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NAS PENSACOLA
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FINAL DATA REPORT FIRST QUARTER SOIL AND GROUNDWATER SAMPLING EVENT OPERABLE UNIT 19 (OU19) SITE 44 NAS PENSACOLA FL

12/1/2012

TETRA TECH

Comprehensive **L**ong-term **E**nvironmental **A**ction **N**avy

CONTRACT NUMBER N62467-04-D-0055

Rev. 0
December 2012

FINAL DATA REPORT
FIRST QUARTER SOIL AND GROUNDWATER SAMPLING EVENT
OPERABLE UNIT 19, SITE 44

NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

DECEMBER 2012
USEPA ID FL9170024567

NAVFAC
Naval Facilities Engineering Command
NAVFAC SOUTHEAST

NAS Jacksonville
Jacksonville, Florida 32212-0030

TETRA TECH

FINAL DATA REPORT
FIRST QUARTER SOIL AND GROUNDWATER SAMPLING EVENT
OPERABLE UNIT 19, SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA
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USEPA ID FL9170024567

1.0 SITE BACKGROUND

NAS Pensacola is located in Escambia County, Florida. Figure ES-1 presents a facility location map depicting the location of Site 44 on the installation. Site 44 is located in the central portion of NAS Pensacola at the southwestern end of Building 3221. Building 3221 is used by National Museum of Naval Aviation staff to refurbish aircraft. Building 3221 is a large hangar adjacent to Forrest Sherman Field, which was opened in 1955 as the master jet landing field for NAS Pensacola. In 1983, Building 3221 was shown as part of the Naval Air Rework Facility (NARF), formerly the NAS Pensacola operations and repair department and was likely used for aircraft maintenance before the current National Museum of Naval Aviation location opened in 1975. The past and current use of the paved area adjacent to the southwest corner of Building 3221 is a wash rack for cleaning aircraft and aircraft parts. According to National Museum of Naval Aviation personnel, only biodegradable surfactant agents are used by the National Museum of Naval Aviation to clean parts.

Site 44 includes approximately 2.16 acres and the surface cover for the site is primarily 18-inch thick concrete pavement with adjacent areas that have grass, asphalt, or tree cover. The area at the southwest corner of Building 3221 was the former location of a 1,000-gallon underground storage tank (UST) that was installed in 1967 and reportedly used to store PD-680 (a petroleum distillate cleaning solvent, also known as Stoddard Solvent). The UST was removed in 1989-1990 and replaced with a new 500-gallon UST used to store waste oil (ABB-ES, 1993). The new 500-gallon UST likely stored waste oil generated from aircraft maintenance operations historically performed at Building 3221. This 500-gallon waste oil tank was subsequently removed on May 2, 1994 (Navy, 1994). There are no USTs remaining at the site.

1.1 SUMMARY OF PREVIOUS INVESTIGATIONS

Based on previous investigations at the site, including information provided in the UST Site 3221SW Contamination Assessment Report (CAR) (ABB-ES, 1993) and the Remedial Investigation (RI) Report for Site 44 (Former UST Site 3221SW) (Tetra Tech, 2008), chemicals of concern (COCs) in groundwater include trichloroethene (TCE) and related biodegradation products at relatively low concentrations primarily in the shallow aquifer zone. The previous investigations, including soil and groundwater data collected in the vicinity of the former UST 3221SW, the wash rack area, and the southwestern end of Building 3221 adjacent to the wash rack area, did not identify a source of the chlorinated solvents detected in groundwater. However, the resulting conceptual site model and current hypothesis for the

A Feasibility Study (FS) report evaluating remedial alternatives was issued in April 2010 (Tetra Tech). The subsequent Proposed Plan (June 2010) recommended Monitored Natural Attenuation (MNA) as the groundwater remedy. However, the Proposed Plan was not accepted by the United States Environmental Protection Agency (USEPA), which concluded sufficient lines of evidence had not been provided during previous investigations to support the efficacy of MNA as a timely remedy for the site.

2.0 OCTOBER 2012 INVESTIGATION

Soil and groundwater samples were at Site 44 in October 2012 as described in the Groundwater Investigation Plan for Site 44 [Operable Unit (OU) 19] Feasibility Study Addendum, at Naval Air Station (NAS) Pensacola, Florida (Tetra Tech, 2012). All field activities were conducted in accordance with USEPA, Region 4, Science and Ecosystem Support Division (SESD), Athens, Georgia, Field Branches Quality System and Technical Procedures. If USEPA, Region 4, SESD did not have an applicable field procedure then Florida Department of Environmental Protection (FDEP) Sampling Operating Procedures (SOPs) were used and if USEPA or FDEP SOPs were not available then Tetra Tech SOPs were used.

2.1 FIELD INVESTIGATION

The following is a summary of the field investigation methods used to collect soil and groundwater samples at Site 44 to provide additional lines of evidence that may support the efficacy of an MNA remedy and to compare MNA with other remedial alternatives being considered, additional groundwater data will be collected at the site during two additional quarterly sampling events to provide spatial and temporal contaminant trend information and geochemistry.

2.1.1 SOIL SAMPLING DATA COLLECTION

On October 10 and 11, 2012, Tetra Tech personnel screened soils collected at Site 44 for the presence of VOCs and collected soil samples for submittal to fixed based laboratories. A surface and subsurface soil sample were collected for laboratory analysis from each of the three boring locations, using a stainless steel hand auger. At each of the three locations, soil samples were collected at two foot intervals until the water table was encountered at 8 feet below land surface (bls). The soil sample were visually described and screened for evidence of the presence of Volatile Organic Compounds (VOCs) with a Flame Ionization Detector (FID) and AQR Color-Tec® methodology (Table 1). In accordance with the UFP SAP, a surface soil sample (land surface to 2 feet bls) was collected at each location and submitted for laboratory analysis. Because the FID and AQR Color-Tec data did not indicate the presence of VOCs in

the soil samples collected from 2 feet bls to the water table (approximately 8 feet bls) subsurface soil samples were collected from the 2-foot interval above the water table (6 to 8 foot bls).

The surface soil samples were analyzed for USEPA Contract Laboratory Program (CLP) Target Analyte List (TAL)/Target Compound List (TCL) suite [TCL VOCs, TCL Semivolatile Organic Compounds (SVOCs) including Low Level Polycyclic Aromatic Hydrocarbons (LL PAHs), TCL Pesticides and Polychlorinated Biphenyls (PCBs), TAL metals including mercury), hexavalent chromium, pH and ORP. The subsurface soil samples were analyzed for the TCL/TAL suite.

The detected soil analytical data is presented in Table 2. The exceedances for the land surface to 2 feet bls interval are graphically presented on Figure 1 and the exceedances in the 6 to 8 foot bls interval are presented on Figure 2. The historic analytical soil data is presented on Figure 3. The soil sampling field forms are provided in Attachment 1 and the laboratory analytical data is provided in Attachment 2.

2.1.2 GROUNDWATER POTENTIOMETRIC DATA COLLECTION

Groundwater potentiometric data was collected from Site 44 monitoring wells on October 16, 2012. The synoptic round of water level measurements was conducted in accordance with the UFP SAP; in addition the storm water drains were visually inspected to determine if water was present and visibly flowing.

Depths to water level measurements were collected from the northern oriented top of well casing utilizing an electronic water level meter. The interface probe was decontaminated prior to and following each measurement in accordance with USEPA SOPs. Water was not observed in the storm water drains at the time of water level measurement collection. The potentiometric data collected from the site monitoring wells was interpreted to indicate groundwater flow direction.

Table 3 and Figure 4 summarize the groundwater elevation data collected from the surficial aquifer in October 2012. The water level field form is presented in Attachment 1. The groundwater flow direction was generally toward the north. Groundwater hydraulic conductivity data from the Site 44 Remedial Investigation (Tetra Tech, 2008) is provided in Attachment 3.

2.1.3 GROUNDWATER SAMPLING DATA COLLECTION

Tetra Tech personnel collected groundwater samples from 28 existing Site 44 monitoring wells from October 12 through October 16, 2012. The groundwater samples were collected in accordance with the UFP SAP (Tetra Tech 2012) using low flow/low stress sampling techniques. Monitoring well PEN-3221-01 was abandoned; therefore a groundwater sample could not be collected from this location. The monitoring well purging and sampling activities were performed utilizing a peristaltic pump and pre-cleaned Teflon® tubing. New tubing was used at each location and was left in place to be dedicated to

that well for future sampling events. Placement of the tubing and purging techniques were determined in the field and conducted in accordance with the applicable USEPA SOPs. Every attempt was made to match the purging rate with the natural monitoring well recovery rate.

Groundwater physical parameters (pH, temperature, conductivity, dissolved oxygen (DO), turbidity and ORP) were collected in the field using a multi meter and flow through cell to ensure that a representative sample was collected by reducing turbidity and removing the "stagnant" groundwater in the well casing and sand pack area. Field parameters from the October 2012 event are summarized in Table 4. The groundwater sampling logs are provided in Attachment 1.

After ensuring that the monitoring wells were sufficiently purged, groundwater samples were collected from the existing monitoring wells and submitted to fixed based laboratories. The specific analysis for each groundwater sample is presented below.

GROUNDWATER ANALYSIS
SITE 44
NAS PENSACOLA
PENSACOLA, FLORIDA

Monitoring Well ID	Purpose	Event 1
PEN-44-09	Upgradient Well	USEPA CLP TCL/TAL; pH, ORP & NA Parameters
PEN-44-10	Cross-Gradient Well	PCE, TCE, cis-DCE, VC; NA Parameters
PEN-44-11	In-Plume Well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-12	Cross-Gradient Well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-13	Cross-Gradient Well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-14	In-Plume Well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-15	In-Plume Well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-16	Cross-Gradient Well	PCE, TCE, cis-DCE, VC
PEN-44-17	Cross-Gradient Well	PCE, TCE, cis-DCE, VC
PEN-44-18	Deep well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-19	Deep well	USEPA CLP TCL/TAL; NA Parameters

Monitoring Well ID	Purpose	Event 1
PEN-44-20	Cross-Gradient Well	PCE, TCE, cis-DCE, VC
PEN-44-21	In-Plume Well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-22	Cross-Gradient Well	PCE, TCE, cis-DCE, VC; NA Parameters
PEN-44-23	Cross-Gradient Well	PCE, TCE, cis-DCE, VC; NA Parameters
PEN-44-24	Plume-Edge Well	USEPA CLP TCL/TAL; NA Parameters
PEN-44-25	Downgradient Well	PCE, TCE, cis-DCE, VC; NA Parameters
PEN-44-26	Cross-Gradient Well	PCE, TCE, cis-DCE, VC
PEN-3221-02	Upgradient Well	USEPA CLP TCL/TAL pH, ORP
PEN-3221-03	Upgradient Well/Former UST Location	USEPA CLP TCL/TAL; pH, ORP; & NA Parameters
PEN-3221-04	Upgradient Well	USEPA CLP TCL/TAL
PEN-3221-05	Upgradient Well	PCE, TCE, cis-DCE, VC & Cr^6
PEN-3221-06	Upgradient Well	USEPA CLP TCL/TAL
PEN-3221-07	Upgradient Well	PCE, TCE, cis-DCE, VC; NA Parameters
PEN-3221-08	Upgradient Well	USEPA CLP TCL/TAL
PEN-3221-09	In-Plume Well	USEPA CLP TCL/TAL; NA Parameters & Cr^6
PEN-3221-10	Cross-Gradient Well	USEPA CLP TCL/TAL; NA Parameters

Notes:

PCE = tetrachloroethene
TCE = trichloroethene
cis-DCE = cis, 1,2-dichloroethene
VC = vinyl chloride
ORP = Oxidation Reduction Potential
$Cr^{6\ =}$ hexavalent chromium
USEPA CLP TCL & TAL = Analyte list provided in Worksheet 15
NA parameters = iron & manganese (total & dissolved); dissolved gases (methane, ethane, ethene, nitrogen, hydrogen & carbon dioxide); anions (chloride, nitrate, nitrite & sulfate); alkalinity, COD, BOD

The detected groundwater analytical data is presented in Table 5 and exceedances are graphically presented on Figure 5. Historic groundwater analytical data is presented on Figure 6. Monitored Natural Attenuation Data is presented in Table 6. Monitoring well construction details are presented in Table 7. Laboratory analytical data is provided in Attachment 2.

Attachment 4 provides figures summarizing the data collected in October 2012 for TCE and cis-1,2-dichloroethene (Figure 1), oxidation reduction potential and dissolved oxygen (Figure 2), iron and aluminum concentrations (Figure 3), nitrate and sulfate concentrations (Figure 4), hydrogen and methane concentrations (Figure 5), ethane and ethane concentrations (Figure 6) and a cross-section showing lithologic information and TCE and cis-1,2-dichloroethene concentrations.

2.1.4 QUALITY ASSURANCE/QUALTIY CONTROL SAMPLES

Quality assurance and quality control (QA/QC) samples collected during the field investigation event included trip blanks (Trip Blank 1035, TB01308 and TB), field duplicates (FD10111201 is the field duplicate of soil sample PEN-44-SS03-0-2-10112012, FD10111202 is the field duplicate of soil sample PEN-44-SS03-6-8-10112012, FD10141201 is the field duplicate of water sample PEN-44-26-10142012, FD10151201 is the field duplicate of water sample PEN-44-18-10152012, FD10161201 is the field duplicate of water sample PEN-3221-05-10162012, FD10161202 is the field duplicate of water sample PEN-3221-02-10162012) and rinsate blanks (FB10151201 and FB10161202) at frequencies listed on Worksheet 12 of the Uniform Federal Policy Sampling and Analysis Plan.

Neither the trip blanks nor field blanks were reported to contain analytes above instrument detection limits. Duplicate sample results are presented on the analytical tables.

2.1.5 INVESTIGATIVE DERIVED WASTE

Investigated derived waste (IDW) including equipment decontamination water and water generated during monitoring well purge and sampling activities were drummed. Soils screened during the sampling event were returned to their original borehole.

2.1.6 EQUIPMENT DECONTAMINATION

The equipment involved in field sampling activities was decontaminated prior to and during sampling activities in accordance with USEPA SOP Field Equipment Cleaning and Decontamination (SESDPROC-205-R1).

3.0 SOIL AND GROUNDWATER ANALYTICAL SUMMARY

The following presents a summary of the data collected during the October 2012 monitoring activities at Site 44:

Soil Sample Analytical Results

- Benzo(a)pyrene, benzo(b)fluoranthene, dieldrin, gamma-BHC, gamma chlordane, Aroclor-1254, aluminum, cadmium, chromium, hexavalent chromium iron and lead exceeded their respective USEPA Protection of Groundwater Leachability Criteria for soil samples collected from the land surface to 2 foot bls interval. Although these analytes did exceed the screening criteria they did not exceed their respective Florida Soil Cleanup Target Levels (SCTLs) for residential and industrial exposure of leachability to groundwater.
- Methylene chloride, benzo(a)pyrene, gamma-BHC, chromium, and iron exceeded their respective USEPA Protection of Groundwater Leachability Criteria for soil samples collected from the 6 to 8 foot bls interval. Although, these analytes did exceed the screening criteria they did not exceed their respective SCTLs for residential and industrial direct exposure of leachability to groundwater.

Depth to Groundwater Measurements

- The groundwater flow direction in the shallow aquifer was generally toward the north.
- Water was not observed in the storm drains

Groundwater Sample Analytical Results

- Aluminum exceeded the Federal and State Secondary Maximum Contaminant Level (MCL) of 200 micrograms/L (µg/L) in groundwater samples collected from eight monitoring wells.
- Chromium exceeded the Limit of Quantitation Value of 2.5 µg/L in groundwater samples collected from five monitoring wells, but is below the Federal and State Primary MCL of 100 µg/L.
- Hexavalent chromium exceeded the USEPA Tapwater Regional Screening Level of 0.031 µg/L in groundwater samples collected from two monitoring wells but is below the Federal and State Primary MCL of 100 µg/L.
- Iron exceeded the Federal and State Secondary MCL of 300 µg/L in groundwater samples collected from three monitoring well.
- Cis-1,2-Dichloroethene exceeded the USEPA Tapwater RSL of 2.8 µg/L in groundwater samples collected from three monitoring wells but is below the Federal and State Primary MCL of 70 µg/L.
- TCE exceeded its USEPA Tapwater RSL of 0.44 µg/L in groundwater samples collected from nine monitoring wells, and the Federal and State Primary MCLs of 5 and 3 µg/L, respectively, at 6 monitoring wells.
- Methylene chloride, benzo(a)pyrene, benzo(b)fluoranthene, dieldrin, gamma-BHC, gamma chlordane, Arochlor-1254, cadmium, chromium, hexavalent chromium and lead, which were

detected in soils samples at concentrations exceeding their USEPA Protection of Groundwater Leachability Criteria, were either not detected or were detected in the groundwater samples at concentrations below their federal or state promulgated criteria.

4.0 PROPOSED SAMPLING LOCATIONS AND ANALYTICAL PARAMETERS

Based on the analytical results presented in Section 3.0, Attachment 5 provides a table that presents Event 2 monitoring well locations and analytical parameters and a figure showing monitoring well locations. The NAS Pensacola Partnering Team agreed to limit the analysis of groundwater samples to tetrachloroethene, TCE, cis-1,2-dichloroethene, vinyl chloride, aluminum and iron; the full suite of natural attenuation parameters for the new monitoring wells and existing monitoring wells along the plume centerline and an abbreviated list of natural attenuation parameters for select existing monitoring wells to represent hydraulic side and downgradient location along the plume.

In addition, hexavalent chromium was detected in groundwater samples using USEPA Method 218.6 from monitoring wells PEN-3221-05 and PEN-3221-09. The samples were preserved in the field as required by the analytical method and filtered in the laboratory; however, the groundwater samples were not filtered in the field as suggested by recent USEPA guidance. Also, there was a disparity in the field and laboratory oxidation reduction potential measurements. Therefore, the Partnering Team could not be certain that interconversion of chromium species did not occur and the data was considered not representative. To minimize the potential for interconversion of chromium species, the Partnering Team agreed to collect additional groundwater samples from monitoring wells PEN-3221-05 and PEN-3221-09, filter the samples within 15 minutes of collection and preserved the samples in the field as required by the analytical method. The samples will be analyzed using USEPA Method 7199.

5.0 REFERENCES

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http://www.epa.gov/region9/superfund/prg/rsl-table.html *November.*

FIGURES

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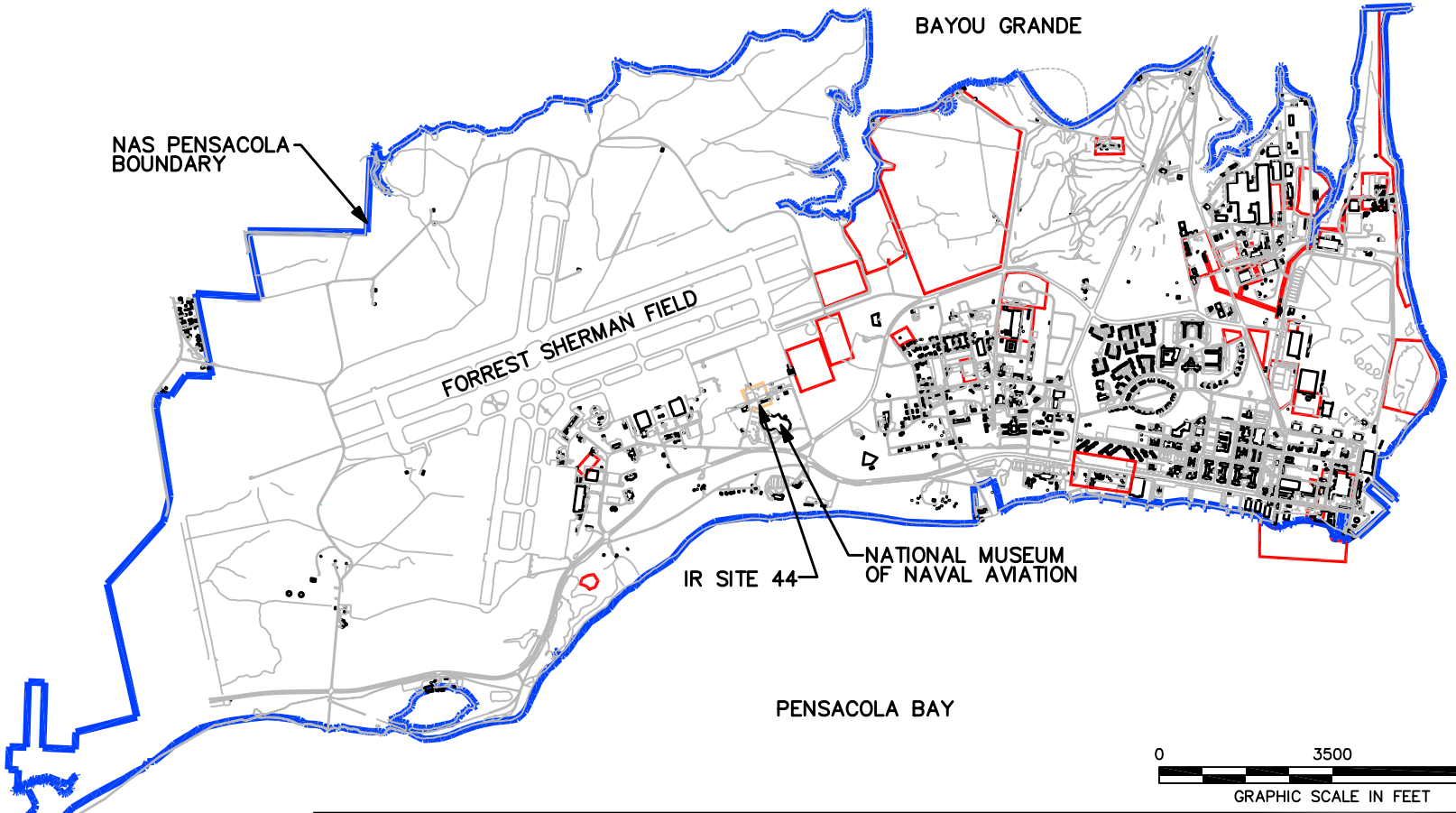

DRAWN BY: MF DATE: 12/15/06	NAVFAC	SITE LOCATION MAP SITE 44 RI REPORT NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO. 0007
CHECKED BY DATE			OWNER NO. 0367
REVISED BY DATE			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE ES-1 / REV. 0

FORM CADD NO. SDIV-AH.DWG - REV 1 - 9/10/98

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N

PEN-44-SS03 (0.00 - 2.00)
METALS (MG/KG)
CADMIUM 0.628 J
CHROMIUM 3.16
IRON 994 J
PCBS (UG/KG)
AROCLOR-1254 24.1
PESTICIDES (UG/KG)
GAMMA-CHLORDANE 4.35
PEN-44-SS03-DUP (0.00 - 2.00)
NO EXCEEDANCES

PEN-44-SS02 (0.00 - 2.00)
METALS (MG/KG)
ALUMINUM 3850 J
CADMIUM 2.89
CHROMIUM 31.8
HEXAVALENT CHROMIUM 3.84
IRON 2300 J
LEAD 30.3 J
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)
BENZO(A)PYRENE 78.2
BENZO(B)FLUORANTHENE 108
PESTICIDES (UG/KG)
GAMMA-CHLORDANE 4.86

PEN-44-SS01 (0.00 - 2.00)
METALS (MG/KG)
IRON 694 J
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)
BENZO(A)PYRENE 13.1
PESTICIDES (UG/KG)
GAMMA-BHC (LINDANE) 0.306 J

3221 Maintenance Hangar

Analyte	Criteria (mg/kg)
Aroclor-1254	8.8
Aluminum	2300
Benzo(a)pyrene (ug/kg)	3.5
Benzo(b)fluoranthene (ug/kg)	35
Cadmium	0.38
Chromium	2 (LOQ)
Gamma-BHC (ug/kg)	0.21
Gamma-Chlordane (ug/kg)	1.8
Hexavalent Chromium	0.4 (LOQ)
Iron	270
Lead	14

Notes:
1) LOQ = Laboratory Limit of Quanitation.
2) mg/kg = milligram per kilogram.
3) ug/kg = micrograms per kilogram.

30 0 30 Feet

Legend

- Soil Sample Location

Historic Soil Sample Locations

- Full Suite TCL/TAL
- Pesticides and SPLP
- PAH Only
- Arsenic Only
- Waste Oil Metals
- Waste Oil Metals and TRPH
- Former Flammable Storage Area
- Former Location of UST3221SW
- Former Staging Area
- Building
- Fence Line
- Road

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J. ENGLISH	11/27/12
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A. IGOE	11/29/12
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NAVFAC

SOIL LEACHABILITY TO GROUNDWATER EXCEEDANCES IN THE LAND SURFACE TO TWO FEET BELOW LAND SURFACE INTERVAL
SITE 44
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER	CTO NUMBER
0784	079
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FIGURE NO.	REV
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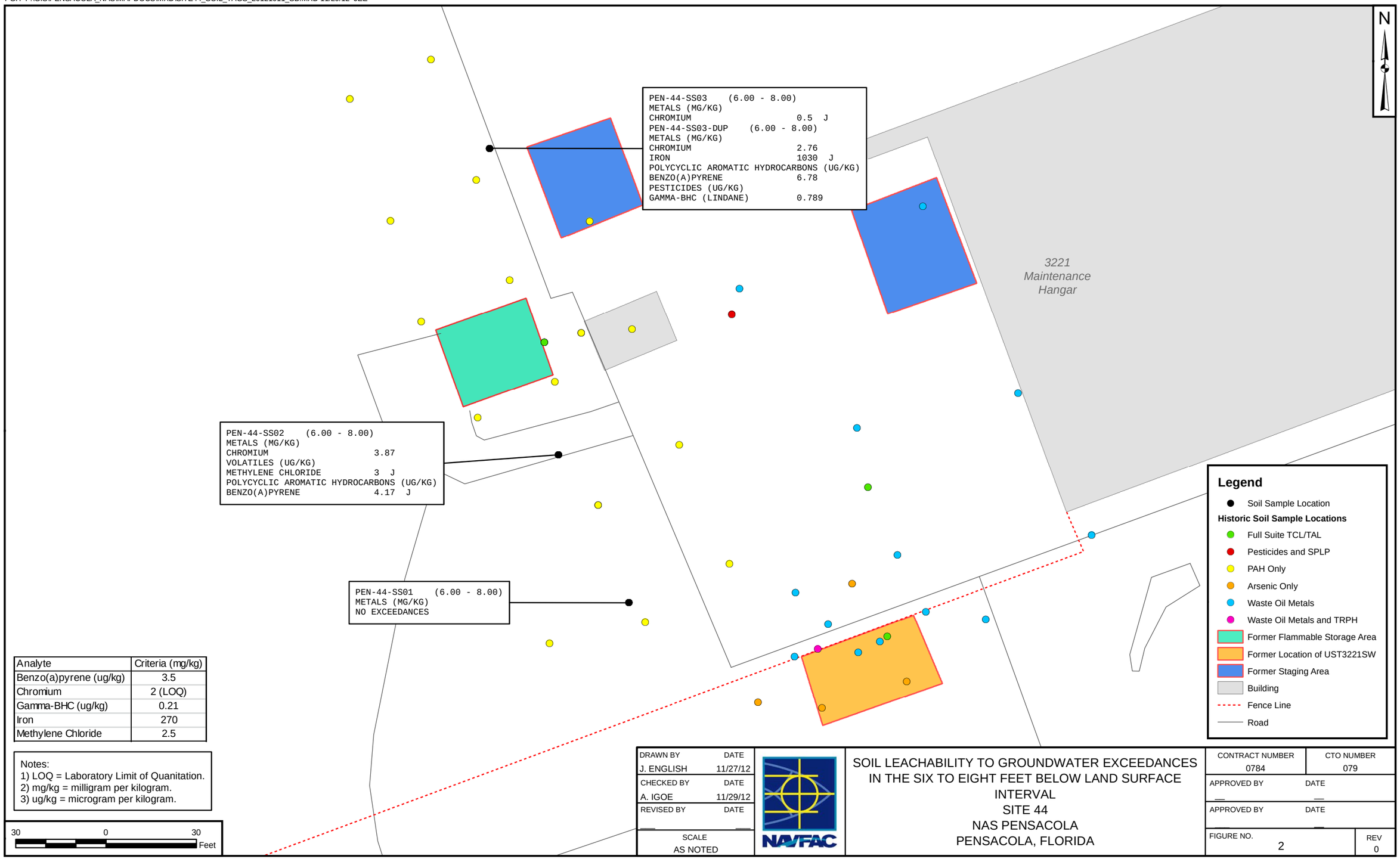

Analyte	Criteria (mg/kg)
Benzo(a)pyrene (ug/kg)	3.5
Chromium	2 (LOQ)
Gamma-BHC (ug/kg)	0.21
Iron	270
Methylene Chloride	2.5

Notes:
1) LOQ = Laboratory Limit of Quanitation.
2) mg/kg = milligram per kilogram.
3) ug/kg = microgram per kilogram.

30 0 30 Feet

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J. ENGLISH	11/27/12
CHECKED BY	DATE
A. IGOE	11/29/12
REVISED BY	DATE
SCALE	
AS NOTED	

NAVFAC

SOIL LEACHABILITY TO GROUNDWATER EXCEEDANCES IN THE SIX TO EIGHT FEET BELOW LAND SURFACE INTERVAL
SITE 44
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER	CTO NUMBER
0784	079
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FIGURE NO.	REV
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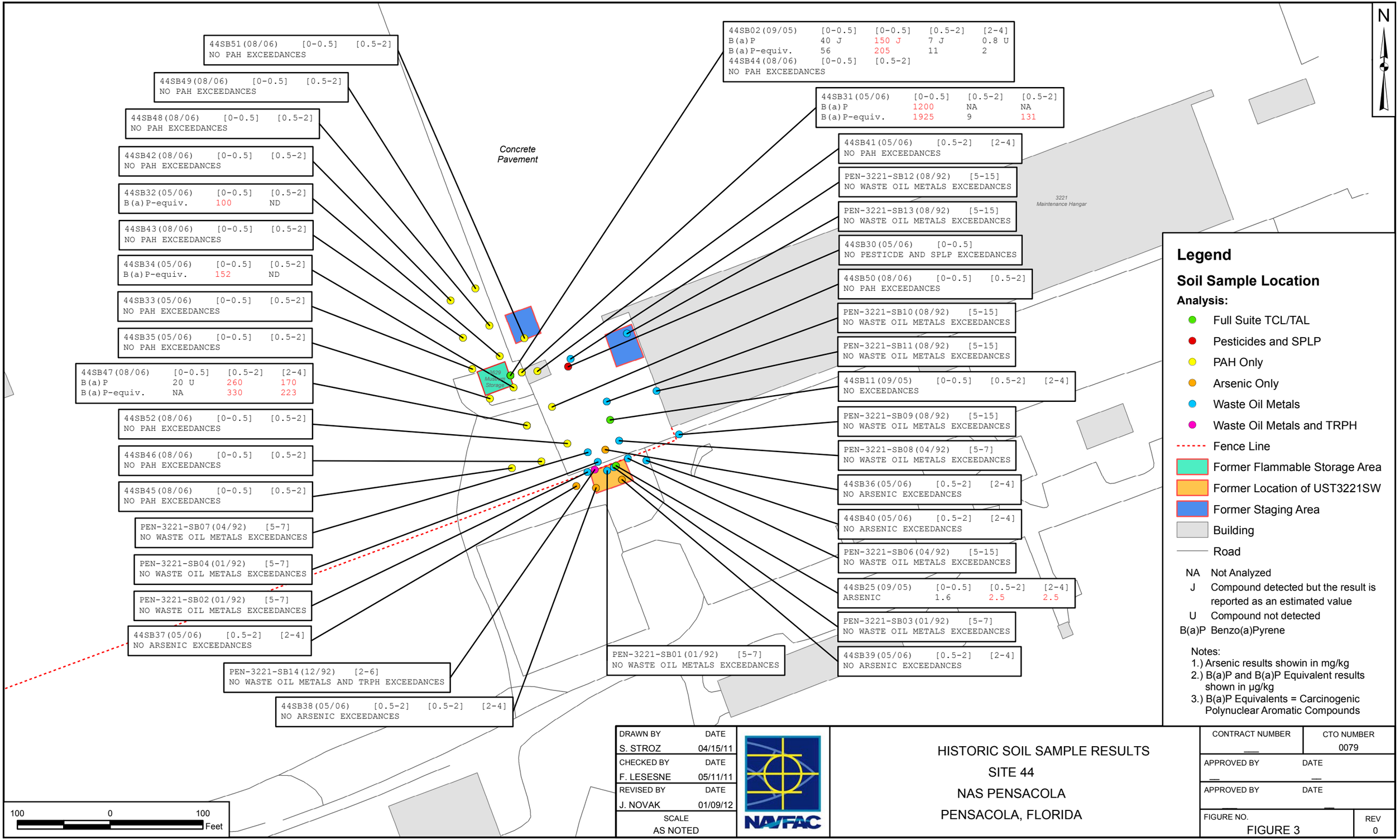

Legend

Soil Sample Location

Analysis:

- Full Suite TCL/TAL
- Pesticides and SPLP
- PAH Only
- Arsenic Only
- Waste Oil Metals
- Waste Oil Metals and TRPH
- Fence Line
- Former Flammable Storage Area
- Former Location of UST3221SW
- Former Staging Area
- Building
- Road

NA Not Analyzed
J Compound detected but the result is reported as an estimated value
U Compound not detected
B(a)P Benzo(a)Pyrene

Notes:
1.) Arsenic results showin in mg/kg
2.) B(a)P and B(a)P Equivalent results shown in µg/kg
3.) B(a)P Equivalents = Carcinogenic Polynuclear Aromatic Compounds

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S. STROZ	04/15/11
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F. LESESNE	05/11/11
REVISED BY	DATE
J. NOVAK	01/09/12
SCALE	
AS NOTED	

NAVFAC

HISTORIC SOIL SAMPLE RESULTS
SITE 44
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER	CTO NUMBER
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FIGURE NO.	REV
FIGURE 3	0

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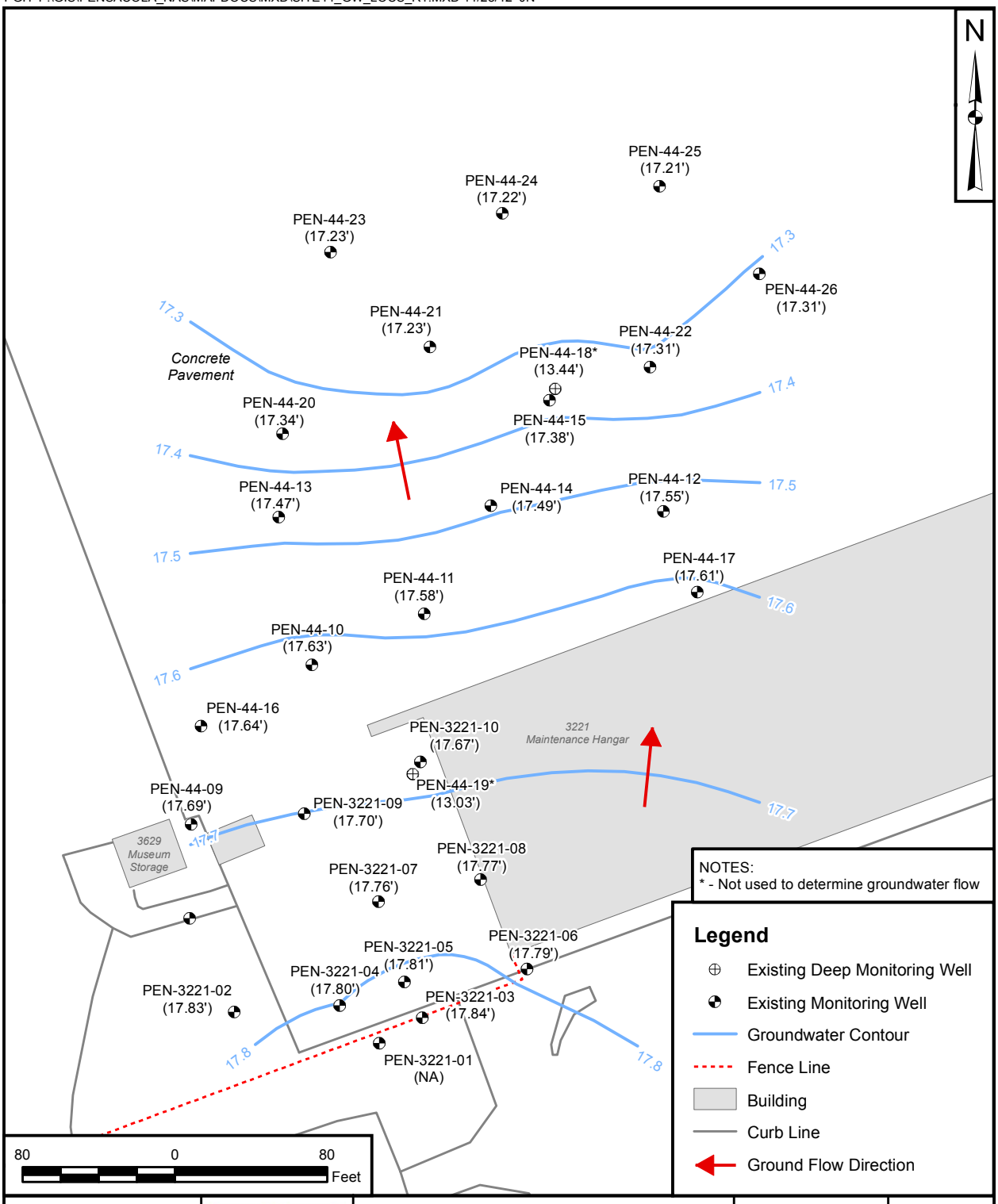

DRAWN BY	DATE		GROUNDWATER ELEVATIONS SITE 44 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER	CTO NUMBER
J. ENGLISH	12/22/10			___	0079
CHECKED BY	DATE			APPROVED BY	DATE
A. IGOE	11/28/12			___	___
REVISED BY	DATE			APPROVED BY	DATE
J. NOVAK	11/28/12			___	___
SCALE AS NOTED		NAVFAC		FIGURE NO. 4_	REV 0

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N

PEN-44-21
METALS (UG/L)
CHROMIUM 4.14 J
VOLATILES (UG/L)
CIS-1,2-DICHLOROETHENE 6.22
TRICHLOROETHENE 109

PEN-44-23
NO EXCEEDANCES

PEN-44-24
NO EXCEEDANCES

PEN-44-25
VOLATILES (UG/L)
TRICHLOROETHENE 1.66

PEN-44-26
NO EXCEEDANCES
PEN-44-26-DUP
NO EXCEEDANCES

PEN-44-18
METALS (UG/L)
IRON 1610
VOLATILES (UG/L)
CIS-1,2-DICHLOROETHENE 2.81
PEN-44-18-DUP
METALS (UG/L)
IRON 1630

PEN-44-22
VOLATILES (UG/L)
TRICHLOROETHENE 6.07

PEN-44-15
VOLATILES (UG/L)
TRICHLOROETHENE 7.93

PEN-44-20
NO EXCEEDANCES

PEN-44-14
METALS (UG/L)
CHROMIUM 3.38 J
VOLATILES (UG/L)
CIS-1,2-DICHLOROETHENE 5.58
TRICHLOROETHENE 64.2

PEN-44-13
METALS (UG/L)
ALUMINUM 554

PEN-44-12
METALS (UG/L)
ALUMINUM 408
VOLATILES (UG/L)
TRICHLOROETHENE 0.67 J

PEN-44-10
VOLATILES (UG/L)
TRICHLOROETHENE 12.7

PEN-44-17
NO EXCEEDANCES

PEN-44-16
NO EXCEEDANCES

PEN-44-11
METALS (UG/L)
ALUMINUM 364
CHROMIUM 2.71 J
VOLATILES (UG/L)
TRICHLOROETHENE 16.7

PEN-3221-09
METALS (UG/L)
ALUMINUM 390
CHROMIUM 5.75 J
HEXAVALENT CHROMIUM 4.19 J
VOLATILES (UG/L)
TRICHLOROETHENE 54.3

PEN-3221-10
METALS (UG/L)
ALUMINUM 2290
CHROMIUM 3.97 J
IRON 1020

PEN-44-09
METALS (UG/L)
ALUMINUM 559

PEN-44-19
METALS (UG/L)
IRON 997

3629
Museum
Storage

PEN-3221-08
NO EXCEEDANCES

PEN-3221-05
METALS (UG/L)
HEXAVALENT CHROMIUM 0.692 J
PEN-3221-05-DUP
METALS (UG/L)
HEXAVALENT CHROMIUM 0.656 J

PEN-3221-07
NO EXCEEDANCES

PEN-3221-04
METALS (UG/L)
NO EXCEEDANCES

PEN-3221-06
NO EXCEEDANCES

PEN-3221-03
METALS (UG/L)
ALUMINUM 400

PEN-3221-02
METALS (UG/L)
ALUMINUM 261

3221
Maintenance Hangar

Analyte	Criteria (ug/L)
Aluminum	200 (SMCL)
Chromium	2.5 (LOQ)
Cis-1,2-DCE	2.8 (Tapw ater RSL)
Hexavalent Chromium	0.031 (Tapw ater RSL)
Iron	300 (GCTL)
Trichloroethene	0.44 (Tapw ater RSL)

Notes:
1) ug/L = micrograms per liter.
2) GCTL = Groundwater Cleanup Target Level.
3) J = estimated result.
4) LOQ = Laboratory Limit of Quanitation.
5) RSL = Regional Screening Level.
6) SMCL = Secondary Maximum Concentration Level.

