamber of Commerce, in cahoots with the Florida Development Commission in Tallahassee, was smart enough to import Miss Florida - Gloria Brody of Jacksonville - to help dispel the rumor that Key West was an armed camp.

Miss Florida was driven down the Overseas Highway, stopping for photo ops along the way. She was the guest of honor at a dinner that Saturday night (the 27th), then taken on a night club tour. Plans for Sunday included a short fishing trip and a tour of the city's museums and beaches. The publicity helped, but not enough.

By November 12th, when the news that the missiles had all been removed from Smathers Beach and shifted to the "abandoned ammunition bunker at the west end of the airport runway" hit the paper, the article went on to say that the majority of rooms at the city's motels were occupied by Marine fliers and crews (at the Key Wester), the Air Force (at the Holiday Inn), and the Army and Air Force at The Town House. It was then noted that "as far as tourists were concerned, the Conch Train was loaded for one trip yesterday, and this morning carried eight passengers."

Thankfully, the tourists came back. Today, there are fourteen trains in The Conch Train system, and 200,000 visitors ride it each year.


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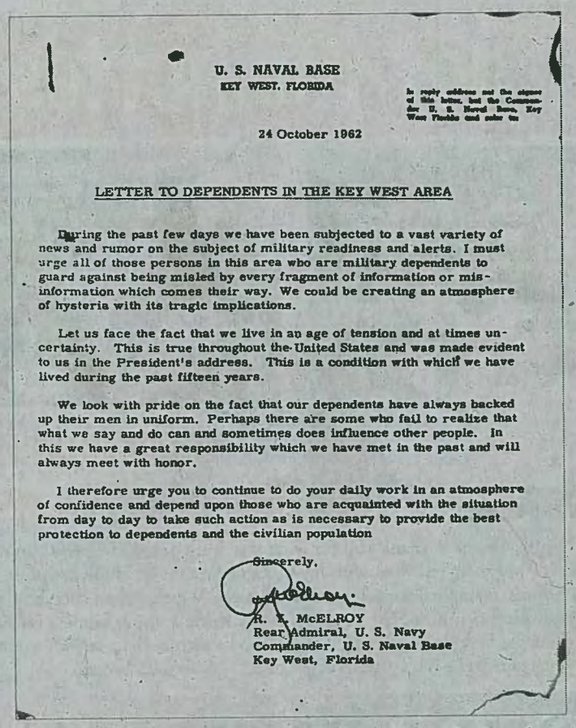
October 25, 1962

# Thursday... Waiting for War

As a letter went from Washington to Moscow calling the current state of affairs the Soviets' fault, Key West remained on the front lines of the action. The local Civil Defense office went into high alert. It was announced that no Civil Defense drills or exercises would be held for the forseeable future, so any CD information or instructions to the public would be the real thing. The real thing: War. There was no outdoor warning system on the island, so it was arranged that, if a warning was necessary, police and sheriff's vehicles would cruise the streets sounding their sirens. There were nine regulation fallout shelters in Key West, capable of holding close to a third of the city's population. Plans were also circulated that told people how to convert their cisterns to shelters. According to Monroe County Civil Defense executive director John Robinson, after two weeks in a cistern, you'd be "sick, dirty and a mess, but you'd be alive."

The Civil Defense bunker out behind the airport was on 24-hour standby and plans were made to cover a number of contingencies, but Robinson didn't believe Cuba or Russia would waste a nuclear bomb on Key West - "Why - when ten guys could have blown up the water tanks and lines, detonated the oil tanks, blown out the bridges with just a few grenades? Maybe it wouldn't even take ten guys."

Nonetheless, plans were made for the worst possibilities - and 1,600 private boats, 18 feet or longer, were put into service to carry people out. Shrimp boat captains were trained to take the lead and carry Key West residents away from the island. Luckily, no one ever had to answer the question - then what?



U. S. NAVAL BASE
KEY WEST, FLORIDA

24 October 1962

LETTER TO DEPENDENTS IN THE KEY WEST AREA

During the past few days we have been subjected to a vast variety of news and rumor on the subject of military readiness and alerts. I must urge all of those persons in this area who are military dependents to guard against being misled by every fragment of information or misinformation which comes their way. We could be creating an atmosphere of hysteria with its tragic implications.

Let us face the fact that we live in an age of tension and at times uncertainty. This is true throughout the United States and was made evident to us in the President's address. This is a condition with which we have lived during the past fifteen years.

We look with pride on the fact that our dependents have always backed up their men in uniform. Perhaps there are some who fail to realize that what we say and do can and sometimes does influence other people. In this we have a great responsibility which we have met in the past and will always meet with honor.

I therefore urge you to continue to do your daily work in an atmosphere of confidence and depend upon those who are acquainted with the situation from day to day to take such action as is necessary to provide the best protection to dependents and the civilian population

Sincerely,

R. L. McELROY
Rear Admiral, U. S. Navy
Commander, U. S. Naval Base
Key West, Florida

**(Top, right) Prime Minister Fidel Castro declared on TV that Cuba will resist the U.S. blockade. (Right) Little used road on Boca Chica closed. (Below) Imported telephone operators relaxing in the sun. (Below) Girls watch soldiers. Soldiers watch girls.**

October 26, 1962

# Friday. Still Waiting...

On October 26th, NBC's *Today Show* broadcast man-on-the-street interviews from Key West. Among those interviewed were Mayor C.B. Harvey and his wife, Wilhelmina, bar owner Riley Carbonell and local musician Rick Martin. Mayor Harvey made it known that "the people of Key West are calm in the face of the local military buildup." Additional news from Key West that day said that crisis food buying wasn't happening here (unlike the rest of the country) - however, 111 children had been withdrawn from area schools (Ed. note; a number much higher than the one published in the Miami Herald - but there was no need to alarm anyone.)

Ana Weekly, who ran Fausto's on Fleming Street with her husband, Carl, said, "We didn't know if they were going to shoot at us, or we were going to shoot at them."

And Nikita Khrushchev responded to President Kennedy with the offer to withdraw the missiles from Cuba if the United States would agree to never invade the country 90 miles to its south.

October 27, 1962

# Saturday... The most dangerous day in human history

Five days after Kennedy's speech to the nation, on Saturday, October 27, Navy ships forced to the surface a Soviet submarine. Unbeknownst to the Navy, it was carrying nuclear torpedoes - and one was almost launched at them.

The Soviet Diesel Submarine

meeting when a news report came in - Khrushchev had gone on record on Radio Moscow saying that, if the United States would remove missiles from Turkey, Russia would in turn remove the missiles from Cuba. These missiles in Turkey - old and not particularly

east side of the Bahamas. The air inside was foul and unbreathable, and men were fainting for lack of oxygen. The sub's batteries were almost drained. US destroyers on the surface had been persistently tracking the sub for days, dropping practice depth charges (hand grenades) in an effort to force the submarine to leave the area.