60 0 60 Feet

Legend
- Existing Monitoring Well
- Existing Deep Monitoring Well
- Building
- Fence Line
- Curb Line

DRAWN BY	DATE
J. ENGLISH	11/28/12
CHECKED BY	DATE
A. IGOE	11/29/12
REVISED BY	DATE
SCALE	
AS NOTED	

NAVFAC

GROUNDWATER EXCEEDANCES,
OCTOBER 2012
SITE 44
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER	CTO NUMBER
0784	079
APPROVED BY	DATE
—	—
APPROVED BY	DATE
FIGURE NO.	REV
5	0

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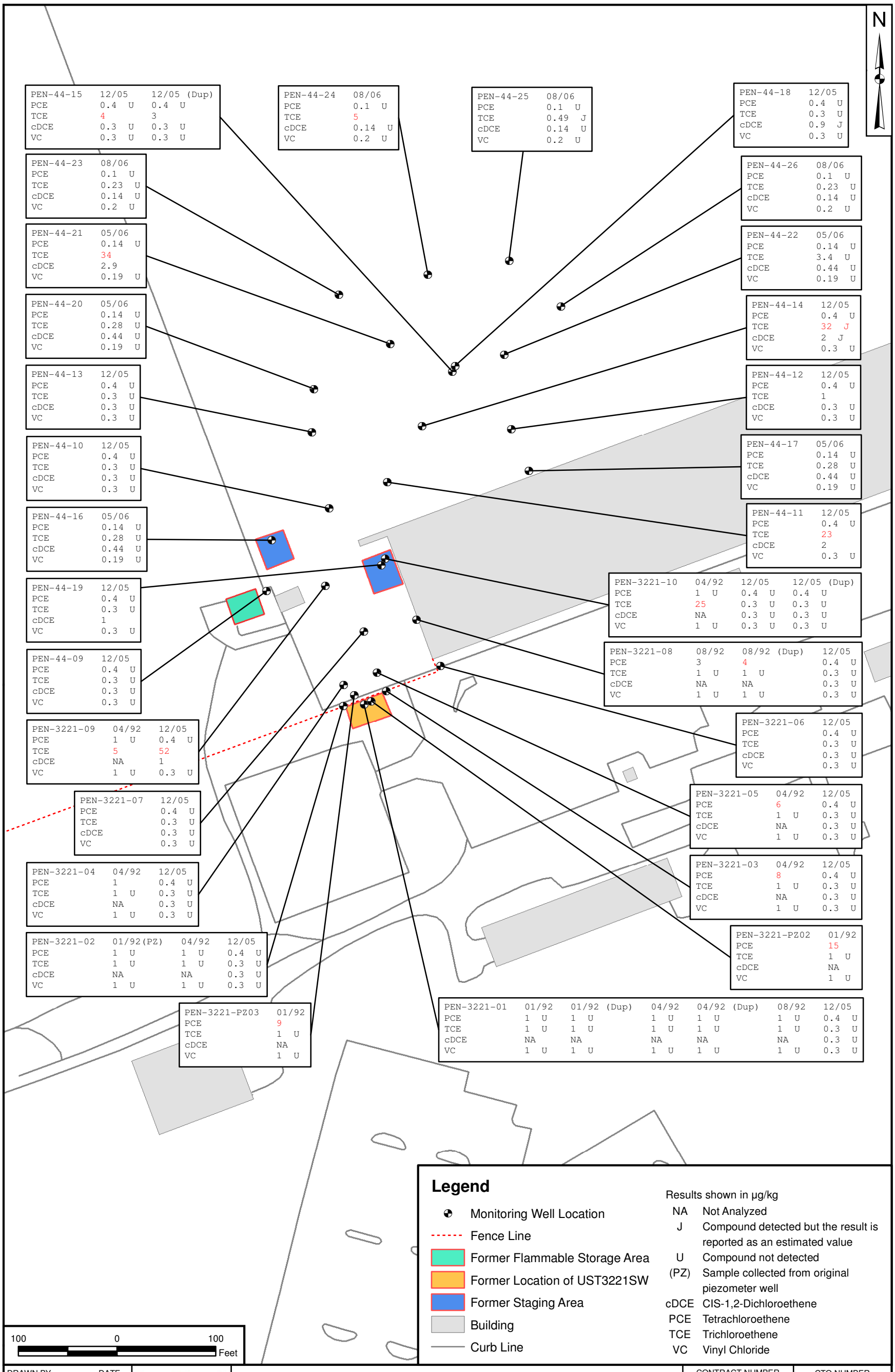

DRAWN BY / DATE	S. STROZ 04/15/11
CHECKED BY / DATE	F. LESESNE 05/02/12
REVISED BY / DATE	S. PAXTON 05/02/12
SCALE	AS NOTED

HISTORIC GROUNDWATER RESULTS
SITE 44
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER	___
CTO NUMBER	0079
APPROVED BY / DATE	___ ___
APPROVED BY / DATE	_ ___
FIGURE NO.	FIGURE 6
REV	0

TABLES

TABLE 1
SOIL SCREENING INFORMATION
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Soil Boring	Depth (Feet BLS)	FID Unfiltered (ppm)	FID Filtered (ppm)	FID Total (ppm)	Color Tec®	Visual Descprition
PEN-44-SS01	0-2	0.0	0.0	0.0	0.0	Medium to medium fine light brown sand with small amounts of organics
PEN-44-SS01	2-4	0.0	0.0	0.0	0.0	Medium to medium fine light brown sand
PEN-44-SS01	4-6	0.0	0.0	0.0	0.0	Medium to medium fine light brown to light tan sand
PEN-44-SS01	6-8	0.0	0.0	0.0	0.0	Medium to medium fine light tan sand
PEN-44-SS02	0-2	0.0	0.0	0.0	0.0	Medium fine to fine light brown sand with small amounts of organics
PEN-44-SS02	2-4	0.0	0.0	0.0	0.0	Medium to medium fine light brown sand
PEN-44-SS02	4-6	0.0	0.0	0.0	0.0	Medium to medium fine light brown sand
PEN-44-SS02	6-8	0.0	0.0	0.0	0.0	Medium to medium fine light brown to white sand
PEN-44-SS03	0-2	0.0	0.0	0.0	0.0	Medium to medium fine light brown sands with small amounts of organics
PEN-44-SS03	2-4	0.0	0.0	0.0	0.0	Medium to medium fine light brown sand
PEN-44-SS03	4-6	0.0	0.0	0.0	0.0	Medium to medium fine light tan sand
PEN-44-SS03	6-8	0.0	0.0	0.0	0.0	Medium to medium fine light brown to white sand

Notes:
FID = Flame Ionization Detector
BLS=Below Land Surface
ppm=parts per million

TABLE 2
SOIL ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION			PEN-44-SS01		PEN-44-SS02	
SAMPLE ID			PEN-44-SS01-0-2-10112012	PEN-44-SS01-6-8-10112012	PEN-44-SS02-0-2-10112012	PEN-44-SS02-6-8-10112012
SAMPLE DATE			10/11/2012	10/11/2012	10/11/2012	10/11/2012
SAMPLE COLLECTION DEPTH (FT BLS)			0-2	6-8	0-2	6-8
	PAL	PAL REFERENCE				
METALS (MG/KG)						
ALUMINUM	2300	USEPA Protection of Groundwater	1140 J	380 J	3850 J	357 J
ARSENIC	2	LOQ*	0.584 U	0.615 U	0.698 J	0.644 U
BARIUM	82	USEPA Protection of Groundwater	1.93 J	1.02 U	12.1	1.07 U
CADMIUM	0.38	USEPA Protection of Groundwater	0.218 J	0.205 U	2.89	0.215 U
CALCIUM	NC	None	343 J	205 UJ	2210 J	215 UJ
CHROMIUM	2	LOQ*	1.83 J	0.742 J	31.8	3.87
HEXAVALENT CHROMIUM	0.4	LOQ*	0.11 U	NA	3.84	NA
COPPER	150	FDEP Residential SCTL	0.778 U	0.82 U	5.38	0.859 U
IRON	270	USEPA Protection of Groundwater	694 J	269 J	2300 J	177 J
LEAD	14	USEPA Protection of Groundwater	3.67 J	0.901 J	30.3 J	2.12 J
MANGANESE	180	USEPA RSL	3.39 J	1.47 J	18.8 J	1.27 J
MERCURY	0.033	USEPA Protection of Groundwater	0.0148 U	0.0155 U	0.0179 J	0.014 U
NICKEL	20	USEPA Protection of Groundwater	0.584 U	0.615 U	1.29 J	0.644 U
VANADIUM	78	USEPA Protection of Groundwater	1.51 J	1.02 U	5.22	1.07 U
ZINC	290	USEPA Protection of Groundwater	4.06	2.62 J	56.1	4.09 J
MISCELLANEOUS PARAMETERS (%)						
TOTAL SOLIDS	NC	NA	98.3	NA	96.3	NA
MISCELLANEOUS PARAMETERS (MV)						
OXIDATION REDUCTION POTENTIAL	NC	NA	442	NA	487	NA
MISCELLANEOUS PARAMETERS (S.U.)						
PH	NC	NA	8.12	NA	7.99	NA
PCBS (UG/KG)						
AROCLOR-1254	8.8	USEPA Protection of Groundwater	4.07 U	4.15 U	4.15 U	4.18 U
AROCLOR-1260	24	USEPA Protection of Groundwater	4.07 U	4.15 U	21.7	4.18 U
TOTAL AROCLOR	500	FDEP Residential SCTL	0 U	0 U	21.7	0 U
PESTICIDES (UG/KG)						
4,4'-DDD	66	USEPA Protection of Groundwater	0.165 U	0.168 U	0.312 J	0.169 U
4,4'-DDE	46	USEPA Protection of Groundwater	0.165 U	0.168 U	0.475	0.169 U
4,4'-DDT	67	USEPA Protection of Groundwater	0.165 U	0.168 U	1.2	0.169 U
ALPHA-CHLORDANE	1.8	USEPA Protection of Groundwater	0.107 U	0.109 U	0.915	0.109 U
DIELDRIN	0.67	USEPA Protection of Groundwater	0.165 U	0.168 U	0.356 J	0.169 U
ENDOSULFAN II	1100	USEPA Protection of Groundwater	0.432 J	0.168 U	3.43	0.329 J
ENDRIN	68	USEPA Protection of Groundwater	0.267 J	0.168 U	0.168 U	0.169 U
ENDRIN ALDEHYDE	68	USEPA Protection of Groundwater	0.165 U	0.168 U	0.168 U	0.169 U
GAMMA-BHC (LINDANE)	0.21	USEPA Protection of Groundwater	0.306 J	0.109 U	0.109 U	0.109 U
GAMMA-CHLORDANE	1.8	USEPA Protection of Groundwater	1.06	1.24	4.86	1.06
METHOXYCHLOR	1500	USEPA Protection of Groundwater	0.107 U	0.109 U	0.109 U	0.109 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)						
BAP EQUIVALENT	100	FDEP Residential SCTL	14.72	1.71 U	89	4.778
BENZO(A)PYRENE	3.5	USEPA Protection of Groundwater	13.1	1.71 U	78.2	4.17 J
BENZO(B)FLUORANTHENE	35	USEPA Protection of Groundwater	16.2	1.71 U	108	6.08 J
SEMIVOLATILES (UG/KG)						
BENZO(G,H,I)PERYLENE	2500000	FDEP Residential SCTL	82.9 U	85.1 U	144 J	83.4 U
BENZO(K)FLUORANTHENE	350	USEPA Protection of Groundwater	82.9 U	85.1 U	108 J	83.4 U
INDENO(1,2,3-CD)PYRENE	120	USEPA Protection of Groundwater	82.9 U	85.1 U	98 J	83.4 U
VOLATILES (UG/KG)						
2-BUTANONE	1000	USEPA Protection of Groundwater	3.07 J	2.54 U	2.43 J	2.42 U
ACETONE	2400	USEPA Protection of Groundwater	15.5 J	5.07 UJ	20.9 J	9.56 J
METHYLENE CHLORIDE	2.5	USEPA Protection of Groundwater	2.73 UJ	2.54 UJ	2.39 UJ	3 J

Notes:
*=Persuant to the Uniform Federal Policy Sampling and Analysis Plan the Project Action Limit is less that the Detection Limit; therefore the Partnering Team agreed to replace the PAL with the Limit of Quantitation (LOQ) for decision making purposes. The LOQ is presented as the criteria in the table.
U = analyte was not detected
J = analytes concentration is estimated
FT BL S= Feet Below Land Surface
mg/kg = milligram per Kilogram
ug/Kg = microgram per Kilogram
NA = Not analyzed
PAL = Project Action Limit
USEPA = United States Environmental Protection Agency
RSL = Residential Screening Level per USEPA Regional Screening Levels (May 2012)
FDEP = Florida Department of Environmental Protection
SCTL = Soil Cleanup Target Level per Florida Chapter 62-777, Florida Administrative Code
Shaded Cell = exceedance of the analytes PAL

TABLE 2
SOIL ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION			PEN-44-SS03			
SAMPLE ID			PEN-44-SS03-0-2-10112012	FD10111201	PEN-44-SS03-6-8-10112012	FD10111202
SAMPLE DATE			10/11/2012	10/11/2012	10/11/2012	10/11/2012
SAMPLE COLLECTION DEPTH (FT BLS)			0-2	0-2	6-8	6-8
	PAL	PAL REFERENCE		Duplicate Sample		Duplicate Sample
METALS (MG/KG)						
ALUMINUM	2300	USEPA Protection of Groundwater	2150 J	NA	248 J	1230 J
ARSENIC	2	LOQ*	0.643 U	NA	0.664 U	0.622 U
BARIUM	82	USEPA Protection of Groundwater	3.74 J	NA	1.11 U	2.25 J
CADMIUM	0.38	USEPA Protection of Groundwater	0.628 J	NA	0.221 U	0.328 J
CALCIUM	NC	None	1020 J	NA	221 UJ	5470 J
CHROMIUM	2	LOQ*	3.16	NA	0.5 J	2.76
HEXAVALENT CHROMIUM	0.4	LOQ*	0.11 U	0.4	NA	NA
COPPER	150	FDEP Residential SCTL	1.95 J	NA	0.885 U	1.95 J
IRON	270	USEPA Protection of Groundwater	994 J	NA	87.8 J	1030 J
LEAD	14	USEPA Protection of Groundwater	6.65 J	NA	0.458 J	5.85 J
MANGANESE	180	USEPA RSL	5.38 J	NA	0.664 UJ	15.6 J
MERCURY	0.033	USEPA Protection of Groundwater	0.0149 J	NA	0.0143 U	0.0148 U
NICKEL	20	USEPA Protection of Groundwater	0.648 J	NA	0.664 U	1.96 J
VANADIUM	78	USEPA Protection of Groundwater	2.46 J	NA	1.11 U	1.85 J
ZINC	290	USEPA Protection of Groundwater	7.91	NA	1.11 U	13.6
MISCELLANEOUS PARAMETERS (%)						
TOTAL SOLIDS	NC	NA	96.9	97.7	NA	NA
MISCELLANEOUS PARAMETERS (MV)						
OXIDATION REDUCTION POTENTIAL	NC	NA	457	450	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)						
PH	NC	NA	8.2	8.21	NA	NA
PCBS (UG/KG)						
AROCLOR-1254	8.8	USEPA Protection of Groundwater	24.1	NA	4.16 U	4.09 U
AROCLOR-1260	24	USEPA Protection of Groundwater	20.8	NA	4.16 U	4.09 U
TOTAL AROCLOR	500	FDEP Residential SCTL	44.9	NA	0 U	0 U
PESTICIDES (UG/KG)						
4,4'-DDD	66	USEPA Protection of Groundwater	0.489 J	NA	0.168 U	0.944
4,4'-DDE	46	USEPA Protection of Groundwater	0.167 U	NA	0.168 U	0.166 U
4,4'-DDT	67	USEPA Protection of Groundwater	0.167 U	NA	0.168 U	0.166 U
ALPHA-CHLORDANE	1.8	USEPA Protection of Groundwater	1.06	NA	0.109 U	0.107 U
DIELDRIN	0.67	USEPA Protection of Groundwater	1.46	NA	0.168 U	0.166 U
ENDOSULFAN II	1100	USEPA Protection of Groundwater	0.169 J	NA	0.168 U	1.21
ENDRIN	68	USEPA Protection of Groundwater	0.167 U	NA	0.243 J	0.166 U
ENDRIN ALDEHYDE	68	USEPA Protection of Groundwater	0.917	NA	0.168 U	0.166 U
GAMMA-BHC (LINDANE)	0.21	USEPA Protection of Groundwater	0.108 U	NA	0.109 U	0.789
GAMMA-CHLORDANE	1.8	USEPA Protection of Groundwater	4.35	NA	0.68	0.328 J
METHOXYCHLOR	1500	USEPA Protection of Groundwater	0.146 J	NA	0.109 U	0.107 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/KG)						
BAP EQUIVALENT	100	FDEP Residential SCTL	1.68 U	NA	1.64 U	7.364
BENZO(A)PYRENE	3.5	USEPA Protection of Groundwater	1.68 U	NA	1.64 U	6.78
BENZO(B)FLUORANTHENE	35	USEPA Protection of Groundwater	1.68 U	NA	1.64 U	5.84 J
SEMIVOLATILES (UG/KG)						
BENZO(G,H,I)PERYLENE	2500000	FDEP Residential SCTL	84 U	NA	81.9 U	81.1 U
BENZO(K)FLUORANTHENE	350	USEPA Protection of Groundwater	84 U	NA	81.9 U	81.1 U
INDENO(1,2,3-CD)PYRENE	120	USEPA Protection of Groundwater	84 U	NA	81.9 U	81.1 U
VOLATILES (UG/KG)						
2-BUTANONE	1000	USEPA Protection of Groundwater	3.73 J	NA	2.54 U	3.05 J
ACETONE	2400	USEPA Protection of Groundwater	20.8 J	NA	5.08 UJ	21.7 J
METHYLENE CHLORIDE	2.5	USEPA Protection of Groundwater	2.49 UJ	NA	2.54 UJ	2.46 UJ

Notes:
*=Persuant to the Uniform Federal Policy Sampling and Analysis Plan the Project Action Limit is less that the Partnering Team agreed to replace the PAL with the Limit of Quantitation (LOQ) for decision making purpose criteria in the table.
U = analyte was not detected
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USEPA = United States Environmental Protection Agency
RSL = Residential Screening Level per USEPA Regional Screening Levels (May 2012)
FDEP = Florida Department of Environmental Protection
SCTL = Soil Cleanup Target Level per Florida Chapter 62-777, Florida Administrative Code
Shaded Cell = exceedance of the analytes PAL

TABLE 3
GROUNDWATER LEVEL MEASUREMENT
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Well ID	Date	Top of Casing (Elevation, feet)	Total Depth (Feet below land surface)	Water Level (Feet below top of casing)	Groundwater Elevation (feet)
PEN-44-3221-01	10/16/2012	24.61	NA	NA	NA
PEN-44-3221-02	10/16/2012	24.49	14.33	6.66	17.83
PEN-44-3221-03	10/16/2012	24.89	14.95	7.05	17.84
PEN-44-3221-04	10/16/2012	24.42	14.93	6.62	17.80
PEN-44-3221-05	10/16/2012	24.82	14.62	7.01	17.81
PEN-44-3221-06	10/16/2012	25.21	14.53	7.42	17.79
PEN-44-3221-07	10/16/2012	24.81	14.65	7.05	17.76
PEN-44-3221-08	10/16/2012	25.41	14.50	7.64	17.77
PEN-44-3221-09	10/16/2012	25.00	14.40	7.30	17.70
PEN-44-3221-10	10/16/2012	25.44	14.25	7.77	17.67
PEN-44-09	10/16/2012	24.66	13.60	6.97	17.69
PEN-44-10	10/16/2012	25.26	13.76	7.63	17.63
PEN-44-11	10/16/2012	25.18	13.65	7.60	17.58
PEN-44-12	10/16/2012	25.08	13.55	7.53	17.55
PEN-44-13	10/16/2012	24.44	13.57	6.97	17.47
PEN-44-14	10/16/2012	24.84	13.59	7.35	17.49
PEN-44-15	10/16/2012	24.54	12.75	7.16	17.38
PEN-44-16	10/16/2012	25.37	13.10	7.73	17.64
PEN-44-17	10/16/2012	25.49	13.60	7.88	17.61
PEN-44-18	10/16/2012	24.48	74.65	11.04	13.44
PEN-44-19	10/16/2012	25.37	74.40	12.34	13.03
PEN-44-20	10/16/2012	24.04	13.68	6.70	17.34
PEN-44-21	10/16/2012	23.96	13.21	6.73	17.23
PEN-44-22	10/16/2012	24.13	13.60	6.82	17.31
PEN-44-23	10/16/2012	23.28	14.70	6.05	17.23
PEN-44-24	10/16/2012	23.62	14.30	6.40	17.22
PEN-44-25	10/16/2012	23.31	14.61	6.10	17.21
PEN-44-26	10/16/2012	24.04	13.33	6.73	17.31

TABLE 4
GROUNDWATER PARAMETERS
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Well ID	Sample Date	pH (SU)	Temperature (°C)	Conductivty (µS/cm)	Dissolved Oxygen (%, mg/L)	Turbidity (NTUs)	ORP (Milivolts)
PEN-44-09	10/11/2012	6.94	26.1	200.0	38.6%, 3.13	7.02	100.2
PEN-44-10	10/12/2012	7.01	27.5	226.7	29.5%, 2.19	8.16	156.0
PEN-44-11	10/12/2012	7.16	28.5	341.0	40.9%, 3.09	3.07	-18.4
PEN-44-12	10/12/2013	6.87	24.2	231.0	30.7%, 2.23	3.89	-90.0
PEN-44-13	10/12/2012	6.69	29.4	206.8	17.3%,1.32	5.54	64.3
PEN-44-14	10/12/2012	6.87	29.5	354.0	16.7%, 1.28	5.65	53.4
PEN-44-15	10/15/2012	7.29	30.3	142.5	30.6%, 2.29	5.09	-64.6
PEN-44-16	10/14/2012	6.60	28.39	185.0	50.8%,3.90	15.8	156.8
PEN-44-17	10/14/2012	6.56	25.59	186.0	14.1%, 1.17	3.00	163.1
PEN-44-18	10/15/2012	6.67	26.2	209.2	2.1%, 0.17	0.91	-124.2
PEN-44-19	10/12/2012	7.48	24.9	332.1	4.0%, 0.33	3.71	-128.7
PEN-44-20	10/14/2012	6.35	29.44	229.0	46.8%, 3.56	2.71	187.0
PEN-44-21	10/15/2012	6.70	30.82	284.0	48.1%, 3.60	0.8	179.5
PEN-44-22	10/15/2012	7.21	28.7	231.8	35.8%, 2.76	1.55	-55.4
PEN-44-23	10/15/2012	5.59	29.91	74.0	18.9%, 1.49	7.12	179.0
PEN-44-24	10/15/2012	7.09	28.59	175.0	79.7%, 6.17	0.6	218.3
PEN-44-25	10/12/2012	7.32	29.29	160.0	89.3%, 6.82	0.62	292.5
PEN-44-26	10/14/2012	7.08	30.71	255.0	77.8%, 5.76	1.01	202.4
PEN-3221-02	10/16/2012	6.46	27.47	146.0	59.1%, 4.67	4.66	106.3
PEN-3221-03	10/16/2012	6.50	27.52	213.0	37.2%, 2.92	5.06	108.9
PEN-3221-04	10/14/2012	6.94	28.5	256.3	21.4%, 1.65	1.58	59.8
PEN-3221-05	10/16/2012	6.37	26.17	207.0	31.8%, 2.60	2.41	27.6
PEN-3221-06	10/14/2012	6.87	29.77	201.0	38.6%, 2.91	1.68	124.3
PEN-3221-07	10/11/2012	6.89	28.8	254.3	15.3%, 1.18	6.78	109.1
PEN-3221-08	10/14/2012	6.81	28.4	187.8	12.7%, 0.98	3.08	-4.5
PEN-3221-09	10/11/2012	6.99	28.8	292.0	40.7%, 3.20	4.37	70.1
PEN-3221-10	10/12/2012	7.04	26.9	245.7	26.3%, 2.10	16.1	7.9
PEN-3221-10	10/16/2012	7.16	26.2	233.6	41.8%, 3.48	24.1	23.7

Notes:
SU=Standard Units
°C = Degrees Centigrade
µS/cm=microSiemens per centimeter
% = percent
mg/L=milligram per Liter
NTU=nephelometric turbidity units

TABLE 5
GROUNDWATER ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION SAMPLE ID SAMPLE DATE	PAL (ug/L)	PAL Reference	PEN-3221-02 PEN-3221-02-10162012 10/16/2012	 FD10161202 10/16/2012 Duplicate Sample	PEN-3221-03 PEN-3221-03_10162012 10/16/20102
TURBIDITY (NTUS)			4.66		5.06
METALS (UG/L)					
ALUMINUM	200	SMCL	261	NA	400
BARIUM	290	Tapwater RSL	6.87 J	NA	6.95 J
CALCIUM	NC	None	40900	NA	36100
CHROMIUM	2.5	LOQ*	2 U	NA	2.35 J
HEXAVALENT CHROMIUM	0.031	Tapwater RSL	NA	NA	NA
IRON	300	SMCL	261	NA	232
MAGNESIUM	NC	None	1360 J	NA	1610 J
MANGANESE	32	Tapwater RSL	3 U	NA	4.72 J
POTASSIUM	NC	None	1000 U	NA	1000 U
SODIUM	160,000	SMCL	7040	NA	5440
ZINC	470	Tapwater RSL	5 U	NA	5 U
MISCELLANEOUS PARAMETERS (MV)					
OXIDATION REDUCTION POTENTIAL	NC	NA	455	500	511
MISCELLANEOUS PARAMETERS (S.U.)					
PH	NC	NA	6.89	6.89	6.9
PESTICIDES (UG/L)					
GAMMA-CHLORDANE	0.027	Tapwater RSL	0.00474 J	NA	0.00306 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)					
1,4-DIOXANE	0.67	Tapwater RSL	0.463 U	NA	0.463 U
VOLATILES (UG/L)					
1,1-DICHLOROETHANE	2.4	Tapwater RSL	0.25 U	NA	0.25 U
CIS-1,2-DICHLOROETHENE	2.8	Tapwater RSL	0.25 U	NA	0.25 U
TRICHLOROETHENE	0.44	Tapwater RSL	0.25 U	NA	0.25 U

Notes:
*=Persuant to the Uniform Federal Policy Sampling and Analysis Plan the Project Action Limit is less that the Detection Limit;
therefore the Partnering Team agreed to replace the PAL with the Limit of Quantitation (LOQ) for decision making purposes.
U = analyte was not detected
J = analytes concentaration is estimated
LOQ = Limit of Quantitation
NA = Not applicable
NC=No Criteria
PAL = Project Action Limit
Tapwater RSL = USEPA Regional Screening Level (May 2012)
SMCL = Secondary Maximum Contaminant Limit per the Federal Safe Drinking Water Act and Florida Chapter 62-550, Florida Administrative Code
U=Non Detect
ug/L = Micrograms per Liter
shaded cell = exceedance of PAL

TABLE 5
GROUNDWATER ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION	PAL (ug/L)	PAL Reference	PEN-3221-04	PEN-3221-05		PEN-3221-06	PEN-3221-07
SAMPLE ID			PEN-3221-04-10142012	PEN-3221-05-10162012	FD10161201	PEN-3221-06-10142012	PEN-3221-07-10112012
SAMPLE DATE			10/14/2012	10/16/2012	10/16/2012	10/14/2012	10/11/2012
					Duplicate Sample		
TURBIDITY (NTUS)			1.58	2.41		1.68	6.78
METALS (UG/L)							
ALUMINUM	200	SMCL	88.5 J	NA	NA	118 J	NA
BARIUM	290	Tapwater RSL	7.2 J	NA	NA	5 U	NA
CALCIUM	NC	None	42100	NA	NA	36200	NA
CHROMIUM	2.5	LOQ*	2.19 J	NA	NA	2 U	NA
HEXAVALENT CHROMIUM	0.031	Tapwater RSL	NA	0.692 J	0.656 J	NA	NA
IRON	300	SMCL	37.1 J	NA	NA	41.6 J	NA
MAGNESIUM	NC	None	1550 J	NA	NA	1170 J	NA
MANGANESE	32	Tapwater RSL	3 U	NA	NA	3 U	NA
POTASSIUM	NC	None	1000 U	NA	NA	1000 U	NA
SODIUM	160,000	SMCL	5070	NA	NA	3790 J	NA
ZINC	470	Tapwater RSL	5 U	NA	NA	5 U	NA
MISCELLANEOUS PARAMETERS (MV)							
OXIDATION REDUCTION POTENTIAL	NC	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)							
PH	NC	NA	NA	NA	NA	NA	NA
PESTICIDES (UG/L)							
GAMMA-CHLORDANE	0.027	Tapwater RSL	0.00557 U	NA	NA	0.005 U	NA
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)							
1,4-DIOXANE	0.67	Tapwater RSL	0.463 U	NA	NA	0.463 U	NA
VOLATILES (UG/L)							
1,1-DICHLOROETHANE	2.4	Tapwater RSL	0.25 U	NA	NA	0.25 U	NA
CIS-1,2-DICHLOROETHENE	2.8	Tapwater RSL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
TRICHLOROETHENE	0.44	Tapwater RSL	0.25 U	0.25 U	0.25 U	0.25 U	0.26 J

Notes:
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PAL = Project Action Limit
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ug/L = Micrograms per Liter
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TABLE 5
GROUNDWATER ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION SAMPLE ID SAMPLE DATE	PAL (ug/L)	PAL Reference	**PEN-3221-08** **PEN-3221-08-10142012** **10/14/2012**	**PEN-3221-09** **PEN-3221-09-10/11/2012** **10/11/2012**	**PEN-3221-10** **PEN-3221-10-10162012** **10/16/2012**	**PEN-44-09** **PEN-44-09-10112012** **10/11/2012**	**PEN-44-10** **PEN-44-10-10122012** **10/12/2012**
TURBIDITY (NTUS)			3.08	4.37	24.1	7.02	8.16
METALS (UG/L)							
ALUMINUM	200	SMCL	129 J	390	2290	559	NA
BARIUM	290	Tapwater RSL	5.56 J	5 U	5.23 J	5 U	NA
CALCIUM	NC	None	31200	31700	33000	34200	NA
CHROMIUM	2.5	LOQ*	2 U	5.75 J	3.97 J	2 U	NA
HEXAVALENT CHROMIUM	0.031	Tapwater RSL	NA	4.19 J	NA	NA	NA
IRON	300	SMCL	105	164	1020	224	NA
MAGNESIUM	NC	None	1030 J	3980 J	1360 J	2580 J	NA
MANGANESE	32	Tapwater RSL	3 U	3 U	3 U	3 U	NA
POTASSIUM	NC	None	1000 U	1000 U	1000 U	1000 U	NA
SODIUM	160,000	SMCL	5610	20700	4930 J	6430	NA
ZINC	470	Tapwater RSL	5 U	5 U	5 U	14 J	NA
MISCELLANEOUS PARAMETERS (MV)							
OXIDATION REDUCTION POTENTIAL	NC	NA	NA	NA	NA	454	NA
MISCELLANEOUS PARAMETERS (S.U.)							
PH	NC	NA	NA	NA	NA	6.79	NA
PESTICIDES (UG/L)							
GAMMA-CHLORDANE	0.027	Tapwater RSL	0.00811 U	0.00306 U	0.00306 U	0.00311 U	NA
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)							
1,4-DIOXANE	0.67	Tapwater RSL	0.463 U	0.472 UJ	0.463 UJ	0.463 UJ	NA
VOLATILES (UG/L)							
1,1-DICHLOROETHANE	2.4	Tapwater RSL	0.25 U	0.25 U	0.25 U	0.25 U	NA
CIS-1,2-DICHLOROETHENE	2.8	Tapwater RSL	0.25 UJ	2.31	0.25 U	0.25 U	0.44 J
TRICHLOROETHENE	0.44	Tapwater RSL	0.25 U	54.3	0.3 J	0.25 U	12.7

Notes:
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PAL = Project Action Limit
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ug/L = Micrograms per Liter
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TABLE 5
GROUNDWATER ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION			PEN-44-11	PEN-44-12	PEN-44-13	PEN-44-14	PEN-44-15
SAMPLE ID	PAL	PAL Reference	PEN-44-11-10122012	PEN-44-12-10122012	PEN-44-13-10122012	PEN-44-14-10122012	PEN-44-15-10152012
SAMPLE DATE	(ug/L)		10/12/2012	10/12/2012	10/12/2012	10/12/2012	10/15/2012
TURBIDITY (NTUS)			3.07	3.89	5.54	6.65	5.09
METALS (UG/L)							
ALUMINUM	200	SMCL	364	408	554	149 J	195 J
BARIUM	290	Tapwater RSL	5 U	5 U	5 U	5 U	5 U
CALCIUM	NC	None	43400	31200	27800	31500	28500
CHROMIUM	2.5	LOQ*	2.71 J	2 U	2 U	3.38 J	2 U
HEXAVALENT CHROMIUM	0.031	Tapwater RSL	NA	NA	NA	NA	NA
IRON	300	SMCL	94 J	87 J	164	52.2 J	38.7 J
MAGNESIUM	NC	None	2090 J	1410 J	1650 J	1200 J	1320 J
MANGANESE	32	Tapwater RSL	3 U	3 U	7.76 J	3 U	3 U
POTASSIUM	NC	None	1000 U	1000 U	1000 U	1000 U	1000 U
SODIUM	160,000	SMCL	15800	8880	4570 J	29100	11500
ZINC	470	Tapwater RSL	5 U	5 U	5 U	5 U	5 U
MISCELLANEOUS PARAMETERS (MV)							
OXIDATION REDUCTION POTENTIAL	NC	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)							
PH	NC	NA	NA	NA	NA	NA	NA
PESTICIDES (UG/L)							
GAMMA-CHLORDANE	0.027	Tapwater RSL	0.00311 U	0.00306 U	0.00311 U	0.00306 U	0.00317 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)							
1,4-DIOXANE	0.67	Tapwater RSL	0.472 UJ	0.463 UJ	0.463 UJ	0.463 UJ	0.463 U
VOLATILES (UG/L)							
1,1-DICHLOROETHANE	2.4	Tapwater RSL	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
CIS-1,2-DICHLOROETHENE	2.8	Tapwater RSL	1.71	0.25 U	0.25 U	5.58	0.77 J
TRICHLOROETHENE	0.44	Tapwater RSL	16.7	0.67 J	0.25 U	64.2	7.93

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NC=No Criteria
PAL = Project Action Limit
Tapwater RSL = USEPA Regional Screening Level (May 2012)
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U=Non Detect
ug/L = Micrograms per Liter
shaded cell = exceedance of PAL

TABLE 5
GROUNDWATER ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION			PEN-44-16	PEN-44-17	PEN-44-18		PEN-44-19
SAMPLE ID	PAL	PAL Reference	PEN-44-16-10142012	PEN-44-17-10/14/2012	PEN-44-18-10152012	FD10151201	PEN-44-19-10122012
SAMPLE DATE	(ug/L)		10/14/2012	10/14/2012	10/15/2012	10/15/2012	10/12/2012
						Duplicate Sample	
TURBIDITY (NTUS)			15.8	3	0.91		3.71
METALS (UG/L)							
ALUMINUM	200	SMCL	NA	NA	50 U	50 U	71.2 J
BARIUM	290	Tapwater RSL	NA	NA	14.3 J	14.2 J	8.28 J
CALCIUM	NC	None	NA	NA	24900	24600	39100
CHROMIUM	2.5	LOQ*	NA	NA	2 U	2 U	2 U
HEXAVALENT CHROMIUM	0.031	Tapwater RSL	NA	NA	NA	NA	NA
IRON	300	SMCL	NA	NA	1610	1630	997
MAGNESIUM	NC	None	NA	NA	2880 J	2880 J	4680 J
MANGANESE	32	Tapwater RSL	NA	NA	24.1	23.4	30.2
POTASSIUM	NC	None	NA	NA	1000 U	1000 U	1210 J
SODIUM	160,000	SMCL	NA	NA	8300	8360	6540
ZINC	470	Tapwater RSL	NA	NA	5 U	5 U	5 U
MISCELLANEOUS PARAMETERS (MV)							
OXIDATION REDUCTION POTENTIAL	NC	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)							
PH	NC	NA	NA	NA	NA	NA	NA
PESTICIDES (UG/L)							
GAMMA-CHLORDANE	0.027	Tapwater RSL	NA	NA	0.00308 U	0.0054 U	0.00311 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)							
1,4-DIOXANE	0.67	Tapwater RSL	NA	NA	0.635 J	0.598 J	0.472 UJ
VOLATILES (UG/L)							
1,1-DICHLOROETHANE	2.4	Tapwater RSL	NA	NA	1.07	1.16	0.46 J
CIS-1,2-DICHLOROETHENE	2.8	Tapwater RSL	0.25 U	0.25 U	2.81	2.56 J	1.12
TRICHLOROETHENE	0.44	Tapwater RSL	0.25 U	0.25 U	0.37 J	0.39 J	0.25 U

Notes:
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LOQ = Limit of Quantitation
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NC=No Criteria
PAL = Project Action Limit
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U=Non Detect
ug/L = Micrograms per Liter
shaded cell = exceedance of PAL

TABLE 5
GROUNDWATER ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION SAMPLE ID SAMPLE DATE	PAL (ug/L)	PAL Reference	**PEN-44-20** **PEN-44-20-10142012** **10/14/2012**	**PEN-44-21** **PEN-44-21-10152012** **10/15/2012**	**PEN-44-22** **PEN-44-22-10152012** **10/15/2012**	**PEN-44-23** **PEN-44-23-10152012** **10/15/2012**	**PEN-44-24** **PEN-44-24-10152012** **10/15/2012**
TURBIDITY (NTUS)			2.71	0.8	1.55	7.12	0.6
METALS (UG/L)							
ALUMINUM	200	SMCL	NA	82.9 J	NA	NA	67.4 J
BARIUM	290	Tapwater RSL	NA	5 U	NA	NA	5 U
CALCIUM	NC	None	NA	40200	NA	NA	37900
CHROMIUM	2.5	LOQ*	NA	4.14 J	NA	NA	2 U
HEXAVALENT CHROMIUM	0.031	Tapwater RSL	NA	NA	NA	NA	NA
IRON	300	SMCL	NA	30 U	NA	NA	30 U
MAGNESIUM	NC	None	NA	1720 J	NA	NA	1000 U
MANGANESE	32	Tapwater RSL	NA	3 U	NA	NA	3 U
POTASSIUM	NC	None	NA	1080 J	NA	NA	1000 U
SODIUM	160,000	SMCL	NA	32200	NA	NA	6310
ZINC	470	Tapwater RSL	NA	5 U	NA	NA	5 U
MISCELLANEOUS PARAMETERS (MV)							
OXIDATION REDUCTION POTENTIAL	NC	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)							
PH	NC	NA	NA	NA	NA	NA	NA
PESTICIDES (UG/L)							
GAMMA-CHLORDANE	0.027	Tapwater RSL	NA	0.00484 U	NA	NA	0.00504 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)							
1,4-DIOXANE	0.67	Tapwater RSL	NA	0.463 U	NA	NA	0.463 U
VOLATILES (UG/L)							
1,1-DICHLOROETHANE	2.4	Tapwater RSL	NA	0.5 U	NA	NA	0.25 U
CIS-1,2-DICHLOROETHENE	2.8	Tapwater RSL	0.25 U	6.22	0.32 J	0.25 U	0.25 U
TRICHLOROETHENE	0.44	Tapwater RSL	0.25 U	109	6.07	0.25 U	0.42 J

Notes:
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LOQ = Limit of Quantitation
NA = Not applicable
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PAL = Project Action Limit
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ug/L = Micrograms per Liter
shaded cell = exceedance of PAL

TABLE 5
GROUNDWATER ANALYTICAL DETECTIONS AND EXCEEDANCES
SITE 44
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

LOCATION			PEN-44-25	PEN-44-26	
SAMPLE ID	PAL	PAL Reference	PEN-44-25-10152012	PEN-44-26-10142012	FD10141201
SAMPLE DATE	(ug/L)		10/15/2012	10/14/2012	10/14/2012
					Duplicate Sample
TURBIDITY (NTUS)			0.62	1.01	
METALS (UG/L)					
ALUMINUM	200	SMCL	NA	NA	NA
BARIUM	290	Tapwater RSL	NA	NA	NA
CALCIUM	NC	None	NA	NA	NA
CHROMIUM	2.5	LOQ*	NA	NA	NA
HEXAVALENT CHROMIUM	0.031	Tapwater RSL	NA	NA	NA
IRON	300	SMCL	NA	NA	NA
MAGNESIUM	NC	None	NA	NA	NA
MANGANESE	32	Tapwater RSL	NA	NA	NA
POTASSIUM	NC	None	NA	NA	NA
SODIUM	160,000	SMCL	NA	NA	NA
ZINC	470	Tapwater RSL	NA	NA	NA
MISCELLANEOUS PARAMETERS (MV)					
OXIDATION REDUCTION POTENTIAL	NC	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)					
PH	NC	NA	NA	NA	NA
PESTICIDES (UG/L)					
GAMMA-CHLORDANE	0.027	Tapwater RSL	NA	NA	NA
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)					
1,4-DIOXANE	0.67	Tapwater RSL	NA	NA	NA
VOLATILES (UG/L)					
1,1-DICHLOROETHANE	2.4	Tapwater RSL	NA	NA	NA
CIS-1,2-DICHLOROETHENE	2.8	Tapwater RSL	0.25 U	0.25 U	0.25 U
TRICHLOROETHENE	0.44	Tapwater RSL	1.66	0.25 U	0.25 U

Notes:
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LOQ = Limit of Quantitation
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PAL = Project Action Limit
Tapwater RSL = USEPA Regional Screening Level (May 2012)
SMCL = Secondary Maximum Contaminant Limit per the Federal Safe Drinking Water Act ar
U=Non Detect
ug/L = Micrograms per Liter
shaded cell = exceedance of PAL

TABLE 6
MONITORED NATURAL ATTENUATION PARAMATERS
SITE 44
NAS PENSACOLA
PENSACOLA, FL

	UPGRADIENT WELLS			SOURCE WELLS	
LOCATION	**PEN-3221-03**	**PEN-3221-07**	**PEN-44-09**	**PEN-3221-09**	**PEN-44-11**
SAMPLE ID	**PEN-3221-03-10162012**	**PEN-3221-07-10112012**	**PEN-44-09-10112012**	**PEN-3221-09-10112012**	**PEN-44-11-10122012**
SAMPLE DATE	**10/16/2012**	**10/11/2012**	**10/11/2012**	**10/11/2012**	**10/12/2012**
FIELD PARAMATERS					
TEMPERATURE (°c)	27.52	28.8	26.1	28.8	28.5
DISSOLVED OXYGEN (MG/L)	2.92	1.18	3.13	5.2	3.29
OXIDATION REDUCTION POTENTIAL (MV)	108.9	109.1	100.23	70.1	-18.4
TURBIDITY (NTU)	5.06	6.78	7.02	4.37	3.07
PH (SU)	6.5	6.89	6.94	6.99	7.16
SPECIFIC CONDUCTANCE (uS/cm)	213	254.3	200	292	341
MISCELLANEOUS PARAMETERS (MG/L)					
ALKALINITY	86	76.7	71	96.1	122
BIOCHEMICAL OXYGEN DEMAND	2 U	2 U	2 U	2 U	2 U
CARBON DIOXIDE	14	21	11	15	25
CHEMICAL OXYGEN DEMAND	20 U	20 U	20 U	20 U	20 U
CHLORIDE	7.8	17.5	12.2	5.82	6.72
NITRATE-N	1.86	3.7	1.07	1.33	1.46
NITROGEN	18	18	18	18	18
OXYGEN	3.5	4.8	4.5	4	4.9
SULFATE	10.5	12.3	5.47	6.18	6.86
DISSOLVED METALS (UG/L)					
IRON	34.8 J	249	63.6 J	49.6 J	31.6 J
MANGANESE	3 U	3.93 J	3 U	3 U	3 U
MISCELLANEOUS PARAMETERS (NM)					
HYDROGEN	1.8	0.97	5	1.1	10
VOLATILE GASES (UG/L)					
ETHANE	0.002 J	0.002 J	0.02 U	0.002 J	0.002 J
ETHENE	0.008 J	0.010 U	0.010 U	0.010 U	0.008 J
METHANE	2.2	0.064	0.015 U	0.023	0.33

Notes:
U=non detect
J=estimated
°c=degree Celsius
mg/L=milligram per Liter
MV=millivolts
NM=nanomoles
NTU=nephelometric turbidity units
SU=Standard Units
uS/cm=microSiemens per centimeter
ug/L=micrograms per Liter

TABLE 6
MONITORED NATURAL ATTENUATION PARAMATERS
SITE 44
NAS PENSACOLA
PENSACOLA, FL

	SOURCE WELLS			DOWNGRADIENT WELLS	
LOCATION	**PEN-44-14**	**PEN-44-15**	**PEN-44-21**	**PEN-44-24**	**PEN-44-25**
SAMPLE ID	**PEN-44-14-10122012**	**PEN-44-15-10152012**	**PEN-44-21-10152012**	**PEN-44-24-10152012**	**PEN-44-25-10152012**
SAMPLE DATE	**10/12/2012**	**10/15/2012**	**10/15/2012**	**10/15/2012**	**10/15/2012**
FIELD PARAMATERS					
TEMPERATURE (°c)	29.5	30.3	30.82	28.59	29.29
DISSOLVED OXYGEN (MG/L)	1.28	2.29	3.6	6.17	6.82
OXIDATION REDUCTION POTENTIAL (MV)	53.4	-64.6	179.5	218.3	292.5
TURBIDITY (NTU)	5.65	5.09	0.8	0.6	0.67
PH (SU)	6.87	7.29	6.7	7.09	7.32
SPECIFIC CONDUCTANCE (uS/cm)	354	142.5	284	175	160
MISCELLANEOUS PARAMETERS (MG/L)					
ALKALINITY	117	80.3 J	143 J	88.8 J	79.1 J
BIOCHEMICAL OXYGEN DEMAND	2 U	2 U	2 U	2 U	2 U
CARBON DIOXIDE	24	16	28	8.7	14
CHEMICAL OXYGEN DEMAND	20 U	20 U	20 U	20 U	20 U
CHLORIDE	6.21	6.21	6.53	5.2	5.34
NITRATE-N	2.07	1.46	2.71	1.28	1.25
NITROGEN	18	18	18	18	18
OXYGEN	4	4.5	3.3	5.8	6.2
SULFATE	7.16	5.15	9.78	5.61	8.45
DISSOLVED METALS (UG/L)					
IRON	34.4 J	69.3 J	30 U	30 U	30 U
MANGANESE	3 U	3 U	3 U	3 U	3 U
MISCELLANEOUS PARAMETERS (NM)					
HYDROGEN	7.4	1.9	1.2	3.1	1.2
VOLATILE GASES (UG/L)					
ETHANE	0.004 J	0.01 U	0.002 J	0.002 J	0.01 U
ETHENE	0.033	0.008 J	0.01 U	0.01 U	0.01 U
METHANE	0.1	0.059	0.075	0.088	0.025

Notes:
U=non detect
J=estimated
°c=degree Celsius
mg/L=milligram per Liter
MV=millivolts
NM=nanomoles
NTU=nephelometric turbidity units
SU=Standard Units
uS/cm=microSiemens per centimeter
ug/L=micrograms per Liter

TABLE 6
MONITORED NATURAL ATTENUATION PARAMATERS
SITE 44
NAS PENSACOLA
PENSACOLA, FL

	CROSS GRADIENT WELLS					
LOCATION	**PEN-3221-10**	**PEN-44-10**	**PEN-44-12**	**PEN-44-13**	**PEN-44-22**	**PEN-44-23**
SAMPLE ID	**PEN-3221-10-10162012**	**PEN-44-10-10122012**	**PEN-44-12-10122012**	**PEN-44-13-10122012**	**PEN-44-22-10152012**	**PEN-44-23-10152012**
SAMPLE DATE	**10/16/2012**	**10/12/2012**	**10/12/2012**	**10/12/2012**	**10/15/2012**	**10/15/2012**
FIELD PARAMATERS						
TEMPERATURE (°c)	26.2	27.5	24.2	29.4	28.7	29.91
DISSOLVED OXYGEN (MG/L)	3.48	2.19	2.23	1.32	2.76	1.47
OXIDATION REDUCTION POTENTIAL (MV)	23.7	156	-91	64.3	-55.4	179
TURBIDITY (NTU)	24.1	8.16	3.89	5.54	1.55	7.12
PH (SU)	7.16	7.01	6.87	6.69	7.21	5.59
SPECIFIC CONDUCTANCE (uS/cm)	233.6	220.6	231	206.8	231.8	74
MISCELLANEOUS PARAMETERS (MG/L)						
ALKALINITY	85.2	69	74.7	64.6	71.4 J	21 J
BIOCHEMICAL OXYGEN DEMAND	2 U	2 U	2 U	2 U	2 U	2 U
CARBON DIOXIDE	12	11	20	23	19	24
CHEMICAL OXYGEN DEMAND	20 U	20 U	20 U	20 U	20 U	20 U
CHLORIDE	3.25	7.85	7.14	6.72	7.27	12.5
NITRATE-N	0.502	0.973	0.786	0.964	1.32	0.269
NITROGEN	18	18	19	18	18	18
OXYGEN	4.5	6.2	1.4	4.8	3.5	2.1
SULFATE	2.28 J	3.93	6.67	4.53	7.76	5.42
DISSOLVED METALS (UG/L)						
IRON	60.4 J	58 J	35.2 J	40.3 J	30 U	76.8 J
MANGANESE	3 U	3 U	3 U	5.54 J	3 U	4.81 J
MISCELLANEOUS PARAMETERS (NM)						
HYDROGEN	1.5	1.7	0.95	1.3	2	1.7
VOLATILE GASES (UG/L)						
ETHANE	0.01 U	0.010 U	0.010 U	0.010 U	0.01 U	0.01 U
ETHENE	0.01 U	0.010 U	0.010 U	0.010 U	0.01 U	0.01 J
METHANE	0.16	0.028	19	0.36	0.16	0.024

Notes:
U=non detect
J=estimated
°c=degree Celsius
mg/L=milligram per Liter
MV=millivolts
NM=nanomoles
NTU=nephelometric turbidity units
SU=Standard Units
uS/cm=microSiemens per centimeter
ug/L=micrograms per Liter

TABLE 6
MONITORED NATURAL ATTENUATION PARAMATERS
SITE 44
NAS PENSACOLA
PENSACOLA, FL

	DEEP WELLS		
LOCATION	**PEN-44-19**	**PEN-44-18**	
SAMPLE ID	**PEN-44-19-10152012**	**PEN-44-18-10152012**	**FD10151201**
SAMPLE DATE	**10/12/2012**	**10/15/2012**	**10/15/2012 Duplicate Sample**
FIELD PARAMATERS			
TEMPERATURE (°c)	24.9	26.2	NA
DISSOLVED OXYGEN (MG/L)	0.33	0.17	NA
OXIDATION REDUCTION POTENTIAL (MV)	-128.7	-124.2	NA
TURBIDITY (NTU)	3.71	0.91	NA
PH (SU)	7.48	6.67	NA
SPECIFIC CONDUCTANCE (uS/cm)	332.1	209.2	NA
MISCELLANEOUS PARAMETERS (MG/L)			
ALKALINITY	110	67.8 J	108 J
BIOCHEMICAL OXYGEN DEMAND	2 U	2 U	2 U
CARBON DIOXIDE	21	40	NA
CHEMICAL OXYGEN DEMAND	20 U	20 U	20 U
CHLORIDE	10.5	10.9	10.9
NITRATE-N	0.033 U	0.033 U	0.033 U
NITROGEN	18	18	NA
OXYGEN	3	1.9	NA
SULFATE	0.33 U	4.74	4.72
DISSOLVED METALS (UG/L)			
IRON	898	1400	1390 J
MANGANESE	27.8	20.6	20.1 J
MISCELLANEOUS PARAMETERS (NM)			
HYDROGEN	2.4	3.3	NA
VOLATILE GASES (UG/L)			
ETHANE	0.83	0.035	NA
ETHENE	0.018	0.04	NA
METHANE	1100	150	NA

Notes:
U=non detect
J=estimated
°c=degree Celsius
mg/L=milligram per Liter
MV=millivolts
NM=nanomoles
NTU=nephelometric turbidity units
SU=Standard Units
uS/cm=microSiemens per centimeter
ug/L=micrograms per Liter

Table 7
Monitoring Well Construction Details
Site 44
Naval Air Station Pensacola
Pensacola, Florida

Well ID	Water Level Collection Date	Top of Casing (Elevation, feet)	Total Depth Measured in Field (Feet below land surface)	Total Depth (Feet below land surface)	Screened Interval (Feet)	Water Level (Feet below top of casing)	Groundwater Elevation (feet)
PEN-44-3221-01	10/16/2012	24.61	NA	NA	NA	NA	NA
PEN-44-3221-02	10/16/2012	24.49	14.33	14.70		6.66	17.83
PEN-44-3221-03	10/16/2012	24.89	14.95	15.00	4.7-14.7	7.05	17.84
PEN-44-3221-04	10/16/2012	24.42	14.93	14.70	41044.00	6.62	17.80
PEN-44-3221-05	10/16/2012	24.82	14.62	15.00	4.7-14.7	7.01	17.81
PEN-44-3221-06	10/16/2012	25.21	14.53	14.70	4.7-14.7	7.42	17.79
PEN-44-3221-07	10/16/2012	24.81	14.65	14.80	4.7-14.7	7.05	17.76
PEN-44-3221-08	10/16/2012	25.41	14.50	14.80	4.8-14.8	7.64	17.77
PEN-44-3221-09	10/16/2012	25.00	14.40	14.70	4.8-14.8	7.30	17.70
PEN-44-3221-10	10/16/2012	25.44	14.25	15.00	4.7-14.7	7.77	17.67
PEN-44-09	10/16/2012	24.66	13.60	14.00	4.7-14.7	6.97	17.69
PEN-44-10	10/16/2012	25.26	13.76	14.00	4.0-14.0	7.63	17.63
PEN-44-11	10/16/2012	25.18	13.65	14.00	4.0-14.0	7.60	17.58
PEN-44-12	10/16/2012	25.08	13.55	14.00	4.0-14.0	7.53	17.55
PEN-44-13	10/16/2012	24.44	13.57	14.00	4.0-14.0	6.97	17.47
PEN-44-14	10/16/2012	24.84	13.59	14.00	4.0-14.0	7.35	17.49
PEN-44-15	10/16/2012	24.54	12.75	14.00	4.0-14.0	7.16	17.38
PEN-44-16	10/16/2012	25.37	13.10	14.00	4.0-14.0	7.73	17.64
PEN-44-17	10/16/2012	25.49	13.60	14.00	4.0-14.0	7.88	17.61
PEN-44-18	10/16/2012	24.48	74.65	75.00	65.00-75.00	11.04	13.44
PEN-44-19	10/16/2012	25.37	74.40	75.00	65.00-75.00	12.34	13.03
PEN-44-20	10/16/2012	24.04	13.68	14.00	4.0-14.0	6.70	17.34
PEN-44-21	10/16/2012	23.96	13.21	14.00	4.0-14.0	6.73	17.23
PEN-44-22	10/16/2012	24.13	13.60	14.00	4.0-14.0	6.82	17.31

Table 7
Monitoring Well Construction Details
Site 44
Naval Air Station Pensacola
Pensacola, Florida

Well ID	Water Level Collection Date	Top of Casing (Elevation, feet)	Total Depth Measured in Field (Feet below land surface)	Total Depth (Feet below land surface)	Screened Interval (Feet)	Water Level (Feet below top of casing)	Groundwater Elevation (feet)
PEN-44-23	10/16/2012	23.28	14.70	15.00	5.0-15.0	6.05	17.23
PEN-44-24	10/16/2012	23.62	14.30	14.00	4.0-14.0	6.40	17.22
PEN-44-25	10/16/2012	23.31	14.61	14.00	4.0-14.0	6.10	17.21
PEN-44-26	10/16/2012	24.04	13.33	14.00	4.0-14.0	6.73	17.31

Notes:
NA=Not applicable
Elevations relative to arbitrary benchmark, top-of-casing for PEN-3221-09 of 25.00 feet
Wells are flush mount surface compeltions

ATTACHMENT 1

FIELD LOGS

Included on the enclosed CD

Tetra Tech

PROJECT: Site 44 JOB #: 112G02704
LOCATION: NAS Pensacola DATE: 10/10/12
PROJECT MANAGER: Greg Waller FOL: Amber Fagan

DAILY ACTIVITIES CHECKLIST

Startup Checklist

Activity	Yes	No	N/A
Pertinent site activities/information entered into site logbook	✓		
All onsite personnel listed in logbook	✓		
Required medical information onsite for all workers (Tetra Tech and Subcontractors)	✓		
Required MSDS's onsite	✓		
Proper equipment calibrations performed (list equipment)	✓		
1 YSI			
2 Turbidity meter			
3 ~~WL~~			
4 Air pump			
Calibration logs filled out	✓		
Tailgate H&S meeting held prior to beginning field activities	✓		
Required work permits filled out/signed	✓		
Required utility clearances obtained	✓		
Required PPE onsite and in use	✓		
Information required to be posted is in place	✓		
(OSHA poster, hospital route, key phone numbers, etc.)			

Exit Checklist

Activity	Yes	No	N/A
Logbooks completely and comprehensively filled out	✓		
Field forms complete and accounted for/properly filed	✓		
Samples properly packaged/shipped	✓		
COCs faxed to appropriate in-house personnel			✓
All equipment accounted for, on charge if needed, and properly secured	✓		
All personnel accounted for	✓		
Arrangements made for upcoming work (permits, clearances, equipment, etc.)	✓		
Site properly secured	✓		

Note - not all items listed apply to every job, and some additional requirements may apply on a job-specific basis.

Tetra Tech

PROJECT: Site 44 JOB #: 112G07764
LOCATION: NAS Pensacola DATE: 10/1/12
PROJECT MANAGER: Gary Walker FOL: Amber Tyre

DAILY ACTIVITIES CHECKLIST

Startup Checklist

Activity	Yes	No	N/A
Pertinent site activities/information entered into site logbook	✓		
All onsite personnel listed in logbook	✓		
Required medical information onsite for all workers (Tetra Tech and Subcontractors)	✓		
Required MSDS's onsite	✓		
Proper equipment calibrations performed (list equipment)	✓		
1 YSI			
2 turbidity			
3 water level			
4 peri. pump			
Calibration logs filled out	✓		
Tailgate H&S meeting held prior to beginning field activities	✓		
Required work permits filled out/signed	✓		
Required utility clearances obtained	✓		
Required PPE onsite and in use	✓		
Information required to be posted is in place (OSHA poster, hospital route, key phone numbers, etc.)	✓		

Exit Checklist

Activity	Yes	No	N/A
Logbooks completely and comprehensively filled out	✓		
Field forms complete and accounted for/properly filed	✓		
Samples properly packaged/shipped	✓		
COCs faxed to appropriate in-house personnel			✓
All equipment accounted for, on charge if needed, and properly secured	✓		
All personnel accounted for	✓		
Arrangements made for upcoming work (permits, clearances, equipment, etc.)	✓		
Site properly secured	✓		

Note - not all items listed apply to every job, and some additional requirements may apply on a job-specific basis.

Tetra Tech

PROJECT: Site 44 **JOB #:** 112500784
LOCATION: NAS Pensacola **DATE:** 10/12/11
PROJECT MANAGER: Greg Walker **FOL:** Amber Igou

DAILY ACTIVITIES CHECKLIST

Startup Checklist

Activity	Yes	No	N/A
Pertinent site activities/information entered into site logbook	✓		
All onsite personnel listed in logbook	✓		
Required medical information onsite for all workers (Tetra Tech and Subcontractors)	✓		
Required MSDS's onsite	✓		
Proper equipment calibrations performed (list equipment)	✓		
1 YSI			
2 turbidity			
3 water level			
4 peri pump			
Calibration logs filled out	✓		
Tailgate H&S meeting held prior to beginning field activities	✓		
Required work permits filled out/signed	✓		
Required utility clearances obtained	✓		
Required PPE onsite and in use	✓		
Information required to be posted is in place	✓		
(OSHA poster, hospital route, key phone numbers, etc.)	✓		

Exit Checklist

Activity	Yes	No	N/A
Logbooks completely and comprehensively filled out	✓		
Field forms complete and accounted for/properly filed	✓		
Samples properly packaged/shipped	✓		
COCs faxed to appropriate in-house personnel			✓
All equipment accounted for, on charge if needed, and properly secured	✓		
All personnel accounted for	✓		
Arrangements made for upcoming work (permits, clearances, equipment, etc.)	✓		
Site properly secured	✓		

Note - not all items listed apply to every job, and some additional requirements may apply on a job-specific basis.

Tetra Tech

PROJECT: HA Site 44 **JOB #:** 112G00784
LOCATION: NAS Pensacola **DATE:** 10/14/12
PROJECT MANAGER: Gerry Walker **FOL:** Amber Tyre

DAILY ACTIVITIES CHECKLIST

Startup Checklist

Activity	Yes	No	N/A
Pertinent site activities/information entered into site logbook	✓		
All onsite personnel listed in logbook	✓		
Required medical information onsite for all workers (Tetra Tech and Subcontractors)	✓		
Required MSDS's onsite	✓		
Proper equipment calibrations performed (list equipment)	✓		
1 YSI			
2 turbidity meter			
3 WL			
4 peri pump			
Calibration logs filled out	✓		
Tailgate H&S meeting held prior to beginning field activities	✓		
Required work permits filled out/signed	✓		
Required utility clearances obtained	✓		
Required PPE onsite and in use	✓		
Information required to be posted is in place (OSHA poster, hospital route, key phone numbers, etc.)	✓		

Exit Checklist

Activity	Yes	No	N/A
Logbooks completely and comprehensively filled out	✓		
Field forms complete and accounted for/properly filed	✓		
Samples properly packaged/shipped	✓		
COCs faxed to appropriate in-house personnel			✓
All equipment accounted for, on charge if needed, and properly secured	✓		
All personnel accounted for	✓		
Arrangements made for upcoming work (permits, clearances, equipment, etc.)	✓		
Site properly secured	✓		

Note - not all items listed apply to every job, and some additional requirements may apply on a job-specific basis.

Tetra Tech

PROJECT: Site 44 JOB #: 112G00704
LOCATION: NAS Pensacola DATE: 10/15/12
PROJECT MANAGER: Gerri Walker FOL: Amber Ivey

DAILY ACTIVITIES CHECKLIST

Startup Checklist

Activity	Yes	No	N/A
Pertinent site activities/information entered into site logbook	✓		
All onsite personnel listed in logbook	✓		
Required medical information onsite for all workers (Tetra Tech and Subcontractors)	✓		
Required MSDS's onsite	✓		
Proper equipment calibrations performed (list equipment)	✓		
1 YSI			
2 turbidity meter			
3 WL			
4 peri pump			
Calibration logs filled out	✓		
Tailgate H&S meeting held prior to beginning field activities	✓		
Required work permits filled out/signed	✓		
Required utility clearances obtained	✓		
Required PPE onsite and in use	✓		
Information required to be posted is in place (OSHA poster, hospital route, key phone numbers, etc.)	✓		

Exit Checklist

Activity	Yes	No	N/A
Logbooks completely and comprehensively filled out	✓		
Field forms complete and accounted for/properly filed	✓		
Samples properly packaged/shipped	✓		
COCs faxed to appropriate in-house personnel			✓
All equipment accounted for, on charge if needed, and properly secured	✓		
All personnel accounted for	✓		
Arrangements made for upcoming work (permits, clearances, equipment, etc.)	✓		
Site properly secured	✓		

Note - not all items listed apply to every job, and some additional requirements may apply on a job-specific basis.

Tetra Tech

PROJECT: Site 44 **JOB #:** 112G03704
LOCATION: NAS Jacksonville **DATE:** 10/16/12
PROJECT MANAGER: Gary Walker **FOL:** Amber Igoe

DAILY ACTIVITIES CHECKLIST

Startup Checklist

Activity	Yes	No	N/A
Pertinent site activities/information entered into site logbook	✓		
All onsite personnel listed in logbook	✓		
Required medical information onsite for all workers (Tetra Tech and Subcontractors)	✓		
Required MSDS's onsite	✓		
Proper equipment calibrations performed (list equipment)	✓		
1 YSI			
2 water level meter			
3 peri pump			
4 turbidity meter			
Calibration logs filled out	✓		
Tailgate H&S meeting held prior to beginning field activities	✓		
Required work permits filled out/signed	✓		
Required utility clearances obtained	✓		
Required PPE onsite and in use	✓		
Information required to be posted is in place (OSHA poster, hospital route, key phone numbers, etc.)	✓		

Exit Checklist

Activity	Yes	No	N/A
Logbooks completely and comprehensively filled out	✓		
Field forms complete and accounted for/properly filed	✓		
Samples properly packaged/shipped	✓		
COCs faxed to appropriate in-house personnel			✓
All equipment accounted for, on charge if needed, and properly secured	✓		
All personnel accounted for	✓		
Arrangements made for upcoming work (permits, clearances, equipment, etc.)	✓		
Site properly secured	✓		

Note - not all items listed apply to every job, and some additional requirements may apply on a job-specific basis.

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola	
WELL NO:	PEN-44-09	SAMPLE ID:	PEN-44-09-0112	DATE: 10/11/12

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2"	3/16"	4 feet to 14 feet	6.99	peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13.5 feet − 6.99 feet) X 0.16 gallons/foot = 1.0 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
8'	8'	0844	0915	3.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
0855	1.0	1.0	0.1	7.10	6.98	25.78	224	42.2% 3.44	19.9	clear	93.4
0900	0.5	1.5	"	"	6.92	25.9	204	38.5% 3.12	9.14	"	98.2
0905	0.5	2.0	"	"	6.93	26.0	199	38.9% 3.16	6.83	"	100.1
0910	0.5	2.5	"	"	6.94	26.1	200	38.6% 3.13	8.29	"	100.23
0915	0.5	3.0	"						7.02		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Amber Fogel TetraTech		0915	0952

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
8'	Teflon		

FIELD DECONTAMINATION: PUMP Y N TUBING Y N (replaced) DUPLICATE: ~~Y~~ (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-09	3	G	40 mL	HCl	NA	NA	TCL VOCs	RFPP	100-200
	2	G	1L	Ice	preserved	NA	TCL SVOCs	APP	
	1	PE	500mL	H_2SO_4	preserved	<2	metals		
	1	G	1L	Ice	Ice	NA	TCL Pest PCBs		
	1	PE	1L	Cool to 4°C	Ice	NA	BOD/TOC		
	1	PE	500mL	HNO3	Ice	<2	Dissolved Fe, Mn		
REMARKS:	1	PE	125	Cool to 4°C	Ice	NA	pH		
	1	PE	40z	Cool to 4°C	Ice	NA	ORP		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1	PE	500ml	H_2SO_4	preserved	<2	COD
1	PE	500ml	Cool to 4°C	Ice	NA	Anions
2	PE	40ml	Cool to 4°C	Ice		Dissolved

.000264

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NA Site 44	SITE LOCATION: ~~Site 44~~ NAS Pensacola		
WELL NO: PEN-44-10	SAMPLE ID: PEN-44-10-10/12	DATE: 10/12/12	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: ~~5~~ 2 feet to 18 14 feet	STATIC DEPTH TO WATER (feet): 7.59	PURGE PUMP TYPE OR BAILER: PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (15 feet − 7.59 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9	PURGING INITIATED AT: 0749	PURGING ENDED AT: 0809	TOTAL VOLUME PURGED (gallons): 2.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
0801	0	1.2	0.10	7.61	7.03	27.5	226.7	2.27 28.1%	9.89	CLEAR	150.5
0805	0.4	1.6	0.16	7.61	7.03	27.5	217.4	2.35 24.6%	9.37	CLEAR	152.3
0809	0.4	2.0	0.10	7.61	7.61	27.5	220.6	2.19 27.5%	8.16	CLEAR	156.6

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0812	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 9	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-10-10/12	3	CG	40ml	HCl	preserved	<2	TCL/TCL+TIC/VOC	RFPP	<100 mL
	1	PE	1L	Cool to 4°C	ice	NA	BOD/ANC	APP	~500 mL
	1	PE	500ml	HNO_3	preserved	<2	Dis Fe, Mn		
	1	PE	500ml	Cool to 4°C	H_2SO_4	NA	COD		
	1	PE	500ml	Cool to 4°C	ice	NA	Anions		
	2	CG	40 ml	Cool to 4°C	ice	NA	Dissolved Gas		NA
REMARKS:	1	AG	40 ml	Cool to 4°C	ice	NA	Dissolved H		NA

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44	SITE LOCATION: NAS Pensacola		
WELL NO: PEN-44-11	SAMPLE ID: PEN-44-11-10/12	DATE: 10/12/12	

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8 ; 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.55	PURGE PUMP TYPE OR BAILER: Pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13 feet − 7.55 feet) X .16 gallons/foot = 0.8 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	PURGING INITIATED AT: 1241	PURGING ENDED AT: 1300	TOTAL VOLUME PURGED (gallons): 2.3

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1250	0.4	0.4	0.1	7.02	7.19	28.8	346	46.4% 3.14	409	Clear	-2.7
1255	0.5	1.4	0.1	" "	7.17	28.6	342	40.9% 3.09	363	" "	-7.9
1300	0.5	2.3	0.1	" "	7.16	28.5	341	" "	307	" "	-18.4

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Amber Tagi / TT	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1305	SAMPLING ENDED AT: 1400
PUMP OR TUBING DEPTH IN WELL (feet): 9'	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-11-1012	3	AG	40mL	HCl	Preserved	<2	TCL VOCs	PPPP	~100mL
	2	AG	1L	ice	NA	NA	TCL SVOCs	APP	~ 500 mL
	1	AG	1L	ice	pest / PCBs	NA		APP	
	1	PG	500mL	HNO3	preserved	<2	TAL metals	APP	
	1	PE	500mL	HNO3	" "	<2	Dissolved Fe, Mn	APP	
	3	AG	40mL		" "		Dissolved gas	APP	~20 mL
REMARKS:	1	PE	500mL	ice	NA		Anion	APP	

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1 PG 250 ice NA BOD APP

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola	
WELL NO:	PEW-44-52 -10/12	SAMPLE ID:		DATE: 6/12/13

PURGING DATA

WELL DIAMETER (inches):	2"	TUBING DIAMETER (inches):	3/8 & 1/4	WELL SCREEN INTERVAL DEPTH:	4 feet to 14 feet	STATIC DEPTH TO WATER (feet):	7.52	PURGE PUMP TYPE OR BAILER:	Peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet − 7.52 feet) X 0.16 gallons/foot = 1.0 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	91	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	91	PURGING INITIATED AT:	1430	PURGING ENDED AT:	1450	TOTAL VOLUME PURGED (gallons):	2.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1440	1.0	1.0	0.1	7.58	6.87	29.4	228	31.3% 2.39	5.51	clear	-92.6
1445	0.5	1.5	0.1	" "	6.89	29.5	229	30.9% 2.34	4.74	" "	-92.4
1450	0.5	2.0	0.1	" "	6.87	29.2	231	30.7% 2.23	3.89	" "	-91.0

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Amber Fox / Tetra Tech	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1450	SAMPLING ENDED AT:	1542
PUMP OR TUBING DEPTH IN WELL (feet):	91	TUBING MATERIAL CODE:		FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PEW-44-4/14	3	G	40 mL	HCl	pre-preserved	<2	TCL VOCs	RFPP	~100 mL
	2	G	1L	ice	NA	NA	TCL SVOCs	APP	~500 mL
	1	PG	500 mL	HNO_3	pre-preserved	<2	metals		
	1	G	1L	ice	ice	NA	TCL Pest / PCBs		
	1	PE	1L	ice	ice	NA	BOD / ALK		
	1	PE	500 mL	HNO_3	ice	<2	Dissolved Iron		
REMARKS:	1	PE	125mL	ice	ice	NA	pH		
	1	PE	500 mL	H_2SO_4	pre-preserved	<2	COD		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1 1 PE 500mL ice NA NA anions

1 2 40mL AG ice HCl 14 Dissolved gases

1 B

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44	SITE LOCATION: NAS Pensacola	
WELL NO: PEN-44-13M	SAMPLE ID: PEN-44-13-10/12	DATE: 10/12/12

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.90	PURGE PUMP TYPE OR BAILER: PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13.81 feet − 6.90 feet) X 0.16 gallons/foot = 1.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	PURGING INITIATED AT: 1208	PURGING ENDED AT: 1235	TOTAL VOLUME PURGED (gallons): 2.7

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) µmhos/cm or (mS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	~~ORP~~ ~~(DBOR,~~ (describe)
1220	0	1.2	0.1	6.83	6.71	29.3	206.3	1.42 18.5%	5.74	CLEAR	59.8
1225	0.5	1.7	0.1	6.93	6.70	29.4	206.5	1.34 17.5%	5.79	CLEAR	60.8
1230	0.5	2.2	0.1	6.93	6.69	29.4	206.5	1.30 17.1%	5.57	CLEAR	63.3
1235	0.5	2.7	0.1	6.93	6.69	29.4	206.8	1.32 17.3%	5.54	CLEAR	64.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1237	SAMPLING ENDED AT: 1306
PUMP OR TUBING DEPTH IN WELL (feet): 8'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-13-1012	3	G	40 ml	HCl	PRESERVED	<2	TCL VOCs	RFPP	~100mls
	2	G	1 L	ICE	N/A	N/A	TCL SVOCs		~500 ml
	1	PE	500ml	HNO_3	PRESERVED	<2	METALS		
	1	G	1L	ICE	N/A	N/A	PEST / PCBs		
	1	PE	1L	ICE	N/A	N/A	BOD / ALK		
	1	PE	500ml	HNO_3	PRESERVED	<2	Dis Fe Mn		
	1	PE	500 ml	H_2SO_4	PRESERVED	<2	COD		
	1	PE	500 ml	ICE	N/A	N/A	ANIONS		
	2	G	40 ml	ICE	N/A	N/A	DISSOLVED GASES		
	1	G	40 ml	ICE	N/A	N/A	DISSOLVED H		

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2) optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44	SITE LOCATION: NAS Pensacola	
WELL NO: PSN-44-14m	SAMPLE ID: PSN-44-14-10/12	DATE: 10/12/12

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.29	PURGE PUMP TYPE OR BAILER: PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13.64 feet − 7.29 feet) X 0.16 gallons/foot = 1.05 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9.1	PURGING INITIATED AT: 1425	PURGING ENDED AT: 1451	TOTAL VOLUME PURGED (gallons): 2.6

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	~~ODOR~~ ORP (describe)
1436	0	1.1	0.1	7.29	6.83	24.6	352.3	1.25 16.4%	11.2	CLEAR	51.3
1441	0.5	1.6	0.1	7.29	6.86	24.4	354.1	1.23 16.1%	8.93	"	52.5
1446	0.5	2.1	0.1	7.29	6.84	24.5	356.6	1.21 15.9%	8.23	"	53.4
1451	0.5	2.6	0.1	7.29	6.87	24.5	354.0	1.26 16.7%	5.65	"	53.4

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1455	SAMPLING ENDED AT: 1533
PUMP OR TUBING DEPTH IN WELL (feet): 9.1	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PSN-44-14m	3	G	40 ml	HCl	preserved	<2	TCL VOCs	RFPP	~100
	2	G	1L	ICE	—	—	TCL SVOCs	APP	~500
	1	PE	500 ml	HNO_3	preserved	<2	Metals		
	1	G	1L	ICE	—	—	Pest/PCBs		
	1	PE	1L	ICE	—	—	BOD/Alk		
	1	PE	500 ml	HNO_3	preserved	<2	Diss Fe Mn		
REMARKS	1	PE	500 ml	H_2SO_4	"	"	COD		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2 STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1 PE 500 ml ICE NA
2 G 40 ml
1 G 40 ml

Anions
Dis. Gases
Bis. H 375 ml/hr for 10 min

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Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS Pensacola	SITE LOCATION: 10/15/2012		
WELL NO: PEN-44-15	SAMPLE ID: PEN-44-15-10/12	DATE: 10/15/12	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.15	PURGE PUMP TYPE OR BAILER: pri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13.04 feet − 7.15 feet) X 0.16 gallons/foot = 1.0 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8.5'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.0'	PURGING INITIATED AT: 1144	PURGING ENDED AT: 1215	TOTAL VOLUME PURGED (gallons): 3.1	

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP ~~ORP~~ (describe)
1200	0	1.6	0.1	7.15	7.32	30.3	143.8	29.3% 2.19	5.85	CLEAR	-63.7
1205	0.5	2.1	0.1	7.15	7.29	30.3	143.2	29.6% 2.24	6.28	"	-64.4
1210	0.5	2.6	0.1	7.15	7.30	30.4	143.2	30.6% 2.31	6.08	"	-64.6
1215	0.5	3.1	0.1	7.15	7.29	30.3	1425	30.6 2.29	5.09	"	-64.6

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006, 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Alex Mieg	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1216	SAMPLING ENDED AT: 1241
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-15-10/12	3	G	40mL	HCl	preserved	<2	TCL VOCs	RFPP	~200 mL
	2	AG	1L	1c	NA	NA	TCL SVOCs	APP	~500
	1	PE	500mL	HNO_3	preserved	NA	metals		
	1	AG	1L	1c	preserved	NA	Pest/PCBs		
	1	PE	500mL	1c	NA	NA	Anions		
	1	PE	1L	1c	NA	NA	BOD/Alk		
REMARKS:	1	PE	50mL	H_2SO_4	preserved	<2	COD		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2) optionally ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1 PE 500mL HNO_3 preserved <2 DIS Metals
1 G 40mL NA NA NA DIS HG 350 mL/HG Rad

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Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS Pensacola Site 44	SITE LOCATION: Pensacola FL	
WELL NO: PEN-44-16	SAMPLE ID: PEN-44-16-10/12	DATE: 10/14/12

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16 x 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.70	PURGE PUMP TYPE OR BAILER: Peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet − 7.70 feet) X 0.16 gallons/foot = 1.0 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	PURGING INITIATED AT: 1240	PURGING ENDED AT: 1310	TOTAL VOLUME PURGED (gallons): 3.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1255	1.5	1.5	0.1	7.72	6.56	28.17	180	50.48, 3.92	17.6	clear	178.3
1300	0.5	2.0	0.1	" "	6.61	28.24	185	50.91, 3.80	18.3	" "	162.2
1305	0.5	2.5	0.1	" "	6.59	28.34	185	50.84, 3.90	15.5	" "	160.8
1310	0.5	3.0	0.1	" "	6.60	28.39	185	50.86, 3.90	15.2	" "	156.8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Amber Tyre / TT	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1310	SAMPLING ENDED AT: 1315
PUMP OR TUBING DEPTH IN WELL (feet): 9'	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-16-10/12	3	CG	40 mL	HCl	preserved	<2	CVOCs	APP	100 mL

REMARKS: CVOCs = PCE; TCE, cis-DCE + VC

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

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Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44	SITE LOCATION: NAS Pensacola	
WELL NO: PEN-44-~~17~~ 10/12	SAMPLE ID: PEN-44-17	DATE: 6/14/12

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8 x 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.84	PURGE PUMP TYPE OR BAILER: peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet – 7.84 feet) X 0.10 gallons/foot = 0.6 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9.5	PURGING INITIATED AT: 1511	PURGING ENDED AT: 1530	TOTAL VOLUME PURGED (gallons): 1.9

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1520	0.9	0.9	0.1	7.92	6.42	25.55	187	13.1%, 1.07	3.40	clear	179.6
1525	0.5	1.4	0.1	"	6.50	25.59	187	15.1%, 1.23	2.61	"	170.6
1530	0.5	1.9	0.1	"	6.56	25.59	186	14.1%, 1.17	3.00	"	163.1

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Arnie Jaquet / Tetra Tech	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1530	SAMPLING ENDED AT: 1536
PUMP OR TUBING DEPTH IN WELL (feet): 9.5	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type.	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
V-VH-17/10/12	3	AG	40mL	HCl	preserved	NA	cVOCs	RFPP	200

REMARKS: cVOCs = PCE, TCE, cis-DCE + VC

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump. **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain), **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

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Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44		SITE LOCATION: NAS Pensacola	
WELL NO: PNS-44-18	SAMPLE ID: PNS-44-18-10/12		DATE: 10/15/2012

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 65 feet to 75 feet	STATIC DEPTH TO WATER (feet): 11.22	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= X gallons + (0.026 gallons/foot X 80 feet) + 0.1 gallons = 0.3 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 70	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 70	PURGING INITIATED AT: 0936	PURGING ENDED AT: 0948	TOTAL VOLUME PURGED (gallons): 2.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0938 ~~0846~~	0.0	1.0	0.1	11.22	6.72	26.4	210.1	0.28 33%	1.66	clear	-107.8
0943	0.5	1.5	0.1	11.22	6.71	26.3	209.0	0.17 2.1	1.32	clear	-130.8
0948	0.5	2.0	0.1	11.22	6.67	26.2	209.2	0.17 2.1	0.91	clear	-122.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S): K. Alex Murphy	SAMPLING INITIATED AT: 0951	SAMPLING ENDED AT: 1026
PUMP OR TUBING DEPTH IN WELL (feet): 70	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: (Y) N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PN-44-18-MW	3	G	40 ml	HCl	preserved	<2	TCL VOCs	RFPP	~100mL
	2	G	1L	Ice	N/A	N/A	TCL SVOCs	APP	~500mL
	1	PE	500ml	HNO3	preserved	<2	Metals		
	1	G	1L	Ice	N/A	N/A	Pest/PCBs		
	1	PE	500ml	Ice	N/A	N/A	Anions		
	1	PE	500ml	HNO3	preserved	<2	Diss Fe, Mn		
REMARKS:		PE FD101512O1		HNO3	preserved	<2	COD		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3):

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2) optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1	PE	1L	Ice	NA	N4	BOD/Alk
1	G	40ml	Ice	NA	N1	DS H

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350 ml/min 10 mN

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44	SITE LOCATION: NAS Pensacola	
WELL NO: PEN-44-19	SAMPLE ID: PEN-44-19-10/12	DATE: 10/12/12

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8 x 1/4"	WELL SCREEN INTERVAL DEPTH: 65 feet to 75 feet	STATIC DEPTH TO WATER (feet): 12.42	PURGE PUMP TYPE OR BAILER: PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (0.0026 gallons/foot X 30 feet) + 0.85 gallons = 0.39 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 70 141	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 141 70	PURGING INITIATED AT: 0908	PURGING ENDED AT: 0930	TOTAL VOLUME PURGED (gallons): 2.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
0920	0.7	1.2	0.1	12.71	7.64	24.9	326.4	0.4 4.8%	5.97	CLEAR	-136.0
0925	0.5	1.7	0.1	12.71	7.53	24.9	331.6	0.35 4.3%	3.68	CLEAR	-127.1
0930	0.5	2.2	0.1	12.163	7.48	24.9	332.1	0.33 4.0	3.71	CLEAR	-125.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. Andy Murphy	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0932	SAMPLING ENDED AT: 0959
PUMP OR TUBING DEPTH IN WELL (feet): 141 70	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-19	3	G	40mL	HCl	preserved	NA	TCL VOCs	RFPP	100 mL
	2	G	1L	ice	NA	NA	TCL SVOCs	APP	500 mL
	1	PE	500mL	HNO_3	preserved	<2	metals		
	1	G	1L	ICE	NA	NA	Pest/PCB		
	1	PE	1L	ICE	NA	NA	SO4/ALK		
	1	PE	500ml	HNO_3	preserved		Dis. Fe, Mn		
REMARKS:	1	PE	500ml	H_2SO_4	preserved		COD		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1	PE	500 ml	ICE	NA	NA	Anions
2	G	40 ml	ICE	NA	NA	Dissolved Gas
1	G	40ml	ICE	NA	NA	Dissolved H

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44 NAS	SITE LOCATION:	Pensacola FL	
WELL NO:	PEN-44-20	SAMPLE ID:	PEN-44-20-10/12	DATE: 10/19/12

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2"	3/8" x 1/4	4 feet to 14 feet	6.72	pc-1

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet − 6.72 feet) X 0.16 gallons/foot = 1.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
8'	9'	1333	1354	2.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1314	1.1	1.1	0.1	6.77	6.33	29.34	222	46.68, 3.55	3.09	clear	208.6
1349	0.5	1.6	0.1	"	6.35	29.43	226	46.88, 3.56	2.41	"	199.9
1354	0.5	2.1	0.1	"	6.35	29.44	229	46.88, 3.56	2.25	"	197.0

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Amber Fyr / T1		1354	1400

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
8'	Teflon		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-20-1012	3	AG	40-mL	HCL	pre-preserved	NA	cVOCs	APP	≤ 100

REMARKS: cVOCs = PCE, TCE, cis DCE + VC

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SIR 44	SITE LOCATION: NAS Pensacola	
WELL NO: PEN-44-21	SAMPLE ID: PEN 44-21-10/12	DATE: 10/15/12

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8 x 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.70	PURGE PUMP TYPE OR BAILER: Peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet − 6.70 feet) X .16 gallons/foot = 1.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	PURGING INITIATED AT: 0955	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1007	1.2	1.2	0.1	6.74	6.79	30.92	284	3.48, 4.19	2.43	clear	192.4
1012	0.5	1.7	0.1	" "	6.78	30.90	282	33.58, 3.97	1.39	clear	188.2
1017	0.5	2.2	0.1	" "	6.73	30.80	286	46.6%, 5.65	0.87	" "	187.7
1022	0.5	2.7	0.1	" "	6.71	30.82	284	48.2%, 3.61	0.74	" "	180.2
1027	0.5	3.2	0.1	" "	6.70	30.82	284	46.1%, 3.60	0.00	" "	179.5

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Andy Tyre	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1027	SAMPLING ENDED AT: 1053
PUMP OR TUBING DEPTH IN WELL (feet): 8'	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ___ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-21-1012	3	G	40 mL	HCl	preserved	<2	TCL VOCs	RFPP	200
	2	G	1L	ice	—	—	TCL SVOCs	APP	250
	1	PE	500mL	HNO3	preserved	<2	metals		
	1	G	1L	ice	—	—	Pest / PCBs		
	1	PE	1L	ice	—	—	BOD / CLIC		
	1	PE	250mL	HNO3	preserved	<2	Diss Fe	↓	↓
REMARKS:	(	Ar	500	H2SO4	" "	<2	COD	Nitrogen	300 mL
	1	PE	500mL	ice	1L	NA	anions		
	1	G	40mL	ice	1L	NA	Dissolved gases		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

Purge 15 min

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2 STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: ~~NAS Pensacola~~ Site 44	SITE LOCATION: ~~Site 44~~ NAS Pensacola	
WELL NO: PSN-44-22	SAMPLE ID: PSN-44-22-10/12	DATE: 10/15/2012

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.80	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (13.83 feet − 6.80 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1349	PURGING ENDED AT: 1411	TOTAL VOLUME PURGED (gallons): 2.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	~~ODOR~~ ORP (describe)
~~1400~~ 1401	~~1400~~	0.0	1.2	0.1	6.82	7.25	28.8	231.8	2.82 36.6%	2.52	CLEAR	-60.6
~~1406~~ 1406	~~1406~~	0.5	1.7	0.1	6.82	7.26	28.8	231.1	2.76 35.8%	4.65	"	-58.0
~~1411~~ 1411	~~1411~~	0.5	2.2	0.1	6.83	7.21	28.7	231.6	2.76 35.8%	1.55	"	-55.4

WELL CAPACITY (Gallons Per Foot) 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.) 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: ~~1415~~ 1415	SAMPLING ENDED AT: 1432
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PSN-44-22-10/12	3	G	40 mL	HCl	preserved	<2	PVC, TCE, cis-DCE, VC	RFPP	~100 mL
	1	PE	500 mL	Ice	NA	NA	Anions	APP	~500
	1	PE	500 mL	HNO_3	preserved	<2	Dis Fe, Mn	APP	
	1	PE	1 L	Ice	NA	NA	BOD/Alk		
	1	PE	500 mL	H_2SO_4	preserved	<2	COD		
	1	G	40 mL	Ice	NA	NA	Dis H	25C	for 15 min

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2 STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44		SITE LOCATION: NAS Pensacola	
WELL NO: PEN-44-23	SAMPLE ID: PEN-44-23-10/12		DATE: 10/5/12

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8 & 1/4	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 6.03	PURGE PUMP TYPE OR BAILER: Peri.