According to Russian crew members, a "totally exhausted" Capt. Valentin Savitsky, unable to establish communications with Moscow, "became furious" and ordered the nuclear torpedo to be assembled for launch. Savitsky roared, "We're going to blast them now! We will die, but we will sink them all." Deputy Brigade Commander Second Capt. Vasili Archipov calmed Savitsky down. Together, they made the decision to surface the sub. But this wasn't the only life-and-death showdown to be averted that day.

At 10:00 a.m. on that Saturday, a US U-2 reconnaissance plane was shot down over Cuba and its pilot, Major Rudolph Anderson Jr., was killed. Sixteen F-100 pilots were briefed at Homestead Air Force Base to fly to Cuba, fire Zuni 5-inch high-velocity air-to-surface rockets and knock out the SAM site's sophisticated radar, then destroy the site with cluster bombs. Back in Washington, the EXCOMM group was military consequence to the US. Then the word came of the U-2 downing over Cuba. Had Moscow ordered the plane be shot down? Or had a barely-trained Cuban contingent merely overreacted? It was a quandary - one that elicited varying responses. Some of the military members of EXCOMM were in favor of immediately attacking Cuba. But Kennedy hesitated, believing if the US blew up a Soviet SAM site, it would almost be begging for the Soviets to find a new way to retaliate. So, in an amazing exhibition of levelheadedness and self-control, Kennedy chose to wait a day. The planes at Homestead were put on stand-by. General Curtis LeMay, chief of the Strategic Air Command, simply stated that Kennedy had "chickened out."At 7:45 p.m., Bobby Kennedy informed the Soviet Ambassador, Anatoly Dobrynin, of the following: If the Soviets agreed to remove the missiles from Cuba, the US would publicly promise not to invade Cuba and would drop the blockade. It would also remove the missiles in Turkey - although there would not be a public announcement of that. Take it or leave it now, said RFK, or the US will unleash a military attack.

The state of alert was at DEFCON 2.

**Continued on Page 11**

(Top) The Soviet sub B-59 was brought to the surface following a tense standoff that could of started WWIII
(Above) The U-2 reconnaissance plane shot down over Cuba that same day.

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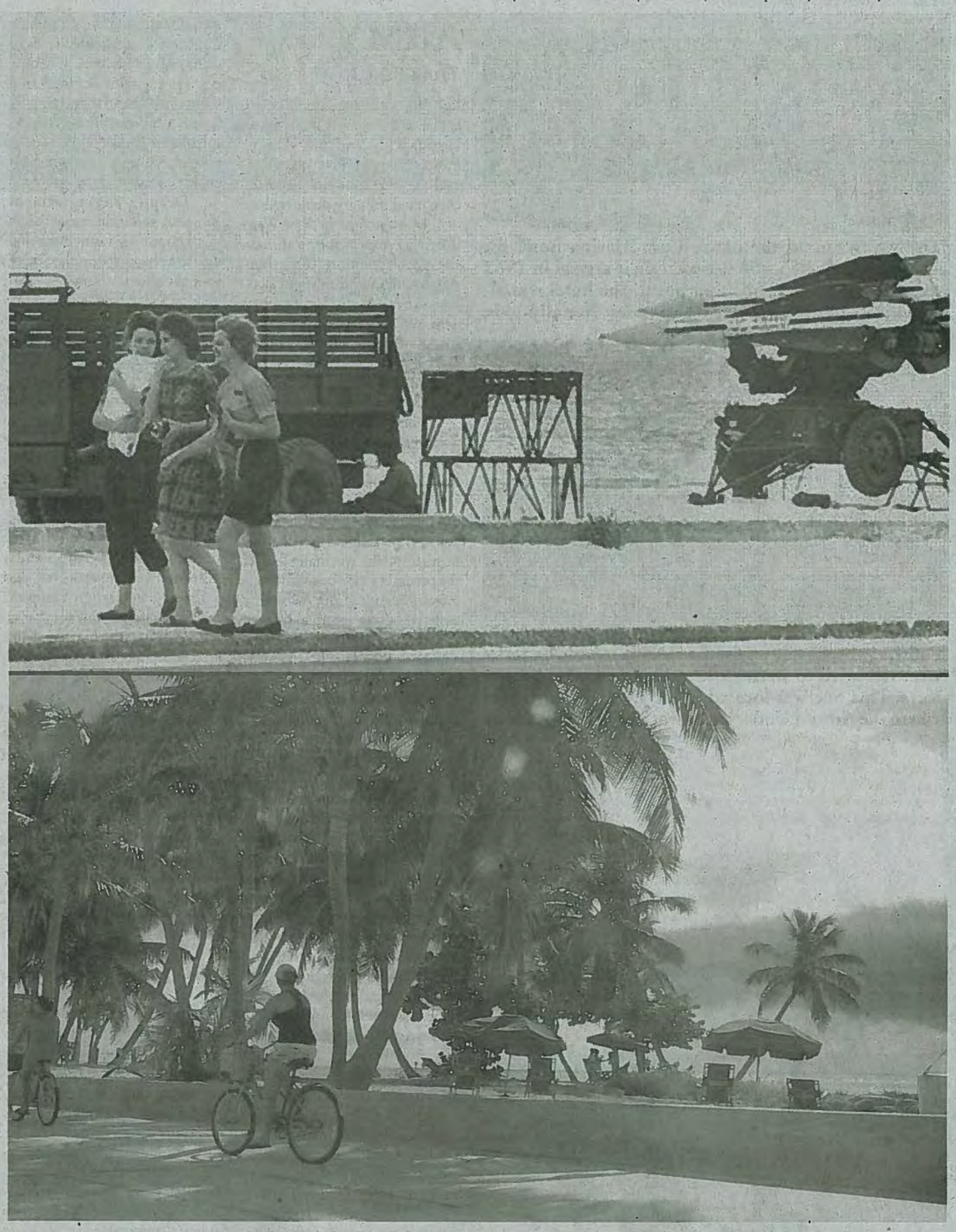
October 28, 1962