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet - 6.03 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
8'	8'	0815	0857	4.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
0827	1.2	1.2	0.1	6.07	5.58	30.10	75	20% 1.51	12.1	clear	177.4
0832	0.5	1.7	"	6.07	5.59	29.93	74	19.1% 1.44	11.8	"	177.9
0837	0.5	2.2	"	"	5.62	29.93	74	19.5% 1.46	11.09	"	178.3
0842	0.5	2.7	"	"	5.59	29.92	73	18.9% 1.44	10.16	"	178.1
0847	0.5	3.2	"	"	5.59	29.92	74	18.9% 1.44	9.46	"	181.3
0852	0.5	3.7	"	"	5.59	29.91	74	18.9% 1.44	7.34	"	180.5
0857	0.5	4.2	"	"	5.59	29.91	74	18.96 1.44	7.12	"	179.6

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Amba Fyfe / TT	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0857	SAMPLING ENDED AT: 0921
PUMP OR TUBING DEPTH IN WELL (feet): 8'	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ___ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-23-10/12	3	CG	40mL	HCl	prepreserved	<2	CVOCs	RFPP	100
	1	PE	1L	ice	NA	NA	BOD/Alk	APP	250
	1		500mL	H_2SO_4	prepreserved	<2	Diss Fe, Mn		
	1		500mL	H_2SO_4	prepreserved	<2	COD		
	1		500mL	ice	NA	NA	Anions		
	1	CG	40mL	ice	NA	NA	Dissolved Gases	Stripped	

REMARKS: H_2O_2 at 300 mls/min per 15 min

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola	
WELL NO:	PEN-44-24	SAMPLE ID:	PEN-44-24-10/12	DATE: 10/15/12

PURGING DATA

WELL DIAMETER (inches):	2"	TUBING DIAMETER (inches):	3/8 HDPE	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.40	PURGE PUMP TYPE OR BAILER: Peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet − 6.40 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	8'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	8'	PURGING INITIATED AT:	1143	PURGING ENDED AT:	1215	TOTAL VOLUME PURGED (gallons):	5.2

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1155	1.2	1.2	0.1	6.43	6.92	28.59	173	81.2%, 6.40	1.39	clear	236.2
1200	0.5	1.7	0.1	" "	" "	28.64	174	79.6% 6.15	1.01	" "	229.0
1205	0.5	2.2	0.1	" "	7.08	28.58	174	79.6%, 6.16	0.69	" "	227.2
1210	0.5	2.7	0.1	" "	7.09	28.60	175	79.6%, 6.16	0.67	" "	220.7
1215	0.5	3.2	0.1	" "	7.09	28.59	175	79.7%, 6.17	0.60	" "	218.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Amber Fox / Tetra Tech	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1215	SAMPLING ENDED AT:	1251
PUMP OR TUBING DEPTH IN WELL (feet):	8'	TUBING MATERIAL CODE:	Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ___ µm	
FIELD DECONTAMINATION: PUMP	Y (N)	TUBING	Y (N) (replaced)	DUPLICATE: Y	(N)		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
44-24-1012	3	G	40 mL	HCl	preserved	<2	TCL VOCs	APP	~100 mL
	2	G	1L	ice	NA	NA	TCL SVOCs		500 mL
	1	PE	500 mL	HNO_3	preserved	<2	TAL metals		
	1	G	1L	ice	NA	NA	Pest / PCBs		
	1	PE	1L	ice	NA	NA	BOD / ALK		
	1	PE	500 mL	H_2SO_4	preserved	<2	Diss Fe Mn		
REMARKS:	1	PE	500mL	H_2SO_4	preserved	<2	COD	Hydrogen Sulfide	

MATERIAL CODES. AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump, B = Bailer, BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain), O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

1 PE 500mL ice NA NA anions
1 G 40mL ice NA NA Dissolved gases

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	SK 44	SITE LOCATION:	NAS Pensacola	
WELL NO:	PEN-44-25	SAMPLE ID:	PEN-44-25-10/12	DATE: 10/15/12

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2"	3/8 x 1/4	4 feet to 14 feet	6.04	P-1

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet − 6.04 feet) X .16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
8'	8'	1328	1400	3.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1340	1.2	1.2	0.1	6.09	7.16	29.35	161	91.2% 6.94	1.29	Clear	285.4
1345	0.5	1.7	0.1	"	7.22	29.31	161	88.9% 6.77	1.05	"	292.6
1350	0.5	2.2	0.1	"	7.27	29.28	161	89.2% 6.81	0.65	"	295.3
1355	0.5	2.7	0.1	"	7.31	29.27	160	89.3% 6.82	0.71	"	294.2
1400	0.5	3.2	0.1	"	7.32	29.29	160	89.2% 6.81	0.62	"	292.5

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Amber Frye / Tetra Tech		1400	1437

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ___ µm
8'	Teflon		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-25-WG	3	CG	40 mL	HCl	preserved	<2	CVOCs	RFPP	~100
	1	PE	1L	ice	NA	NA	BOD/Alk	APP	~500
	1		500 mL	HNO_3	preserved	<2	Diss Fe, Mn	↓	↓
	1		" "	H_2SO_4	preserved	<2	COD		
	1	↓	" "	ice	NA	NA	Anions	↓	↓
↓	1	CG	40 mL	ice	NA	NA	Dissolved Gases	O	NA

REMARKS: Hydrogen @ 300 mL/min
Purge 15 min

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2), optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44 NAS Pensacola	SITE LOCATION: Pensacola FL	
WELL NO: PEN-44-26-	SAMPLE ID: PEN-44-26-10/14	DATE: 10/14/21

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8 x 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.73	PURGE PUMP TYPE OR BAILER: peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet – 6.73 feet) X 0.16 gallons/foot = 1.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	PURGING INITIATED AT: 1419	PURGING ENDED AT: 1440	TOTAL VOLUME PURGED (gallons): 2.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1430	1.1	1.1	0.1	6.75	7.06	30.70	254	78.4%, 5.85	0.31	clr	216.7
1435	0.5	1.6	0.1	"	7.09	30.68	254	77.9%, 5.8	2.16	"	208.7
1440	0.5	2.1	0.1	"	7.08	30.71	255	77.0%, 5.76	1.01	"	202.4

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006, 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Amber Fox / TT	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1440	SAMPLING ENDED AT: 1446
PUMP OR TUBING DEPTH IN WELL (feet): 8'	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: (Y) N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-44-26-10/14	9	AG	40 mL	HCL	pre-preserved	NA	CVOCs	APP	~100mL/min
FD10141201	3	↓	↓	↓	↓	↓	↓	↓	↓

REMARKS: FD10141201 MS/MSD CVOCs = PCE, TCE, cis-DCE + VC

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

0.00114

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44		SITE LOCATION: NAS Pensacola	
WELL NO: Pen-3221-02	SAMPLE ID: Pen-3221-02-10112		DATE: 10/16/2012

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8 x 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.66	PURGE PUMP TYPE OR BAILER: peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.33 feet – 6.66 feet) X 0.16 gallons/foot = 1.3 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	PURGING INITIATED AT: 0918	PURGING ENDED AT: 1050	TOTAL VOLUME PURGED (gallons): 6.6

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or ~~µS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	~~ODOR (describe)~~ ORP
0936	0.0	1.6	0.1	6.77	6.45	26.26	246	4.58 56.0%	33.8	clear	85.6
0946	0.5	2.3	0.05	6.89	6.53	26.33	250	4.60 56.9%	24.8	"	89.4
0956	0.5	2.8	0.05	6.89	6.46	26.50	244	4.10 51.4%	10.63	"	95.8
~~1000~~	LARGE	PIECES OF	SEDIMENT	FOUND	IN	TUBING.	TUBING	REPLACED.	PURGED	ANOTHER	WELL VOLUME
~~1024~~	~~0.1~~	~~4.1~~	~~0.1~~	~~6.67~~							
1030	0.1	4.6	0.1	6.67	6.46	27.18	247	4.94 61.7%	18.5	"	100.2
1035	0.1	5.1	0.1	6.70	6.47	27.23	~~254~~ 244	4.83 60.7%	11.5	"	100.4
1040	0.1	5.6	0.1	6.70	6.46	27.27	245	4.65 58.7%	9.60	"	105.0
1045	0.1	6.1	0.1	6.70	6.45	27.45	246	4.68 59.3%	6.24	"	106.9
1050	0.1	6.6	0.1	6.70	6.46	27.47	246	4.67 59.1%	4.66	"	106.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

~~SAMPLED BY (PRINT) / AFFILIATION~~ Signature	SAMPLER(S) SIGNATURE(S): Sampled by K. Arep Murphy	SAMPLING INITIATED AT: 1055	SAMPLING ENDED AT: 1140
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y ~~N~~ (replaced)	DUPLICATE Y (N)	ORP pH

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
N-3221-02-10112	3	CG	40 mL	HCl	preserved	<2	TCL VOCs	RFPP	200
	2	AG	1L	ice	NA	NA	TCL SVOCs	APP	~500
	1	AG	1L	ice	NA	NA	Pest / PCBs		
	1	PE	500mL	HNO_3	preserved	<2	Metals		
	2	PE	60mL	ice	NA	NA	pH		
	2	PE	500mL	ice	NA	NA	ORP		

REMARKS: FD101612012 for ORP pH MS/MSD for ORP pH

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola	
WELL NO:	PEN-3221-03	SAMPLE ID:	PEN-3221-03-10/12	DATE: 10/16/12

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	5 feet to 15 feet	STATIC DEPTH TO WATER (feet):	7.05	PURGE PUMP TYPE OR BAILER:	peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − TATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.95 feet − 7.05 feet) X 0.16 gallons/foot = 1.3 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	8.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	8.0	PURGING INITIATED AT:	1148	PURGING ENDED AT:	1252	TOTAL VOLUME PURGED (gallons):	5.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	~~ODOR~~ (describe)
1201	0	1.3	0.1	7.05	6.47	27.17	223	3.77 47.1%	30.3	clear	127.9
1211	1.0	2.3	0.1	7.05	6.54	27.41	204	2.88 36.5%	58.6	sediment	120.6
~~1231~~	~~1.0~~	~~3.3~~	~~0.05~~	~~7.05~~	large sediment pieces found in tubing. Replaced tubing,						
and purged one well volume.											
1237	1.3	3.6	0.1	7.05	6.50	27.56	211	2.72 3.25 41.6%	12.8	clear	116.3
1242	0.5	4.1	0.1	7.05	6.50	27.51	211	~~2.52~~ 32.6%	7.37	"	108.0
1247	0.5	4.6	0.1	7.05	6.51	27.46	212	2.81 35.5%	5.75	"	108.5
1252	0.5	5.1	0.1	7.05	6.50	27.52	213	2.92 37.2%	5.00	"	108.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	K Alex Murphy	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1255	SAMPLING ENDED AT	1340
PUMP OR TUBING DEPTH IN WELL (feet):	8.0	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE ___ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
U-3221-0-1012	3	G	40mL	HCl	preserved	<2	TCL VOCs	RFPP	~100
	2	G	1L	ICE	NA	NA	TCL SVOCs	APP	~500
	1	G	1L	ICE	NA	NA	Pest / PCBs		
	1	PE	500mL	HNO_3	preserved	<2	Metals		
	1	PE	500mL	ICE	NA	NA	Anions		
	1	PE	~~500~~ 1L	ICE	NA	NA	BOD/ALK		
REMARKS:	1	PE	500mL	H_2SO_4	preserved	<2	COD		
	1	PE	500mL	HNO_3	"	"	Dis Fe, Mn		

MATERIAL CODES AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2 STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2) optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1 G 40mL ICE NA NA Dis Cations O
1 G 20mL ICE Dis Al O
1 PE 60mL ICE pH APP
1 PE 60mL —

220 ml/min 15 (100)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 44	SITE LOCATION: NAS Pensacola	
WELL NO: PRD-3221-04	SAMPLE ID: PRD-3221-04-1012	DATE: 10/14/12

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.55	PURGE PUMP TYPE OR BAILER: PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (15.09 feet – 6.55 feet) X 0.16 gallons/foot = 1.4 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8'	PURGING INITIATED AT: 1516	PURGING ENDED AT: 1540	TOTAL VOLUME PURGED (gallons): 2.4

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1530	0.0	1.4	0.1	6.55	6.98	28.4	240.4	1.78 23.1%	2.22	CLEAR	NO ODOR
1535	0.5	1.9	0.1	6.55	6.92	28.3	252.6	1.72 22.1	1.83	"	"
1540	0.5	2.4	0.1	6.55	6.94	28.5	256.3	1.65 21.4	1.58	"	"
~~1545~~	~~0.5~~	~~2.9~~	~~0.1~~	~~6.55~~							

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. Alex Murphy	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1545	SAMPLING ENDED AT: 1600
PUMP OR TUBING DEPTH IN WELL (feet): 8'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
U 3221-04-1012	3	G	40 ml	HCl	PRESERVED	<2	TCL VOCs	RFPP	~100
	2	G	1 L	ICE	NA	NA	TCL SVOCs	APP	~500
	1	PE	500 ml	HNO_3	PRESERVED	<2	METALS	↓	↓
↓	1	G	1 L	ICE	NA	NA	PEST/PCBs	↓	↓

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola
WELL NO.	PEN-3221-05	SAMPLE ID:	PEN-3221-05f 10/12
DATE:	10/16/12		

PURGING DATA

WELL DIAMETER (inches):	2"	TUBING DIAMETER (inches):	3/8 x 1/4	WELL SCREEN INTERVAL DEPTH:	5 feet to 15 feet	STATIC DEPTH TO WATER (feet):	7.01	PURGE PUMP TYPE OR BAILER:	peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet − 7.01 feet) X 0.16 gallons/foot = 1.1 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	PURGING INITIATED AT:	0751	PURGING ENDED AT:	0824	TOTAL VOLUME PURGED (gallons):	3.3

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm ~~µS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
0802	1.1	1.1	0.1	7.06	6.39	26.60	196	21.48, 1.75	12.3	clear	167.5
0807	0.5	1.6	0.1	" "	6.40	26.36	201	11.99, 2.56	12.2	" "	158.7
0812	0.5	2.1	0.1	" "	6.39	26.16	203	21.76, 2.59	6.59	" "	68.5
0819	0.7	2.8	0.1	" "	6.38	26.19	208	31.76, 2.59	2.42	" "	36.7
0824	0.5	3.3	0.1	" "	6.37	26.17	207	31.65, 2.60	2.41	" "	27.6

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Amber Fyke / TetraTech	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	0824	SAMPLING ENDED AT:	0930

PUMP OR TUBING DEPTH IN WELL (feet):	9'	TUBING MATERIAL CODE:	Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PEN-3221-05f-10/12	3	CG	40mL	HCl	pre-preserved	<2	CVOCs	RFPP	200 mL
↓	3	PE	125mL	*	↓	↓	Cr^{6+}	APP	200 mL
↓	1	"	125mL	*	↓	↓	C_2E Dup	↓	↓

REMARKS: CVOCs: PCE, TCE, cis, VC , * Dup ck, ms/msD chrom * FD101612 01

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

* Cr^{6+} pre-added = NH_4 Ox $(NH_4)SO_4$

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola
WELL NO:	PEN-3221-06	SAMPLE ID:	PEN-3221-06-10/12
DATE:	10/14/12		

PURGING DATA

WELL DIAMETER (inches):	2"	TUBING DIAMETER (inches):	3/8" x 1/4"	WELL SCREEN INTERVAL DEPTH:	4 feet to 14 feet	STATIC DEPTH TO WATER (feet):	7.39	PURGE PUMP TYPE OR BAILER:	Peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (14 feet − 7.39 feet) X 0.16 gallons/foot = 1.0 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	PURGING INITIATED AT:	1601	PURGING ENDED AT:	1626	TOTAL VOLUME PURGED (gallons):	2.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1611	1.0	1.0	0.1	7.44	6.86	30.03	199	38.6% 2.91	3.24	clear	124.2
1616	0.5	1.5	0.1	" "	6.87	29.80	200	38.6% 2.92	2.58	" "	124.9
1621	0.5	2.0	0.1	" "	6.87	29.77	198	38.6% 2.91	2.95	" "	125.1
1626	0.5	2.5	0.1	" "	6.87	29.77	201	38.6% 2.91	1.68	" "	124.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Amber Fyock / Tetra Tech	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1626	SAMPLING ENDED AT:	1631
PUMP OR TUBING DEPTH IN WELL (feet):	9'	TUBING MATERIAL CODE:	Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N (replaced))		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-3221-06	3	CG	40 mL	HCl	preserved	<2	TCL VOCs	RFPP	200 mL
	1	PE	500 mL	HNO_3	" "	<2	TAL metals	APP	500 mL
	2	AG	1L	Ice	NA	NA	TCL SVOCs	APP	↓
↓	1	AG	1L	Ice	NA	NA	Pest/PCBs	APP	↓

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola	
WELL NO:	PEN-3221-05	SAMPLE ID:	PEN-3221-05-10/12	DATE: 10/11/12

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2"	1/4	4 feet to 14 feet	6.83	PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (15 feet – 6.83 feet) X 0.16 gallons/foot = 1.31 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
9'	9'	1355	1420	2.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or ~~µS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1410	0	1.5	~~0.1~~ 0.1	6.91	6.92	28.9	236.2	18.4% 1.41mg/L	9.43	CLEAR	77.5
1415	0.5	2.0	0.1	6.93	6.91	28.8	243.2	16.2% 1.25mg/L	8.81	CLEAR	80.1
1420	0.5	2.5	0.1	6.93	6.89	28.8	254.3	15.3 1.18mg/L	6.78	CLEAR	109.1
ALL PARAMETERS STABILIZED				Sample Recommended							

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Alex Murphy		1425	1435

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ___ µm
9'	Teflon PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: (Y) N ~~Duplicate~~

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
~~EN-3221-10~~	3	CG	40ml	HCl	preserved	<2	BTEX, MTBE, VC	RFPP	max mL
	~~1~~		~~500ml~~	~~Cr6 Buffer Sol.~~			~~Cr6~~		
	1	PE	1L	Cool to 4°C	NA	NA	BOD/ALK	APP	~500
	1	PE	500ml	HNO_3	preserved	<2	Dissolved Fe Mn		
	1	PE	500ml	H_2SO_4	" "	" "	COD		
	1	PE	500ml	Cool to 4°C	NA	NA	Anions		

REMARKS: ~~Duplicate of just Cr6.~~ FD101112OZ

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

2 G 40ml Cool to 4°C HCl NA Dissolved gas
1 G 40ml Cool to 4°C HCl NA Dissolved H

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Site 24		SITE LOCATION: NAS Pensacola	
WELL NO: PEW-3221-08	SAMPLE ID: PEP-3221-08-10/12		DATE: 10/14/12

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/8" 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 7.59	PURGE PUMP TYPE OR BAILER: PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.79 feet − 7.59 feet) X 0.16 gallons/foot = 1.15 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	PURGING INITIATED AT: 1256	PURGING ENDED AT: 1318	TOTAL VOLUME PURGED (gallons): 2.2	

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1308	0	1.2	0.1	7.59	6.81	28.6	173.3	0.90 11.6%	4.12	CLEAR	NO ODOR
1313	0.5	1.7	0.1	7.59	6.80	28.5	180.0	0.96 12.6%	2.81	"	NO ODOR
1318	0.5	2.2	0.1	7.59	6.81	28.4	187.8	0.98 12.7%	3.08	"	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K Arep Murphy	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1320	SAMPLING ENDED AT: 1500
PUMP OR TUBING DEPTH IN WELL (feet): 9'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEW-3221-08-10/12	3	G	40ml	HCl	PRESERVED	<2	TCL SVOCS	RFPP	~100
	2	G	1L	ICE	NA	4	TCL SVOCS	APP	~500
	1	P	500ml	HNO_3	PRESERVED	<2	METALS		
	1	G	1L	ICE	NA	NA	PEST/PCBS		

REMARKS: MS/MSD on TCL/TAL

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Tefion; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 220 optionally ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola	
WELL NO:	PEN-3221-09	SAMPLE ID:	PEN-3221-09-10/12	DATE: 10/11/12

PURGING DATA

WELL DIAMETER (inches):	2"	TUBING DIAMETER (inches):	3/8 x 1/4	WELL SCREEN INTERVAL DEPTH:	14 feet to 19 feet	STATIC DEPTH TO WATER (feet):	7.29	PURGE PUMP TYPE OR BAILER:	Peri

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (15 feet – 7.29 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	PURGING INITIATED AT:	1156	PURGING ENDED AT:	1210	TOTAL VOLUME PURGED (gallons):	2.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1209	1.2	1.2	0.1	67.34	6.91	28.8	288	41.0%, 3.18	7.85	clear	70.0
1213	0.5	1.7	0.1	7.34	6.95	28.9	289	40.6%, 3.19	4.97	" "	70.7
1219	0.5	2.2	0.1	" "	6.99	28.8	292	40.7%, 3.2	4.37	" "	70.1

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump, O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Amber Ice / TT	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1221	SAMPLING ENDED AT:	1340
PUMP OR TUBING DEPTH IN WELL (feet):	9'	TUBING MATERIAL CODE:	Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y N		TUBING Y (N replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
N 3221-09-10/12	1	PE	125 mL		Preserved		6010	APP	250
	3	G	40 mL	HCl	preserved	<2	TCL VOCs	RFPP	~100
	2	G	1L	Ice	—	—	TCL SVOCs	RFPP/APP	~500
	1	G	1L	Ice	—	—	Pest / PCB	RFPP/APP	
	1	PE	500mL	HNO_3	pp	<2	metals	RFPP/APP	
	1	PE	500mL	Ice	—	—	anions	RFPP	
REMARKS:	1	PE	1L	Ice		—	BOD/ALK		
	1	PE	500mL	H_2SO_4	preserved	<2	COD	Revision Date: February 12, 2009	
	1	PE	500mL	HNO_3	" "	<2	dissolved Fe		
		BG					dissolved gases		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone, T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer, BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Site 44	SITE LOCATION:	NAS Pensacola	
WELL NO.	PEN-3221-10	SAMPLE ID:	PEN-3221-10-101012	DATE: 10-10-12

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	1/4	WELL SCREEN INTERVAL DEPTH:	5 feet to 15 feet	STATIC DEPTH TO WATER (feet):	7.77	PURGE PUMP TYPE OR BAILER:	Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (14.91 feet - 7.77 feet) X 0.16 gallons/foot = 1.15 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9'	PURGING INITIATED AT:	0754	PURGING ENDED AT:	1005	TOTAL VOLUME PURGED (gallons):	6.97

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP ~~ODOR~~ (describe)
0800	0.0	1.2	0.1	7.77	7.20	26.3	233.0	3.96 44.1%	24.5	CLEAR	-34.5
0810	1.0	2.2	0.1	7.77	7.18	26.3	232.4	3.64 55.6%	20.4	"	-40.5
0820	1.0	3.2	0.1	7.77	7.17	26.3	234.3	3.72 46.1%	20.4	"	-38.5
0830	0.5	3.7	0.05	7.77							
0904	0.84	4.54	0.03	" "	7.16	26.3	233.8	3.48 41.8%	21.2	" "	-16.0
0940	1.08	5.62	0.03	" "	7.14	26.3	233.2	3.48 41.6%	24.0	" "	23.0
1005	1.35	6.97	0.03	" "	7.14	26.2	233.6	3.48 41.6%	24.1	" "	23.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04, 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	K. Alex Murphy	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1010	SAMPLING ENDED AT	
PUMP OR TUBING DEPTH IN WELL (feet):	9'	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) Replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
PEN-3221-10	3	G	40 mL	HCl	pre-preserved	<2	TCL VOCs	RFPP	100-200
	2	G	1L	Ice	—	—	TCL SVOCs	APP	
	1	G	1L	Ice	—	—	PEST / PCBs		
	1	PE	500mL	HNO_3	pre-preserved	<2	METALS		
	1	PE	500mL	Ice		—	ANIONS		
	1	PE	1L	Ice	—	—	BOD/TOC		
REMARKS:	1	PE	500mL	H_2SO_4	pre-preserved	<2	COD		
	1	PE	500mL	HNO_3	pre-preserved	<2	DISSOLVED Fe, Mn		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone, T = Teflon, O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer, BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2) optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1	G	40 mL	HCl	—	Dissolved Gases	
1	O	40 mL	HAC	—	Dissolved H	

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	SITE LOCATION:	
WELL NO: PMW-3221-10	SAMPLE ID: PMW-3221-10-10/12	DATE: 10/12/12

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 7.68	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.69 feet − 7.68 feet) X 0.16 gallons/foot = 1.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 91	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 91	PURGING INITIATED AT: 1040	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ORP (describe)
1052	0	1.2	0.1	7.71	7.05	27.0	249.8	2.33 29.1%	18.0	CLEAR	10.0
1057 ~~1058~~	~~1058~~ 0.5	1.6	0.1	7.71	7.04	27.0	251.0	2.19 27.5%	16.8	CLEAR	8.4
1102 ~~1102~~	~~1102~~ 0.5	2.1	0.1	7.71	7.04	26.9	245.7	2.10 26.3%	16.1	CLEAR	7.9
Could not get turbidity <10 NTUs. Will surge well & let sit overnight											

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 5" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3	G	40ml	HCl	preserved		TCL VOCs		
	2	G	1L	ice	NA		TCL SVOCs		
	1	PE	500ml	HNO3	preserved		METALS		
	1	G	1L	ice	NA		PEST/PCBs		
	1	PE	1L	ice	NA		BOD/ALK		
	1	PE	500ml	HNO3	preserved		Dis. Fe, Mn		
REMARKS:	1	PE	500ml	H2SO4	preserved		COD		

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

1 PE 500ml ice NA
2 G 40ml ice NA
1 G 40ml ice NA

Arsenic
Dissolved Gases
Dissolved H

Revision Date: February 12, 2009

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 44
Project No.: 112GC701
Location: NAS Pensacola
Personnel: Amber Fyer + Alex Murphy
Weather Conditions: Sunny, clear high ~80
Measuring Device: Solinst
Tidally Influenced: Yes ___ No X
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
3221 -01	10/16/17	NA	24.61	NA	NA	NA	NA	DNE
3221-02		0915	24.49	14.33	6.66		17.83	
3221-03		1100	24.89	14.95	7.05		17.84	
3221-04		1222	24.42	14.93	~~6.67~~ 6.62		17.80	
3221-05		0736	24.82	14.62	7.01		17.81	
3221-06		1302	25.21	14.53	7.42		17.79	
3221-07		1227	24.81	14.65	7.05		17.76	
3221-08		1229	25.41	14.50	7.64		17.77	
3221-09		1233	25.00	14.40	7.30		17.70	
3221-10		0740	25.44	14.25	7.77		17.67	
44-09		1236	24.66	13.60	6.97		17.69	
44-10		1239	25.26	13.76	7.63		17.63	
44-11		1352	25.18	13.65	7.60		17.58	
44-12		1345	25.08	13.55	~~7.45~~ 7.53		17.55	
44-13		1259	24.44	13.57	6.97		17.47	
44-14		1353	24.84	13.59	7.35		17.49	
44-15		1341	24.54	12.75	7.16		17.38	
44-16		1250	25.37	13.10	7.73		17.64	
44-17		1348	25.49	13.60	7.88		17.61	
44-18		1334	24.48	74.05	11.04		13.44	
44-19		1242	25.37	74.40	12.34		13.03	
44-20		1303	24.04	13.60	6.70		17.34	
44-21		1318	23.96	13.21	6.73		17.23	
44-22		1333	24.13	13.60	6.82		17.31	
44-23		1309	23.20	14.70	6.05		17.23	

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 44 **Project No.:** 112G05784

Location: NAS Pensacola 50 **Personnel:** Amber Tyson, Alex Murphy

Weather Conditions: sunny hum° **Measuring Device:** Solinst

Tidally Influenced: Yes ___ No X **Remarks:**

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
44-24	10/16/12	1322	23.62	14.30	6.40	NA	17.22	
44-25	"	1326	23.31	14.61	6.10	"	17.21	
44-26	"	1329	24.04	13.33	6.73	"	17.31	

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: NAS Pensacola Site 44
Project No.: 126G7E4

Sample ID No.: PEA-44-SS01-0-2-101112
Sample Location: SS01
Sampled By: AM
C.O.C. No.: ___

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other: ___
[ ] QA Sample Type: ___

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/11/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0935	0-2'	LT BROWN - TAN	MED - MED FINE SAND W/ SMALL AMOUNT OF ORGANICS
Method: HA			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

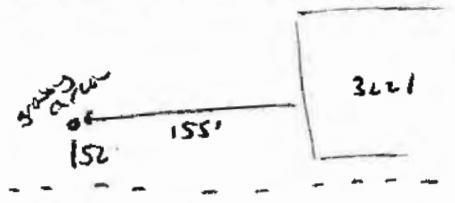
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	~~3~~ 2 5 g jars		
TCL SVOCs including LAPAH	1 4 oz jar		
TCL Pesticides + PCBs	1 4 oz jar		
TAL metals including Hg	1 4 oz jar		
Hexavalent chromium	1 4 oz jar		
pH	1 4 oz jar		
ORP	1 4 oz jar no headspace		

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD ✓ | Duplicate ID No.: FD 101112 MS/MSD

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: NAS Pensacola Site 44
Project No.: 112G07841

Sample ID No.: PEN-SS01-6-8-10/12
Sample Location: SS01
Sampled By: AM
C.O.C. No.:

- [ ] Surface Soil
- [X] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [ ] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/11/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0930	6-8'	LT Tan LT Brown	Med Sand
Method: NA			
Monitor Reading (ppm): 0 0			

COMPOSITE SAMPLE DATA:

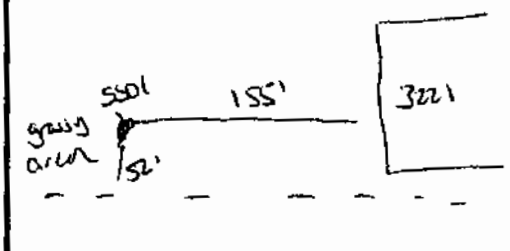
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	3 VOAs	Y	
TCL SVOCs including LL PAH	1 4oz jar		
TCL Pesticides + PCBs			
TAL metals			

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: NAS Pensacola Site 44
Project No.: 112G01784

Sample ID No.: PEN-44-SS02-0-2-101[illegible]
Sample Location: SS02
Sampled By: AM
C.O.C. No.:

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/11/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100	0-2'	Brown Lt Brn	Med Fine - Fine Sand w/ Small Amount of Organics
Method: HA			
Monitor Reading (ppm): 6.0			

COMPOSITE SAMPLE DATA:

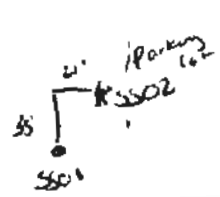
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	3-5 g vial		
TCL SVOCs including LL PAHs	1-4 oz jar		
TCL Pesticides + PCBs	↓		
TAL metals including Hg			
Hexavalent Chromium			
pH			
ORP	↓ no headspace		

OBSERVATIONS / NOTES:

MAP:



3221

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: NAS Pensacola Site 44
Project No.: 1120-00784

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: PEN-44-SS02-6-8-10/12
Sample Location: SS02
Sampled By: Am
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10/11/12 Time: 1020 Method: HA Monitor Reading (ppm): 0.0	6-8'	white - lt brown	med - med fine Sand

COMPOSITE SAMPLE DATA:

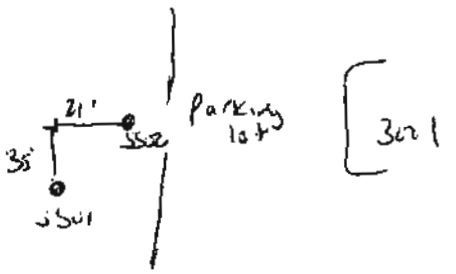
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	3 - 5g jars	Y	
TCL SVOCs including LLPAHs	1 - 4 oz jar	↓	
TCL Pesticides + PCBs	↓	↓	
TAL metals including Hg	↓	↓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: NAS Pensacola S.k 44
Project No.: 112G6764

Sample ID No.: PSN-44-SS03-02-1011
Sample Location: SS03
Sampled By: AM
C.O.C. No.: ___

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other: ___
[ ] QA Sample Type: ___

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:	0-2'	LT BROWN-BROWN	MED FINE - FINE SAND w/ SMALL AMOUNT OF ORGANICS
Method:			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

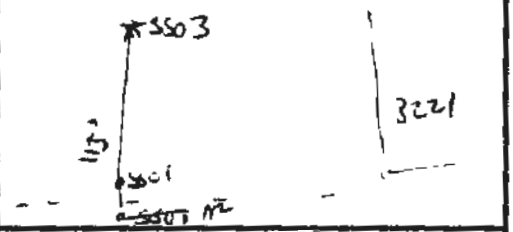
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOAs	3 - 5g vials		
TCL SVOCs including LL PAH	1 4oz jar		
TCL pesticides + PCBs	↓		
TAL metals including Hg, Hexavalent Chromium			
pH			
ORP	↓ no headspace		

OBSERVATIONS / NOTES:

MAP:



Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NAS Pensacola Site 44
Project No.: 112G00784

Sample ID No.: PEN-44-SS03-6-8-0112
Sample Location: SS03
Sampled By: AM
C.O.C. No.:

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Other:
- [ ] QA Sample Type:

Type of Sample:
- [ ] Low Concentration
- [ ] High Concentration

GRAB SAMPLE DATA:

Date: 10/11/12	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1055	6-8'	white + T Brown	med- med fine Sand
Method: H4			
Monitor Reading (ppm): 0.0			

COMPOSITE SAMPLE DATA:

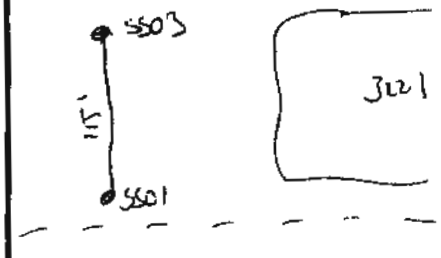
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCL VOCs	3 - 5g VOA's	Y	
TCL SVOCs including LL PAH	1 4oz jar	↓	
TCL pesticides + PCBs	↓	↓	
TAL metals including Hg	↓	↓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1980 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00704	NAS Pensacola Site 44	Gerry Walker	850-385-9899	Microseeps Robin Rogel
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Igoe	PHONE NUMBER: 850-322-3033	ADDRESS: 220 William Pitt Way
		CARRIER/WAYBILL NUMBER		CITY, STATE: Pittsburgh, PA 15238

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR (10/11 2012)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED		TYPE OF ANALYSIS: Dissolved Gases	TYPE OF ANALYSIS: Dissolved Hydrogen							COMMENTS
									G	G	*										
10/12/12	0915	PEN-44-04-10/12						3	2	3											
	1210	PEN-3221-04-10/12						3	2	1											
	1425	PEN-3221-07-10/12						3	2	1											
10/12/12	0852	PEN-44-10-10/12						3	2	1											
	0932	PEN-44-14-10/12						3	2	1											
		~~PEN-3221-10-10/12~~						~~3~~	~~2~~	~~1~~											
	1237	PEN-44-13-10/12						3	2	1											
	1305	PEN-44-11-10/12						3	2	1											
	1445	PEN-44-14-10-12						3	2	1											
	1450	PEN-44-14-10/12						3	2	1											

1. RELINQUISHED BY	DATE 17:15	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS
* = Benzalkonium Chloride Dissolved Gases = methane, ethane, ethene, nitrogen, + carbon dioxide

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 0040 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G-007804	NAS Pensacola Site 44	Gerry Walker	850-385-9899	Microscopy Robbin Rishel
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Ivey	PHONE NUMBER: 850-324-9933	ADDRESS: 220 William Pitt Way
		CARRIER/WAYBILL NUMBER: 3013 7440 7569		CITY, STATE: Pittsburgh PA 15238

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G): G	PRESERVATIVE USED: 1A	TYPE OF ANALYSIS: Dissolved Gases	COMMENTS
10/12	0852	PEN-44-23-10/12						1	1			
	0951	PEN-44-14-10/12						1	1			
	1027	PEN-44-21-10/12						1	1			
	1215	PEN-44-24-10/12						1	1			
	1419	PEN-44-15-10/12						1	1			
	1448	PEN-44-25-10/12						1	1			
	1415	PEN-44-22-10/12						1	1			
10/11	1110	PEN-3221-10-10/12						2	2			
10	0824	PEN-3221-05-10/12										
10	1110	PEN-3221-03-10/12						2	2			

1. RELINQUISHED BY	DATE 10/11/12	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS Dissolved Gases =

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. | **CHAIN OF CUSTODY** | **NUMBER** 1984 | **PAGE** ___ **OF** ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G0184	NAS Pensacola Site 44	Gerry Waite	850-385-9344	Columbia Analytical Services, Inc. Pensacola
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
		Amber Trace	850-321-9023	1565 Jefferson Road Building 300 Suite 360
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
		8003 2540 7541		Rochester NY 14623

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2012)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	G	G	G						COMMENTS
									PRESERVATIVE USED		ice	ice						
									TYPE OF ANALYSIS	Hexavalent Chromium	OGP reported as Cr	pH						
10/11/12	0835	PEN-44-SS01-0-2-10/12	SS01	0	2	SO	G			1	1	1						
	1000	PEN-44-SS02-0-2-10/12	SS02	0	2					1	1	1						
	1035	PEN-44-SS03-0-2-10/12	SS03	0	2					1	1	1						
	0000	FD 101112 01								1	1	1						
	0115	PEN-44-09-10/12				GW					1	1						
	1010	PEN-~~44~~-3221-09-10/12								1								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/11/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS * Preservative NH_4OH $(NH_4)_2SO_4$ soln pH 9.2 +/- in H_2O

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc.

CHAIN OF CUSTODY | **NUMBER** No. 0043 | **PAGE** ___ **OF** ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G 03754	Site 44 NAS Pensacola	Greg Wilke	910-343-4074	Columbia Analytical 4 mile Perry
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
		Andy Jack	910-322-5123	1565 Jefferson Road Suite 300 Suite 300
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
		8003 2510 7150		Rochester NY 14623

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: Hexavalent Chromium	TYPE OF ANALYSIS: ORP corrected to Eh	TYPE OF ANALYSIS: pH	COMMENTS
									G	*	ie			
12/11/12	0924	PEN-3221-05-10/12						3	3					MS/MSD
	0930	FD13DEC12 01						1	1					
	1055	PEN-3221-02-1/12						6 4		[B]	[B]2			MS/MSD
	0930	FD13DEC12 02						2		1	1			
	1155	PEN-3221-03-10/12						2		1	1			

1. RELINQUISHED BY	DATE 12/14/12	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS * preserved w/ NH_4OH $(NH_4)_2$ Sky solution pH 9.3-9.7 in Water MS/MSD in same bottle

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 0042 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00794	Site 44 NAS Pensacola	Gerry Walker	850-385-9899	Empirical Labs % Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Ambe Jose	PHONE NUMBER: 850-322-8033	ADDRESS: 621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER: 9003 2540 7547		CITY, STATE: Nashville, TN 37224

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, G, G, P, P, P, P

PRESERVATIVE USED: HCL, HCL, Ice, Ice, HNO3, Ice, HNO3, H2SO4, Ice

TYPE OF ANALYSIS: PCE, TCE, cis DCE, VC; TCL VOCs; TCL Pest/PCBs; TCL SVOCs w/LL PAHs; TAL metals w/Hg; BOD + ALK; Dissolved Fe, Mn; COD; Anions

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	PCE, TCE, cis DCE, VC	TCL VOCs	TCL Pest/PCBs	TCL SVOCs w/LL PAHs	TAL metals w/Hg	BOD + ALK	Dissolved Fe, Mn	COD	Anions	COMMENTS
10/10/12	0921	PEN-3221-05-10/12				GW	G	3	3									
↓	1010	PEN-3221-10-10/12				↓	↓	11		3	1	2	1	1	1	1/1		
	1055	PEN-3221-02-10/12				↓	↓	~~11~~ 7		3	1	2	1	+	+	+/+		no NA preservation
	1255	PEN-3221-03-10/12				↓	↓	11		3	1	2	1	1	1	1/1		
	1430	FB10161201				DI	G	7		3	1	2	1					
	1450	FB10161201				↓	↓	10	3	3	1	2	1					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/11/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 1983 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
NG0994	NAS Pensacola Site 44	Gerry Walker	850-385-9994	Empirical Laboratory Yo Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Ford	PHONE NUMBER: 850-321-9033	ADDRESS: 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER: 8003 2540 7606		CITY, STATE: Nashville TN 37214

STANDARD TAT [X]
RUSH TAT [ ]
[ ] 24 hr. [ ] 48 hr. [ ] 72 hr. [ ] 7 day [ ] 14 day

DATE (YEAR 2012)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TCL VOCs	PCE, TCE, cis-1,2-DCE, VC	TCL Pesticides + PCBs	TAL metals with mercury	Arsenic	TCL SVOCs + LL PAHs	Alkalinity	EDD	COMMENTS
		CONTAINER TYPE PLASTIC (P) or GLASS (G)							G			P		P			
		PRESERVATIVE USED							None			HNO3		None			
10/11/12	0835	PEN-44-SS01-0-2-10/12	SS01	0	2	SO	G	19	9		3	MS/3		3			
	0930	PEN-44-SS01-6-8-10/12	" "	6	8			6	3		1	1		1			
	1000	PEN-44-SS02-0-2-10/12	SS02	0	2			6	3		1	1		1			
	1020	PEN-44-SS02-6-8-10/12	" "	6	8			6	3		1	1		1			
	1035	PEN-44-SS03-0-2-10/12	SS03	0	2			6	3		1	1		1			
	1055	PEN-44-SS03-6-8-10/12	" "	6	8			6	3		1	1		1			
	0000	FD101112 01				↓	↓	6	3		1	1		1			
	0915	PEN-44-09-10/12				GW		11	3		1	1	1	2	1	1/1	
	1214	PEN-3221-09-10/12						11	3		1	1	1	2	1	1/1	
	1425	PEN-3221-07-10/12				↓		7		3			1		1	1/1	
		Trip Blank 01035				01			3								

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	1700	10/11/12			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1988 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00784	NAS Pensacola Site 44	Gerry Walker	850-385-9999	Empirical Laboratory % Brian Kirkland
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Amber Igoe	850-322-9033	621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Nashville TN 37229

STANDARD TAT ☑
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, G, G, P, P, P, P/P

PRESERVATIVE USED: HCl, HCl, Ice, Ice, H_2CO_3, H_2CO_3, Ice, H_2SO_4, Ice

TYPE OF ANALYSIS: PCE, TCE, cis 1,2 DCE, VC; TCL VOCs; TCL Pesticides, PCBs; TCL SVOCs w/ CC PAHs; TAL metals w/ Hg; Dissolved Fe, Mn; BOD + Alk; COD; Anions

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	PCE, TCE, cis 1,2 DCE, VC	TCL VOCs	TCL Pesticides, PCBs	TCL SVOCs w/ CC PAHs	TAL metals w/ Hg	Dissolved Fe, Mn	BOD + Alk	COD	Anions	COMMENTS
10/12/12	0812	PEN-44-10-10/12				GW	G	7	3					1	1	1	1	
	0932	PEN-44-19-10/12				GW	G	11		3	1	2	1	1	1	1	1	
		~~PEN-3221-10-10/12~~				~~GW~~	~~G~~	~~11~~		~~3~~	~~1~~	~~2~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	
	1237	PEN-44-13-10/12				GW	G	11		3	1	2	1	1	1	1	1	
	1305	PEN-44-11-10/12				GW	G	11		3	1	2	1	1	1	1	1	
	1450	PEN-44-12-10/12				GW	G	11		3	1	2	1	1	1	1	1	
	1445	PEN-44-14-10/12				GW	G	11		3	1	2	1	1	1	1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/12/12	1745	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER | PAGE ___ OF ___

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02744	NAS Pensacola, FW	Gary Walter 850 345-4949	Empirical Laboratory (Barry Ricketts)
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Amber Tate 850-505-9023	ADDRESS: 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER: 8003 2540 7450	CITY, STATE: Nashville TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2012)	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: PCB, TCL, CLP-like ACE/NC	TCL VOCs	TCL PESTICIDES/PCBs	TCL SVOCs w/o BNAs	TAL metals - filtered	Dissolved Fe, Mn	8021 A II	CVD	Anions	COMMENTS
						G	HCl										
10/14/12	1510	PEN-44-16-10/12	GW	G	3	3											
	1354	PEN-44-20-10/12	GW	G	3	3											
	1440	PEN-44-16-10/12	GW	G	9	9											ms/msD
	0900	FD101112-01	GW	G	3	3											
	1535	PEN-44-17-10/12	GW	G	3	3											
	1626	PEN-3221-06-10/12	GW	G	7		3	1	2	1							ms/msD
	1312	PEN-3221-08-10/12	GW	G	21		9	3	6	3							↓ "
	1545	PEN-3221-04-10/12	GW	G	7		3	1	2	1							
		TB	GW		3	3	3										
10/15/12	0836	PEN-44-23-10/12	GW		7	3						1	1	1	1		
	0951	PEN-44-13-10/12	GW		11		3	1	2	1	1	1	1	1	1		
	0905	FD101512-01	GW		11		3	1	2	1	1	1	1	1	1		
↓	1627	PEN-44-21-10/12	GW		11		3	1	2	1	1	1	1	1	1		

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/15/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 0041 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00784	Site 44 NAS Pcola	Greg Walker	850-385-9949	Empirical Lab Brian ~~[illegible]~~ Richard

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]	Arnie Faye	850-322-8033	621 Mainstream Dr. Suite 270

CARRIER/WAYBILL NUMBER	CITY, STATE
9003 2540 7400	Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, G, G, P, P, P, P

PRESERVATIVE USED: HCl, HCl, Ice, Ice, HNO_3, Ice, HNO_3, H_2SO_4, Ice

TYPE OF ANALYSIS: PCE, TCE, cis DCE, VC; TCL VOCs; TCL Pest / PCBs; TCL SVOCs w/ LL PAHs; TAL metals w/ Hg; BOD, Alk; Dissolved Fe, Mn; COD; Anions

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SO, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	PCE, TCE, cis DCE, VC	TCL VOCs	TCL Pest / PCBs	TCL SVOCs w/ LL PAHs	TAL metals w/ Hg	BOD, Alk	Dissolved Fe, Mn	COD	Anions	COMMENTS
10/15/12	1215	PEN-44-24-10/12						11		3	1	2	1	1	1	1	1	
↓	1218	PEN-44-15-10/12						11		3	1	2	1	1	1	1	1	
	1400 ~~1415~~	PEN-44-25-10/12						7	3				~~1~~	1	1	1	1	no TAL metal
↓	1415	PEN-44-22-10/12						7	3					1	1	1	1	

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
[signature]	10/15/12	1100			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : NAS PENSACOLA

INSTRUMENT NAME/MODEL: PROFESSIONAL PLUS / 556 MPS

SITE NAME: SITE 44

MANUFACTURER: YSI

PROJECT No.: 112G00704

SERIAL NUMBER: 10D101440 / 06M1538AO

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings Pre-calibration	Instrument Settings Post-calibration	Instrument Readings Pre-calibration	Instrument Readings Post-calibration	Calibration Standard (Lot No.)	Remarks and Comments
10/11/12	10D101440	A. Murphy	7.0	7.0	7.14	7.01	C250666	EXP 1-30-2014
			4.0	4.0	4.19	3.99	C251274	EXP 2-24-14
			10.0	10.0	9.59	9.99	C150016	EXP 1-05-14
			1000 µS/cm	1000 µS/cm	859	1000	C2501430	EXP 1-11-14
			100%	100%	86.4%	99.8%		10040 ATM 21.2°C
	EOD	RL	6.97					
			9.95					
		cond	1100					
10/12/12	"	"	7.0	7.0	7.00		"	"
			4.0	4.0	4.01		"	"
			10.0	10.0	9.70	10.01	"	"
			1000 µS/cm	1000 µS/cm	972	998	"	"
			100%	100%	111.8%	101.1%		100% ATM 19.7°C
	EOD		7.0		7.04			
			10.0		10.15			
			1000 µS/cm		1095			
10/14/2012	06M1538AO	"	7.0	7.0	6.77	7.00	NOT AVAIL.	N/A
			4.0	4.0	3.90	4.00	NOT AVAIL	N/A
			10.0	10.0	10.29	10.00	NOT AVAIL	N/A
			1000 µS/cm	1000	1095	991	~~NOT AVAIL~~	LOT 128100552 EXP 2014/02
			100%	100%	111.2%	100.6%		24.83°C
			234.5	234.5	234.5		128100552	02/2014 ORP
10/14/12		EOD	4.0 reading	3.81				
			7.0 " "	6.88				
			10.0 reading	9.98				
~~10/15/12~~	~~06M1538AO~~	T cond	reading					
10/15/12	06M1538AO	Alex Murphy	7.0	7.0	~~6.83~~ ~~95.5%~~	~~7.00~~ ~~100.2%~~		~~25.38°C~~ "
			4.0	4.0	3.91	4.00		"
			10.0	10.0	10.37	10.00		"
			1000	1000	1004	999		"
			100%	100%	93.5%	100.2%		25.38°C
			234.5	234.5	234.5			
"	EOD	"	STANDARD 1000	987				
			4.0	3.69				
			7.0	6.83				
				READING				

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : NTS PENSACOLA

INSTRUMENT NAME/MODEL: 2020 WE TURBIDIMETER

SITE NAME: SITE 44

MANUFACTURER: LaMotte

PROJECT No.: 112G00764

SERIAL NUMBER: ~~768-104~~ 2093-1212

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
10/11/12	2093-1212	A. Murphy	0.0	0.0	0.34	0.08		
			10.0	10.0	11.15	10.09		
		EOD	0.87					
			10.92					
10/12/2012	"	"	0.0	0.0	2.22	0.11		
			10.0	10.0	11.02	9.92		
		EOD	0.00		2.04			
			10.0		10.82			
10/14/2012	"	"	0.0	0.0	1.37	0.00		
			10.0	10.0	11.7	9.97		
		EOD	0.0		2.04			
			10.0		10.78			
10/15/2012	"	A. Murphy	0.0	0.0	1.57	0.00		
			10.0	10.0	11.20	9.96		
"	"	EOD	0.0	0.0	2.66			
~~10/16/2012~~	"	"	0.0	10.0	10.92			
10/16/2012	"	"	0.0	0.0	0.43	0.0		
			10.0	10.0	10.93	10.01		

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : NAS PENSACOLA

INSTRUMENT NAME/MODEL: 2020WE TURBIDIMETER

SITE NAME: SITE 44

MANUFACTURER: LaMotte

PROJECT No.: 1126-05704

SERIAL NUMBER: 768-1011

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
10/11/12	768-1011	A. Murphy	0.0	0.0	0.37	~~0.00~~	No EQD was not used in field	
			10.0	10.0	10.14	9.99		
10/12/2012	"	"	0.0	0.0	0.38	0.00		
			10.0	10.0	10.16	9.93		
		EQD	0.0		0.51			
			10.0		10.12			
10/14/2012	"	"	0.0	0.0	0.37	0.00		
			10.0	10.0	10.09	9.93		
	EQD	A Tague	0.33 Fail	0.00				
			10.19 Fail	10.00				
10/15/2012	"	"	0.0	0.0	0.34	~~0.00~~		
			10.0	10.0	10.10	9.92		
"	"	EQD	0.0	0.0	0.50			
			10.0	10.0	10.12			
10/16/2012	"	"	0.0	0.0	0.38	0.01		
			10.0	10.0	10.12	9.89		
		EQD	0.42					
			10.36					

YSI 556 EQUIPMENT CALIBRATION SHEET

Tetra Tech, Inc.

PROJECT NAME : NAS Pensacola - Site 42 **INSTRUMENT NAME/MODEL:** Professional Plus YSI 556 MPS

SITE NAME: " **MANUFACTURER:** YSI ~~prof~~

PROJECT No.: 112G0781 **SERIAL NUMBER:** 10D101440

Date of Calibration	Person Performing Calibration	pH Post/Post (S.U.)			Cond. (µS/cm)	Temp. (Celsius)	Dissolved Oxyden (%)	ORP (mV)	Calibration Standard (Lot#/Expiration Date)	Comments
10/15/2012	A.Murphy	4.11	7.17	9.46	1045	24.3	98.4%	234.5	Lot# C25137H	
		4.0	7.0	10.0	1045			234.5	Exp.Date: 2-24-2014	Ph 4.0
"	" EOD	4.15	7.12	9.49	1037				Lot# C250606	
	on check	4.0	7.0	10.0					Exp.Date: 1-30-2014	Ph 7.0
10/16/2012	"								Lot# C15C016	
		4.0	7.0	10.0					Exp.Date: 01-05-14	Ph 10.0
	AM	4.03							Lot# 12B1003Z	
		4.0	7.0	10.0					Exp.Date: 2014/02	ORP
									Lot# SHHC3501430	
		4.0	7.0	10.0					Exp.Date: 01-11-15	Conductivity 1000 µS/cm Stand
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : NAS PENSACOLA

INSTRUMENT NAME/MODEL: PROFESSIONAL PLUS

SITE NAME: SITE 44

MANUFACTURER: YSI

PROJECT No.: 112G00784

SERIAL NUMBER: 10E100341

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings Pre-calibration	Instrument Settings Post-calibration	Instrument Readings Pre-calibration	Instrument Readings Post-calibration	Calibration Standard (Lot No.)	Remarks and Comments
10/11/12	10E100341	A. MURPHY	7.0	7.0	7.02		C251987	Exp 3-14 NO EOD. WAS
			4.0	4.0	3.99		C252301	Exp 4-14 NOT USED IN
			10.0	10.0	9.92	10.01	C252535	Exp 4-14 FIELD
			1000 µS/cm	1000 µm/cm	~~87.5~~ 862	1000	C251430	Exp 3-13
			~~[illegible]~~ 100%	~~[illegible]~~ 100%	~~[illegible]~~	100.8%		100% ATM TEMP 20.8°C
					86.4%			
10/12/2012	"	"	7.0	7.0	7.02		"	
			4.0	4.0	4.02		"	
			10.0	10.0	9.99		"	
			1000 µS/cm	1000 µS/cm	956	1000	"	
			100.0%	100%	108.1%	100.9%		100% ATM 18.8°C
		EOD	7.0		6.98			
			10.0		9.85			
			1000		1337			
10/12/2012	"	"	7.0	7.0	7.02		"	
			4.0	4.0	4.01		"	
			10.0	10.0	9.98		"	
			1000 µS/cm	1000	1157	1000	"	
			100.0%	100%	99.7%			24°C
"	"	EOD	7.0	7.0	6.98			
			10.0	10.0	9.81			
			1000	1000	998			
10/10/2012	"	"	7.0	7.00	7.02			
			10.0	10.0	9.88	10.01		
			1000	~~857~~ 851	857	999		
			237.5	237.5	257.2	237.5		
			100%	100%	115.1%	100.1%		760 Barometric Pressure
			4.0 pH	4.0	4.04			

NO ORD SOLUTION PROVIDED

YSI 556 EQUIPMENT CALIBRATION SHEET

Tetra Tech, Inc.

PROJECT NAME : NAS Pensacola **INSTRUMENT NAME/MODEL:** YSI 556 MPS

SITE NAME: Site 4d **MANUFACTURER:** YSI

PROJECT No.: 112G00784 **SERIAL NUMBER:** 06M1538AD

Date of Calibration	Person Performing Calibration	pH pre/post Calibration			Cond.	Temp.	Dissolved Oxyden	ORP	Calibration Standard (Lot#/Expiration Date)	Comments
(mm/dd/yy)	(Name)	(S.U.)			(µS/cm)	(Celsius)	(%)	(mV)		
10/16/2012	Alex Murphy	3.84 / 3.99	6.91 / 6.99	10.41 / 10.00	781 / 1000	16.38	108.1 / 100.0	242.8 / 237.5	Lot# NA Exp.Date: NA	Ph 4.0
	EOD Calcheck	3.41 / 4.0	6.54 / 7.0	9.77 / 10.0	1106				Lot# NA Exp.Date: NA	Ph 7.0
		4.0	7.0	10.0					Lot# NA Exp.Date: NA	Ph 10.0
		4.0	7.0	10.0					Lot# 12B10052 Exp.Date: 02/2014	ORP STANDARD ~~234.5~~ 237.5
		4.0	7.0	10.0					Lot# NA Exp.Date: NA	Conductivity
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						
		4.0	7.0	10.0						

ATTACHMENT 2

LABORATORY ANALYTICAL DATA

Included on the enclosed CD

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 14, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- VOC/SVOC/PAH/PCB/PEST**
CTO 0079, NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 1210127

SAMPLES: 7/Soil/VOC/SVOC/PAH/PEST/PCB

FD10111201	PEN-44-SS01-0-2-10/12	PEN-44-SS01-6-8-10/12
PEN-44-SS02-0-2-10/12	PEN-44-SS02-6-8-10/12	PEN-44-SS03-0-2-10/12
PEN-44-SS03-6-8-10/12		

4/Aqueous/VOC

PEN-3221-07-10/12*	PEN-3221-09-10/12	PEN-44-09-10/12
Trip Blank 01035		

2/Aqueous/SVOC/PAH/PEST/PCB

PEN-3221-09-10/12	PEN-44-09-10/12

OVERVIEW

The sample set for CTO 0079 NAS PENSACOLA, SDG 1210127 consists of seven (7) soil environmental samples, three (3) aqueous environmental samples and a trip blank analyzed for Volatile Organic Compounds (VOCs). Samples denoted with an (*) were analyzed for the select VOCs, cis 1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride. The seven (7) soil environmental samples and two (2) aqueous environmental samples were also analyzed for semivolatile organic compounds (SVOCs), Polycyclic Aromatic Hydrocarbons (PAH), pesticides (PEST) and polychlorinated biphenyls (PCB). There is one field duplicate pair contained within this SDG: PEN-44-SS03-6-9-10/12 and FD10111201.

The samples were collected by Tetra Tech on October 11, 2012 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8260B, 8270D, 8082A and 8081A analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
• Initial/Continuing Calibrations
• Laboratory Method Blank Results
* • Detection Limits
* • Field Duplicate Precision

The symbol (*) indicates that quality control criteria were met for this parameter. Issues affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 14, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION –TOTAL AND DISSOLVED METALS, ALKALINITY, BIOCHEMICAL OXYGEN DEMAND, CHEMICAL OXYGEN DEMAND, CHLORIDE, NITRATE, NITRITE, SULFATE**
CTO 0079 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 1210127

SAMPLES: 7/Soil/

FD10111201	PEN-44-SS01-0-2-10/12
PEN-44-SS01-6-8-10/12	PEN-44-SS02-0-2-10/12
PEN-44-SS02-6-8-10/12	PEN-44-SS03-0-2-10/12
PEN-44-SS03-6-8-10/12	

3/Aqueous/

PEN-3221-09-10/12	PEN-44-09-10/12
PEN-3221-07-10/12	

Overview

The sample set for NAS Pensacola, CTO 0079, SDG 1210127, consists of seven (7) soil environmental samples and three (3) aqueous environmental samples. One (1) field duplicate pair (PEN-44-SS03-6-8-10/12 / FD10111201) was included within this SDG.

All soil samples were analyzed for target analyte list (TAL) metals. Samples PEN-3221-09-10/12 and PEN-44-09-10/12 were analyzed for TAL metals. Samples PEN-3221-07-10/12, PEN-3221-09-10/12 and PEN-44-09-10/12 were analyzed for dissolved iron and manganese, alkalinity, biochemical oxygen demand, chemical oxygen demand, chloride, nitrate, nitrite and sulfate. The samples were collected by Tetra Tech on October 11, 2012 and analyzed by Empirical Laboratories, LLC. under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010C. Mercury analyses were conducted using SW-846 method 7470A. Alkalinity analyses were conducted using Standard Method 2320B. Biochemical oxygen demand analyses were conducted using Standard Method 5210B. Chemical oxygen demand analyses were conducted using EPA method 410.4. Chloride, nitrate, nitrite and sulfate analyses were conducted using SW-846 method 9056.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
  • Field Duplicate Results

* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

The field duplicate relative percent difference (RPD) for aluminum was > 50% quality control limit for sample pair PEN-44-SS03-6-8-10/12 / FD10111201. The positive results reported for aluminum were qualified as estimated, "J".

The absolute difference between the sample and duplicate were > 4X limit of quantitation (LOQ) for calcium, iron, lead and manganese for sample pair PEN-44-SS03-6-8-10/12 / FD10111201. The positive and nondetected results reported for calcium, iron, lead and manganese were qualified as estimated, "J" and "UJ", respectively.

Notes

Positive results reported below the LOQ but above the method detection limit (MDL) were qualified as estimated, "J".

The nondetected results were reported to the MDL.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: Positive results reported below the LOQ but above the LOD were qualified as estimated. The field duplicate relative percent difference for aluminum, calcium, iron, lead and manganese were outside the quality control limits for sample pair PEN-44-SS03-6-8-10/12 / FD10111201.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	FD10111201			PEN-44-SS01-0-2-10/12			PEN-44-SS01-6-8-10/12			PEN-44-SS02-0-2-10/12		
SDG: 1210127	LAB_ID	1210127-07			1210127-01			1210127-02			1210127-03		
FRACTION: M	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	97.5			97.9			96.6			96.0		
	DUP_OF	PEN-44-SS03-6-8-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		1230	J	G	1140	J	G	380	J	G	3850	J	G
ANTIMONY		1.04	U		0.973	U		1.02	U		1	U	
ARSENIC		0.622	U		0.584	U		0.615	U		0.698	J	P
BARIUM		2.25	J	P	1.93	J	P	1.02	U		12.1		
BERYLLIUM		0.207	U		0.195	U		0.205	U		0.2	U	
CADMIUM		0.328	J	P	0.218	J	P	0.205	U		2.89		
CALCIUM		5470	J	G	343	J	GP	205	UJ	G	2210	J	G
CHROMIUM		2.76			1.83	J	P	0.742	J	P	31.8		
COBALT		1.04	U		0.973	U		1.02	U		1	U	
COPPER		1.95	J	P	0.778	U		0.82	U		5.38		
IRON		1030	J	G	694	J	G	269	J	G	2300	J	G
LEAD		5.85	J	G	3.67	J	G	0.901	J	G	30.3	J	G
MAGNESIUM		207	U		195	U		205	U		200	U	
MANGANESE		15.6	J	G	3.39	J	G	1.47	J	GP	18.8	J	G
MERCURY		0.0148	U		0.0148	U		0.0155	U		0.0179	J	P
NICKEL		1.96	J	P	0.584	U		0.615	U		1.29	J	P
POTASSIUM		207	U		195	U		205	U		200	U	
SELENIUM		0.622	U		0.584	U		0.615	U		0.601	U	
SILVER		0.207	U		0.195	U		0.205	U		0.2	U	
SODIUM		207	U		195	U		205	U		200	U	
THALLIUM		0.622	U		0.584	U		0.615	U		0.601	U	
VANADIUM		1.85	J	P	1.51	J	P	1.02	U		5.22		
ZINC		13.6			4.06			2.62	J	P	56.1		

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: M	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		357	J	G	2150	J	G	248	J	G
ANTIMONY		1.07	U		1.07	U		1.11	U	
ARSENIC		0.644	U		0.643	U		0.664	U	
BARIUM		1.07	U		3.74	J	P	1.11	U	
BERYLLIUM		0.215	U		0.214	U		0.221	U	
CADMIUM		0.215	U		0.628	J	P	0.221	U	
CALCIUM		215	UJ	G	1020	J	GP	221	UJ	G
CHROMIUM		3.87			3.16			0.5	J	P
COBALT		1.07	U		1.07	U		1.11	U	
COPPER		0.859	U		1.95	J	P	0.885	U	
IRON		177	J	G	994	J	G	87.8	J	G
LEAD		2.12	J	G	6.65	J	G	0.458	J	GP
MAGNESIUM		215	U		214	U		221	U	
MANGANESE		1.27	J	GP	5.38	J	G	0.664	UJ	G
MERCURY		0.014	U		0.0149	J	P	0.0143	U	
NICKEL		0.644	U		0.648	J	P	0.664	U	
POTASSIUM		215	U		214	U		221	U	
SELENIUM		0.644	U		0.643	U		0.664	U	
SILVER		0.215	U		0.214	U		0.221	U	
SODIUM		215	U		214	U		221	U	
THALLIUM		0.644	U		0.643	U		0.664	U	
VANADIUM		1.07	U		2.46	J	P	1.11	U	
ZINC		4.09	J	P	7.91			1.11	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-10			1210127-08		
FRACTION: M	SAMP_DATE	10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		390			559		
ANTIMONY		5	U		5	U	
ARSENIC		3	U		3	U	
BARIUM		5	U		5	U	
BERYLLIUM		1	U		1	U	
CADMIUM		1	U		1	U	
CALCIUM		31700			34200		
CHROMIUM		5.75	J	P	2	U	
COBALT		5	U		5	U	
COPPER		4	U		4	U	
IRON		164			224		
LEAD		1.5	U		1.5	U	
MAGNESIUM		3980	J	P	2580	J	P
MANGANESE		3	U		3	U	
MERCURY		0.08	U		0.08	U	
NICKEL		3	U		3	U	
POTASSIUM		1000	U		1000	U	
SELENIUM		3	U		3	U	
SILVER		1	U		1	U	
SODIUM		20700			6430		
THALLIUM		3	U		3	U	
VANADIUM		5	U		5	U	
ZINC		5	U		14	J	P

PROJ_NO: 00784	NSAMPLE	PEN-3221-07-10/12			PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-12			1210127-11			1210127-09		
FRACTION: MF	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		249			49.6	J	P	63.6	J	P
MANGANESE		3.93	J	P	3	U		3	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-07-10/12			PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-12			1210127-10			1210127-08		
FRACTION: MISC	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		76.7			96.1			71		
BIOCHEMICAL OXYGEN DEMAND		2	U		2	U		2	U	
CHEMICAL OXYGEN DEMAND		20	U		20	U		20	U	
CHLORIDE		17.5			5.82			12.2		
NITRATE-N		3.7			1.33			1.07		
NITRITE-N		0.033	U		0.033	U		0.033	U	
SULFATE		12.3			6.18			5.47		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

FD10111201

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 10/11/12 00:00
% Solids: 97.48

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-07
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/Kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0148	0.0308	0.0376	1	U*	SW7471A	2J26015	10/31/12 09:57
7429-90-5	Aluminum	1230	10.4	20.7	41.4	1		SW6010C	2J24020	10/25/12 19:58
7440-36-0	Antimony		1.04	1.66	3.11	1	U	SW6010C	2J24020	10/25/12 19:58
7440-38-2	Arsenic		0.622	1.24	2.07	1	U	SW6010C	2J24020	10/25/12 19:58
7440-39-3	Barium	2.25	1.04	4.14	8.29	1	I	SW6010C	2J24020	10/25/12 19:58
7440-41-7	Beryllium		0.207	0.414	1.04	1	U	SW6010C	2J24020	10/25/12 19:58
7440-43-9	Cadmium	0.328	0.207	0.414	1.04	1	I	SW6010C	2J24020	10/25/12 19:58
7440-70-2	Calcium	5470	207	414	1040	1	N*	SW6010C	2J24020	10/25/12 19:58
7440-47-3	Chromium	2.76	0.414	0.829	2.07	1		SW6010C	2J24020	10/25/12 19:58
7440-48-4	Cobalt		1.04	2.07	2.59	1	U	SW6010C	2J24020	10/25/12 19:58
7440-50-8	Copper	1.95	0.829	1.66	2.07	1	I	SW6010C	2J24020	10/25/12 19:58
7439-89-6	Iron	1030	6.22	12.4	20.7	1	N*	SW6010C	2J24020	10/25/12 19:58
7439-92-1	Lead	5.85	0.311	0.622	0.622	1		SW6010C	2J24020	10/25/12 19:58
7439-95-4	Magnesium		207	622	1040	1	U	SW6010C	2J24020	10/25/12 19:58
7439-96-5	Manganese	15.6	0.622	1.24	3.11	1		SW6010C	2J24020	10/25/12 19:58
7440-02-0	Nickel	1.96	0.622	1.24	2.07	1	Y1	SW6010C	2J24020	10/25/12 19:58
7440-09-7	Potassium		207	622	1040	1	U	SW6010C	2J24020	10/25/12 19:58
7782-49-2	Selenium		0.622	1.04	1.24	1	U	SW6010C	2J24020	10/25/12 19:58
7440-22-4	Silver		0.207	0.414	2.07	1	U	SW6010C	2J24020	10/25/12 19:58
7440-23-5	Sodium		207	622	1040	1	U	SW6010C	2J24020	10/25/12 19:58
7440-28-0	Thallium		0.622	0.829	1.66	1	U	SW6010C	2J24020	10/25/12 19:58
7440-62-2	Vanadium	1.85	1.04	2.07	2.59	1	I	SW6010C	2J24020	10/25/12 19:58
7440-66-6	Zinc	13.6	1.04	2.07	4.14	1		SW6010C	2J24020	10/25/12 19:58

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 10/11/12 08:35
% Solids: 97.93

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-01
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/Kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0148	0.0306	0.0374	1	U*	SW7471A	2J26015	10/31/12 09:47
7429-90-5	Aluminum	1140	9.73	19.5	38.9	1		SW6010C	2J24020	10/25/12 19:13
7440-36-0	Antimony		0.973	1.56	2.92	1	U	SW6010C	2J24020	10/25/12 19:13
7440-38-2	Arsenic		0.584	1.17	1.95	1	U	SW6010C	2J24020	10/25/12 19:13
7440-39-3	Barium	1.93	0.973	3.89	7.78	1	I	SW6010C	2J24020	10/25/12 19:13
7440-41-7	Beryllium		0.195	0.389	0.973	1	U	SW6010C	2J24020	10/25/12 19:13
7440-43-9	Cadmium	0.218	0.195	0.389	0.973	1	1	SW6010C	2J24020	10/25/12 19:13
7440-70-2	Calcium	343	195	389	973	1	IN*	SW6010C	2J24020	10/25/12 19:13
7440-47-3	Chromium	1.83	0.389	0.778	1.95	1	1	SW6010C	2J24020	10/25/12 19:13
7440-48-4	Cobalt		0.973	1.95	2.43	1	U	SW6010C	2J24020	10/25/12 19:13
7440-50-8	Copper		0.778	1.56	1.95	1	U	SW6010C	2J24020	10/25/12 19:13
7439-89-6	Iron	694	5.84	11.7	19.5	1	N*	SW6010C	2J24020	10/25/12 19:13
7439-92-1	Lead	3.67	0.292	0.584	0.584	1		SW6010C	2J24020	10/25/12 19:13
7439-95-4	Magnesium		195	584	973	1	U	SW6010C	2J24020	10/25/12 19:13
7439-96-5	Manganese	3.39	0.584	1.17	2.92	1		SW6010C	2J24020	10/25/12 19:13
7440-02-0	Nickel		0.584	1.17	1.95	1	Y U	SW6010C	2J24020	10/25/12 19:13
7440-09-7	Potassium		195	584	973	1	U	SW6010C	2J24020	10/25/12 19:13
7782-49-2	Selenium		0.584	0.973	1.17	1	U	SW6010C	2J24020	10/25/12 19:13
7440-22-4	Silver		0.195	0.389	1.95	1	U	SW6010C	2J24020	10/25/12 19:13
7440-23-5	Sodium		195	584	973	1	U	SW6010C	2J24020	10/25/12 19:13
7440-28-0	Thallium		0.584	0.778	1.56	1	U	SW6010C	2J24020	10/25/12 19:13
7440-62-2	Vanadium	1.51	0.973	1.95	2.43	1	I	SW6010C	2J24020	10/25/12 19:13
7440-66-6	Zinc	4.06	0.973	1.95	3.89	1		SW6010C	2J24020	10/25/12 19:13

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 10/11/12 09:30
% Solids: 96.63

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-02
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/Kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0155	0.0322	0.0394	1	U*	SW7471A	2J26015	10/31/12 09:51
7429-90-5	Aluminum	380	10.2	20.5	41.0	1		SW6010C	2J24020	10/25/12 19:35
7440-36-0	Antimony		1.02	1.64	3.07	1	U	SW6010C	2J24020	10/25/12 19:35
7440-38-2	Arsenic		0.615	1.23	2.05	1	U	SW6010C	2J24020	10/25/12 19:35
7440-39-3	Barium		1.02	4.10	8.20	1	U	SW6010C	2J24020	10/25/12 19:35
7440-41-7	Beryllium		0.205	0.410	1.02	1	U	SW6010C	2J24020	10/25/12 19:35
7440-43-9	Cadmium		0.205	0.410	1.02	1	U	SW6010C	2J24020	10/25/12 19:35
7440-70-2	Calcium		205	410	1020	1	UN*	SW6010C	2J24020	10/25/12 19:35
7440-47-3	Chromium	0.742	0.410	0.820	2.05	1	I	SW6010C	2J24020	10/25/12 19:35
7440-48-4	Cobalt		1.02	2.05	2.56	1	U	SW6010C	2J24020	10/25/12 19:35
7440-50-8	Copper		0.820	1.64	2.05	1	U	SW6010C	2J24020	10/25/12 19:35
7439-89-6	Iron	269	6.15	12.3	20.5	1	N*	SW6010C	2J24020	10/25/12 19:35
7439-92-1	Lead	0.901	0.307	0.615	0.615	1		SW6010C	2J24020	10/25/12 19:35
7439-95-4	Magnesium		205	615	1020	1	U	SW6010C	2J24020	10/25/12 19:35
7439-96-5	Manganese	1.47	0.615	1.23	3.07	1	I	SW6010C	2J24020	10/25/12 19:35
7440-02-0	Nickel		0.615	1.23	2.05	1	Y U	SW6010C	2J24020	10/25/12 19:35
7440-09-7	Potassium		205	615	1020	1	U	SW6010C	2J24020	10/25/12 19:35
7782-49-2	Selenium		0.615	1.02	1.23	1	U	SW6010C	2J24020	10/25/12 19:35
7440-22-4	Silver		0.205	0.410	2.05	1	U	SW6010C	2J24020	10/25/12 19:35
7440-23-5	Sodium		205	615	1020	1	U	SW6010C	2J24020	10/25/12 19:35
7440-28-0	Thallium		0.615	0.820	1.64	1	U	SW6010C	2J24020	10/25/12 19:35
7440-62-2	Vanadium		1.02	2.05	2.56	1	U	SW6010C	2J24020	10/25/12 19:35
7440-66-6	Zinc	2.62	1.02	2.05	4.10	1	I	SW6010C	2J24020	10/25/12 19:35

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 10/11/12 10:00
% Solids: 96.02

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-03
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/Kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury	0.0179	0.0145	0.0301	0.0368	1	I*	SW7471A	2J26015	10/31/12 09:52
7429-90-5	Aluminum	3850	10.0	20.0	40.1	1		SW6010C	2J24020	10/25/12 19:40
7440-36-0	Antimony		1.00	1.60	3.00	1	U	SW6010C	2J24020	10/25/12 19:40
7440-38-2	Arsenic	0.698	0.601	1.20	2.00	1	I	SW6010C	2J24020	10/25/12 19:40
7440-39-3	Barium	12.1	1.00	4.01	8.01	1		SW6010C	2J24020	10/25/12 19:40
7440-41-7	Beryllium		0.200	0.401	1.00	1	U	SW6010C	2J24020	10/25/12 19:40
7440-43-9	Cadmium	2.89	0.200	0.401	1.00	1		SW6010C	2J24020	10/25/12 19:40
7440-70-2	Calcium	2210	200	401	1000	1	N*	SW6010C	2J24020	10/25/12 19:40
7440-47-3	Chromium	31.8	0.401	0.801	2.00	1		SW6010C	2J24020	10/25/12 19:40
7440-48-4	Cobalt		1.00	2.00	2.50	1	U	SW6010C	2J24020	10/25/12 19:40
7440-50-8	Copper	5.38	0.801	1.60	2.00	1		SW6010C	2J24020	10/25/12 19:40
7439-89-6	Iron	2300	6.01	12.0	20.0	1	N*	SW6010C	2J24020	10/25/12 19:40
7439-92-1	Lead	30.3	0.300	0.601	0.601	1		SW6010C	2J24020	10/25/12 19:40
7439-95-4	Magnesium		200	601	1000	1	U	SW6010C	2J24020	10/25/12 19:40
7439-96-5	Manganese	18.8	0.601	1.20	3.00	1		SW6010C	2J24020	10/25/12 19:40
7440-02-0	Nickel	1.29	0.601	1.20	2.00	1	Y I	SW6010C	2J24020	10/25/12 19:40
7440-09-7	Potassium		200	601	1000	1	U	SW6010C	2J24020	10/25/12 19:40
7782-49-2	Selenium		0.601	1.00	1.20	1	U	SW6010C	2J24020	10/25/12 19:40
7440-22-4	Silver		0.200	0.401	2.00	1	U	SW6010C	2J24020	10/25/12 19:40
7440-23-5	Sodium		200	601	1000	1	U	SW6010C	2J24020	10/25/12 19:40
7440-28-0	Thallium		0.601	0.801	1.60	1	U	SW6010C	2J24020	10/25/12 19:40
7440-62-2	Vanadium	5.22	1.00	2.00	2.50	1		SW6010C	2J24020	10/25/12 19:40
7440-66-6	Zinc	56.1	1.00	2.00	4.01	1		SW6010C	2J24020	10/25/12 19:40

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 10/11/12 10:20
% Solids: 96.01

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-04
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/Kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0140	0.0291	0.0356	1	U*	SW7471A	2J26015	10/31/12 09:54
7429-90-5	Aluminum	357	10.7	21.5	43.0	1		SW6010C	2J24020	10/25/12 19:44
7440-36-0	Antimony		1.07	1.72	3.22	1	U	SW6010C	2J24020	10/25/12 19:44
7440-38-2	Arsenic		0.644	1.29	2.15	1	U	SW6010C	2J24020	10/25/12 19:44
7440-39-3	Barium		1.07	4.30	8.59	1	U	SW6010C	2J24020	10/25/12 19:44
7440-41-7	Beryllium		0.215	0.430	1.07	1	U	SW6010C	2J24020	10/25/12 19:44
7440-43-9	Cadmium		0.215	0.430	1.07	1	U	SW6010C	2J24020	10/25/12 19:44
7440-70-2	Calcium		215	430	1070	1	UN*	SW6010C	2J24020	10/25/12 19:44
7440-47-3	Chromium	3.87	0.430	0.859	2.15	1		SW6010C	2J24020	10/25/12 19:44
7440-48-4	Cobalt		1.07	2.15	2.68	1	U	SW6010C	2J24020	10/25/12 19:44
7440-50-8	Copper		0.859	1.72	2.15	1	U	SW6010C	2J24020	10/25/12 19:44
7439-89-6	Iron	177	6.44	12.9	21.5	1	N*	SW6010C	2J24020	10/25/12 19:44
7439-92-1	Lead	2.12	0.322	0.644	0.644	1		SW6010C	2J24020	10/25/12 19:44
7439-95-4	Magnesium		215	644	1070	1	U	SW6010C	2J24020	10/25/12 19:44
7439-96-5	Manganese	1.27	0.644	1.29	3.22	1	I	SW6010C	2J24020	10/25/12 19:44
7440-02-0	Nickel		0.644	1.29	2.15	1	Y U	SW6010C	2J24020	10/25/12 19:44
7440-09-7	Potassium		215	644	1070	1	U	SW6010C	2J24020	10/25/12 19:44
7782-49-2	Selenium		0.644	1.07	1.29	1	U	SW6010C	2J24020	10/25/12 19:44
7440-22-4	Silver		0.215	0.430	2.15	1	U	SW6010C	2J24020	10/25/12 19:44
7440-23-5	Sodium		215	644	1070	1	U	SW6010C	2J24020	10/25/12 19:44
7440-28-0	Thallium		0.644	0.859	1.72	1	U	SW6010C	2J24020	10/25/12 19:44
7440-62-2	Vanadium		1.07	2.15	2.68	1	U	SW6010C	2J24020	10/25/12 19:44
7440-66-6	Zinc	4.09	1.07	2.15	4.30	1	I	SW6010C	2J24020	10/25/12 19:44

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 10/11/12 10:35
% Solids: 97.26

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-05
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/Kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury	0.0149	0.0143	0.0297	0.0364	1	I*	SW7471A	2J26015	10/31/12 09:55
7429-90-5	Aluminum	2150	10.7	21.4	42.8	1		SW6010C	2J24020	10/25/12 19:49
7440-36-0	Antimony		1.07	1.71	3.21	1	U	SW6010C	2J24020	10/25/12 19:49
7440-38-2	Arsenic		0.643	1.29	2.14	1	U	SW6010C	2J24020	10/25/12 19:49
7440-39-3	Barium	3.74	1.07	4.28	8.57	1	I	SW6010C	2J24020	10/25/12 19:49
7440-41-7	Beryllium		0.214	0.428	1.07	1	U	SW6010C	2J24020	10/25/12 19:49
7440-43-9	Cadmium	0.628	0.214	0.428	1.07	1	I	SW6010C	2J24020	10/25/12 19:49
7440-70-2	Calcium	1020	214	428	1070	1	IN*	SW6010C	2J24020	10/25/12 19:49
7440-47-3	Chromium	3.16	0.428	0.857	2.14	1		SW6010C	2J24020	10/25/12 19:49
7440-48-4	Cobalt		1.07	2.14	2.68	1	U	SW6010C	2J24020	10/25/12 19:49
7440-50-8	Copper	1.95	0.857	1.71	2.14	1	I	SW6010C	2J24020	10/25/12 19:49
7439-89-6	Iron	994	6.43	12.9	21.4	1	N*	SW6010C	2J24020	10/25/12 19:49
7439-92-1	Lead	6.65	0.321	0.643	0.643	1		SW6010C	2J24020	10/25/12 19:49
7439-95-4	Magnesium		214	643	1070	1	U	SW6010C	2J24020	10/25/12 19:49
7439-96-5	Manganese	5.38	0.643	1.29	3.21	1		SW6010C	2J24020	10/25/12 19:49
7440-02-0	Nickel	0.648	0.643	1.29	2.14	1	Y I	SW6010C	2J24020	10/25/12 19:49
7440-09-7	Potassium		214	643	1070	1	U	SW6010C	2J24020	10/25/12 19:49
7782-49-2	Selenium		0.643	1.07	1.29	1	U	SW6010C	2J24020	10/25/12 19:49
7440-22-4	Silver		0.214	0.428	2.14	1	U	SW6010C	2J24020	10/25/12 19:49
7440-23-5	Sodium		214	643	1070	1	U	SW6010C	2J24020	10/25/12 19:49
7440-28-0	Thallium		0.643	0.857	1.71	1	U	SW6010C	2J24020	10/25/12 19:49
7440-62-2	Vanadium	2.46	1.07	2.14	2.68	1	I	SW6010C	2J24020	10/25/12 19:49
7440-66-6	Zinc	7.91	1.07	2.14	4.28	1		SW6010C	2J24020	10/25/12 19:49

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Solid
Sampled: 10/11/12 10:55
% Solids: 97.17

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-06
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/Kg dry)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0143	0.0298	0.0364	1	U*	SW7471A	2J26015	10/31/12 09:56
7429-90-5	Aluminum	248	11.1	22.1	44.3	1		SW6010C	2J24020	10/25/12 19:53
7440-36-0	Antimony		1.11	1.77	3.32	1	U	SW6010C	2J24020	10/25/12 19:53
7440-38-2	Arsenic		0.664	1.33	2.21	1	U	SW6010C	2J24020	10/25/12 19:53
7440-39-3	Barium		1.11	4.43	8.85	1	U	SW6010C	2J24020	10/25/12 19:53
7440-41-7	Beryllium		0.221	0.443	1.11	1	U	SW6010C	2J24020	10/25/12 19:53
7440-43-9	Cadmium		0.221	0.443	1.11	1	U	SW6010C	2J24020	10/25/12 19:53
7440-70-2	Calcium		221	443	1110	1	UN*	SW6010C	2J24020	10/25/12 19:53
7440-47-3	Chromium	0.500	0.443	0.885	2.21	1	1	SW6010C	2J24020	10/25/12 19:53
7440-48-4	Cobalt		1.11	2.21	2.77	1	U	SW6010C	2J24020	10/25/12 19:53
7440-50-8	Copper		0.885	1.77	2.21	1	U	SW6010C	2J24020	10/25/12 19:53
7439-89-6	Iron	87.8	6.64	13.3	22.1	1	N*	SW6010C	2J24020	10/25/12 19:53
7439-92-1	Lead	0.458	0.332	0.664	0.664	1	1	SW6010C	2J24020	10/25/12 19:53
7439-95-4	Magnesium		221	664	1110	1	U	SW6010C	2J24020	10/25/12 19:53
7439-96-5	Manganese		0.664	1.33	3.32	1	U	SW6010C	2J24020	10/25/12 19:53
7440-02-0	Nickel		0.664	1.33	2.21	1	Y U	SW6010C	2J24020	10/25/12 19:53
7440-09-7	Potassium		221	664	1110	1	U	SW6010C	2J24020	10/25/12 19:53
7782-49-2	Selenium		0.664	1.11	1.33	1	U	SW6010C	2J24020	10/25/12 19:53
7440-22-4	Silver		0.221	0.443	2.21	1	U	SW6010C	2J24020	10/25/12 19:53
7440-23-5	Sodium		221	664	1110	1	U	SW6010C	2J24020	10/25/12 19:53
7440-28-0	Thallium		0.664	0.885	1.77	1	U	SW6010C	2J24020	10/25/12 19:53
7440-62-2	Vanadium		1.11	2.21	2.77	1	U	SW6010C	2J24020	10/25/12 19:53
7440-66-6	Zinc		1.11	2.21	4.43	1	U	SW6010C	2J24020	10/25/12 19:53

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 12:18
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-10
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:04
7429-90-5	Aluminum	390	50.0	100	200	1		SW6010C	2J24021	10/25/12 17:15
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J24021	10/25/12 17:15
7440-38-2	Arsenic		3.00	6.00	10.0	1	U	SW6010C	2J24021	10/25/12 17:15
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J24021	10/25/12 17:15
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J24021	10/25/12 17:15
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J24021	10/25/12 17:15
7440-70-2	Calcium	31700	1000	2000	5000	1		SW6010C	2J24021	10/25/12 17:15
7440-47-3	Chromium	5.75	2.00	4.00	10.0	1	1	SW6010C	2J24021	10/25/12 17:15
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J24021	10/25/12 17:15
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J24021	10/25/12 17:15
7439-89-6	Iron	164	30.0	60.0	100	1		SW6010C	2J24021	10/25/12 17:15
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J24021	10/25/12 17:15
7439-95-4	Magnesium	3980	1000	3000	5000	1	I	SW6010C	2J24021	10/25/12 17:15
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J24021	10/25/12 17:15
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J24021	10/25/12 17:15
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J24021	10/25/12 17:15
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J24021	10/25/12 17:15
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J24021	10/25/12 17:15
7440-23-5	Sodium	20700	1000	3000	5000	1		SW6010C	2J24021	10/25/12 17:15
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J24021	10/25/12 17:15
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J24021	10/25/12 17:15
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J24021	10/25/12 17:15

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 09:15
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-08
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:03
7429-90-5	Aluminum	559	50.0	100	200	1		SW6010C	2J24021	10/25/12 17:10
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J24021	10/25/12 17:10
7440-38-2	Arsenic		3.00	6.00	10.0	1	U	SW6010C	2J24021	10/25/12 17:10
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J24021	10/25/12 17:10
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J24021	10/25/12 17:10
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J24021	10/25/12 17:10
7440-70-2	Calcium	34200	1000	2000	5000	1		SW6010C	2J24021	10/25/12 17:10
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J24021	10/25/12 17:10
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J24021	10/25/12 17:10
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J24021	10/25/12 17:10
7439-89-6	Iron	224	30.0	60.0	100	1		SW6010C	2J24021	10/25/12 17:10
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J24021	10/25/12 17:10
7439-95-4	Magnesium	2580	1000	3000	5000	1	1	SW6010C	2J24021	10/25/12 17:10
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J24021	10/25/12 17:10
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J24021	10/25/12 17:10
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J24021	10/25/12 17:10
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J24021	10/25/12 17:10
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J24021	10/25/12 17:10
7440-23-5	Sodium	6430	1000	3000	5000	1		SW6010C	2J24021	10/25/12 17:10
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J24021	10/25/12 17:10
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J24021	10/25/12 17:10
7440-66-6	Zinc	14.0	5.00	10.0	20.0	1	I	SW6010C	2J24021	10/25/12 17:10

ANALYSIS DATA SHEET

PEN-3221-07-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 14:25
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-12
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	249	30.0	60.0	100	1		SW6010C	2J17017	10/17/12 14:33
7439-96-5	Manganese (dissolved)	3.93	3.00	6.00	15.0	1	I	SW6010C	2J17017	10/17/12 14:33

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 12:18
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-11
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	49.6	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 14:29
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 14:29

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 09:15
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-09
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	63.6	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 14:24
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 14:24

ANALYSIS DATA SHEET

PEN-3221-07-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 14:25
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-12
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J12023	10/17/12 12:49
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J15001	10/15/12 09:38
16887-00-6	Chloride	17.5	0.170	0.330	0.500	1	M	SW9056	2J12033	10/12/12 19:52
14797-55-8	Nitrate as N	3.70	0.0330	0.100	0.250	1		SW9056	2J12033	10/12/12 19:52
471-34-1	Alkalinity, Total (as CACO3)	76.7	1.00	1.00	1.00	1		SM2320B	2J24009	10/24/12 09:51
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J12033	10/12/12 19:52
14808-79-8	Sulfate as SO4	12.3	0.330	1.00	2.50	1		SW9056	2J12033	10/12/12 19:52

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 12:18
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-10
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J12023	10/17/12 12:49
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J15001	10/15/12 09:37
16887-00-6	Chloride	5.82	0.170	0.330	0.500	1	M	SW9056	2J12033	10/12/12 19:34
14797-55-8	Nitrate as N	1.33	0.0330	0.100	0.250	1		SW9056	2J12033	10/12/12 19:34
471-34-1	Alkalinity, Total (as CACO3)	96.1	1.00	1.00	1.00	1		SM2320B	2J24009	10/24/12 09:39
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J12033	10/12/12 19:34
14808-79-8	Sulfate as SO4	6.18	0.330	1.00	2.50	1		SW9056	2J12033	10/12/12 19:34

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/11/12 09:15
% Solids: 0.00

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210127-08
Received: 10/12/12 08:35

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J12023	10/17/12 12:49
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J15001	10/15/12 09:37
16887-00-6	Chloride	12.2	0.170	0.330	0.500	1	M	SW9056	2J12033	10/12/12 19:17
14797-55-8	Nitrate as N	1.07	0.0330	0.100	0.250	1		SW9056	2J12033	10/12/12 19:17
471-34-1	Alkalinity, Total (as CACO3)	71.0	1.00	1.00	1.00	1		SM2320B	2J24009	10/24/12 09:27
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J12033	10/12/12 19:17
14808-79-8	Sulfate as SO4	5.47	0.330	1.00	2.50	1		SW9056	2J12033	10/12/12 19:17

APPENDIX C
SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Sample PEN-3221-07-10/12 was received for dissolved metals but was not listed on the COC.