# Sunday... Prayers Answered

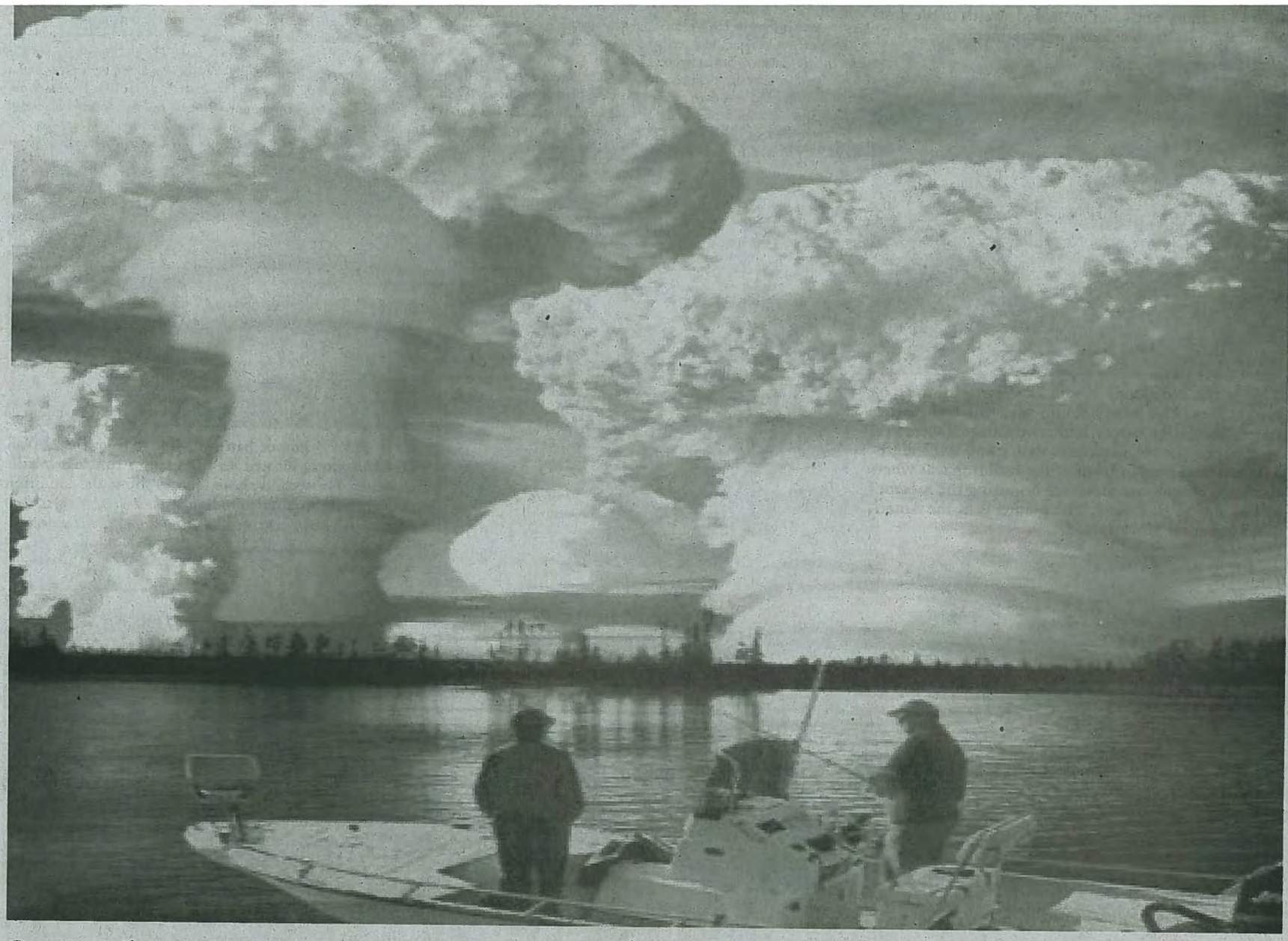
On Sunday, October 28, Key Westers awakened to the sound of combat-ready jets taking off from Boca Chica. Missile operators stood next to their launchers, ready to act. Giant radar installations swept the sky. But it was time to go to church. Every mass at St. Mary Star of the Sea Catholic Church was packed - many in the congregation wearing uniforms. Special services were held at St. Paul's Episcopal Church downtown, and a special observance of Navy Day was altered to include prayers for all servicemen involved in the current crisis. A prayer offered by the Rev. Bruce Powell for the Key West ships serving in the blockade said, "We do not know where our men are, but our prayers are offered without qualification for God's guidance and for the protection of all involved in the present critical days." Interestingly, the sound of planes flying overhead almost came to a stop during the regular hour of worship.

And as the prayers began, urgent news bulletins announced that Kennedy and Khrushchev had made a deal. At first the locals doubted the news, feeling as though Khrushchev was merely stalling for time. But as the day went on, a collective sigh of relief was heard throughout the town.

These few days in October of 1962 were some of the scariest and most dangerous days ever faced by citizens of the United States - and the people of Key West were on the front lines. In the years since, many participants and observers have written of the experience and analyzed the military actions. One of the most interesting "takes" on the event was offered by Jorge Dominguez, a Harvard professor of government, in an article he wrote in 1992: "Fortunately for the world, an agreement between Kennedy and Khrushchev was already in the works (Ed. note; on Saturday, the 27th), so the United States did not retaliate against Cuba or the USSR for the shooting down of the U-2. Had that incident occurred even a few days earlier, or had Cuban antiaircraft batteries succeeded in shooting down several US aircraft, the US government would have retaliated with conventional weapons, to which the Soviets would have responded with tactical nuclear weapons, to which the United States would have responded with tactical nuclear weapons, and then . . . I would not have lived to write this article, nor would you have lived to read it."



**(Top) So now it was back to life in Paradise. Only in Key West would three women stroll past an armed missile launcher on Smathers Beach - one with a camera close at hand, another cradling a baby. (Above) A modern view of the same scene, the missiles replaced by palm trees. Today, photographers shoot weddings here.**



# Scary Thoughts...

Two significant after-the-fact occurrences have broadened our knowledge of what really happened on both sides of the equation in 1962. A cache of papers was located in a seventh-floor storage room of the State Department in 1987. Following several years of filing requests for the files under the Freedom of Information Act, more than two thousand papers were studied and distilled into the book *The Cuban Missile Crisis, 1962* from the National Security Archive. In 2002, the fortieth anniversary of the crisis was marked with a unique summit meeting in Cuba that brought together all the old players from both sides, including Teddy Sorensen (personal counsel and chief speech writer to Kennedy), Robert McNamara (secretary of defense), Arthur Schlesinger, Jr. (Aide to JFK, and a Pulitzer Prize-winning historian), Russian officers from the B-59 sub captured by the blockade, U-2 pilots, Robert Kennedy's widow, Ethel, and Fidel Castro. The knowledge exchanged was elucidating, including:

• U.S. intelligence sources had gauged Soviet troop strength on the island at about 10,000 that October. Russians have acknowledged that troop strength was actually 42,000 in addition to 270,000 armed Cubans. McNamara has stated that, had the U.S. decided to invade Cuba at the height of the crisis, plans were to put 180,000 soldiers ashore.

• Before the observance of the missile build-up kick-started the crisis, both the Soviet Union and Cuba firmly believed that the U.S. intended to invade Cuba, possibly in October. McNamara says no such plan existed.

• The U.S. had no confirmation of any nuclear warheads in Cuba until the U-2 photographs. We now know there were 42.

• The Joint Chiefs of Staff and other military members of EXCOMM who urged Kennedy to strike Cuba and destroy the missiles believed the Soviets would not retaliate militarily. Now, both Soviet and Cuban commanders have stated emphatically that they would've struck back.

• The U.S. didn't believe that the Soviet commanders in Cuba could utilize their short-range tactical nuclear weapons without receiving an okay from Moscow. Not true.

Robert McNamara stated in 1992 that, if the US had invaded and the local Soviet commanders had used the tactical nukes against advancing American troops, there would've been a U.S. nuclear response - and that would've quickly escalated to a nuclear war. □

**The Army rented the entire Casa Marina hotel for approximately $63,000 between their arrival in 1962 through 1966. Up until that point, the hotel was allegedly in poor condition. The Army literally gave the hotel a new lease on life.**

**Follwing the missile crisis, the HAWK missile batteries were relocated to strategic locations around the lower Keys. This one was located at the tip of Fleming Key where the Army's Underwater Warfare School is today.**

**President John F. Kennedy inspects a HAWK missile battery during his visit to Key West after the 1962 Thanks-**

# ARMY

**From Page 1**

fighting, was considered slow. Railroad service only as far as Florida City and the need to move via trucks down the Overseas Highway complicated the orchestrated military deployment.

Upon arrival in Key West, the Army dispersed its four missile batteries along Smathers Beach and South Roosevelt Boulevard near Key West Airport. The AADCP was set up on the corner of Bertha Street. This air defense stance was the proverbial "line in the sand" Cuba and the Soviet Union had better not cross.

The HAWK missile system was a relatively new air defense system when it arrived on the front lines of the missile crisis. Developed in the late 1950s, it only became operational two years before the missile crisis. The missile system was named after the predatory bird but shortly afterward, many in the Army suggested it was an acronym defined as "Homing All the Way Killer." The basic elements of a HAWK defense system like the one deployed to Key West were mobile radars to locate the target and help direct the fired missile, mobile missile launchers with a quiver of three missiles and a command post that could communicate and coordinate among all the dispersed missile batteries in a specific area. Each unit was self contained and could operate independently. After shooting three missiles, a good missile crew could reload the launchers in less than 10 minutes. The unclassified information regarding the missile's effectiveness boasted a range of about 15 miles and an ability to hit targets no higher than 30,000 feet.

The sudden arrival of soldiers created a serious housing crunch. Key West's former Army barracks, located where Peary Court housing is today, was razed after World War II. There was no room at Navy facilities either. Instead, Army officers contracted an aging and termite-infested hotel, the Casa Marina, and began moving in. The Army also benefitted from the loan of large canvas tents from the Navy. Army missile crews stood 24/7 alerts at their respective batteries and needed a place to eat and sleep. The borrowed tents fir the bill un-

statesmanship trumped military might. Nikita Khrushchev ordered the removal of Soviet nuclear-capable weapons from Cuba and Kennedy agreed to remove American nuclear-tipped missiles in Turkey. A showdown of nuclear proportions was apparently averted.

Despite the agreement, Kennedy still didn't trust the Soviet Union. He wanted the military to keep an eye on the Soviet's to make sure the Russians didn't balk on the agreement by sneaking weapons back into Cuba. It was this level of distrust and uncertainty that seemed to forecast that the Army's stay here was going to be anything but temporary.

On November 17, President Kennedy suspended the Cuban quarantine. Navy ships and submarines homeported at the Truman Annex naval station began returning to port. The announcement coupled with the upcoming Thanksgiving holiday raised spirits more than ever. Just a few weeks earlier, residents feared the worst and some even left town as war threatened like an approaching category-five hurricane. Thanksgiving 1962 was made more special with a surprise visitor: Kennedy himself! Following the holiday weekend, the President and an entourage of Pentagon brass boarded Air Force One on Monday, Nov. 26, and flew south to thank military personnel for their sacrifices during the Cuban missile crisis. After thanking Army units at Fort Stewart, Ga., and Air Force personnel at Homestead Air Force Base, Fla., Kennedy arrived at NAS Key West's Boca Chica Field. Florida Governor Farris Bryant and U.S. Representative Dante Fascell joined the official party in congratulating Key West's military people. Key West mayor C.B. Harvey also made an appearance hoping the publicity would boost tourism hard hit by the crisis.

After speeches and a presentation of awards to Navy squadrons at Boca Chica, Kennedy rode into Key West in the back seat of a convertible Lincoln Continental. Followed by a 10-car convoy, the Presidential parade made a short stop at Army Hawk missile batteries near Key West International Airport before heading to the Naval Station. There, the 6th Battalion (HAWK), 65th Artillery was pre-

Cuban missile crisis appeared officially over. But the capability of Cuba launching a surprise aerial attack was unchanged. The Army and defense officials determined it prudent to keep the HAWK missile unit in Key West.

In the weeks that followed, the missile batteries at Smathers Beach new defensive positions were reconnoitered and eventually moved. The four batteries were named Alpha, Bravo, Charlie and Delta, respectively. Alpha Battery was established at the tip of Fleming Key where the Army dive school is located today. Bravo Battery was located near Key West International Airport. Located first at Saddlebunch Key where a RV Park is now located and eventually moved to Geiger Key, next to what is now Tamarac Park, was Charlie Battery. The last battery, Delta Battery, was located on the other side of the highway from NAS Key West Boca Chica, near an area locals refer to as the "sub pens." A golf ball-shaped NOAA Doppler radar can be seen from US-1 designating the site. The AADCP left its Bertha Street location and moved to NAS Key West, Boca Chica.

While Florida's climate caused havoc with missile maintenance and concern arose about reliability of systems, the Army presence was no less a deterrent. The HAWK missile system required a great deal of maintenance and there were questions whether it would really work. While no HAWK missiles were fired in anger from Key West, the system performed admirably in future combat situations. During the first Gulf War, Kuwaiti troops shot down 22 Iraqi aircraft with the missile defense system.

By the mid-1960s, the Army roots spread in the Keys. Barracks were constructed at NAS Key West on Boca Chica replacing canvas and screen, wood-framed tents reminiscent of something out of the MASH television series. The AADCP was co-located with Air Force early warning air search radar personnel also on Boca Chica. Command and control functions among the four missile batteries improved. Later, the Army dedicated each battery in honor of a Key West-born soldier killed in Vietnam. Batteries Alpha through Delta honored the memory of Lt. Eckwood Solomon, Richard A. Recupero

batteries became part of the North Americah Aerospace Defense Command (NORAD) system to defend the United States from attack. By the late 1970's, relations between the United States and Soviet Union warmed and Cuba became less of a military threat. Military intelligence questioned the readiness and reliability of the Cuban military as problems there resulted in large cuts from the defense budget and loss of support from the Soviet military. The threat of an aerial attack from Cuba was decidedly less likely. On the home front large defense cuts were taking place in the post-Vietnam War era. It was little surprise, the Army decided to pull the air defense unit from Key West and reassign it to Ft. Bliss, Texas in 1979. The Defense Department endorsed the decision and said modern Air Force F-16 fighter jets based at Homestead Air Force Base could fulfill the air defense mission. The barracks built at Boca Chica and the former Army property was transferred to NAS Key West. The barracks are still used today to provide temporary housing to Navy aviation detachments training here.

With reassignment of soldiers and equipment to Ft Bliss the Army's presence in Key West virtually disappeared. Dense vegetation has overrun abandoned missile posts on Boca Chica. Battery buildings on Fleming Key were transformed into the Army Underwater Warfare School and Key West International Airport's buildings were transferred to the FAA and local authorities.