Changes to the Revision

This is an original submittal of the final report package.

Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following batch spikes exceeded criteria:
2J22007-BSD1 with a negative bias for 1,1-Dichloroethane

The following matrix spikes exceeded criteria:
2J22007-MS1/MSD1 (1210127-01) with a negative bias for Chlorobenzene, Cyclohexane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,1-Dichloroethane, 1,1-Dichloroethene, Isopropylbenzene, Methylcyclohexane, Styrene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, m,p-Xylene, o-Xylene, and Xylene (total)

The following was analyzed after the 12-hour tune criteria:
2J29702-BSD1 was analyzed 12 hours 16 minutes after the associated tune standard
2J23004-BSD1 was analyzed 12 hours 28 minutes after the associated tune standard

The following continuing calibration verifications exceeded criteria:
2J29608-CCV1 with a negative bias for Acetone and a positive bias for Carbon Disulfide, Chloromethane, Cyclohexane, Dichlorodifluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, and Vinyl Chloride
2J29702-CCV1 with a negative bias for Acetone, Chloroethane, Chloromethane, and Methylene Chloride and a positive bias for 2-Hexanone and 4-Methyl-2-pentanone
2J29804-CCV1 CCV1 with a negative bias for Acetone and a positive bias for Dichlorodifluoromethane

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA:
The following surrogates exceeded criteria:
2-Fluorophenol with a negative bias in 1210127-08 and -10
2,4,6-Tribromophenol with a negative bias in 1210127-08

The following batch spikes exceeded criteria:
2J17004-BS1/BSD1 exceeded relative percent difference criteria for 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, 4-Nitrophenol, Pentachlorophenol, 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol
2J19037-BS1 with a positive bias for Caprolactam

The following matrix spikes exceeded criteria:
2J19037-MS1/MSD1 (1210127-01) with a positive bias for Caprolactam

The following blanks have reported results:
2J19037-BLK1 for Bis(2-ethylhexyl)phthalate

The following continuing calibration verifications exceeded criteria:

2J29819-CCV1 with a positive bias for 2,4-Dinitrophenol and 2-Nitrophenol
2J29819-CCV2 with a positive bias for Caprolactam and 3,3'-Dichlorobenzidine
2K30609-CCV1 with a positive bias for 2,4-Dinitrophenol and 2-Nitrophenol
2K30609-CCV2 with a positive bias for Caprolactam and 3,3'-Dichlorobenzidine

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA LOW:
Note - There was a mismatch between the bid and the SAP, and the 1,4-Dioxane was missed when the project was set up in the LIMS, which drives the spiking and reporting. When this was discovered, the samples were already outside of 1x holding time. As per the client's okay, samples are being reported with 1,4-Dioxane CCVs only and no batch, matrix spike, or matrix spike duplicates.

The following continuing calibration verifications exceeded criteria:
2J29806-CCV1 with a negative bias for 1,4-Dioxane and a positive bias for 2,4,6-Tribromophenol

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8081A:
Note –Samples with positive results for PCBs may attribute to higher results and/or false positives for individual Pesticide analytes.

The following surrogates exceeded criteria:
Tetrachloro-m-xylene with a negative bias on both columns in 1210127-01, -02, -03, -04, -05, -06, -07, 2J12031-MS1, and –MSD1 and on column 2 in 2J12031-BLK1 and -BS1
Decachlorobiphenyl with a negative bias on column 2 in 1210127-05 and -06

The following batch spikes exceeded criteria:
2J12031-BS1 with a negative bias on column 2 for Endrin Ketone
2J16016-BS1 with a negative bias on column 2 for Endrin Ketone

The following matrix spikes exceeded criteria:
2J12031-MS1/MSD1 (1210127-01) with a negative bias on column 2 for 4,4'-DDE, Alpha-BHC, Alpha-chlordane, Dieldrin, Endrin, Endrin Ketone, Gamma-BHC, Gamma-chlordane, and Heptachlor Epoxide

The following blanks have reported results:
2J16016-BLK1 for Gamma-chlordane; note – no positive results were detected in the

associated samples

The following initial calibration verifications exceeded criteria:
2J28406-ICV2 with a negative bias on column 2 for Toxaphene
2J29909-ICV2 with a negative bias on both columns for Toxaphene

The following continuing calibration verifications exceeded criteria:
2J29616-CCVH with a negative bias on column 2 for Toxaphene
2J29706-CCVB with a negative bias on column 1 for Decachlorobiphenyl
2J29706-CCVG with a positive bias on column 1 for 4,4'-DDD and Delta-BHC
2J30449-CCV1 with a negative bias on column 2 for Decachlorobiphenyl
2J30449-CCVB with a positive bias on column 1 for 4,4'-DDE, 4,4'-DDD, and Delta-BHC
2J30449-CCVL with a positive bias on column 1 for 4,4'-DDE, 4,4'-DDD, and Delta-BHC

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8082A:
The following surrogates exceeded criteria:
Tetrachloro-m-xylene with a negative bias on both columns in 1210127-01, -02, -03, -04, -05, -06, -07, 2J12031-MS2, and –MSD2 and on column 2 in 2J12031-BLK1 and -BS2
Decachlorobiphenyl with a negative bias on column 2 in 1210127-03, -04, -05, and -06

The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 2 for Tetrachloro-m-xylene
2J30449-CCV1 with a negative bias on column 2 for Decachlorobiphenyl

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C/SW7470A:
The following continuing calibration verifications exceeded criteria:
2J29918-CCV9 with a negative bias for Nickel

The following matrix spikes exceeded criteria:
2J24020-MS2/MSD2 (1210127-01) with a positive bias for Iron and Calcium, exceeded relative percent difference criteria for Calcium, and exceeded criteria for Aluminum; note – the parent sample concentration for Aluminum is greater than 4 times the amount spiked
2J26015-MS1/MSD1 (1210127-01) exceeded relative percent difference criteria for

Mercury

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:
The following compounds are qualified with an M to indicate that the LOQ was raised to the level of the reporting limit standard within criteria:
Chloride (1.0mg/L) in 1210127-08, -10, and -12

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

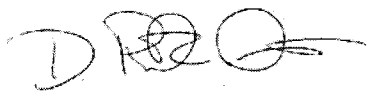
BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

1210127

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1983 | PAGE 1 OF 1

PROJECT NO: 112G 08104	FACILITY: NAS Pensacola Site 44	PROJECT MANAGER Gerry Walker	PHONE NUMBER 850-385-9849	LABORATORY NAME AND CONTACT: Empirical Laboratory Yo Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Amber Igo	PHONE NUMBER 850-322-8033	ADDRESS 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER 8003 2540 7606		CITY, STATE Nashville TN 37228

STANDARD TAT [X]
RUSH TAT [ ]
[ ] 24 hr. [ ] 48 hr. [ ] 72 hr. [ ] 7 day [ ] 14 day

DATE (YEAR 2012)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TCL VOCs	PCE, TCE, cis-1,2-DCE, VC	TCL Pesticides + PCBs	TAL metals with mercury	Anions	TCL SVOCs w/ LL PAHs	Alkalinity	BOD	COD	COMMENTS
10/11/12	0835	PEN-44-SS01-0-2-10/12	SS01	0	2	SO	G	18	9		3	13	3					01
	0930	PEN-44-SS01-6-8-10/12	" "	6	8			6	3		1	1	1					02
	1000	PEN-44-SS02-0-2-10/12	SS02	0	2			6	3		1	1	1					03
	1020	PEN-44-SS02-6-8-10/12	" "	6	8			6	3		1	1	1					04
	1035	PEN-44-SS03-0-2-10/12	SS03	0	2			6	3		1	1	1					05
	1055	PEN-44-SS03-6-8-10/12	" "	6	8			6	3		1	1	1					06
	0000	FD101112 01				↓	↓	6	3		1	1	1					07
	0915	PEN-44-09-10/12				GW		11	3		1	1	2	1	1	1		08/09
	1118	PEN-3221-09-10/12						11	3		1	1	2	1	1	1		10/11
↓	1425	PEN-3221-07-10/12				↓		7		3				1	1	1	1	12
		Trip Blank 01035				01			3									13

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	1700	10/11/12	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY jack daville jr.	10-12-12	0835

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

13

1210127 Summ Package

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/12/12 @ 0835 Workorder# 1210127

1. Tracking # 0315 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 4.2 °C + *correction factor (+ 0.2)* = 4.4 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

   If yes, how many and where: 2 FRONT/BACK

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) JD

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES...(NO)...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence # 1

I certify that I unloaded the cooler and answered questions 7-14 (initial) JD

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JD

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JD

I certify that I attached a label with the unique LIMS number to each container (initial) JD

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance Issues at login? YES (NO) Was a NCR generated? YES (NO) #____

Additional Details:

Sample -12 arrived with bottles for anions, alkalinity, BOD, COC, and VOCs, a dissolved metals container arrived with these, but the analysis wasn't included on COC.

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/12/12 @ 0835 Workorder# 1210127

1. Tracking # 7606 (last 4 digits, FedEx)

   Courier: FED-EX

2. Temperature of rep. sample or temp blank when opened: 0.5 °C + *correction factor (+ 0.2)* = 0.7 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

   If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? YES...(NO)...NA

I certify that I opened the cooler and answered questions 1-6 (initial) JV

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES...(NO)...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence # 2

I certify that I unloaded the cooler and answered questions 7-14 (initial) JV

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

    b. Did the bottle labels indicate that the correct preservatives were used YES...NO...(NA)

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JV

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JV

I certify that I attached a label with the unique LIMS number to each container (initial) JV

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES (NO) Was a NCR generated? YES (NO)...# —

Additional Details:

HOLDTIME

SDG 1210127

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	MG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	FD10111201	1210127-07	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/27/2012	10/29/2012	16	2	18
HG	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/27/2012	10/29/2012	16	2	18
M	MG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	FD10111201	1210127-07	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
MF	UG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/17/2012	10/17/2012	6	0	6
MF	UG/L	PEN-44-09-10/12	1210127-09	NM	10/11/2012	10/17/2012	10/17/2012	6	0	6
MF	UG/L	PEN-3221-09-10/12	1210127-11	NM	10/11/2012	10/17/2012	10/17/2012	6	0	6
ALK	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/24/2012	10/24/2012	13	0	13
ALK	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/24/2012	10/24/2012	13	0	13
ALK	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/24/2012	10/24/2012	13	0	13
BOD	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/17/2012	1	5	6
BOD	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/17/2012	1	5	6
BOD	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/17/2012	1	5	6
CL	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
CL	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
CL	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
COD	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
COD	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
COD	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTA	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTA	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTA	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTI	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTI	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTI	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
SO4	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
SO4	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
SO4	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
OS	UG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	FD10111201	1210127-07	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/17/2012	10/23/2012	6	6	12
OS	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/17/2012	10/23/2012	6	6	12

NAS PENSACOLA
SOIL DATA
1210127

FRACTION	CHEMICAL	PEN-44-SS03-6-8-10/12	UNITS	FD10111201	RPD	D	
M	ALUMINUM	248	MG/KG	1230	132.88	982.00	RPD
M	BARIUM	ND	MG/KG	2.25 I	200.00	2.25	OK
M	CADMIUM	ND	MG/KG	0.328 I	200.00	0.33	OK
M	CALCIUM	ND	MG/KG	5470 N*	200.00	5470.00	Range
M	CHROMIUM	0.5 I	MG/KG	2.76	138.65	2.26	OK
M	COPPER	ND	MG/KG	1.95 I	200.00	1.95	OK
M	IRON	87.8 N*	MG/KG	1030 N*	168.58	942.20	Range
M	LEAD	0.458 I	MG/KG	5.85	170.96	5.39	Range
M	MANGANESE	ND	MG/KG	15.6	200.00	15.60	Range
M	NICKEL	ND	MG/KG	1.96 YI	200.00	1.96	OK
M	VANADIUM	ND	MG/KG	1.85 I	200.00	1.85	OK
M	ZINC	ND	MG/KG	13.6	200.00	13.60	OK

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291004
Sequence: 2J29110

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29110-ICV1	Iron (dissolved)	10000	10140	101	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1020	102	ug/L	+/- 10.00%
2J29110-CCV1	Iron (dissolved)	10000	10420	104	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1066	107	ug/L	+/- 10.00%
2J29110-CCV3	Iron (dissolved)	10000	10120	101	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1034	103	ug/L	+/- 10.00%
2J29110-CCV4	Iron (dissolved)	10000	10540	105	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1035	104	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299006
Sequence: 2J29918

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29918-ICV1	Aluminum	10000	10200	102	ug/L	+/- 10.00%
	Antimony	1000	987.2	98.7	ug/L	+/- 10.00%
	Arsenic	1000	1026	103	ug/L	+/- 10.00%
	Barium	1000	976.3	97.6	ug/L	+/- 10.00%
	Beryllium	1000	1013	101	ug/L	+/- 10.00%
	Cadmium	1000	1044	104	ug/L	+/- 10.00%
	Calcium	50000	52300	105	ug/L	+/- 10.00%
	Chromium	1000	981.8	98.2	ug/L	+/- 10.00%
	Cobalt	1000	980.4	98.0	ug/L	+/- 10.00%
	Copper	1000	998.6	99.9	ug/L	+/- 10.00%
	Iron	10000	10480	105	ug/L	+/- 10.00%
	Lead	1000	961.1	96.1	ug/L	+/- 10.00%
	Magnesium	50000	49660	99.3	ug/L	+/- 10.00%
	Manganese	1000	1035	103	ug/L	+/- 10.00%
	Nickel	1000	961.9	96.2	ug/L	+/- 10.00%
	Potassium	10000	9958	99.6	ug/L	+/- 10.00%
	Selenium	1000	1001	100	ug/L	+/- 10.00%
	Silver	500.0	496.4	99.3	ug/L	+/- 10.00%
	Sodium	50000	50940	102	ug/L	+/- 10.00%
	Thallium	1000	937.1	93.7	ug/L	+/- 10.00%
	Vanadium	1000	1011	101	ug/L	+/- 10.00%
	Zinc	1000	1011	101	ug/L	+/- 10.00%
2J29918-CCV1	Aluminum	10000	10390	104	ug/L	+/- 10.00%
	Antimony	1000	974.8	97.5	ug/L	+/- 10.00%
	Arsenic	1000	1000	100	ug/L	+/- 10.00%
	Barium	1000	970.4	97.0	ug/L	+/- 10.00%
	Beryllium	1000	1008	101	ug/L	+/- 10.00%
	Cadmium	1000	1043	104	ug/L	+/- 10.00%
	Calcium	50000	50940	102	ug/L	+/- 10.00%
	Chromium	1000	995.3	99.5	ug/L	+/- 10.00%
	Cobalt	1000	989.7	99.0	ug/L	+/- 10.00%
	Copper	1000	1011	101	ug/L	+/- 10.00%
	Iron	10000	10510	105	ug/L	+/- 10.00%
	Lead	1000	975.6	97.6	ug/L	+/- 10.00%
	Magnesium	50000	49930	99.9	ug/L	+/- 10.00%
	Manganese	1000	1056	106	ug/L	+/- 10.00%
	Nickel	1000	969.1	96.9	ug/L	+/- 10.00%
	Potassium	10000	9953	99.5	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299006
Sequence: 2J29918

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29918-CCV1	Selenium	1000	1018	102	ug/L	+/- 10.00%
	Silver	500.0	493.5	98.7	ug/L	+/- 10.00%
	Sodium	50000	51800	104	ug/L	+/- 10.00%
	Thallium	1000	959.9	96.0	ug/L	+/- 10.00%
	Vanadium	1000	990.1	99.0	ug/L	+/- 10.00%
	Zinc	1000	1007	101	ug/L	+/- 10.00%
2J29918-CCV5	Aluminum	10000	10500	105	ug/L	+/- 10.00%
	Antimony	1000	967.6	96.8	ug/L	+/- 10.00%
	Arsenic	1000	994.2	99.4	ug/L	+/- 10.00%
	Barium	1000	956.7	95.7	ug/L	+/- 10.00%
	Beryllium	1000	1010	101	ug/L	+/- 10.00%
	Cadmium	1000	1024	102	ug/L	+/- 10.00%
	Calcium	50000	51640	103	ug/L	+/- 10.00%
	Chromium	1000	991.6	99.2	ug/L	+/- 10.00%
	Cobalt	1000	984.1	98.4	ug/L	+/- 10.00%
	Copper	1000	1039	104	ug/L	+/- 10.00%
	Iron	10000	10620	106	ug/L	+/- 10.00%
	Lead	1000	973.0	97.3	ug/L	+/- 10.00%
	Magnesium	50000	49290	98.6	ug/L	+/- 10.00%
	Manganese	1000	1066	107	ug/L	+/- 10.00%
	Nickel	1000	947.2	94.7	ug/L	+/- 10.00%
	Potassium	10000	9980	99.8	ug/L	+/- 10.00%
	Selenium	1000	1022	102	ug/L	+/- 10.00%
	Silver	500.0	502.4	100	ug/L	+/- 10.00%
	Sodium	50000	51360	103	ug/L	+/- 10.00%
	Thallium	1000	949.5	94.9	ug/L	+/- 10.00%
	Vanadium	1000	991.8	99.2	ug/L	+/- 10.00%
	Zinc	1000	986.1	98.6	ug/L	+/- 10.00%
2J29918-CCV6	Aluminum	10000	10780	108	ug/L	+/- 10.00%
	Antimony	1000	925.8	92.6	ug/L	+/- 10.00%
	Arsenic	1000	959.5	95.9	ug/L	+/- 10.00%
	Barium	1000	922.2	92.2	ug/L	+/- 10.00%
	Beryllium	1000	974.7	97.5	ug/L	+/- 10.00%
	Cadmium	1000	1004	100	ug/L	+/- 10.00%
	Calcium	50000	50340	101	ug/L	+/- 10.00%
	Chromium	1000	959.6	96.0	ug/L	+/- 10.00%
	Cobalt	1000	974.0	97.4	ug/L	+/- 10.00%
	Copper	1000	1063	106	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299006
Sequence: 2J29918

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29918-CCV6	Iron	10000	10540	105	ug/L	+/- 10.00%
	Lead	1000	962.9	96.3	ug/L	+/- 10.00%
	Magnesium	50000	48300	96.6	ug/L	+/- 10.00%
	Manganese	1000	1090	109	ug/L	+/- 10.00%
	Nickel	1000	908.5	90.8	ug/L	+/- 10.00%
	Potassium	10000	10010	100	ug/L	+/- 10.00%
	Selenium	1000	1012	101	ug/L	+/- 10.00%
	Silver	500.0	502.8	101	ug/L	+/- 10.00%
	Sodium	50000	51550	103	ug/L	+/- 10.00%
	Thallium	1000	916.9	91.7	ug/L	+/- 10.00%
	Vanadium	1000	949.7	95.0	ug/L	+/- 10.00%
	Zinc	1000	963.9	96.4	ug/L	+/- 10.00%
2J29918-CCV7	Aluminum	10000	10250	103	ug/L	+/- 10.00%
	Antimony	1000	950.8	95.1	ug/L	+/- 10.00%
	Arsenic	1000	974.7	97.5	ug/L	+/- 10.00%
	Barium	1000	939.7	94.0	ug/L	+/- 10.00%
	Beryllium	1000	1006	101	ug/L	+/- 10.00%
	Cadmium	1000	1007	101	ug/L	+/- 10.00%
	Calcium	50000	51600	103	ug/L	+/- 10.00%
	Chromium	1000	982.2	98.2	ug/L	+/- 10.00%
	Cobalt	1000	962.1	96.2	ug/L	+/- 10.00%
	Copper	1000	1013	101	ug/L	+/- 10.00%
	Iron	10000	10510	105	ug/L	+/- 10.00%
	Lead	1000	954.5	95.4	ug/L	+/- 10.00%
	Magnesium	50000	48810	97.6	ug/L	+/- 10.00%
	Manganese	1000	1042	104	ug/L	+/- 10.00%
	Nickel	1000	933.1	93.3	ug/L	+/- 10.00%
	Potassium	10000	9853	98.5	ug/L	+/- 10.00%
	Selenium	1000	1002	100	ug/L	+/- 10.00%
	Silver	500.0	494.3	98.9	ug/L	+/- 10.00%
	Sodium	50000	50320	101	ug/L	+/- 10.00%
	Thallium	1000	933.9	93.4	ug/L	+/- 10.00%
	Vanadium	1000	980.4	98.0	ug/L	+/- 10.00%
	Zinc	1000	970.4	97.0	ug/L	+/- 10.00%
2J29918-CCV8	Aluminum	10000	10620	106	ug/L	+/- 10.00%
	Antimony	1000	927.0	92.7	ug/L	+/- 10.00%
	Arsenic	1000	956.1	95.6	ug/L	+/- 10.00%
	Barium	1000	923.2	92.3	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299006
Sequence: 2J29918

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29918-CCV8	Beryllium	1000	1008	101	ug/L	+/- 10.00%
	Cadmium	1000	995.7	99.6	ug/L	+/- 10.00%
	Calcium	50000	52380	105	ug/L	+/- 10.00%
	Chromium	1000	974.6	97.5	ug/L	+/- 10.00%
	Cobalt	1000	961.3	96.1	ug/L	+/- 10.00%
	Copper	1000	1030	103	ug/L	+/- 10.00%
	Iron	10000	10720	107	ug/L	+/- 10.00%
	Lead	1000	952.5	95.2	ug/L	+/- 10.00%
	Magnesium	50000	48960	97.9	ug/L	+/- 10.00%
	Manganese	1000	1056	106	ug/L	+/- 10.00%
	Nickel	1000	910.7	91.1	ug/L	+/- 10.00%
	Potassium	10000	10080	101	ug/L	+/- 10.00%
	Selenium	1000	1006	101	ug/L	+/- 10.00%
	Silver	500.0	499.1	99.8	ug/L	+/- 10.00%
	Sodium	50000	51050	102	ug/L	+/- 10.00%
	Thallium	1000	914.1	91.4	ug/L	+/- 10.00%
	Vanadium	1000	974.0	97.4	ug/L	+/- 10.00%
	Zinc	1000	961.4	96.1	ug/L	+/- 10.00%
2J29918-CCV9	Aluminum	10000	10690	107	ug/L	+/- 10.00%
	Antimony	1000	916.0	91.6	ug/L	+/- 10.00%
	Arsenic	1000	951.3	95.1	ug/L	+/- 10.00%
	Barium	1000	910.6	91.1	ug/L	+/- 10.00%
	Beryllium	1000	1010	101	ug/L	+/- 10.00%
	Cadmium	1000	984.4	98.4	ug/L	+/- 10.00%
	Calcium	50000	53350	107	ug/L	+/- 10.00%
	Chromium	1000	993.2	99.3	ug/L	+/- 10.00%
	Cobalt	1000	952.5	95.2	ug/L	+/- 10.00%
	Copper	1000	1055	106	ug/L	+/- 10.00%
	Iron	10000	10780	108	ug/L	+/- 10.00%
	Lead	1000	947.3	94.7	ug/L	+/- 10.00%
	Magnesium	50000	48690	97.4	ug/L	+/- 10.00%
	Manganese	1000	1078	108	ug/L	+/- 10.00%
	Nickel	**1000**	**895.0**	**89.5** OL	**ug/L**	+/- 10.00%
	Potassium	10000	10120	101	ug/L	+/- 10.00%
	Selenium	1000	1005	100	ug/L	+/- 10.00%
	Silver	500.0	512.5	102	ug/L	+/- 10.00%
	Sodium	50000	50540	101	ug/L	+/- 10.00%
	Thallium	1000	901.2	90.1	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299006
Sequence: 2J29918

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29918-CCV9	Vanadium	1000	992.7	99.3	ug/L	+/- 10.00%
	Zinc	1000	955.4	95.5	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2304001
Sequence: 2J30413

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30413-ICV1	Mercury	4.000	4.356	109	ug/L	+/- 20.00%
2J30413-CCV1	Mercury	2.000	2.189	109	ug/L	+/- 20.00%
2J30413-CCV2	Mercury	2.000	2.061	103	ug/L	+/- 20.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW7471A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2305001
Sequence: 2J30511

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30511-ICV1	Mercury	4.000	4.156	104	ug/L	+/- 15.00%
2J30511-CCV1	Mercury	2.000	2.021	101	ug/L	+/- 15.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2291004

Sequence: 2J29110

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J29110-CRL1	Iron (dissolved)	60.00	64.82	108	ug/L	80 - 120
	Manganese (dissolved)	6.000	6.475	108	ug/L	80 - 120

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2299006

Sequence: 2J29918

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J29918-CRL1	Aluminum	100.0	102.2	102	ug/L	80 - 120
	Antimony	8.000	7.396	92.4	ug/L	80 - 120
	Barium	10.00	10.18	102	ug/L	80 - 120
	Beryllium	2.000	2.036	102	ug/L	80 - 120
	Cadmium	2.000	2.121	106	ug/L	80 - 120
	Calcium	2000	2142	107	ug/L	80 - 120
	Chromium	4.000	4.070	102	ug/L	80 - 120
	Cobalt	10.00	9.601	96.0	ug/L	80 - 120
	Copper	8.000	8.047	101	ug/L	80 - 120
	Iron	60.00	65.56	109	ug/L	80 - 120
	Lead	3.000	2.870	95.7	ug/L	80 - 120
	Magnesium	3000	3138	105	ug/L	80 - 120
	Manganese	6.000	6.605	110	ug/L	80 - 120
	Nickel	6.000	6.034	101	ug/L	80 - 120
	Potassium	3000	3075	103	ug/L	80 - 120
	Silver	2.000	1.969	98.4	ug/L	80 - 120
	Sodium	3000	3145	105	ug/L	80 - 120
	Thallium	4.000	3.731	93.3	ug/L	80 - 120
	Vanadium	10.00	9.923	99.2	ug/L	80 - 120
	Zinc	10.00	10.05	101	ug/L	80 - 120
2J29918-CRL2	Arsenic	5.000	4.137	82.7	ug/L	80 - 120
	Selenium	5.000	4.641	92.8	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29110
Calibration: 2291004

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29110-ICB1	Iron (dissolved)	1.866	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	-0.03475	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB1	Iron (dissolved)	1.48	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0143	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB3	Iron (dissolved)	8.29	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.132	3.00	15.0	ug/L	U	SW6010C
2J17017-BLK1	Iron (dissolved)	9.80	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.128	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB4	Iron (dissolved)	2.21	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0918	3.00	15.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29918
Calibration: 2299006

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29918-ICB1	Aluminum	-14.27	50.0	200	ug/L	U	SW6010C
	Antimony	0.4280	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.3445	3.00	10.0	ug/L	U	SW6010C
	Barium	-0.06101	5.00	40.0	ug/L	U	SW6010C
	Beryllium	-0.01443	1.00	5.00	ug/L	U	SW6010C
	Cadmium	-0.05382	1.00	5.00	ug/L	U	SW6010C
	Calcium	-0.8900	1000	5000	ug/L	U	SW6010C
	Chromium	-0.09543	2.00	10.0	ug/L	U	SW6010C
	Cobalt	-0.04505	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.1703	4.00	10.0	ug/L	U	SW6010C
	Iron	-0.1654	30.0	100	ug/L	U	SW6010C
	Lead	0.4459	1.50	3.00	ug/L	U	SW6010C
	Magnesium	6.480	1000	5000	ug/L	U	SW6010C
	Manganese	-0.02068	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.06096	3.00	10.0	ug/L	U	SW6010C
	Potassium	9.810	1000	5000	ug/L	U	SW6010C
	Selenium	0.2749	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.08754	1.00	3.00	ug/L	U	SW6010C
	Sodium	-2.220	1000	5000	ug/L	U	SW6010C
	Thallium	0.2201	3.00	8.00	ug/L	U	SW6010C
	Vanadium	-0.08637	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.05915	5.00	20.0	ug/L	U	SW6010C
2J29918-CCB1	Aluminum	-13.7	50.0	200	ug/L	U	SW6010C
	Antimony	-0.159	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.683	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0790	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.00408	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0868	1.00	5.00	ug/L	U	SW6010C
	Calcium	-0.900	1000	5000	ug/L	U	SW6010C
	Chromium	0.00733	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0683	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.330	4.00	10.0	ug/L	U	SW6010C
	Iron	-0.850	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29918
Calibration: 2299006

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29918-CCB1	Lead	0.713	1.50	3.00	ug/L	U	SW6010C
	Magnesium	10.0	1000	5000	ug/L	U	SW6010C
	Manganese	0.0289	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.291	3.00	10.0	ug/L	U	SW6010C
	Potassium	9.31	1000	5000	ug/L	U	SW6010C
	Selenium	0.0118	3.00	5.00	ug/L	U	SW6010C
	Silver	0.0770	1.00	3.00	ug/L	U	SW6010C
	Sodium	8.22	1000	5000	ug/L	U	SW6010C
	Thallium	0.203	3.00	8.00	ug/L	U	SW6010C
	Vanadium	-0.0300	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.190	5.00	20.0	ug/L	U	SW6010C
2J29918-CCB5	Aluminum	-12.3	50.0	200	ug/L	U	SW6010C
	Antimony	-0.821	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.0973	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0536	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0274	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0726	1.00	5.00	ug/L	U	SW6010C
	Calcium	17.0	1000	5000	ug/L	U	SW6010C
	Chromium	0.0587	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0556	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.356	4.00	10.0	ug/L	U	SW6010C
	Iron	1.27	30.0	100	ug/L	U	SW6010C
	Lead	0.734	1.50	3.00	ug/L	U	SW6010C
	Magnesium	12.8	1000	5000	ug/L	U	SW6010C
	Manganese	0.0706	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.154	3.00	10.0	ug/L	U	SW6010C
	Potassium	15.1	1000	5000	ug/L	U	SW6010C
	Selenium	0.871	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.0857	1.00	3.00	ug/L	U	SW6010C
	Sodium	12.1	1000	5000	ug/L	U	SW6010C
	Thallium	0.318	3.00	8.00	ug/L	U	SW6010C
	Vanadium	-0.209	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.195	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29918
Calibration: 2299006

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J24021-BLK1	Aluminum	-7.26	50.0	200	ug/L	U	SW6010C
	Antimony	-0.414	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.989	3.00	10.0	ug/L	U	SW6010C
	Barium	0.253	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0161	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.00655	1.00	5.00	ug/L	U	SW6010C
	Calcium	16.4	1000	5000	ug/L	U	SW6010C
	Chromium	0.0984	2.00	10.0	ug/L	U	SW6010C
	Cobalt	-0.125	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.234	4.00	10.0	ug/L	U	SW6010C
	Iron	2.34	30.0	100	ug/L	U	SW6010C
	Lead	0.150	1.50	3.00	ug/L	U	SW6010C
	Magnesium	5.22	1000	5000	ug/L	U	SW6010C
	Manganese	0.0850	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.230	3.00	10.0	ug/L	U	SW6010C
	Potassium	32.4	1000	5000	ug/L	U	SW6010C
	Selenium	-0.874	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.0488	1.00	3.00	ug/L	U	SW6010C
	Sodium	12.2	1000	5000	ug/L	U	SW6010C
	Thallium	-0.431	3.00	8.00	ug/L	U	SW6010C
	Vanadium	-0.0702	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.268	5.00	20.0	ug/L	U	SW6010C
2J29918-CCB6	Aluminum	-14.1	50.0	200	ug/L	U	SW6010C
	Antimony	-0.155	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.133	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0650	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0188	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0904	1.00	5.00	ug/L	U	SW6010C
	Calcium	0.520	1000	5000	ug/L	U	SW6010C
	Chromium	-0.0648	2.00	10.0	ug/L	U	SW6010C
	Cobalt	-0.0501	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.846	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.46	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29918
Calibration: 2299006

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29918-CCB6	Lead	0.800	1.50	3.00	ug/L	U	SW6010C
	Magnesium	7.26	1000	5000	ug/L	U	SW6010C
	Manganese	0.0150	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.363	3.00	10.0	ug/L	U	SW6010C
	Potassium	22.2	1000	5000	ug/L	U	SW6010C
	Selenium	0.0588	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.0661	1.00	3.00	ug/L	U	SW6010C
	Sodium	6.98	1000	5000	ug/L	U	SW6010C
	Thallium	0.313	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.0382	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.181	5.00	20.0	ug/L	U	SW6010C
2J29918-CCB7	Aluminum	-3.79	50.0	200	ug/L	U	SW6010C
	Antimony	-0.00773	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.375	3.00	10.0	ug/L	U	SW6010C
	Barium	0.151	5.00	40.0	ug/L	U	SW6010C
	Beryllium	-0.0223	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.168	1.00	5.00	ug/L	U	SW6010C
	Calcium	1.86	1000	5000	ug/L	U	SW6010C
	Chromium	0.0558	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0562	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.460	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.62	30.0	100	ug/L	U	SW6010C
	Lead	0.515	1.50	3.00	ug/L	U	SW6010C
	Magnesium	7.82	1000	5000	ug/L	U	SW6010C
	Manganese	0.0561	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.337	3.00	10.0	ug/L	U	SW6010C
	Potassium	20.8	1000	5000	ug/L	U	SW6010C
	Selenium	-0.189	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.143	1.00	3.00	ug/L	U	SW6010C
	Sodium	52.3	1000	5000	ug/L	U	SW6010C
	Thallium	0.470	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.000500	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.817	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29918
Calibration: 2299006

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J24020-BLK1	Aluminum	-0.934	10.0	40.0	mg/Kg wet	U	SW6010C
	Antimony	-0.0679	1.00	3.00	mg/Kg wet	U	SW6010C
	Arsenic	0.0358	0.600	2.00	mg/Kg wet	U	SW6010C
	Barium	0.0158	1.00	8.00	mg/Kg wet	U	SW6010C
	Beryllium	-0.00608	0.200	1.00	mg/Kg wet	U	SW6010C
	Cadmium	0.0220	0.200	1.00	mg/Kg wet	U	SW6010C
	Calcium	0.272	200	1000	mg/Kg wet	U	SW6010C
	Chromium	0.0833	0.400	2.00	mg/Kg wet	U	SW6010C
	Cobalt	-0.0183	1.00	2.50	mg/Kg wet	U	SW6010C
	Copper	-0.0785	0.800	2.00	mg/Kg wet	U	SW6010C
	Iron	0.407	6.00	20.0	mg/Kg wet	U	SW6010C
	Lead	0.0735	0.300	0.600	mg/Kg wet	U	SW6010C
	Magnesium	0.798	200	1000	mg/Kg wet	U	SW6010C
	Manganese	0.0246	0.600	3.00	mg/Kg wet	U	SW6010C
	Nickel	0.0604	0.600	2.00	mg/Kg wet	U	SW6010C
	Potassium	7.95	200	1000	mg/Kg wet	U	SW6010C
	Selenium	0.0130	0.600	1.20	mg/Kg wet	U	SW6010C
	Silver	-0.0648	0.200	2.00	mg/Kg wet	U	SW6010C
	Sodium	7.64	200	1000	mg/Kg wet	U	SW6010C
	Thallium	0.0415	0.600	1.60	mg/Kg wet	U	SW6010C
	Vanadium	-0.0159	1.00	2.50	mg/Kg wet	U	SW6010C
	Zinc	0.0972	1.00	4.00	mg/Kg wet	U	SW6010C
2J29918-CCB8	Aluminum	-0.705	50.0	200	ug/L	U	SW6010C
	Antimony	-0.657	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.970	3.00	10.0	ug/L	U	SW6010C
	Barium	0.166	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0601	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0248	1.00	5.00	ug/L	U	SW6010C
	Calcium	4.86	1000	5000	ug/L	U	SW6010C
	Chromium	-0.0368	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0229	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.867	4.00	10.0	ug/L	U	SW6010C
	Iron	23.3	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29918
Calibration: 2299006

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29918-CCB8	Lead	-0.0149	1.50	3.00	ug/L	U	SW6010C
	Magnesium	7.93	1000	5000	ug/L	U	SW6010C
	Manganese	0.256	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.294	3.00	10.0	ug/L	U	SW6010C
	Potassium	6.59	1000	5000	ug/L	U	SW6010C
	Selenium	0.121	3.00	5.00	ug/L	U	SW6010C
	Silver	0.0249	1.00	3.00	ug/L	U	SW6010C
	Sodium	6.60	1000	5000	ug/L	U	SW6010C
	Thallium	0.727	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.126	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.245	5.00	20.0	ug/L	U	SW6010C
2J29918-CCB9	Aluminum	-9.62	50.0	200	ug/L	U	SW6010C
	Antimony	-0.817	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.159	3.00	10.0	ug/L	U	SW6010C
	Barium	0.143	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.121	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0918	1.00	5.00	ug/L	U	SW6010C
	Calcium	10.3	1000	5000	ug/L	U	SW6010C
	Chromium	0.284	2.00	10.0	ug/L	U	SW6010C
	Cobalt	-0.000390	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.822	4.00	10.0	ug/L	U	SW6010C
	Iron	1.31	30.0	100	ug/L	U	SW6010C
	Lead	0.329	1.50	3.00	ug/L	U	SW6010C
	Magnesium	15.9	1000	5000	ug/L	U	SW6010C
	Manganese	0.227	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.368	3.00	10.0	ug/L	U	SW6010C
	Potassium	-10.1	1000	5000	ug/L	U	SW6010C
	Selenium	-0.752	3.00	5.00	ug/L	U	SW6010C
	Silver	0.313	1.00	3.00	ug/L	U	SW6010C
	Sodium	10.8	1000	5000	ug/L	U	SW6010C
	Thallium	0.239	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.103	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.215	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30413
Calibration: 2304001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30413-ICB1	Mercury	0.02571	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB1	Mercury	0.0177	0.0800	0.200	ug/L	U	SW7470A
2J27920-BLK1	Mercury	0.0356	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB2	Mercury	0.0267	0.0800	0.200	ug/L	U	SW7470A

BLANKS
SW7471A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30511
Calibration: 2305001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30511-ICB1	Mercury	0.04161	0.0780	0.198	ug/L	U	SW7471A
2J26015-BLK1	Mercury	0.00693	0.0130	0.0330	mg/Kg wet	U	SW7471A
2J30511-CCB1	Mercury	0.0410	0.0780	0.198	ug/L	U	SW7471A

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17017 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-09	10/17/12 10:58	50.00	50.00
PEN-3221-09-10/12	1210127-11	10/17/12 10:58	50.00	50.00
PEN-3221-07-10/12	1210127-12	10/17/12 10:58	50.00	50.00
Blank	2J17017-BLK1	10/17/12 10:58	50.00	50.00
LCS	2J17017-BS1	10/17/12 10:58	50.00	50.00

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J24020 Batch Matrix: Solid Preparation: MET_3050B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-SS01-0-2-10/12	1210127-01	10/24/12 09:46	1.05	200.00
PEN-44-SS01-6-8-10/12	1210127-02	10/24/12 09:46	1.01	200.00
PEN-44-SS02-0-2-10/12	1210127-03	10/24/12 09:46	1.04	200.00
PEN-44-SS02-6-8-10/12	1210127-04	10/24/12 09:46	0.97	200.00
PEN-44-SS03-0-2-10/12	1210127-05	10/24/12 09:46	0.96	200.00
PEN-44-SS03-6-8-10/12	1210127-06	10/24/12 09:46	0.93	200.00
FD10111201	1210127-07	10/24/12 09:46	0.99	200.00
Blank	2J24020-BLK1	10/24/12 09:46	1.00	200.00
LCS	2J24020-BS1	10/24/12 09:46	1.00	200.00
PEN-44-SS01-0-2-10/12	2J24020-DUP2	10/24/12 09:46	1.05	200.00
PEN-44-SS01-0-2-10/12	2J24020-MS2	10/24/12 09:46	1.00	200.00
PEN-44-SS01-0-2-10/12	2J24020-MSD2	10/24/12 09:46	0.96	200.00
PEN-44-SS01-0-2-10/12	2J24020-PS2	10/24/12 09:46	1.05	200.00

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J24021 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/24/12 09:48	50.00	50.00
PEN-3221-09-10/12	1210127-10	10/24/12 09:48	50.00	50.00
Blank	2J24021-BLK1	10/24/12 09:48	50.00	50.00
LCS	2J24021-BS1	10/24/12 09:48	50.00	50.00

PREPARATION BATCH SUMMARY

SW7471A

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J26015 Batch Matrix: Solid Preparation: MET_HG_S

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-SS01-0-2-10/12	1210127-01	10/30/12 12:25	0.27	50.00
PEN-44-SS01-6-8-10/12	1210127-02	10/30/12 12:25	0.26	50.00
PEN-44-SS02-0-2-10/12	1210127-03	10/30/12 12:25	0.28	50.00
PEN-44-SS02-6-8-10/12	1210127-04	10/30/12 12:25	0.29	50.00
PEN-44-SS03-0-2-10/12	1210127-05	10/30/12 12:25	0.28	50.00
PEN-44-SS03-6-8-10/12	1210127-06	10/30/12 12:25	0.28	50.00
FD10111201	1210127-07	10/30/12 12:25	0.27	50.00
Blank	2J26015-BLK1	10/30/12 12:25	0.30	50.00
LCS	2J26015-BS1	10/30/12 12:25	0.30	50.00
PEN-44-SS01-0-2-10/12	2J26015-MS1	10/30/12 12:25	0.29	50.00
PEN-44-SS01-0-2-10/12	2J26015-MSD1	10/30/12 12:25	0.27	50.00

PREPARATION BATCH SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J27920 Batch Matrix: Water Preparation: pMercury-W SW 7470A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/27/12 00:00	30.00	30.00
PEN-3221-09-10/12	1210127-10	10/27/12 00:00	30.00	30.00
Blank	2J27920-BLK1	10/27/12 00:00	30.00	30.00
LCS	2J27920-BS1	10/27/12 00:00	30.00	30.00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29110
Instrument: ME-ICP
Calibration: 2291004