The 1991 Department of Defense Appropriations Act established the Department of Defense Legacy Resource Management Program in part to "protect, inventory, and conserve the artifacts of Native American civilization, settler communities, and others deemed to have historic, cultural, or spiritual significance. A major study group was organized to look at Cold War-specific areas. In October 1992, representatives of the study group visited Key West and inspected the former HAWK missile sites. Reports were made but the resource management program was given no requirements or funding to preserve areas like the former missile sites. The sites that once held "win" the Cold War are now

with all military units and presented awards to the units who responded to the Cuban quarantine.

til permanent facilities were built.

Even before the HAWK missile batteries became fully ready to engage Cuban or Soviet fighter and bomber aircraft, it appeared the missile crisis was over. Key West and the nation breathed a sigh of relief on October 28, 1962, when diplomacy and

Unit Citation by the President for their quick reaction during the crisis.

Kennedy's second visit to Key West lasted two hours. With congratulations extended, hands shaken and citations awarded, Key West's involvement with the

Peter S. Knight, respectively. Brass plaques were mounted outside the ready room of each battery in memory of the fallen soldiers.

The Keys' Army community numbered more than 700 soldiers. Key West's HAWK missile

weather and trespassers.

*James E. "Jim" Brooks is NAS K West Public Affairs Officer and student of Key West's military hi tory - and he's chosen to share th knowledge with KWHx readers. H is a regular contributor to the pap*

**This is the old Ready Room at Charlie Battery on Geiger Key. The Ready Room was where the office spaces, recreation spaces, bathrooms and showers were located for the missile crews that stood 24/7 alerts. The concrete post in front of the building was where the brass plaque was mounted honoring the memory of Florentino R. Roque. The plaque is at the American Legion on Stock Island.**

**(Left) HAWK missile battery. Soldiers from the HAW DELTA battery located on Boca Chica run to a miss launcher. The second photo (above) shows the conditi of the missile reventment today.** *First photo courtesy of Flor Memory Photo Archives. Second photo by James E. Brooks*

**(Above) These are photos of the Gen tor Building of Geiger Key's Charlie B tery. The original photo was taken former Army Lt. Ed Bayne in the 1960s.** *Recent photo taken by James E. Bro*

**(Left) First photo is of the gener shed at Delta Battery on Boca Chica circa late 1960s, and the same gener building today.** *First photo is courtesy of M roe County Library. Second was taken by Ja Brooks.*

# THE OFFICIAL VISIT OF PRESIDENT KENNEDY

Thirty days after the end of the crisis, President John F. Kennedy was in Key West to review the missile defenses in the Lower Keys.

At 3:35 p.m. Monday, November 26, 1962 - following stops to thank the troops at Fort Stewart, Georgia, and Homestead Air Force Base in Florida - the president landed at Boca Chica aboard Air Force One. Among those greeting the president were Florida Governor Farris Bryant and U.S. Representative Dante Fascell, as well as Key West Mayor C.B. Harvey, who told reporters that the nationally publicized tour would do "a world of good for Key West." However, Harvey did present the President with a bent key to the city - signifying the strain "which the Cuban crisis has put on the Key West economy." Kennedy beamed at the Mayor's choice of words and responded saying, "I certainly realize that and I hope my visit here will help things." Local lawmen recruited by the Secret Service to assist in security included Monroe County Sheriff John M. Spottswood and Key West Police Chief George G. Gomez. Spottswood, known as a close friend to President Truman, chatted with Kennedy about *PT 109* - the soon-to-be-released film about JFK's WWII heroism that had been shot on Spottswood's own Munson Key (now Little Palm Island.)

The guests at Boca Chica heard a speech from Kennedy thanking the Marine, Air Force and Navy fliers whose reconnaissance flights over Cuba during the missile crisis "played the most important and most critical part . . . in the most dangerous days that America has faced since the end of World War II."

Police Chief Gomez had his entire force on the road as protection for the president, as were the Sheriff's Department, Border Patrol, Florida Highway Patrol and even the local game wardens. Marine and Navy guards were posted at the four bridges which the party would cross or pass - Boca Chica, Stock Island, Thompson Island and along South Roosevelt Boulevard - after the bridges had been completely searched for explosives.

The president then visited US Army HAWK anti-aircraft missile sites at the base, after which a motorcade of 10 automobiles, led by the president's yellow Lincoln Continental convertible (acquired at a Miami dealership for the occasion) sped the half dozen miles from the air station to the Presidential Gates at NAS Key West on Whitehead Street. Along the way the President reviewed troops outside the Casa Marina. On Duval Street, the fast-moving motorcade was greeted by crowds of onlookers and flag-wavers, though the mood of the crowd was somber. The convoy of cars finally arrived at the Little White House by way of a road that had been paved since Kennedy's previous visit eighteen months earlier when he met there with England's Prime Minister, Harold Macmillan. At the Naval Station the 6th Battalion (HAWK), 65th Artillery was presented the Army's Meritorious Unit Citation by the President for their quick reaction during the crisis. Quickly, the motorcade sped back up the Overseas Highway to Boca Chica and President Kennedy was gone.

ENCLOSURE (1) SECRET
26 November 1962

SCHEDULE FOR THE PRESIDENT'S VISIT TO THE U.S. NAVAL BASE, KEY WEST, 26 NOVEMBER 1962 (FINAL EDITION)

TIME OF ARRIVAL: 1535 LOCAL TIME
TIME OF DEPARTURE: 1735 LOCAL TIME
TOTAL ELAPSED TIME: 2 HOURS

| EVENT NO. | ARRIVE | EVENT | ELAPSED TIME | DEPART |
|---|---|---|---|---|
| | | AIRCRAFT AND CREWS | | |
| 7 | 1611 | MOBILE FUELING | ---- | 1611 |
| 8 | 1612 | TAXIWAY - MARINE AIR GROUP 14 F8U AIRCRAFT AND CREWS | 1 MIN | 1613 |
| 9 | 1614 | NAVY AND MARINE BLUE MOON AIRCRAFT AND CREW PRESENTATION OF UNIT COMMENDATION BY PRESIDENT KENNEDY | 15 MIN | 1629 |
| 10 | 1644 | HAWK MISSILE BATTERY "BRAVO" | ---- | 1644 |
| 11 | 1649 4:49 | CASA MARINA HOTEL - U. S. ARMY, COMMAND POST HEADQUARTERS AND BILLETING | ---- | 1649 |
| 12 | 1700 5PM | ENTER U. S. NAVAL STATION PRESIDENTIAL GATE VIA CAROLINE STREET | ---- | 1700 |
| 13 | 1701 | U. S. NAVAL STATION WATERFRONT AND PARADE FORMATIONS | 2 MIN | 1703 |

Enclosure (1)

The lost 8mm film

## KENNEDY'S MOTORCADE ALONG DUVAL STREET

Three years ago, when KWHx first researched the activities of October and November, 1962, we learned about a home movie taken that Monday, November 26, that captured Kennedy's trip down Duval Street. The film was in the 6th Floor Museum at Dealey Plaza in Dallas. We were fascinated - we love to be tipped off about artifacts - so we pursued our lead. Thanks to the museum's Gary Mack and Deborah Marine, we learned the film had come into the possession of the museum in 2003. It was donated by an individual who had picked up the 8mm bit of history at a garage sale in Key West. The filmmaker is unknown.