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29110-CAL1	10-17-12A-001	10/17/12 09:32
Cal Standard	2J29110-CAL2	10-17-12A-002	10/17/12 09:36
Cal Standard	2J29110-CAL3	10-17-12A-003	10/17/12 09:41
Cal Standard	2J29110-CAL4	10-17-12A-004	10/17/12 09:45
Cal Standard	2J29110-CAL5	10-17-12A-005	10/17/12 09:50
Cal Standard	2J29110-CAL6	10-17-12A-006	10/17/12 09:55
Initial Cal Check	2J29110-ICV1	10-17-12B-001	10/17/12 10:38
Initial Cal Blank	2J29110-ICB1	10-17-12B-002	10/17/12 10:45
Instrument RL Check	2J29110-CRL1	10-17-12B-004	10/17/12 10:56
Interference Check A	2J29110-IFA1	10-17-12B-007	10/17/12 11:11
Interference Check B	2J29110-IFB1	10-17-12B-008	10/17/12 11:16
Calibration Check	2J29110-CCV1	10-17-12B-010	10/17/12 11:27
Calibration Blank	2J29110-CCB1	10-17-12B-011	10/17/12 11:34
Calibration Check	2J29110-CCV3	10-17-12E-029	10/17/12 13:54
Calibration Blank	2J29110-CCB3	10-17-12E-030	10/17/12 14:02
Blank	2J17017-BLK1	101712C-001	10/17/12 14:09
LCS	2J17017-BS1	101712C-002	10/17/12 14:13
PEN-44-09-10/12	1210127-09	101712C-004	10/17/12 14:24
PEN-3221-09-10/12	1210127-11	101712C-005	10/17/12 14:29
PEN-3221-07-10/12	1210127-12	101712C-006	10/17/12 14:33
Calibration Check	2J29110-CCV4	101712C-043	10/17/12 17:31
Calibration Blank	2J29110-CCB4	101712C-044	10/17/12 17:38

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29918	Instrument:	ME-ICP
Calibration:	2299006		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29918-CAL1	10-25-12A-001	10/25/12 09:00
Cal Standard	2J29918-CAL2	10-25-12A-002	10/25/12 09:05
Cal Standard	2J29918-CAL3	10-25-12A-003	10/25/12 09:09
Cal Standard	2J29918-CAL4	10-25-12A-004	10/25/12 09:13
Cal Standard	2J29918-CAL5	10-25-12A-005	10/25/12 09:18
Cal Standard	2J29918-CAL6	10-25-12A-006	10/25/12 09:23
Cal Standard	2J29918-CAL7	10-25-12A-007	10/25/12 09:29
Cal Standard	2J29918-CAL8	10-25-12A-008	10/25/12 09:33
Initial Cal Check	2J29918-ICV1	10-25-12B-001	10/25/12 10:07
Initial Cal Blank	2J29918-ICB1	10-25-12B-002	10/25/12 10:15
Instrument RL Check	2J29918-CRL1	10-25-12B-003	10/25/12 10:19
Instrument RL Check	2J29918-CRL2	10-25-12B-004	10/25/12 10:24
Interference Check A	2J29918-IFA1	10-25-12B-005	10/25/12 10:28
Interference Check B	2J29918-IFB1	10-25-12B-006	10/25/12 10:34
Calibration Check	2J29918-CCV1	10-25-12B-008	10/25/12 10:44
Calibration Blank	2J29918-CCB1	10-25-12B-009	10/25/12 10:51
Calibration Check	2J29918-CCV5	102512C-023	10/25/12 15:29
Calibration Blank	2J29918-CCB5	102512C-024	10/25/12 15:36
Blank	2J24021-BLK1	102512D-001	10/25/12 15:44
LCS	2J24021-BS1	102512D-002	10/25/12 15:48
Calibration Check	2J29918-CCV6	102512D-017	10/25/12 16:58
Calibration Blank	2J29918-CCB6	102512D-018	10/25/12 17:06
PEN-44-09-10/12	1210127-08	102512D-019	10/25/12 17:10
PEN-3221-09-10/12	1210127-10	102512D-020	10/25/12 17:15
Calibration Check	2J29918-CCV7	102512D-029	10/25/12 17:56
Calibration Blank	2J29918-CCB7	102512D-030	10/25/12 18:04
Blank	2J24020-BLK1	102512D-031	10/25/12 18:08
LCS	2J24020-BS1	102512D-032	10/25/12 18:13
Calibration Check	2J29918-CCV8	102512D-042	10/25/12 19:01
Calibration Blank	2J29918-CCB8	102512D-043	10/25/12 19:08
PEN-44-SS01-0-2-10/12	1210127-01	102512D-044	10/25/12 19:13
PEN-44-SS01-0-2-10/12	2J24020-MS2	102512D-045	10/25/12 19:17

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29918	Instrument:	ME-ICP
Calibration:	2299006		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PEN-44-SS01-0-2-10/12	2J24020-MSD2	102512D-046	10/25/12 19:21
PEN-44-SS01-0-2-10/12	2J24020-PS2	102512D-047	10/25/12 19:26
PEN-44-SS01-0-2-10/12	2J24020-DUP2	102512D-048	10/25/12 19:31
PEN-44-SS01-6-8-10/12	1210127-02	102512D-049	10/25/12 19:35
PEN-44-SS02-0-2-10/12	1210127-03	102512D-050	10/25/12 19:40
PEN-44-SS02-6-8-10/12	1210127-04	102512D-051	10/25/12 19:44
PEN-44-SS03-0-2-10/12	1210127-05	102512D-052	10/25/12 19:49
PEN-44-SS03-6-8-10/12	1210127-06	102512D-053	10/25/12 19:53
FD10111201	1210127-07	102512D-054	10/25/12 19:58
Calibration Check	2J29918-CCV9	102512D-055	10/25/12 20:03
Calibration Blank	2J29918-CCB9	102512D-056	10/25/12 20:11

ANALYSIS SEQUENCE SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30413
Instrument: ME-FIMS
Calibration: 2304001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30413-CAL1	COPY103012W-001	10/29/12 14:21
Cal Standard	2J30413-CAL2	COPY103012W-002	10/29/12 14:22
Cal Standard	2J30413-CAL3	COPY103012W-003	10/29/12 14:23
Cal Standard	2J30413-CAL4	COPY103012W-004	10/29/12 14:24
Cal Standard	2J30413-CAL5	COPY103012W-005	10/29/12 14:26
Cal Standard	2J30413-CAL6	COPY103012W-006	10/29/12 14:27
Cal Standard	2J30413-CAL7	COPY103012W-007	10/29/12 14:28
Cal Standard	2J30413-CAL8	COPY103012W-008	10/29/12 14:29
Initial Cal Check	2J30413-ICV1	COPY103012W-009	10/29/12 14:31
Initial Cal Blank	2J30413-ICB1	COPY103012W-010	10/29/12 14:32
Calibration Check	2J30413-CCV1	COPY103012W-027	10/29/12 14:52
Calibration Blank	2J30413-CCB1	COPY103012W-028	10/29/12 14:54
LCS	2J27920-BS1	COPY103012W-033	10/29/12 15:01
Blank	2J27920-BLK1	COPY103012W-034	10/29/12 15:02
PEN-44-09-10/12	1210127-08	COPY103012W-035	10/29/12 15:03
PEN-3221-09-10/12	1210127-10	COPY103012W-036	10/29/12 15:04
Calibration Check	2J30413-CCV2	COPY103012W-042	10/29/12 15:12
Calibration Blank	2J30413-CCB2	COPY103012W-043	10/29/12 15:13

ANALYSIS SEQUENCE SUMMARY

SW7471A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30511	Instrument:	ME-FIMS
Calibration:	2305001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30511-CAL1	103112S-001	10/31/12 09:32
Cal Standard	2J30511-CAL2	103112S-002	10/31/12 09:33
Cal Standard	2J30511-CAL3	103112S-003	10/31/12 09:34
Cal Standard	2J30511-CAL4	103112S-004	10/31/12 09:36
Cal Standard	2J30511-CAL5	103112S-005	10/31/12 09:37
Cal Standard	2J30511-CAL6	103112S-006	10/31/12 09:38
Cal Standard	2J30511-CAL7	103112S-007	10/31/12 09:39
Cal Standard	2J30511-CAL8	103112S-008	10/31/12 09:41
Initial Cal Check	2J30511-ICV1	103112S-009	10/31/12 09:43
Initial Cal Blank	2J30511-ICB1	103112S-010	10/31/12 09:44
LCS	2J26015-BS1	103112S-011	10/31/12 09:45
Blank	2J26015-BLK1	103112S-012	10/31/12 09:46
PEN-44-SS01-0-2-10/12	1210127-01	103112S-013	10/31/12 09:47
PEN-44-SS01-0-2-10/12	2J26015-MS1	103112S-014	10/31/12 09:49
PEN-44-SS01-0-2-10/12	2J26015-MSD1	103112S-015	10/31/12 09:50
PEN-44-SS01-6-8-10/12	1210127-02	103112S-016	10/31/12 09:51
PEN-44-SS02-0-2-10/12	1210127-03	103112S-017	10/31/12 09:52
PEN-44-SS02-6-8-10/12	1210127-04	103112S-018	10/31/12 09:54
PEN-44-SS03-0-2-10/12	1210127-05	103112S-019	10/31/12 09:55
PEN-44-SS03-6-8-10/12	1210127-06	103112S-020	10/31/12 09:56
FD10111201	1210127-07	103112S-021	10/31/12 09:57
Calibration Check	2J30511-CCV1	103112S-027	10/31/12 10:04
Calibration Blank	2J30511-CCB1	103112S-028	10/31/12 10:06

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2E13609

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2E13609-ICV1	Chloride	4.800	4.613	96.1	mg/L	+/- 10.00%
	Nitrate as N	3.616	3.464	95.8	mg/L	+/- 10.00%
	Nitrite as N	4.864	4.659	95.8	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.62	98.4	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2138003
Sequence: 2J28903

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J28903-CCV1	Chemical Oxygen Demand	100.0	97.90	97.9	mg/L	+/- 10.00%
2J28903-CCV2	Chemical Oxygen Demand	400.0	398.9	99.7	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210127
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2J30405

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30405-CCV1	Chloride	25.00	25.86	103	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.549	102	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.350	94.0	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.47	106	mg/L	+/- 10.00%
2J30405-CCV2	Chloride	25.00	25.45	102	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.507	100	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.548	102	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.28	105	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: WC-IC

Calibration: 2136002

Sequence: 2J30405

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J30405-CRL2	Chloride	1.000	1.252	125	mg/L	75 - 125
	Nitrate as N	0.1000	0.1180	118	mg/L	75 - 125
2J30405-CRL3	Nitrite as N	0.2500	0.1920	76.8	mg/L	75 - 125
	Sulfate as SO4	2.500	2.269	90.8	mg/L	75 - 125

METHOD BLANKS
SM5210B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J12023

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J12023-BLK1	Biochemical Oxygen Demand	-0.660	2.00	2.00	mg/L	U	SM5210B

METHOD BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J12033

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J12033-BLK1	Chloride	0.0540	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

METHOD BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J15001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J15001-BLK1	Chemical Oxygen Demand	-7.44	20.0	60.0	mg/L	U	E410.4

METHOD BLANKS
SM2320B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J24009

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J24009-BLK1	Alkalinity, Total (as CACO3)	0.00	1.00	1.00	mg/L	U	SM2320B

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2E13609
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2E13609-ICB1	Chloride	0.000	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.000	0.330	2.50	mg/L	U	SW9056

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J28903
Calibration: 2138003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J28903-CCB1	Chemical Oxygen Demand	-7.40	20.0	60.0	mg/L	U	E410.4
2J28903-CCB2	Chemical Oxygen Demand	-7.40	20.0	60.0	mg/L	U	E410.4

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30405
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30405-CCB1	Chloride	0.0490	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056
2J30405-CCB2	Chloride	0.0250	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

PREPARATION BATCH SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J12023 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/12/12 12:31	250.00	250.00
PEN-3221-09-10/12	1210127-10	10/12/12 12:31	250.00	250.00
PEN-3221-07-10/12	1210127-12	10/12/12 12:31	250.00	250.00
Blank	2J12023-BLK1	10/12/12 12:31	250.00	250.00
LCS	2J12023-BS1	10/12/12 12:31	5.00	250.00

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J12033 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/12/12 15:16	5.00	5.00
PEN-3221-09-10/12	1210127-10	10/12/12 15:16	5.00	5.00
PEN-3221-07-10/12	1210127-12	10/12/12 15:16	5.00	5.00
Blank	2J12033-BLK1	10/12/12 15:16	5.00	5.00
LCS	2J12033-BS1	10/12/12 15:16	5.00	5.00

PREPARATION BATCH SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J15001 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/15/12 05:57	2.00	2.00
PEN-3221-09-10/12	1210127-10	10/15/12 05:57	2.00	2.00
PEN-3221-07-10/12	1210127-12	10/15/12 05:57	2.00	2.00
Blank	2J15001-BLK1	10/15/12 05:57	2.00	2.00
LCS	2J15001-BS1	10/15/12 05:57	2.00	2.00
PEN-44-09-10/12	2J15001-MS1	10/15/12 05:57	1.40	2.00
PEN-44-09-10/12	2J15001-MSD1	10/15/12 05:57	1.40	2.00

PREPARATION BATCH SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J24009 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/24/12 08:06	25.00	25.00
PEN-3221-09-10/12	1210127-10	10/24/12 08:06	25.00	25.00
PEN-3221-07-10/12	1210127-12	10/24/12 08:06	25.00	25.00
Blank	2J24009-BLK1	10/24/12 08:06	25.00	25.00
LCS	2J24009-BS1	10/24/12 08:06	5.00	25.00

ANALYSIS SEQUENCE SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J24009-BS1	102412-002	10/24/12 08:40
Blank	2J24009-BLK1	102412-003	10/24/12 08:45

ANALYSIS SEQUENCE SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J12023-BS1		10/17/12 12:49
Blank	2J12023-BLK1		10/17/12 12:49

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2E13609	Instrument:	WC-IC
Calibration:	2136002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13609-CAL1	051412-010	05/14/12 18:29
Cal Standard	2E13609-CAL2	051412-011	05/14/12 18:46
Cal Standard	2E13609-CAL3	051412-012	05/14/12 19:04
Cal Standard	2E13609-CAL4	051412-013	05/14/12 19:21
Cal Standard	2E13609-CAL5	051412-014	05/14/12 19:38
Cal Standard	2E13609-CAL6	051412-015	05/14/12 19:56
Cal Standard	2E13609-CAL7	051412-016	05/14/12 20:13
Cal Standard	2E13609-CAL8	051412-017	05/14/12 20:31
Initial Cal Check	2E13609-ICV1	051412-018	05/14/12 20:48
Initial Cal Blank	2E13609-ICB1	051412-019	05/14/12 21:06

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2E13809
Instrument: WC-Gensys
Calibration: 2138003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13809-CAL2	051412-003	05/14/12 11:44
Cal Standard	2E13809-CAL1	051412-002	05/14/12 11:44
Cal Standard	2E13809-CAL4	051412-005	05/14/12 11:45
Cal Standard	2E13809-CAL3	051412-004	05/14/12 11:45
Cal Standard	2E13809-CAL6	051412-007	05/14/12 11:46
Cal Standard	2E13809-CAL5	051412-006	05/14/12 11:46
Cal Standard	2E13809-CAL7	051412-008	05/14/12 11:47

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28903	Instrument:	WC-Gensys
Calibration:	2138003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J28903-CCV1		10/15/12 09:34
Calibration Blank	2J28903-CCB1		10/15/12 09:35
LCS	2J15001-BS1	101512-004	10/15/12 09:35
PEN-44-09-10/12	2J15001-MSD1	101512-007	10/15/12 09:36
PEN-44-09-10/12	2J15001-MS1	101512-006	10/15/12 09:36
Blank	2J15001-BLK1	101512-005	10/15/12 09:36
PEN-44-09-10/12	1210127-08	101512-009	10/15/12 09:37
PEN-3221-09-10/12	1210127-10	101512-010	10/15/12 09:37
Calibration Check	2J28903-CCV2		10/15/12 09:38
Calibration Blank	2J28903-CCB2		10/15/12 09:38
PEN-3221-07-10/12	1210127-12	101512-011	10/15/12 09:38

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30405
Instrument: WC-IC
Calibration: 2136002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J30405-CCV1	101212-003	10/12/12 17:15
Calibration Blank	2J30405-CCB1	101212-004	10/12/12 17:32
Instrument RL Check	2J30405-CRL2	101212-006	10/12/12 18:07
Instrument RL Check	2J30405-CRL3	101212-007	10/12/12 18:25
LCS	2J12033-BS1	101212-008	10/12/12 18:42
Blank	2J12033-BLK1	101212-009	10/12/12 18:59
PEN-44-09-10/12	1210127-08	101212-010	10/12/12 19:17
PEN-3221-09-10/12	1210127-10	101212-011	10/12/12 19:34
PEN-3221-07-10/12	1210127-12	101212-012	10/12/12 19:52
Calibration Check	2J30405-CCV2	101212-013	10/12/12 20:09
Calibration Blank	2J30405-CCB2	101212-014	10/12/12 20:27

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 13, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- VOC/SVOC/PAH/PCB/PEST**
CTO 0079, NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 1210138

SAMPLES: 7/Aqueous/VOC

PEN-44-10-10/12*	PEN-44-11-10/12	PEN-44-12-10/12	PEN-44-13-10/12
PEN-44-14-10/12	PEN-44-19-10/12	TB01308	

5/Aqueous/SVOC/PAH/PCB/PEST

PEN-44-11-10/12	PEN-44-12-10/12	PEN-44-13-10/12	PEN-44-14-10/12
PEN-44-19-10/12			

OVERVIEW

The sample set for CTO 0079 NAS PENSACOLA, SDG 1210138 consists of six (6) aqueous environmental samples and trip blank analyzed for Volatile Organic Compounds (VOCs). Sample PEN-44-10-10/12 was analyzed for the select VOCs, cis 1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride. Five (5) aqueous environmental samples were also analyzed for semivolatile organic compounds (SVOCs), Polycyclic Aromatic Hydrocarbons (PAH), pesticides (PEST) and polychlorinated biphenyls (PCB). There is no field duplicate pair contained within this SDG.

The samples were collected by Tetra Tech on October 16, 2012 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8260B, 8270D, 8082A and 8081A analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
• Initial/Continuing Calibrations
* • Laboratory Method Blank Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Issues affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The continuing calibration percent differences (%Ds) for 2-butanone, carbon disulfide, chloromethane, cyclohexane, dichlorodifluoromethane, methyl acetate, 4-methyl-2-pentanone and methyl tert-butyl ether were greater than the 20% quality control limit on October 23, 2012 @ 10:10 on instrument MS-VOA3. The nondetected results of the aforementioned analytes were qualified as estimated (UJ) in the affected samples.

SVOC

The continuing calibration %Ds for 2,4-dinitrophenol,2-nitrophenol and caprolactam exceeded the 20% quality control limit on October 24, 2012 @ 12:01 and 12:29 on instrument MS-BNA3. The nondetected 2,4-dinitrophenol,2-nitrophenol and caprolactam results were qualified as estimated (UJ) in the affected samples.

PAH & 1,4-DIOXANE

The continuing calibration %D for 1,4-dioxane exceeded the 20% quality control limit on October 24, 2012 @ 17:57 on instrument MS-BNA4. The nondetected 1,4-dioxane results were qualified as estimated (UJ).

ADDITIONAL COMMENTS

The continuing calibration verification %D for 4,4'-DDD and delta-BHC exceeded the 20% quality control limit on column 1 on October 19, 2012 @4:28. No action was taken on the nondetected 4,4'-DDD and delta-BHC results in the affected samples.

The PEST laboratory method blank associated with batch 2J16016 contained a contaminant.

Contaminant	Maximum Concentration (ug/L)
Gamma-chlordane	0.00566

No action was taken on the nondetected gamma-chlordane results in the affected samples.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Continuing calibration %D noncompliances were found in the VOC and SVOC fractions.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	PEN-44-10-10/12			PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12		
SDG: 1210138	LAB_ID	1210138-01			1210138-06			1210138-08			1210138-04		
FRACTION: OV	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1,2,2-TETRACHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROTRIFLUOROETHANE				0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1-DICHLOROETHENE				0.25	U		0.25	U		0.25	U	
1,2,3-TRICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,2,4-TRICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,2-DIBROMO-3-CHLOROPROPANE				0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE				0.25	U		0.25	U		0.25	U	
1,2-DICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,2-DICHLOROPROPANE				0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,4-DICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
2-BUTANONE				2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
2-HEXANONE				1.25	U		1.25	U		1.25	U	
4-METHYL-2-PENTANONE				1.25	UJ	C	1.25	UJ	C	1.25	UJ	C
ACETONE				2.5	U		2.5	U		2.5	U	
BENZENE				0.25	U		0.25	U		0.25	U	
BROMOCHLOROMETHANE				0.25	U		0.25	U		0.25	U	
BROMODICHLOROMETHANE				0.25	U		0.25	U		0.25	U	
BROMOFORM				0.25	U		0.25	U		0.25	U	
BROMOMETHANE				0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE				0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CARBON TETRACHLORIDE				0.25	U		0.25	U		0.25	U	
CHLOROBENZENE				0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE				0.25	U		0.25	U		0.25	U	
CHLOROETHANE				0.5	U		0.5	U		0.5	U	
CHLOROFORM				0.25	U		0.25	U		0.25	U	
CHLOROMETHANE				0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CIS-1,2-DICHLOROETHENE	0.44	J	P	1.71			0.25	U		0.25	U	
CIS-1,3-DICHLOROPROPENE				0.25	U		0.25	U		0.25	U	
CYCLOHEXANE				0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
DICHLORODIFLUOROMETHANE				0.5	UJ	C	0.5	UJ	C	0.5	UJ	C

PROJ_NO: 00784	NSAMPLE	PEN-44-14-10/12			PEN-44-19-10/12			TB01308		
SDG: 1210138	LAB_ID	1210138-10			1210138-02			1210138-12		
FRACTION: OV	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.25	U		0.25	U		0.25	U	
1,1,2,2-TETRACHLOROETHANE		0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROETHANE		0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.25	U		0.46	J	P	0.25	U	
1,1-DICHLOROETHENE		0.25	U		0.25	U		0.25	U	
1,2,3-TRICHLOROBENZENE		0.25	U		0.25	U		0.25	U	
1,2,4-TRICHLOROBENZENE		0.25	U		0.25	U		0.25	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROPROPANE		0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U	
1,4-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U	
2-BUTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
2-HEXANONE		1.25	U		1.25	U		1.25	U	
4-METHYL-2-PENTANONE		1.25	UJ	C	1.25	UJ	C	1.25	UJ	C
ACETONE		2.5	U		2.5	U		2.5	U	
BENZENE		0.25	U		0.25	U		0.25	U	
BROMOCHLOROMETHANE		0.25	U		0.25	U		0.25	U	
BROMODICHLOROMETHANE		0.25	U		0.25	U		0.25	U	
BROMOFORM		0.25	U		0.25	U		0.25	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CARBON TETRACHLORIDE		0.25	U		0.25	U		0.25	U	
CHLOROBENZENE		0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE		0.25	U		0.25	U		0.25	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.25	U		0.25	U		0.25	U	
CHLOROMETHANE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CIS-1,2-DICHLOROETHENE		5.58			1.12			0.25	U	
CIS-1,3-DICHLOROPROPENE		0.25	U		0.25	U		0.25	U	
CYCLOHEXANE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C

PROJ_NO: 00784	NSAMPLE	PEN-44-10-10/12			PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12		
SDG: 1210138	LAB_ID	1210138-01			1210138-06			1210138-08			1210138-04		
FRACTION: OV	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE					0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE					0.25	U		0.25	U		0.25	U	
M+P-XYLENES					0.5	U		0.5	U		0.5	U	
METHYL ACETATE					0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE					0.25	U		0.25	U		0.25	U	
METHYL TERT-BUTYL ETHER					0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.25	U		0.25	U		0.25	U	
STYRENE					0.25	U		0.25	U		0.25	U	
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOLUENE					0.25	U		0.25	U		0.25	U	
TOTAL XYLENES					0.75	U		0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE					0.25	U		0.25	U		0.25	U	
TRANS-1,3-DICHLOROPROPENE					0.25	U		0.25	U		0.25	U	
TRICHLOROETHENE		12.7			16.7			0.67	J	P	0.25	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.25	U		0.25	U		0.25	U		0.25	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-14-10/12			PEN-44-19-10/12			TB01308		
SDG: 1210138	LAB_ID	1210138-10			1210138-02			1210138-12		
FRACTION: OV	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE		0.25	U		0.25	U		0.25	U	
M+P-XYLENES		0.5	U		0.5	U		0.5	U	
METHYL ACETATE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.25	U		0.25	U		0.25	U	
METHYL TERT-BUTYL ETHER		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.25	U		0.25	U		0.25	U	
STYRENE		0.25	U		0.25	U		0.25	U	
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U	
TOLUENE		0.25	U		0.25	U		0.25	U	
TOTAL XYLENES		0.75	U		0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE		0.25	U		0.25	U		0.25	U	
TRANS-1,3-DICHLOROPROPENE		0.25	U		0.25	U		0.25	U	
TRICHLOROETHENE		64.2			0.25	U		0.25	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.25	U		0.25	U		0.25	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12			PEN-44-14-10/12		
SDG: 1210138	LAB_ID	1210138-06			1210138-08			1210138-04			1210138-10		
FRACTION: OS	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1-BIPHENYL		1.18	U		1.16	U		1.16	U		1.16	U	
1,2,4,5-TETRACHLOROBENZENE		1.18	U		1.16	U		1.16	U		1.16	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		1.18	U		1.16	U		1.16	U		1.16	U	
2,3,4,6-TETRACHLOROPHENOL		2.36	U		2.31	U		2.31	U		2.31	U	
2,4,5-TRICHLOROPHENOL		1.18	U		1.16	U		1.16	U		1.16	U	
2,4,6-TRICHLOROPHENOL		1.18	U		1.16	U		1.16	U		1.16	U	
2,4-DICHLOROPHENOL		1.18	U		1.16	U		1.16	U		1.16	U	
2,4-DIMETHYLPHENOL		4.72	U		4.63	U		4.63	U		4.63	U	
2,4-DINITROPHENOL		7.86	UJ	C	7.71	UJ	C	7.71	UJ	C	7.71	UJ	C
2,4-DINITROTOLUENE		1.18	U		1.16	U		1.16	U		1.16	U	
2,6-DINITROTOLUENE		1.18	U		1.16	U		1.16	U		1.16	U	
2-CHLORONAPHTHALENE		1.18	U		1.16	U		1.16	U		1.16	U	
2-CHLOROPHENOL		1.18	U		1.16	U		1.16	U		1.16	U	
2-METHYLPHENOL		1.18	U		1.16	U		1.16	U		1.16	U	
2-NITROANILINE		4.72	U		4.63	U		4.63	U		4.63	U	
2-NITROPHENOL		1.18	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
3,3'-DICHLOROBENZIDINE		1.18	U		1.16	U		1.16	U		1.16	U	
3-NITROANILINE		4.72	U		4.63	U		4.63	U		4.63	U	
4,6-DINITRO-2-METHYLPHENOL		4.72	U		4.63	U		4.63	U		4.63	U	
4-BROMOPHENYL PHENYL ETHER		1.18	U		1.16	U		1.16	U		1.16	U	
4-CHLORO-3-METHYLPHENOL		1.18	U		1.16	U		1.16	U		1.16	U	
4-CHLOROANILINE		1.18	U		1.16	U		1.16	U		1.16	U	
4-CHLOROPHENYL PHENYL ETHER		1.18	U		1.16	U		1.16	U		1.16	U	
4-METHYLPHENOL		1.18	U		1.16	U		1.16	U		1.16	U	
4-NITROANILINE		4.72	U		4.63	U		4.63	U		4.63	U	
4-NITROPHENOL		4.72	U		4.63	U		4.63	U		4.63	U	
ATRAZINE		1.18	U		1.16	U		1.16	U		1.16	U	
BENZALDEHYDE		1.18	U		1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHOXY)METHANE		1.18	U		1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHYL)ETHER		1.18	U		1.16	U		1.16	U		1.16	U	
BIS(2-ETHYLHEXYL)PHTHALATE		1.18	U		1.16	U		1.16	U		1.16	U	
BUTYL BENZYL PHTHALATE		1.18	U		1.16	U		1.16	U		1.16	U	
CAPROLACTAM		1.18	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
CARBAZOLE		1.18	U		1.16	U		1.16	U		1.16	U	
DIBENZOFURAN		1.18	U		1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-19-10/12
SDG: 1210138	LAB_ID	1210138-02
FRACTION: OS	SAMP_DATE	10/12/2012
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1-BIPHENYL	1.18	U	
1,2,4,5-TETRACHLOROBENZENE	1.18	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	1.18	U	
2,3,4,6-TETRACHLOROPHENOL	2.36	U	
2,4,5-TRICHLOROPHENOL	1.18	U	
2,4,6-TRICHLOROPHENOL	1.18	U	
2,4-DICHLOROPHENOL	1.18	U	
2,4-DIMETHYLPHENOL	4.72	U	
2,4-DINITROPHENOL	7.86	UJ	C
2,4-DINITROTOLUENE	1.18	U	
2,6-DINITROTOLUENE	1.18	U	
2-CHLORONAPHTHALENE	1.18	U	
2-CHLOROPHENOL	1.18	U	
2-METHYLPHENOL	1.18	U	
2-NITROANILINE	4.72	U	
2-NITROPHENOL	1.18	UJ	C
3,3'-DICHLOROBENZIDINE	1.18	U	
3-NITROANILINE	4.72	U	
4,6-DINITRO-2-METHYLPHENOL	4.72	U	
4-BROMOPHENYL PHENYL ETHER	1.18	U	
4-CHLORO-3-METHYLPHENOL	1.18	U	
4-CHLOROANILINE	1.18	U	
4-CHLOROPHENYL PHENYL ETHER	1.18	U	
4-METHYLPHENOL	1.18	U	
4-NITROANILINE	4.72	U	
4-NITROPHENOL	4.72	U	
ATRAZINE	1.18	U	
BENZALDEHYDE	1.18	U	
BIS(2-CHLOROETHOXY)METHANE	1.18	U	
BIS(2-CHLOROETHYL)ETHER	1.18	U	
BIS(2-ETHYLHEXYL)PHTHALATE	1.18	U	
BUTYL BENZYL PHTHALATE	1.18	U	
CAPROLACTAM	1.18	UJ	C
CARBAZOLE	1.18	U	
DIBENZOFURAN	1.18	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12			PEN-44-14-10/12		
SDG: 1210138	LAB_ID	1210138-06			1210138-08			1210138-04			1210138-10		
FRACTION: OS	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DIETHYL PHTHALATE		1.18	U		1.16	U		1.16	U		1.16	U	
DIMETHYL PHTHALATE		1.18	U		1.16	U		1.16	U		1.16	U	
DI-N-BUTYL PHTHALATE		1.18	U		1.16	U		1.16	U		1.16	U	
DI-N-OCTYL PHTHALATE		1.18	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBENZENE		1.18	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBUTADIENE		1.18	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROCYCLOPENTADIENE		1.18	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROETHANE		1.18	U		1.16	U		1.16	U		1.16	U	
ISOPHORONE		1.18	U		1.16	U		1.16	U		1.16	U	
NITROBENZENE		1.18	U		1.16	U		1.16	U		1.16	U	
N-NITROSODIMETHYLAMINE		1.18	U		1.16	U		1.16	U		1.16	U	
N-NITROSO-DI-N-PROPYLAMINE		1.18	U		1.16	U		1.16	U		1.16	U	
PENTACHLOROPHENOL		4.72	U		4.63	U		4.63	U		4.63	U	
PHENOL		1.18	U		1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-19-10/12		
SDG: 1210138	LAB_ID	1210138-02		
FRACTION: OS	SAMP_DATE	10/12/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DIETHYL PHTHALATE		1.18	U	
DIMETHYL PHTHALATE		1.18	U	
DI-N-BUTYL PHTHALATE		1.18	U	
DI-N-OCTYL PHTHALATE		1.18	U	
HEXACHLOROBENZENE		1.18	U	
HEXACHLOROBUTADIENE		1.18	U	
HEXACHLOROCYCLOPENTADIENE		1.18	U	
HEXACHLOROETHANE		1.18	U	
ISOPHORONE		1.18	U	
NITROBENZENE		1.18	U	
N-NITROSODIMETHYLAMINE		1.18	U	
N-NITROSO-DI-N-PROPYLAMINE		1.18	U	
PENTACHLOROPHENOL		4.72	U	
PHENOL		1.18	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12			PEN-44-14-10/12		
SDG: 1210138	LAB_ID	1210138-06			1210138-08			1210138-04			1210138-10		
FRACTION: PAH	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.472	UJ	C	0.463	UJ	C	0.463	UJ	C	0.463	UJ	C
2-METHYLNAPHTHALENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHYLENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
ANTHRACENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(A)ANTHRACENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(A)PYRENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(B)FLUORANTHENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(G,H,I)PERYLENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(K)FLUORANTHENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
CHRYSENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
DIBENZO(A,H)ANTHRACENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
FLUORANTHENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
FLUORENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
INDENO(1,2,3-CD)PYRENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
NAPHTHALENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
PHENANTHRENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	
PYRENE		0.0472	U		0.0463	U		0.0463	U		0.0463	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-19-10/12		
SDG: 1210138	LAB_ID	1210138-02		
FRACTION: PAH	SAMP_DATE	10/12/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,4-DIOXANE		0.472	UJ	C
2-METHYLNAPHTHALENE		0.0472	U	
ACENAPHTHENE		0.0472	U	
ACENAPHTHYLENE		0.0472	U	
ANTHRACENE		0.0472	U	
BENZO(A)ANTHRACENE		0.0472	U	
BENZO(A)PYRENE		0.0472	U	
BENZO(B)FLUORANTHENE		0.0472	U	
BENZO(G,H,I)PERYLENE		0.0472	U	
BENZO(K)FLUORANTHENE		0.0472	U	
CHRYSENE		0.0472	U	
DIBENZO(A,H)ANTHRACENE		0.0472	U	
FLUORANTHENE		0.0472	U	
FLUORENE		0.0472	U	
INDENO(1,2,3-CD)PYRENE		0.0472	U	
NAPHTHALENE		0.0472	U	
PHENANTHRENE		0.0472	U	
PYRENE		0.0472	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12			PEN-44-14-10/12		
SDG: 1210138	LAB_ID	1210138-06			1210138-08			1210138-04			1210138-10		
FRACTION: PCB	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.113	U		0.111	U		0.113	U		0.111	U	
AROCLOR-1221		0.113	U		0.111	U		0.113	U		0.111	U	
AROCLOR-1232		0.113	U		0.111	U		0.113	U		0.111	U	
AROCLOR-1242		0.113	U		0.111	U		0.113	U		0.111	U	
AROCLOR-1248		0.113	U		0.111	U		0.113	U		0.111	U	
AROCLOR-1254		0.113	U		0.111	U		0.113	U		0.111	U	
AROCLOR-1260		0.113	U		0.111	U		0.113	U		0.111	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-19-10/12		
SDG: 1210138	LAB_ID	1210138-02		
FRACTION: PCB	SAMP_DATE	10/12/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.113	U	
AROCLOR-1221		0.113	U	
AROCLOR-1232		0.113	U	
AROCLOR-1242		0.113	U	
AROCLOR-1248		0.113	U	
AROCLOR-1254		0.113	U	
AROCLOR-1260		0.113	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12			PEN-44-14-10/12		
SDG: 1210138	LAB_ID	1210138-06			1210138-08			1210138-04			1210138-10		
FRACTION: PEST	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
4,4'-DDD		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
4,4'-DDE		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
4,4'-DDT		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
ALDRIN		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
ALPHA-BHC		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
ALPHA-CHLORDANE		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
BETA-BHC		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
DELTA-BHC		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
DIELDRIN		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
ENDOSULFAN I		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
ENDOSULFAN II		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
ENDOSULFAN SULFATE		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
ENDRIN		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
ENDRIN ALDEHYDE		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
ENDRIN KETONE		0.00472	U		0.00463	U		0.00472	U		0.00463	U	
GAMMA-BHC (LINDANE)		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
GAMMA-CHLORDANE		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
HEPTACHLOR		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
HEPTACHLOR EPOXIDE		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
METHOXYCHLOR		0.00311	U		0.00306	U		0.00311	U		0.00306	U	
TOXAPHENE		0.311	U		0.306	U		0.311	U		0.306	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-19-10/12		
SDG: 1210138	LAB_ID	1210138-02		
FRACTION: PEST	SAMP_DATE	10/12/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
4,4'-DDD		0.00472	U	
4,4'-DDE		0.00472	U	
4,4'-DDT		0.00472	U	
ALDRIN		0.00311	U	
ALPHA-BHC		0.00311	U	
ALPHA-CHLORDANE		0.00311	U	
BETA-BHC		0.00311	U	
DELTA-BHC		0.00311	U	
DIELDRIN		0.00472	U	
ENDOSULFAN I		0.00311	U	
ENDOSULFAN II		0.00472	U	
ENDOSULFAN SULFATE		0.00472	U	
ENDRIN		0.00472	U	
ENDRIN ALDEHYDE		0.00472	U	
ENDRIN KETONE		0.00472	U	
GAMMA-BHC (LINDANE)		0.00311	U	
GAMMA-CHLORDANE		0.00311	U	
HEPTACHLOR		0.00311	U	
HEPTACHLOR EPOXIDE		0.00311	U	
METHOXYCHLOR		0.00311	U	
TOXAPHENE		0.311	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

PEN-44-10-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-01 File ID: 1013801.D

Sampled: 10/12/12 08:12 Prepared: 10/23/12 17:32 Analyzed: 10/23/12 17:32

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene	0.440	0.250	0.500	1.00	J
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene	12.7	0.250	0.500	1.00	
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.36	105	75 - 120	
Dibromofluoromethane	30.00	33.14	110	85 - 115	
1,2-Dichloroethane-d4	30.00	27.93	93.1	70 - 120	I
Toluene-d8	30.00	27.70	92.3	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-06 File ID: 1013806.D

Sampled: 10/12/12 13:05 Prepared: 10/23/12 18:55 Analyzed: 10/23/12 18:55

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	X, U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	Q, U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	Q, U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene	1.71	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	X, U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	X, U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	X, U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-06 File ID: 1013806.D

Sampled: 10/12/12 13:05 Prepared: 10/23/12 18:55 Analyzed: 10/23/12 18:55

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	16.7	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	Q, U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	32.41	108	75 - 120	
Dibromofluoromethane	30.00	33.65	112	85 - 115	
1,2-Dichloroethane-d4	30.00	28.11	93.7	70 - 120	I
Toluene-d8	30.00	26.72	89.1	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210138-08	File ID:	1013808.D
Sampled:	10/12/12 14:50	Prepared:	10/23/12 19:23	Analyzed:	10/23/12 19:23
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J23005	Sequence:	2J29802	Calibration:	2213002
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	X, U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	Q, U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	Q, U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	X, U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	X, U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	X, U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-08 File ID: 1013808.D

Sampled: 10/12/12 14:50 Prepared: 10/23/12 19:23 Analyzed: 10/23/12 19:23

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	0.670	0.250	0.500	1.00	I
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	Q, U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	32.00	107	75 - 120	
Dibromofluoromethane	30.00	34.00	113	85 - 115	
1,2-Dichloroethane-d4	30.00	26.37	87.9	70 - 120	I
Toluene-d8	30.00	27.16	90.5	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210138-04	File ID:	1013804.D
Sampled:	10/12/12 12:37	Prepared:	10/23/12 18:27	Analyzed:	10/23/12 18:27
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J23005	Sequence:	2J29802	Calibration:	2213002
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	X, U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	Q, U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	Q, U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	X, U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	X, U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	X, U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-04 File ID: 1013804.D

Sampled: 10/12/12 12:37 Prepared: 10/23/12 18:27 Analyzed: 10/23/12 18:27

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	Q, U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.82	103	75 - 120	
Dibromofluoromethane	30.00	33.72	112	85 - 115	
1.2-Dichloroethane-d4	30.00	27.24	90.8	70 - 120	I
Toluene-d8	30.00	26.87	89.6	85 - 120	1

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-10 File ID: 1013810.D

Sampled: 10/12/12 14:45 Prepared: 10/23/12 19:50 Analyzed: 10/23/12 19:50

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	X, U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	Q, U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	Q, U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene	5.58	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	X, U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	X, U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	X, U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-10 File ID: 1013810.D

Sampled: 10/12/12 14:45 Prepared: 10/23/12 19:50 Analyzed: 10/23/12 19:50

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	64.2	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	Q, U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.37	105	75 - 120	
Dibromofluoromethane	30.00	34.80	116	85 - 115	*
1,2-Dichloroethane-d4	30.00	29.94	99.8	70 - 120	I
Toluene-d8	30.00	26.75	89.2	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210138-02	File ID:	1013802.D
Sampled:	10/12/12 09:32	Prepared:	10/23/12 18:00	Analyzed:	10/23/12 18:00
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J23005	Sequence:	2J29802	Calibration:	2213002
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	X, U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	Q, U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	Q, U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane	0.460	0.250	0.500	1.00	I
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene	1.12	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	X, U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	X, U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	X, U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-02 File ID: 1013802.D

Sampled: 10/12/12 09:32 Prepared: 10/23/12 18:00 Analyzed: 10/23/12 18:00

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	Q, U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.66	102	75 - 120	
Dibromofluoromethane	30.00	34.15	114	85 - 115	
1.2-Dichloroethane-d4	30.00	28.08	93.6	70 - 120	I
Toluene-d8	30.00	26.85	89.5	85 - 120	I

ANALYSIS DATA SHEET

TB01308

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-12 File ID: 1013812.D

Sampled: 10/12/12 00:00 Prepared: 10/23/12 12:28 Analyzed: 10/23/12 12:28

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	X, U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	Q, U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	Q, U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	X, U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	X, U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	X, U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

TB01308

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-12 File ID: 1013812.D

Sampled: 10/12/12 00:00 Prepared: 10/23/12 12:28 Analyzed: 10/23/12 12:28

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	Q, U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.65	102	75 - 120	
Dibromofluoromethane	30.00	30.04	100	85 - 115	
1.2-Dichloroethane-d4	30.00	27.64	92.1	70 - 120	I
Toluene-d8	30.00	28.00	93.3	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-06 File ID: 1013806.D

Sampled: 10/12/12 13:05 Prepared: 10/18/12 10:00 Analyzed: 10/24/12 17:35

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.18	2.36	4.72	U
100-52-7	Benzaldehyde		1.18	2.36	4.72	U
92-52-4	1,1-Biphenyl		1.18	2.36	4.72	U
101-55-3	4-Bromophenyl-phenylether		1.18	2.36	4.72	U
85-68-7	Butylbenzylphthalate		1.18	2.36	4.72	U
105-60-2	Caprolactam		1.18	2.36	4.72	X, U
86-74-8	Carbazole		1.18	2.36	4.72	U
59-50-7	4-Chloro-3-methylphenol		1.18	2.36	4.72	U
106-47-8	4-Chloroaniline		1.18	2.36	4.72	U
111-91-1	Bis(2-chloroethoxy)methane		1.18	2.36	4.72	U
111-44-4	Bis(2-chloroethyl)ether		1.18	2.36	4.72	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.18	2.36	4.72	U
91-58-7	2-Chloronaphthalene		1.18	2.36	4.72	U
95-57-8	2-Chlorophenol		1.18	2.36	4.72	U
7005-72-3	4-Chlorophenyl phenyl ether		1.18	2.36	4.72	U
132-64-9	Dibenzofuran		1.18	2.36	4.72	U
84-74-2	Di-n-butylphthalate		1.18	2.36	4.72	U
91-94-1	3,3'-Dichlorobenzidine		1.18	2.36	4.72	U
120-83-2	2,4-Dichlorophenol		1.18	2.36	4.72	U
84-66-2	Diethylphthalate		1.18	2.36	4.72	U
105-67-9	2,4-Dimethylphenol		4.72	9.43	18.9	U
131-11-3	Dimethyl phthalate		1.18	2.36	4.72	U
534-52-1	4,6-Dinitro-2-methylphenol		4.72	9.43	18.9	U
51-28-5	2,4-Dinitrophenol		7.86	23.6	47.2	X, U
121-14-2	2,4-Dinitrotoluene		1.18	2.36	4.72	U
606-20-2	2,6-Dinitrotoluene		1.18	2.36	4.72	U
117-84-0	Di-n-octylphthalate		1.18	2.36	4.72	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.18	2.36	4.72	U
118-74-1	Hexachlorobenzene		1.18	2.36	4.72	U
87-68-3	Hexachlorobutadiene		1.18	2.36	4.72	U
77-47-4	Hexachlorocyclopentadiene		1.18	4.72	9.43	U
67-72-1	Hexachloroethane		1.18	2.36	4.72	U
78-59-1	Isophorone		1.18	2.36	4.72	U
95-48-7	2-Methylphenol		1.18	2.36	4.72	U
106-44-5	4-Methylphenol		1.18	2.36	4.72	U
100-01-6	4-Nitroaniline		4.72	9.43	18.9	U
99-09-2	3-Nitroaniline		4.72	9.43	18.9	U
88-74-4	2-Nitroaniline		4.72	9.43	18.9	U
98-95-3	Nitrobenzene		1.18	2.36	4.72	U