So, three years after curiosity sent us on a treasure hunt to Dallas, here they are - the best frames from a home movie that documents Kennedy's visit to Key West.

At 4:49 p.m., November 26, 1962, President Kennedy's motorcade left the Casa Marina and made its way to Duval Street. Meanwhile our man-with-the-8mm-camera, standing in the 300-block of Duval, is ready and waiting. As the motorcade passes Eaton Street and heads toward him, he starts filming. (1&2) The Women's Club is on the left in the photograph, putting our man in the vicinity of Caroline's Café.

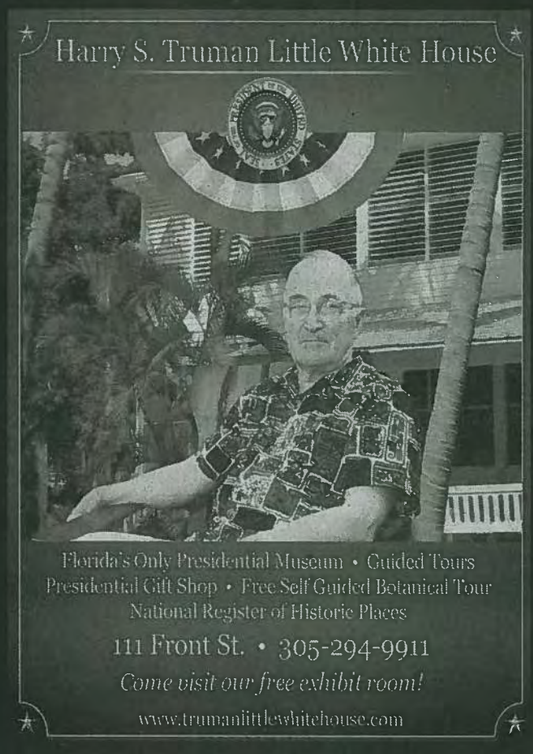
(3) The motorcade then turned left onto Caroline Street and passed the Gallery Lounge - a combo bar and art gallery. Today the building houses The Bull and Whistle and The Garden of Eden.

(4) It's the next frame that's indelible - that face. Kennedy normally appeared so handsome, yet it can't be denied that the stress of the previous six weeks is evident. No doubt this man had felt the weight of the free world on his shoulders, no question he knew exactly how close we had come to war - it's written in every line, in every wrinkle, in those deep eyes, of that face. At this frozen moment in time, the President had been on the ground for an hour and a half - he had reviewed the results of orders he had directly given since that first secret aerial photo was taken on October 14. Perhaps the Key West trip was lending the human experience to a situation he had heretofore experienced only intellectually.

(5) The last frame of the JFK home movie was captured just seconds after Kennedy and his motorcade passed through the Presidential Gates at Whitehead and Caroline onto the Naval Base. The sailors haven't yet broken formation - they've just shown the highest respect to their Commander in Chief, and the crowd is dispersing. According to the Secret Service itinerary, it is precisely 5 p.m.

That was the last time the Presidential Gates were opened for a seated President. Today, as part of the Truman Annex development, they are opened for visiting Heads of State - regardless of country.

**Note: Those famous moments when President John F. Kennedy came down Duval Street on November 26, 1962, are now viewable in Key West through the generosity of the 6th Floor Museum at Dealey Plaza. A DVD is available for viewing at the Florida History Room at the Monroe County Library. So now the movie is back where it started - Key West, Florida.**



John F. Kennedy's first visit to Key West was in March of 1961. At the Truman Little White House, he met British Prime Minister Harold Macmillan to discuss the Suez Canal.

In celebration of the fiftieth Anniversary of the Kennedy presidency, the Truman Little White House will present a special Kennedy exhibition starting in January 2011.


## "A MISEDUCATED CHILD IS A CHILD LOST."

*- John F. Kennedy*

President Kennedy in a February 1962 address to Congress stated: "Education is the foundation of our democratic way of life—it is the mainspring of our economic and social progress."

**ONLY BARBARA BOWERS HAS A MASTER'S DEGREE IN EDUCATION; ONLY BARBARA HAS CLASSROOM TEACHING EXPERIENCE (11 YEARS AS A TEACHER; 4 IN MONROE COUNTY.)**

When 44% of Monroe County tenth graders cannot reach basic reading proficiency on FCATS we MUST do better. We need a person of Barbara's eminent qualifications on our School Board.

BOWERS HAS BEEN ENDORSED BY JUDY WILD (HER PRIMARY OPPONENT AND ALSO A FORMER TEACHER) WHO FIRST INTERVIEWED EACH CANDIDATE

# ELECT BARBARA BOWERS

**Political ad authorized & paid for by Barbara Bowers, candidate for school board, District 1**

**Florida Administrative Code 62-780.680**

62-780.680 (3) Risk Management Options Level III - A No Further Action with institutional controls and, if appropriate, engineering controls shall apply if the controls are protective of human health, public safety, and the environment and are agreed to by the current real property owner(s) of all properties subject to the institutional or engineering controls. Fate and transport models, as defined in Rule 62-780.610, F.A.C., supported by a minimum of one year of monitoring data, may be utilized to justify the No Further Action Proposal. It shall be demonstrated to the Department that the following conditions are met for those contaminants that do not meet Risk Management Options Level I or Level II criteria of subsection 62-780.680(1) or 62-780.680(2), F.A.C.:

(a) Free product is not present and no fire or explosive hazard exists as a result of a release of non-aqueous phase liquids, or free product removal is not technologically feasible; or

(b) Alternative soil CTLs have been established by the PRSR and the following criteria are met for soil in the unsaturated zone:

1. Soil contaminant concentrations, or average soil contaminant concentrations calculated based on the 95% UCL approach pursuant to this subparagraph, do not exceed the alternative direct exposure soil CTLs established pursuant to paragraph 62-780.650(1)(d), F.A.C. If more than one contaminant is present in the soil in the unsaturated zone at the site, the soil CTLs for all contaminants detected in soil samples at the site shall be apportioned, as applicable [refer to Appendix D of the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance on apportioning soil CTLs]. If the 95% UCL approach is utilized to calculate average soil contaminant concentrations pursuant to this subparagraph [refer to the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance], the following criteria shall be met:

a. The Florida-UCL tool or other approved statistical method pursuant to subsection 62-780.610(2), F.A.C., shall be used to perform the 95% UCL calculations;

b. The maximum soil contaminant concentrations shall not exceed three times the applicable soil CTLs (apportioned pursuant to subparagraph 62-780.680(3)(b)1., F.A.C., if applicable); higher maximum soil contaminant concentrations may be utilized provided the maximum concentrations address the potential risk based on exposure to contaminants which may cause acute toxicity, and the potential for direct contact within the exposure unit that is not equal and random; and

c. The exposure unit shall reflect normal activity patterns for the existing land use, with supporting institutional controls if the exposure unit exceeds 1/4 acre. The institutional controls shall require recalculation of the 95% UCL if the property is subdivided or land use changes such that the exposure unit utilized in the original calculation is no longer appropriate; and

2. One or more of the following criteria for leachability are met, as applicable:

a. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using the alternative groundwater CTLs derived pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

b. Direct leachability testing results pursuant to subparagraph 62-780.600(5)(c)4., F.A.C., demonstrate that leachate concentrations do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(b), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

c. An engineering control that prevents infiltration (for example, permanent impermeable cover material) is implemented, in which case the contaminant concentrations in the soil

below the impermeable cover may exceed the leachability-based soil CTLs. Prior to Department approval of a No Further Action with engineering controls, the PRSR shall provide certification by a registered Professional Engineer that, to the best of his or her knowledge, the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented. It shall be demonstrated to the Department by a minimum of one year of groundwater monitoring data that contaminants will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs established pursuant to paragraph 62-780.680(1)(c), F.A.C., or, if the groundwater is already contaminated, at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

d. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using site-specific soil properties pursuant to subparagraph 62-780.600(5)(c)2., F.A.C., the equation and appropriate default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

e. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., do not exceed the alternative leachability-based soil CTLs for the TRPH fractions established using the equation and default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the chemical/physical parameters provided in Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C., the alternative groundwater CTL for TRPHs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTL for TRPHs pursuant to paragraph 62-780.680(1)(d), F.A.C.; and

f. It has been demonstrated to the Department by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results that, based upon the site-specific conditions, contaminants will not leach into the groundwater at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.; and

(c) Alternative groundwater CTLs have been established by the PRSR depending on the current and projected use of groundwater in the vicinity of the site, and the following criteria are met:

1. Groundwater contaminant concentrations do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.650(1)(d), F.A.C. [apportioned, if applicable; refer to Appendix E of the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance on apportioning groundwater CTLs], and the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-780.680(1)(c)2., F.A.C.; and

2. It has been demonstrated to the Department by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results, that the plume is stable or shrinking, and groundwater contaminant concentrations at the institutional control boundary do not, and will not, exceed the appropriate groundwater CTLs pursuant to paragraph 62-780.680(1)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.

(4) Unless the No Further Action Proposal is included in a Site Assessment Report pursuant to subparagraph 62-780.600(8)(b)1., F.A.C., or a Risk Assessment Report pursuant to paragraph 62-780.650(4)(a), F.A.C., or a Site Rehabilitation Completion Report pursuant to subsection 62-780.690(10) or 62-780.750(6), F.A.C., the PRSR shall submit to

the Department two copies of the No Further Action Proposal for review when the criteria for No Further Action have been met. The No Further Action Proposal shall include the tables required pursuant to subparagraph 62-780.600(8)(a)27., F.A.C., updated as applicable. Prior to approval of a No Further Action Proposal with an institutional control or an engineering control accompanied by an institutional control, documentation of the agreement with the real property owner(s) of all properties subject to the institutional or engineering controls shall be submitted to the Department.

(5) The Department shall:

(a) Provide the PRSR with a Site Rehabilitation Completion Order that approves the No Further Action Proposal; or

(b) Notify the PRSR in writing, stating the reason(s) why the No Further Action Proposal does not contain information adequate to support the conclusion that the applicable No Further Action criteria of Rule 62-780.680, F.A.C., have been met. Site rehabilitation activities shall not be deemed complete until such time as a No Further Action Proposal is approved.

(6) If the No Further Action Proposal is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.680(1), 62-780.680(2), or 62-780.680(3), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.680(5)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a revised No Further Action Proposal that addresses the deficiencies within 30 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the PRSR shall submit to the Department for review, as appropriate, two copies of a Natural Attenuation with Monitoring Plan pursuant to Rule 62-780.690, F.A.C., or two copies of a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C., within 60 days after receipt of the notice.

(7) When a No Further Action Proposal is approved pursuant to subparagraph 62-780.600(9)(a)1. or 62-780.650(5)(a)1., F.A.C., or paragraph 62-780.680(5)(a), 62-780.690(11)(a), or 62-780.750(7)(a), F.A.C., the Site Rehabilitation Completion Order shall contain, at a minimum, the following information:

(a) The facility identification number or other FDEP or USEPA tracking number, as applicable, that identifies the property where the source(s) of the contaminated site is(are) or was(were) located;

(b) The street address of the property where the source(s) of the contaminated site is(are) or was(were) located;

(c) The date(s) of the discharge(s), if known, that resulted in the contaminated site;

(d) A reference to an attached map or legal description that depicts or describes the contaminated site for which the Site Rehabilitation Completion Order is being issued;

(e) The most recent tables generated by the PRSR pursuant to subparagraph 62-780.600(8)(a)27., F.A.C., or subsection 62-780.650(4), 62-780.680(4), 62-780.690(10), or 62-780.750(6), F.A.C.;

(f) If applicable, a reference to all engineering and institutional controls that were implemented at the contaminated site. For engineering controls, a brief description of the physical control and any maintenance or monitoring requirements shall be included; for institutional controls, a copy of the restrictive covenant including a reference to the book and page numbers where recorded shall be attached;

(g) If applicable, a statement that the Site Rehabilitation Completion Order is conditioned upon such engineering and institutional controls being effective, properly maintained, and remaining in place. If applicable, the following statement shall be included: “If the real property owner proposes to remove the institutional controls or engineering controls, the real property owner shall obtain prior written approval from the Department. The removal of the controls shall be accompanied by the immediate resumption of site rehabilitation, or implementation of other approved controls, unless it is demonstrated to the

Department that the criteria of subsection 62-780.680(1), F.A.C., are met.”; and

(h) A statement that the Site Rehabilitation Completion Order is subject to specific statutory re-openers and a listing of those re-openers found in Section 376.30701(4), F.S.

(8) Prior to the Department’s approval of a No Further Action Proposal with institutional controls or with institutional and engineering controls, the PRSR shall provide constructive notice of the Department’s intent for such approval to the local government(s) with jurisdiction over the property(ies) subject to the institutional control, to real property owner(s) of any property subject to the institutional control, and to residents of any property subject to the institutional control. The PRSR shall provide the Department with proof of such notice that meets the requirements of subsections 62-110.106(5), (8), and (9), F.A.C., except that the notice shall be prepared and published by the PRSR within 30 days after the Department's conditional approval of the No Further Action Proposal with institutional controls. The notice shall provide the local government(s) with jurisdiction over the property(ies) subject to the institutional control, real property owners of any property subject to the institutional control, and residents of any property subject to the institutional control, the opportunity to comment to the Department within 30 days after receipt of the notice of the Department’s intent of approval. Where subsection 62-110.106(8), F.A.C., requires a description of the agency action proposed, the notice shall contain "to issue a Site Rehabilitation Completion Order with institutional controls for a contaminated site”. Additionally, the notice of rights language shall be replaced with "Local governments, real property owner(s) of any property subject to the institutional control, and residents of any property subject to the institutional control have 30 days from publication of this notice to provide comments to the Department.” The notice also shall provide the appropriate mailing address to which comments should be sent.

(9) The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

*Specific Authority 376.30701, 403.0877 FS. Law Implemented 376.30701, 403.0877 FS. History–New 4-17-05.*

# APPENDIX J

# FDEP COMMENT RESPONSES

**RESPONSE TO FDEP COMMENTS DATED OCTOBER 3, 2011**
**PRELIMINARY ASSESMENT AND SITE INSPECTION**
**U.S. ARMY HAWK MISSILE SITE, GEIGER KEY**
**NAVAL AIR STATION KEY WEST, FLORIDA**

*Note that where the comment response provides revised text, text additions are shown in bold italics and deleted text is shown as strikethrough.*

**COMMENTS**

1. **General Comment:** Please note that the term Total Petroleum Hydrocarbon (TPH) is not correct. The correct name is Total Recoverable Petroleum Hydrocarbons (TRPH). Please make the necessary changes to this document.

   **Response**: Total Petroleum Hydrocarbon (TPH) has been revised to Total Recoverable Petroleum Hydrocarbon (TRPH). Revisions have been made throughout the PA/SI to reflect this change.

2. **Comment: Page 4-1, Section 4.1, Groundwater:** This section describes several areas that could have served as possible sources of contamination at this site. The Aboveground Storage Tank (AST) area which could have served as a potential source for both Total Recoverable Petroleum Hydrocarbons (TRPHs) and other petroleum related constituents, and the generator building and the radar tower both of which could have had chlorinated solvents on site. The Department feels that this information will need to be taken into consideration when conducting any future remedial investigations for this site.

   **Response from NAS Key West**: The Department's recommendation to consider the AST area, generator building, and radar towers as possible sources of contamination has been noted for future remedial investigations at this site.

   **Response from The Department**: We feel as though this comment has been duly noted in the preceding response. Please provide the necessary text to support your comment in the final version of the PA/SI.

   **Response**: The following has been inserted as the second sentence of Section 4.1, "***These potential sources will be taken into consideration during future remedial investigations at this site***."

3. **Comment: Page 7-2, Section 7.2.1.2 Monitoring Well Sampling Techniques**: Due to the age of these wells and the metals found in the groundwater that exceeded our Groundwater Cleanup Target Levels (GCTLs), the Department was concerned that the groundwater purging technique used may be a contributing factor for this situation. The Department would like to know if the monitoring wells were sampled per "Standard Operating Procedure (SOP) 001/01 FS2200 Groundwater Sampling" for this site.

   **Response from NAS Key West**: All monitoring wells at this site were sampled per "Standard Operating Procedure (SOP) 001/01 FS2200 Groundwater Sampling".

**Response from The Department:** We feel as though this comment has been fully addressed.

**Response**: The Department's response has been noted.

4. **Comment: Page 8-3, Section 8.1.3, Potential Contaminant Migration Pathways, 3rd paragraph last sentence**: This sentence states: *"At this time, it is not known if contaminated groundwater is discharging to any of the surface water features surrounding the Site."* The Department would expect this situation to be fully addressed in any future remedial investigations to be conducted at this site.

   **Response from NAS Key West**: The Department's expectation to investigate possible groundwater interface with surface water has been noted for future remedial investigations for this site.

   **Response from The Department**: We feel as though this comment has been fully addressed and look forward to addressing this situation in future remedial investigation for this site. Please provide the necessary text to support your comment in the final version of the PA/SI.

   **Response:** The last sentence of Section 8.1.3 has been revised, "At this time, it is not known if contaminated groundwater is discharging to any of the surface water features surrounding the Site, ***this possibility will be investigated during future remedial activities***."

5. **Comment: Page 8-7, Section 8.5, Recommendations**: The Department concurs with the recommendation to perform confirmatory sampling for TRPHs for this site. However, we also think it would be prudent to delineate the metals and pesticides found in the groundwater as well.

   **Response from NAS Key West**: It is the intent of the Navy to conduct a site specific risk assessment before a Remedial Action Plan (RAP) is drafted to determine the human health risk of exposure to metals from on this site. Upon completion of the risk assessment and determination of the level of risk associated with metal contamination present onsite, further delineation needs will be determined. Under CERCLA § 103, an exemption for the normal application of pesticide products exist. This exemption is intended to present the" typical pesticide user" from incurring liability under CERCLA for purchasing and applying pesticides in the customary manner.

   **Response from The Department**: We feel as though this comment has been fully addressed and look forward to addressing this situation in future remedial investigation for this site. Please know, we will also take the exemption under CERCLA § 103 into consideration when reviewing analytical data for pesticides at this site. The Department will require adequate documentation to support this conclusion. Please provide the necessary text to support your comment in the final version of the PA/SI.

   **Response**: The following has been added as the last bullet of Section 8.5,

   - "***Conduct a site-specific risk assessment, prior to the completion of a Remedial***

***Action Plan (for TRPH), to determine the human health risk of exposure to metals from this site***."

6. **Comment: Page 8-7, Section 8.5, Recommendations**: In this section the Navy also recommends they would like to perform a site specific risk assessment and a preparation of a Remedial Action Plan to address the TRPH contamination found at this site. The Department has no objection to this but feels that the same tasks will need to be conducted after the site has been fully assessed in a remedial investigation.

   **Response from NAS Key West**: The Navy intends to perform the risk assessment as a step in this multi-step process. The Navy understands that a major component of the RI will be the baseline risk assessment (BRA), which will evaluate risks to human health and ecological resources. In the BRA, characterization data collected during the RI are used together with BRA-specific studies to evaluate potential human health and ecological risks. The results of the RI (including the BRA) support one of two decisions: 1) the site poses acceptable risks and remediation is not warranted or 2) remediation is warranted because there are unacceptable risks to human health and/ or ecological resources. However, the first step will be to perform confirmatory sampling for TRPH, in order to delineate the free product plume. The following recommendation has been revised to state:

   "The following actions are recommended for the former AHMS Geiger Key site, in the form of an Expanded SI ~~Remedial Investigation/Feasibility Study (RI/FS)~~:

   - Confirmatory sampling for TRPH in the vicinity of monitoring well GKHMS-MW-12. To include, but not limited to, additional sampling for TRPH, samples to be collected through the generator building floor to delineate the free product plume to determine if source removal is feasible;
   - ***and, additional confirmatory sampling of media for metals.***
   - ~~a baseline human health and ecological risk assessment~~;
   - ~~and, preparation of a RAP~~.

   These actions correlate with the steps in Rule 62.780.680 (3) Risk Management Option III as a final remedy in place." Please describe this comment in the text of this document, specifically the language that explains" acceptable risk".

   **Response from The Department**: We feel as though this comment has been fully addressed and look forward to addressing this situation in future remedial investigation for this site. Please provide the necessary text to support your comment in the final version of the PA/SI.

   **Response:** Refer to response to Comment #5 for revisions to Section 8.5.

   Rule 62.780.680 (3) is included in Appendix I for reference Chapter 62.780.680 (3) "Risk Management Option Level III" of the Florida Administrative Code (April,2005) has been added to Appendix I, References.

   Additionally, the following has been added as the last sentence of Section 8.5, "***Rule 62.780.680 (3) is included in Appendix I for reference***."