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-06 File ID: 1013806.D

Sampled: 10/12/12 13:05 Prepared: 10/18/12 10:00 Analyzed: 10/24/12 17:35

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.72	9.43	18.9	U
88-75-5	2-Nitrophenol		1.18	2.36	4.72	X, U
62-75-9	N-Nitrosodimethylamine		1.18	2.36	4.72	Q, U
621-64-7	N-Nitroso-di-n-propylamine		1.18	2.36	4.72	U
87-86-5	Pentachlorophenol		4.72	9.43	18.9	U
108-95-2	Phenol		1.18	2.36	4.72	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.18	2.36	4.72	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.36	4.72	9.43	U
88-06-2	2,4,6-Trichlorophenol		1.18	2.36	4.72	U
95-95-4	2,4,5-Trichlorophenol		1.18	2.36	4.72	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5	47.17	35.02	74.3	40 - 110	
Phenol-d6	94.34	17.01	18.0	0 - 110	
Terphenyl-d14	47.17	42.20	89.5	50 - 135	X
2,4,6-Tribromophenol	94.34	67.68	71.7	40 - 125	

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-08 File ID: 1013808.D

Sampled: 10/12/12 14:50 Prepared: 10/18/12 10:00 Analyzed: 10/24/12 18:03

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210138-08
File ID: 1013808.D
Sampled: 10/12/12 14:50
Prepared: 10/18/12 10:00
Analyzed: 10/24/12 18:03
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17024
Sequence: 2J30001
Calibration: 2261001
Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	X, U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	Q, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5	46.30	35.66	77.0	40 - 110	
Phenol-d6	92.59	16.43	17.7	0 - 110	
Terphenyl-d14	46.30	41.90	90.5	50 - 135	X
2,4,6-Tribromophenol	92.59	59.74	64.5	40 - 125	

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-04 File ID: 1013804.D

Sampled: 10/12/12 12:37 Prepared: 10/18/12 10:00 Analyzed: 10/24/12 17:07

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210138-04	File ID:	1013804.D
Sampled:	10/12/12 12:37	Prepared:	10/18/12 10:00	Analyzed:	10/24/12 17:07
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17024	Sequence:	2J30001	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	X, U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	Q, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5	46.30	34.19	73.8	40 - 110	
Phenol-d6	92.59	15.75	17.0	0 - 110	
Terphenyl-d14	46.30	41.20	89.0	50 - 135	X
2,4,6-Tribromophenol	92.59	59.99	64.8	40 - 125	

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-10 File ID: 1013810.D

Sampled: 10/12/12 14:45 Prepared: 10/18/12 10:00 Analyzed: 10/24/12 18:30

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-10 File ID: 1013810.D

Sampled: 10/12/12 14:45 Prepared: 10/18/12 10:00 Analyzed: 10/24/12 18:30

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	X, U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	Q, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5	46.30	34.70	75.0	40 - 110	
Phenol-d6	92.59	15.32	16.5	0 - 110	
Terphenyl-d14	46.30	41.16	88.9	50 - 135	X
2,4,6-Tribromophenol	92.59	61.69	66.6	40 - 125	

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210138-02
File ID: 1013802.D
Sampled: 10/12/12 09:32
Prepared: 10/18/12 10:00
Analyzed: 10/24/12 16:39
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17024
Sequence: 2J30001
Calibration: 2261001
Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.18	2.36	4.72	U
100-52-7	Benzaldehyde		1.18	2.36	4.72	U
92-52-4	1,1-Biphenyl		1.18	2.36	4.72	U
101-55-3	4-Bromophenyl-phenylether		1.18	2.36	4.72	U
85-68-7	Butylbenzylphthalate		1.18	2.36	4.72	U
105-60-2	Caprolactam		1.18	2.36	4.72	X, U
86-74-8	Carbazole		1.18	2.36	4.72	U
59-50-7	4-Chloro-3-methylphenol		1.18	2.36	4.72	U
106-47-8	4-Chloroaniline		1.18	2.36	4.72	U
111-91-1	Bis(2-chloroethoxy)methane		1.18	2.36	4.72	U
111-44-4	Bis(2-chloroethyl)ether		1.18	2.36	4.72	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.18	2.36	4.72	U
91-58-7	2-Chloronaphthalene		1.18	2.36	4.72	U
95-57-8	2-Chlorophenol		1.18	2.36	4.72	U
7005-72-3	4-Chlorophenyl phenyl ether		1.18	2.36	4.72	U
132-64-9	Dibenzofuran		1.18	2.36	4.72	U
84-74-2	Di-n-butylphthalate		1.18	2.36	4.72	U
91-94-1	3,3'-Dichlorobenzidine		1.18	2.36	4.72	U
120-83-2	2,4-Dichlorophenol		1.18	2.36	4.72	U
84-66-2	Diethylphthalate		1.18	2.36	4.72	U
105-67-9	2,4-Dimethylphenol		4.72	9.43	18.9	U
131-11-3	Dimethyl phthalate		1.18	2.36	4.72	U
534-52-1	4,6-Dinitro-2-methylphenol		4.72	9.43	18.9	U
51-28-5	2,4-Dinitrophenol		7.86	23.6	47.2	X, U
121-14-2	2,4-Dinitrotoluene		1.18	2.36	4.72	U
606-20-2	2,6-Dinitrotoluene		1.18	2.36	4.72	U
117-84-0	Di-n-octylphthalate		1.18	2.36	4.72	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.18	2.36	4.72	U
118-74-1	Hexachlorobenzene		1.18	2.36	4.72	U
87-68-3	Hexachlorobutadiene		1.18	2.36	4.72	U
77-47-4	Hexachlorocyclopentadiene		1.18	4.72	9.43	U
67-72-1	Hexachloroethane		1.18	2.36	4.72	U
78-59-1	Isophorone		1.18	2.36	4.72	U
95-48-7	2-Methylphenol		1.18	2.36	4.72	U
106-44-5	4-Methylphenol		1.18	2.36	4.72	U
100-01-6	4-Nitroaniline		4.72	9.43	18.9	U
99-09-2	3-Nitroaniline		4.72	9.43	18.9	U
88-74-4	2-Nitroaniline		4.72	9.43	18.9	U
98-95-3	Nitrobenzene		1.18	2.36	4.72	U

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-02 File ID: 1013802.D

Sampled: 10/12/12 09:32 Prepared: 10/18/12 10:00 Analyzed: 10/24/12 16:39

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.72	9.43	18.9	U
88-75-5	2-Nitrophenol		1.18	2.36	4.72	X, U
62-75-9	N-Nitrosodimethylamine		1.18	2.36	4.72	Q, U
621-64-7	N-Nitroso-di-n-propylamine		1.18	2.36	4.72	U
87-86-5	Pentachlorophenol		4.72	9.43	18.9	U
108-95-2	Phenol		1.18	2.36	4.72	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.18	2.36	4.72	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.36	4.72	9.43	U
88-06-2	2,4,6-Trichlorophenol		1.18	2.36	4.72	U
95-95-4	2,4,5-Trichlorophenol		1.18	2.36	4.72	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5	47.17	31.64	67.1	40 - 110	
Phenol-d6	94.34	15.66	16.6	0 - 110	
Terphenyl-d14	47.17	40.48	85.8	50 - 135	X
2,4,6-Tribromophenol	94.34	67.16	71.2	40 - 125	

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-06 File ID: 1013806.D

Sampled: 10/12/12 13:05 Prepared: 10/18/12 10:00 Analyzed: 10/25/12 01:00

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J29915 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0472	0.0943	0.189	U
208-96-8	Acenaphthylene		0.0472	0.0943	0.189	U
120-12-7	Anthracene		0.0472	0.0943	0.189	U
56-55-3	Benzo(a)anthracene		0.0472	0.0943	0.189	U
50-32-8	Benzo(a)pyrene		0.0472	0.0943	0.189	U
205-99-2	Benzo(b)fluoranthene		0.0472	0.0943	0.189	U
191-24-2	Benzo(g,h,i)perylene		0.0472	0.0943	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.0943	0.189	U
123-91-1	1,4-Dioxane		0.472	0.943	1.89	Y, Q, U
218-01-9	Chrysene		0.0472	0.0943	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.0943	0.189	U
206-44-0	Fluoranthene		0.0472	0.0943	0.189	U
86-73-7	Fluorene		0.0472	0.0943	0.189	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0472	0.0943	0.189	U
91-57-6	2-Methylnaphthalene		0.0472	0.0943	0.189	U
91-20-3	Naphthalene		0.0472	0.0943	0.189	U
85-01-8	Phenanthrene		0.0472	0.189	0.377	U
129-00-0	Pyrene		0.0472	0.0943	0.189	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	36.14	76.6	34 - 167	
Terphenyl-d14	47.17	39.64	84.0	34 - 167	
2,4,6-Tribromophenol	94.34	73.94	78.4	34 - 167	X

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210138-08
File ID: 1013808.D
Sampled: 10/12/12 14:50
Prepared: 10/18/12 10:00
Analyzed: 10/25/12 01:28
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17024
Sequence: 2J29915
Calibration: 2263001
Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, Y, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	38.04	82.2	34 - 167	
Terphenyl-d14	46.30	40.50	87.5	34 - 167	
2,4,6-Tribromophenol	92.59	66.69	72.0	34 - 167	X

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-04 File ID: 1013804.D

Sampled: 10/12/12 12:37 Prepared: 10/18/12 10:00 Analyzed: 10/25/12 00:32

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J29915 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, Y, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	35.55	76.8	34 - 167	
Terphenyl-d14	46.30	36.50	78.8	34 - 167	
2,4,6-Tribromophenol	92.59	62.54	67.5	34 - 167	X

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-10 File ID: 1013810.D

Sampled: 10/12/12 14:45 Prepared: 10/18/12 10:00 Analyzed: 10/25/12 01:57

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J29915 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, Y, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	36.56	79.0	34 - 167	
Terphenyl-d14	46.30	39.37	85.0	34 - 167	
2,4,6-Tribromophenol	92.59	68.55	74.0	34 - 167	X

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-02 File ID: 1013802.D

Sampled: 10/12/12 09:32 Prepared: 10/18/12 10:00 Analyzed: 10/25/12 00:04

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17024 Sequence: 2J29915 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0472	0.0943	0.189	U
208-96-8	Acenaphthylene		0.0472	0.0943	0.189	U
120-12-7	Anthracene		0.0472	0.0943	0.189	U
56-55-3	Benzo(a)anthracene		0.0472	0.0943	0.189	U
50-32-8	Benzo(a)pyrene		0.0472	0.0943	0.189	U
205-99-2	Benzo(b)fluoranthene		0.0472	0.0943	0.189	U
191-24-2	Benzo(g,h,i)perylene		0.0472	0.0943	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.0943	0.189	U
123-91-1	1,4-Dioxane		0.472	0.943	1.89	Q, Y, U
218-01-9	Chrysene		0.0472	0.0943	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.0943	0.189	U
206-44-0	Fluoranthene		0.0472	0.0943	0.189	U
86-73-7	Fluorene		0.0472	0.0943	0.189	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0472	0.0943	0.189	U
91-57-6	2-Methylnaphthalene		0.0472	0.0943	0.189	U
91-20-3	Naphthalene		0.0472	0.0943	0.189	U
85-01-8	Phenanthrene		0.0472	0.189	0.377	U
129-00-0	Pyrene		0.0472	0.0943	0.189	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	34.28	72.7	34 - 167	
Terphenyl-d14	47.17	39.23	83.2	34 - 167	
2,4,6-Tribromophenol	94.34	76.45	81.0	34 - 167	X

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210138-06	File ID:	051F5101.D
Sampled:	10/12/12 13:05	Prepared:	10/16/12 14:38	Analyzed:	10/19/12 01:36
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J16016	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00472	0.00943	0.0189	U
72-54-8	4,4'-DDD		0.00472	0.00943	0.0189	UX
50-29-3	4,4'-DDT		0.00472	0.00943	0.0189	U
309-00-2	Aldrin		0.00311	0.00943	0.0189	U
319-84-6	alpha-BHC		0.00311	0.00943	0.0189	U
5103-71-9	alpha-Chlordane		0.00311	0.00943	0.0189	U
319-85-7	beta-BHC		0.00311	0.00943	0.0189	U
319-86-8	delta-BHC		0.00311	0.00943	0.0189	UX
60-57-1	Dieldrin		0.00472	0.00943	0.0189	U
959-98-8	Endosulfan I		0.00311	0.00943	0.0189	U
33213-65-9	Endosulfan II		0.00472	0.00943	0.0189	U
1031-07-8	Endosulfan sulfate		0.00472	0.00943	0.0189	U
72-20-8	Endrin		0.00472	0.00943	0.0189	U
7421-93-4	Endrin aldehyde		0.00472	0.00943	0.0189	U
53494-70-5	Endrin ketone		0.00472	0.00943	0.0189	U
58-89-9	gamma-BHC (Lindane)		0.00311	0.00943	0.0189	U
5103-74-2	gamma-Chlordane		0.00311	0.00943	0.0189	U
76-44-8	Heptachlor		0.00311	0.00943	0.0189	U
1024-57-3	Heptachlor epoxide		0.00311	0.00943	0.0189	U
72-43-5	Methoxychlor		0.00311	0.00943	0.0189	U
8001-35-2	Toxaphene		0.311	0.472	0.943	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3318	70.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3088	65.5	25 - 140	Y
Decachlorobiphenyl	0.4717	0.2562	54.3	30 - 135	
Decachlorobiphenyl [2C]	0.4717	0.2457	52.1	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-08 File ID: 052F5201.D

Sampled: 10/12/12 14:50 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 01:55

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC		0.00306	0.00926	0.0185	UX
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane		0.00306	0.00926	0.0185	U
76-44-8	Heptachlor		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3622	78.2	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3362	72.6	25 - 140	Y
Decachlorobiphenyl	0.4630	0.2866	61.9	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.2789	60.2	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-04 File ID: 050F5001.D

Sampled: 10/12/12 12:37 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 01:17

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00472	0.00943	0.0189	U
72-54-8	4,4'-DDD		0.00472	0.00943	0.0189	UX
50-29-3	4,4'-DDT		0.00472	0.00943	0.0189	U
309-00-2	Aldrin		0.00311	0.00943	0.0189	U
319-84-6	alpha-BHC		0.00311	0.00943	0.0189	U
5103-71-9	alpha-Chlordane		0.00311	0.00943	0.0189	U
319-85-7	beta-BHC		0.00311	0.00943	0.0189	U
319-86-8	delta-BHC		0.00311	0.00943	0.0189	UX
60-57-1	Dieldrin		0.00472	0.00943	0.0189	U
959-98-8	Endosulfan I		0.00311	0.00943	0.0189	U
33213-65-9	Endosulfan II		0.00472	0.00943	0.0189	U
1031-07-8	Endosulfan sulfate		0.00472	0.00943	0.0189	U
72-20-8	Endrin		0.00472	0.00943	0.0189	U
7421-93-4	Endrin aldehyde		0.00472	0.00943	0.0189	U
53494-70-5	Endrin ketone		0.00472	0.00943	0.0189	U
58-89-9	gamma-BHC (Lindane)		0.00311	0.00943	0.0189	U
5103-74-2	gamma-Chlordane		0.00311	0.00943	0.0189	U
76-44-8	Heptachlor		0.00311	0.00943	0.0189	U
1024-57-3	Heptachlor epoxide		0.00311	0.00943	0.0189	U
72-43-5	Methoxychlor		0.00311	0.00943	0.0189	U
8001-35-2	Toxaphene		0.311	0.472	0.943	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3694	78.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3443	73.0	25 - 140	Y
Decachlorobiphenyl	0.4717	0.2798	59.3	30 - 135	
Decachlorobiphenyl [2C]	0.4717	0.2742	58.1	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-10 File ID: 053F5301.D

Sampled: 10/12/12 14:45 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 02:14

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC		0.00306	0.00926	0.0185	UX
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane		0.00306	0.00926	0.0185	U
76-44-8	Heptachlor		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3501	75.6	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3312	71.5	25 - 140	Y
Decachlorobiphenyl	0.4630	0.2758	59.6	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.2641	57.0	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-02 File ID: 049F4901.D

Sampled: 10/12/12 09:32 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 00:58

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00472	0.00943	0.0189	U
72-54-8	4,4'-DDD		0.00472	0.00943	0.0189	UX
50-29-3	4,4'-DDT		0.00472	0.00943	0.0189	U
309-00-2	Aldrin		0.00311	0.00943	0.0189	U
319-84-6	alpha-BHC		0.00311	0.00943	0.0189	U
5103-71-9	alpha-Chlordane		0.00311	0.00943	0.0189	U
319-85-7	beta-BHC		0.00311	0.00943	0.0189	U
319-86-8	delta-BHC		0.00311	0.00943	0.0189	UX
60-57-1	Dieldrin		0.00472	0.00943	0.0189	U
959-98-8	Endosulfan I		0.00311	0.00943	0.0189	U
33213-65-9	Endosulfan II		0.00472	0.00943	0.0189	U
1031-07-8	Endosulfan sulfate		0.00472	0.00943	0.0189	U
72-20-8	Endrin		0.00472	0.00943	0.0189	U
7421-93-4	Endrin aldehyde		0.00472	0.00943	0.0189	U
53494-70-5	Endrin ketone		0.00472	0.00943	0.0189	U
58-89-9	gamma-BHC (Lindane)		0.00311	0.00943	0.0189	U
5103-74-2	gamma-Chlordane		0.00311	0.00943	0.0189	U
76-44-8	Heptachlor		0.00311	0.00943	0.0189	U
1024-57-3	Heptachlor epoxide		0.00311	0.00943	0.0189	U
72-43-5	Methoxychlor		0.00311	0.00943	0.0189	U
8001-35-2	Toxaphene		0.311	0.472	0.943	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3967	84.1	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3634	77.0	25 - 140	Y
Decachlorobiphenyl	0.4717	0.3531	74.9	30 - 135	
Decachlorobiphenyl [2C]	0.4717	0.3353	71.1	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210138-06	File ID:	051F5101.D
Sampled:	10/12/12 13:05	Prepared:	10/16/12 14:38	Analyzed:	10/19/12 01:36
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J16016	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.113	0.236	0.472	U
11104-28-2	Aroclor-1221		0.113	0.236	0.472	U
11141-16-5	Aroclor-1232		0.113	0.236	0.472	U
53469-21-9	Aroclor-1242		0.113	0.236	0.472	U
12672-29-6	Aroclor-1248		0.113	0.236	0.472	U
11097-69-1	Aroclor-1254		0.113	0.236	0.472	U
11096-82-5	Aroclor-1260		0.113	0.236	0.472	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3318	70.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3088	65.5	25 - 140	Y
Decachlorobiphenyl	0.4717	0.2562	54.3	40 - 135	
Decachlorobiphenyl [2C]	0.4717	0.2457	52.1	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-08 File ID: 052F5201.D

Sampled: 10/12/12 14:50 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 01:55

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3622	78.2	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3362	72.6	25 - 140	Y
Decachlorobiphenyl	0.4630	0.2866	61.9	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.2789	60.2	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210138-04 File ID: 050F5001.D

Sampled: 10/12/12 12:37 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 01:17

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.113	0.236	0.472	U
11104-28-2	Aroclor-1221		0.113	0.236	0.472	U
11141-16-5	Aroclor-1232		0.113	0.236	0.472	U
53469-21-9	Aroclor-1242		0.113	0.236	0.472	U
12672-29-6	Aroclor-1248		0.113	0.236	0.472	U
11097-69-1	Aroclor-1254		0.113	0.236	0.472	U
11096-82-5	Aroclor-1260		0.113	0.236	0.472	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3694	78.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3443	73.0	25 - 140	Y
Decachlorobiphenyl	0.4717	0.2798	59.3	40 - 135	
Decachlorobiphenyl [2C]	0.4717	0.2742	58.1	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210138-10	File ID:	053F5301.D
Sampled:	10/12/12 14:45	Prepared:	10/16/12 14:38	Analyzed:	10/19/12 02:14
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J16016	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3501	75.6	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3312	71.5	25 - 140	Y
Decachlorobiphenyl	0.4630	0.2758	59.6	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.2641	57.0	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210138-02
File ID: 049F4901.D
Sampled: 10/12/12 09:32
Prepared: 10/16/12 14:38
Analyzed: 10/19/12 00:58
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J16016
Sequence: 2J29706
Calibration: 2284005
Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.113	0.236	0.472	U
11104-28-2	Aroclor-1221		0.113	0.236	0.472	U
11141-16-5	Aroclor-1232		0.113	0.236	0.472	U
53469-21-9	Aroclor-1242		0.113	0.236	0.472	U
12672-29-6	Aroclor-1248		0.113	0.236	0.472	U
11097-69-1	Aroclor-1254		0.113	0.236	0.472	U
11096-82-5	Aroclor-1260		0.113	0.236	0.472	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3967	84.1	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3634	77.0	25 - 140	Y
Decachlorobiphenyl	0.4717	0.3531	74.9	40 - 135	
Decachlorobiphenyl [2C]	0.4717	0.3353	71.1	40 - 135	

* Values outside of QC limits

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Sample PEN-44-14-10/12 had a sample collection time on the jar of 1455 but on the COC of 1445. The time on the COC was used.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following surrogates exceeded criteria:
Dibromofluoromethane in 1210138-10 with a positive bias

The following batch spikes exceeded criteria:
2J23005-BS1/BSD1 with a negative bias for Chlorobenzene and 1,2-Dibromoethane and exceeded relative percent difference criteria for Trichlorofluoromethane

The following continuing calibration verifications exceeded criteria:
2J29802-CCV1 with a positive bias for 2-Butanone, Carbon Disulfide, Chloromethane, Cyclohexane, Dichlorodifluoromethane, Methyl Acetate, 4-Methyl-2-pentanone, and Methyl t-Butyl Ether

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA:
The following batch spikes exceeded criteria:
2J17024-BSD1 with a negative bias for N-nitrosodimethylamine

The following continuing calibration verifications exceeded criteria:
2J30001-CCV1 with a positive bias for 2,4-Dinitrophenol, 2-Nitrophenol, and Terphenyl-d14
2J30001-CCV2 with a positive bias for Caprolactam

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA LOW:
Note - There was a mismatch between the bid and the SAP, and the 1,4-Dioxane was missed when the project was set up in the LIMS, which drives the spiking and reporting. When this was discovered, the samples were already outside of 1x holding time. As per the client's okay, samples are being reported with 1,4-Dioxane CCVs only and no batch, matrix spike, or matrix spike duplicates.

The following continuing calibration verifications exceeded criteria:
2J29915-CCV1 with a negative bias for 1,4-Dioxane and a positive bias for 2,4,6-Tribromophenol

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8081A:
The following batch spikes exceeded criteria:
2J16016-BS1 with a negative bias on column 2 for Endrin Ketone

The following blanks have reported results:
2J16016-BLK1 for Gamma-chlordane; note – no positive results were detected in the associated samples

The following initial calibration verifications exceeded criteria:
2J28406-ICV2 with a negative bias on column 2 for Toxaphene

The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 1 for Decachlorobiphenyl
2J29706-CCVG with a positive bias on column 1 for 4,4'-DDD and Delta-BHC

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8082A:
The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 1 for Decachlorobiphenyl

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C/SW7470A:
The following continuing calibration verifications exceeded criteria:
2J30316-CCV6 with a positive bias for Arsenic

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:
The following compounds are qualified with an M to indicate that the LOQ was raised to the level of the reporting limit standard within criteria:
Chloride (2.5mg/L) in 1210138-01, -02, -04, -06, -08, and -10

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

1210138

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1988 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00784	NAS Pensacola Site 44	Gerry Walker	850-385-9899	Empirical Laboratory c/o Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Igoe	PHONE NUMBER: 850-322-8033	ADDRESS: 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, G, G, P, P, P, P/P

PRESERVATIVE USED: HCl, HCl, ice, ice, HNO3, HNO3, Ice, H2SO4, Ice

TYPE OF ANALYSIS: PCE, TCE, cis, 1-2, DCE, VC; TCL VOCs; TCL Pesticides, PCBs; TCL SVOCs w/ LL PAHs; TAL metals w/ Hg; Dissolved Fe, Mn; BOD + Alk; COD; Anions

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	PCE, TCE, cis, 1-2, DCE, VC	TCL VOCs	TCL Pesticides, PCBs	TCL SVOCs w/ LL PAHs	TAL metals w/ Hg	Dissolved Fe, Mn	BOD + Alk	COD	Anions	COMMENTS
10/12/12	0812	PEN-44-10-10/12				GW	G	7	3					1	1	1	1	01
	0932	PEN-44-14-10/12				GW	G	11		3	1	2	1	1	1	1	1	02/03
		~~PEN-3221-10-10/12~~				~~GW~~	~~G~~	~~11~~		~~3~~	~~1~~	~~2~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	
	1237	PEN-44-13-10/12				GW	G	11		3	1	2	1	1	1	1	1	04/05
	1305	PEN-44-11-10/12				GW	G	11		3	1	2	1	1	1	1	1	06/07
	1450	PEN-44-12-10/12				GW	G	11		3	1	2	1	1	1	1	1	08/09
	1445	PEN-44-14-10/12				GW	G	11		3	1	2	1	1	1	1	1	10/11
		TB01308				OI				-3								12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/12/12	1745	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY: jack deville jr.	10-13-12	0840

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

11

1210138

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10-13-12 (date) @ 0840 (time) Workorder# 1210138

1. Tracking # 7580 (last 4 digits, FedEx)

   Courier: (FED-EX) UPS ROUTE WALK-IN

2. Temperature of rep. sample or temp blank when opened: 2.6 °C + *correction factor (+ 0.2)* = 2.8°C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

   If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) JD

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)..NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)..NO...NA *

13. a. Were VOA vials received? (YES)..NO...NA

    b. Was there any observable headspace present in any VOA vial? YES..(NO)..NA

14. Was there a Trip Blank in this cooler? (YES)...NO...NA If multiple coolers, sequence # 1

I certify that I unloaded the cooler and answered questions 7-14 (initial) JD

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JD

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JD

I certify that I attached a label with the unique LIMS number to each container (initial) JD

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance Issues at login? YES...(NO) Was a NCR generated? YES..(NO)..# ____

Additional Details:

* Sample 10 and 11 time on COC was 1445 and on container labels said 1455

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10-13-12 @ 840 (date) (time) *Workorder#* 1210138

1. Tracking # 5479 (last 4 digits, FedEx)

   Courier: (FED-EX) UPS ROUTE WALK-IN

2. Temperature of rep. sample or temp blank when opened: 4.9 °C + *correction factor (+ 0.2)* = 5.1 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

   If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? YES...(NO)..NA

I certify that I opened the cooler and answered questions 1-6 (initial) JD

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES...(NO)..NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence # 2

I certify that I unloaded the cooler and answered questions 7-14 (initial) JD

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)..NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)..NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JD

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)..NO...NA

20. Was sufficient amount of sample sent in each container? (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JD

I certify that I attached a label with the unique LIMS number to each container (initial) JD

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCR generated? YES...(NO)..# _____

Additional Details:

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10-13-12 (date) @ 840 (time) Workorder# 1210138

1. Tracking # 5480 (last 4 digits, FedEx)

   Courier: (FED-EX) UPS ROUTE WALK-IN

2. Temperature of rep. sample or temp blank when opened: 1.1 °C + *correction factor (+ 0.2)* = 1.3 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

   If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? YES..(NO)..NA

I certify that I opened the cooler and answered questions 1-6 (initial) JD

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES...(NO)..NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO..(NA) If multiple coolers, sequence # 3

I certify that I unloaded the cooler and answered questions 7-14 (initial) JD

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JD

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JD

I certify that I attached a label with the unique LIMS number to each container (initial) JD

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES..(NO) Was a NCR generated? YES..(NO)..# _____

Additional Details:

HOLDTIME

SDG 1210138

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
M	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
MF	UG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-11-10/12	1210138-07	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-12-10/12	1210138-09	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-13-10/12	1210138-05	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-14-10/12	1210138-11	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	PEN-44-19-10/12	1210138-03	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
ALK	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
CL	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
COD	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
COD	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
FFE	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
NTA	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTI	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
OS	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OV	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	TB01308	1210138-12	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
PAH	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/18/2012	10/25/2012	6	7	13
PAH	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/18/2012	10/25/2012	6	7	13
PAH	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/18/2012	10/25/2012	6	7	13
PAH	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/18/2012	10/25/2012	6	7	13
PAH	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/18/2012	10/25/2012	6	7	13
PCB	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PCB	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PCB	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PCB	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PCB	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PEST	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PEST	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PEST	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PEST	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7
PEST	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/16/2012	10/19/2012	4	3	7

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-10-10/12	10/12/12 08:12	10/13/12 08:40	10/23/12 17:32	N/A	14.00	10/23/12 17:32	11.39	14.00	
PEN-44-19-10/12	10/12/12 09:32	10/13/12 08:40	10/23/12 18:00	N/A	14.00	10/23/12 18:00	11.35	14.00	
PEN-44-13-10/12	10/12/12 12:37	10/13/12 08:40	10/23/12 18:27	N/A	14.00	10/23/12 18:27	11.24	14.00	
PEN-44-11-10/12	10/12/12 13:05	10/13/12 08:40	10/23/12 18:55	N/A	14.00	10/23/12 18:55	11.24	14.00	
PEN-44-12-10/12	10/12/12 14:50	10/13/12 08:40	10/23/12 19:23	N/A	14.00	10/23/12 19:23	11.19	14.00	
PEN-44-14-10/12	10/12/12 14:45	10/13/12 08:40	10/23/12 19:50	N/A	14.00	10/23/12 19:50	11.21	14.00	
TB01308	10/12/12 00:00	10/13/12 08:40	10/23/12 12:28	N/A	14.00	10/23/12 12:28	11.52	14.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-19-10/12	10/12/12 09:32	10/13/12 08:40	10/18/12 10:00	6.02	7.00	10/24/12 16:39	6.28	40.00	
PEN-44-13-10/12	10/12/12 12:37	10/13/12 08:40	10/18/12 10:00	5.89	7.00	10/24/12 17:07	6.30	40.00	
PEN-44-11-10/12	10/12/12 13:05	10/13/12 08:40	10/18/12 10:00	5.87	7.00	10/24/12 17:35	6.32	40.00	
PEN-44-12-10/12	10/12/12 14:50	10/13/12 08:40	10/18/12 10:00	5.80	7.00	10/24/12 18:03	6.34	40.00	
PEN-44-14-10/12	10/12/12 14:45	10/13/12 08:40	10/18/12 10:00	5.80	7.00	10/24/12 18:30	6.35	40.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-19-10/12	10/12/12 09:32	10/13/12 08:40	10/18/12 10:00	6.02	7.00	10/25/12 00:04	6.59	40.00	
PEN-44-13-10/12	10/12/12 12:37	10/13/12 08:40	10/18/12 10:00	5.89	7.00	10/25/12 00:32	6.61	40.00	
PEN-44-11-10/12	10/12/12 13:05	10/13/12 08:40	10/18/12 10:00	5.87	7.00	10/25/12 01:00	6.63	40.00	
PEN-44-12-10/12	10/12/12 14:50	10/13/12 08:40	10/18/12 10:00	5.80	7.00	10/25/12 01:28	6.64	40.00	
PEN-44-14-10/12	10/12/12 14:45	10/13/12 08:40	10/18/12 10:00	5.80	7.00	10/25/12 01:57	6.66	40.00	

HOLDING TIME SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-19-10/12	10/12/12 09:32	10/13/12 08:40	10/16/12 14:38	4.21	7.00	10/19/12 00:58	2.43	40.00	
PEN-44-13-10/12	10/12/12 12:37	10/13/12 08:40	10/16/12 14:38	4.08	7.00	10/19/12 01:17	2.44	40.00	
PEN-44-11-10/12	10/12/12 13:05	10/13/12 08:40	10/16/12 14:38	4.06	7.00	10/19/12 01:36	2.46	40.00	
PEN-44-12-10/12	10/12/12 14:50	10/13/12 08:40	10/16/12 14:38	3.99	7.00	10/19/12 01:55	2.47	40.00	
PEN-44-14-10/12	10/12/12 14:45	10/13/12 08:40	10/16/12 14:38	4.00	7.00	10/19/12 02:14	2.48	40.00	

HOLDING TIME SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-19-10/12	10/12/12 09:32	10/13/12 08:40	10/16/12 14:38	4.21	7.00	10/19/12 00:58	2.43	40.00	
PEN-44-13-10/12	10/12/12 12:37	10/13/12 08:40	10/16/12 14:38	4.08	7.00	10/19/12 01:17	2.44	40.00	
PEN-44-11-10/12	10/12/12 13:05	10/13/12 08:40	10/16/12 14:38	4.06	7.00	10/19/12 01:36	2.46	40.00	
PEN-44-12-10/12	10/12/12 14:50	10/13/12 08:40	10/16/12 14:38	3.99	7.00	10/19/12 01:55	2.47	40.00	
PEN-44-14-10/12	10/12/12 14:45	10/13/12 08:40	10/16/12 14:38	4.00	7.00	10/19/12 02:14	2.48	40.00	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2G21301	Instrument:	MS-VOA3
Calibration:	2213002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2G21301-TUN1	SEQTUN1.D	07/30/12 08:21
Cal Standard	2G21301-CAL1	SEQCAL1.D	07/30/12 09:48
Cal Standard	2G21301-CAL2	SEQCAL2.D	07/30/12 10:17
Cal Standard	2G21301-CAL3	SEQCAL3.D	07/30/12 10:45
Cal Standard	2G21301-CAL4	SEQCAL4.D	07/30/12 11:14
Cal Standard	2G21301-CAL5	SEQCAL5.D	07/30/12 11:42
Cal Standard	2G21301-CAL6	SEQCAL6.D	07/30/12 12:11
Cal Standard	2G21301-CAL7	SEQCAL7.D	07/30/12 12:40
Cal Standard	2G21301-CAL8	SEQCAL8.D	07/30/12 13:08
Cal Standard	2G21301-CAL9	SEQCAL9.D	07/30/12 13:37
Initial Cal Check	2G21301-ICV2	SEQICV2.D	07/30/12 15:03

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQTUN1.D	Injection Date:	07/30/12
Instrument ID:	MS-VOA3	Injection Time:	08:21
Sequence:	2G21301	Lab Sample ID:	2G21301-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	15.1	PASS
75	30 - 60% of 95	44	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.12	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	107	PASS
175	5 - 9% of 174	7.07	PASS
176	95 - 101% of 174	97.6	PASS
177	5 - 9% of 176	6.17	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2213002
Instrument: MS-VOA3
Matrix: Water
Calibration Dates: 7/30/12 9:48 7/30/12 13:37

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	6.127911E-02	16.92363	3.489556	0.2769129		0.9983323	0.99	
Acrolein	3.059046E-02	9.042267	3.376333	7.786118E-02			15	
Acrylonitrile	6.569715E-02	7.095252	4.357333	0.1704013			15	
Benzene	0.9439093	6.370831	7.5	2.781251E-02			15	
Bromobenzene	0.7349524	5.636576	12.27633	1.968109E-02			15	
Bromochloromethane	0.1828541	7.498248	6.580333	5.424699E-02			15	
Tert-Amyl Methyl Ether	0.6162765	12.93296	7.694666	0.0240391			15	
Bromodichloromethane	0.4300389	4.102128	8.496333	2.508591E-02			15	
Bromoform	0.6947025	8.261521	11.67967	1.393066E-02			SPCC (0.1)	
Bromomethane	0.1767748	11.14876	2.549625	0.1425364			15	
Bromofluorobenzene	1.013563	2.299563	12.11633	2.469625E-02			15	
n-Butylbenzene	1.341081	11.53189	13.71633	1.319746E-02			15	
2-Butanone	7.898584E-02	10.20907	6.031	0.1725912			15	
sec-Butylbenzene	1.938318	13.35342	13.16967	1.150339E-02			15	
tert-Butylbenzene	1.716248	12.97525	12.938	2.081815E-02			15	
Carbon disulfide	0.6093037	4.150462	4.533667	7.199769E-02			15	
Carbon tetrachloride	0.484154	4.30031	7.468333	2.016041E-02			15	
Chlorobenzene	2.105777	6.341832	10.949	1.081874E-02			SPCC (0.3)	
Chloroethane	0.1372338	4.005678	2.682333	9.791205E-02			15	
Chloroform	0.5183192	4.836199	6.555	4.631319E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1370578	13.8323	8.861334	1.149182E-02			15	
Chloromethane	0.2232586	5.632496	1.957	1.354336E-02			SPCC (0.1)	
1-Chlorohexane	0.8363237	6.728935	10.91744	1.891962E-02			15	
2-Chlorotoluene	1.478503	7.480181	12.5	0			15	
4-Chlorotoluene	1.728237	7.872081	12.561	7.068191E-03			15	
Cyclohexane	0.2895896	6.561665	7.401333	2.945346E-02			15	
Dibromochloromethane	0.96157	6.556881	10.178	3.269395E-02			15	
1,2-Dibromo-3-chloropropane	0.165218	11.82885	14.32125	1.750125E-02			15	
1,2-Dibromoethane (EDB)	0.7261361	4.973904	10.395	1.877545E-02			15	
Dibromomethane	0.187154	6.960802	8.433333	0.0332705			15	
1,2-Dichlorobenzene	1.306003	7.460591	13.674	8.933889E-03			15	
1,3-Dichlorobenzene	1.348763	6.977902	13.26078	8.708723E-03			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2213002
Instrument: MS-VOA3
Matrix: Water
Calibration Dates: 7/30/12 9:48 7/30/12 13:37

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.414025	5.293393	13.352	7.502474E-03			15	
Dichlorodifluoromethane	0.2646311	10.62008	1.750222	2.540826E-02			15	
1,1-Dichloroethane	0.4219782	5.521849	5.567667	5.428684E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3881483	5.21031	7.329	4.188113E-03			15	
1,1-Dichloroethene	0.2299039	5.551603	3.971667	9.159627E-02			CCC (20)	
cis-1,2-Dichloroethene	0.2923164	5.638785	6.294333	3.025872E-02			15	
trans-1,2-Dichloroethene	0.2706481	3.555312	5.181111	4.764946E-02			15	
1,2-Dichloroethene (total)	0.2814822	4.437246	6.294333	3.025872E-02			15	
1,2-Dichloropropane	0.2208834	7.812962	8.319667	3.633876E-02			CCC (20)	
1,3-Dichloropropane	0.9533089	5.639417	9.920222	2.212023E-02			15	
2,2-Dichloropropane	0.380659	4.60598	6.404111	2.180096E-02			15	
1,1-Dichloropropene	0.3461839	7.954365	7.347778	0.0317453			15	
cis-1,3-Dichloropropene	0.4014071	10.04126	9.075	5.230454E-03			15	
trans-1,3-Dichloropropene	0.9928947	10.02535	9.550556	2.770872E-02			15	
Diisopropyl Ether	0.656586	8.940648	5.949333	4.557293E-02			15	
Ethylbenzene	2.993416	9.387991	11.101	1.748548E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.6614789	10.04625	6.425	6.832556E-02			15	
Ethyl Methacrylate	0.6451489	14.54432	9.743334	1.069978E-02			15	
Hexachlorobutadiene	0.2768995	5.50911	15.688	1.776325E-02			15	
2-Hexanone	0.2794217	13.03604	9.856	0.0333086			15	
Iodomethane	0.3462486	31.03425	4.1735	7.085955E-02	0.9990374		0.995	
Isopropylbenzene	2.843894	11.40757	12.001	0.0227546			15	
p-Isopropyltoluene	1.937734	9.773661	13.309	1.723665E-02			15	
Methylene chloride	0.2732269	13.23693	4.4805	6.443989E-02			15	
Methyl Acetate	0.1184226	13.48682	4.342667	0.1609046			15	
Methylcyclohexane	0.2857842	10.79483	8.649	0.0189802			15	
Naphthalene	1.980321	19.25825	15.56	1.343556E-02		0.9997546	0.99	
Methyl Methacrylate	0.1770339	11.08417	8.454	2.482942E-02			15	
4-Methyl-2-pentanone	0.1703177	12.6742	9.002667	0.0546286			15	
Methyl t-Butyl Ether	0.6006161	6.704845	5.172778	6.088712E-02			15	
n-Propylbenzene	2.246051	9.964759	12.415	0.022024			15	
Styrene	2.183883	14.04007	11.57456	2.092247E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2213002
Instrument: MS-VOA3
Matrix: Water
Calibration Dates: 7/30/12 9:48 7/30/12 13:37

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.4961926	8.131299	11.92733	3.235038E-04			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.898878	7.003265	10.99178	2.130655E-02			15	
tert-Butyl alcohol	1.295405E-02	11.35649	4.120429	0.1656188			15	
Tetrachloroethene	0.888101	4.753778	10.29267	2.470326E-02			15	
Toluene	1.582424	6.084639	9.554555	3.006621E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.7234561	12.34467	15.84733	8.158592E-03			15	
1,2,4-Trichlorobenzene	0.7784328	14.42566	15.40733	1.305204E-02			15	
1,1,2-Trichloroethane	0.4518993	5.575963	9.708	1.627961E-02			15	
1,1,1-Trichloroethane	0.4808123	3.852205	7.122667	3.367217E-02			15	
Tetrahydrofuran	2.143596E-02	21.31035	6.771714	0.1294004	0.9985781		0.995	
Trichloroethene	0.2875668	6.508933	8.270667	2.727798E-02			15	
Trichlorofluoromethane	0.448402	5.002987	3.184	0.1325704			15	
1,2,3-Trichloropropane	0.2946555	13.58789	12.05467	2.887739E-02			15	
1,3,5-Trimethylbenzene	1.776362	11.33083	12.59111	0.0191309			15	
1,2,4-Trimethylbenzene	1.893477	9.525768	12.96878	1.605514E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2397551	8.27233	4.056	7.263164E-02			15	
Vinyl chloride	0.2136571	8.692742	2.111111	0.1383994			CCC (20)	
m,p-Xylene	2.381184	10.73742	11.21011	2.506495E-03			15	
o-Xylene	2.487692	9.010655	11.60533	1.667237E-02			15	
Vinyl acetate	0.4024672	13.05969	5.64475	3.612669E-02			15	
Xylenes (total)	2.416686	9.981037	11.60533	1.667237E-02			15	
Dibromofluoromethane	0.3010273	3.051016	6.729	4.596158E-02			15	
1,2-Dichloroethane-d4	7.164132E-02	3.519973	7.236667	3.348431E-02			15	
Toluene-d8	2.401311	2.156175	9.476778	1.932701E-02			15	
tert-Amyl alcohol	8.853803E-03	17.78507	6.931429	4.807711E-02	0.9950466		0.995	
tert-Amyl ethyl ether	0.4964199	9.599005	8.588889	2.096708E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA3	Calibration:	2213002
Lab File ID:	SEQICV2.D	Calibration Date:	07/30/12 09:48
Sequence:	2G21301	Injection Date:	07/30/12
Lab Sample ID:	2G21301-ICV2	Injection Time:	15:03

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acetone	Q	200.0	183.7	6.127911E-02	5.039898E-02		-8.2	20
Benzene	A	100.0	98.12	0.9439093	0.9261312		-1.9	20
Bromochloromethane	A	100.0	95.84	0.1828541	0.1752508		-4.2	20
Bromodichloromethane	A	100.0	88.61	0.4300389	0.3810484		-11.4	20
Bromoform	A	100.0	100.1	0.6947025	0.6956394	0.1	0.1	20
Bromomethane	A	100.0	91.96	0.1767748	0.162559		-8.0	20
2-Butanone	A	200.0	207.8	7.898584E-02	8.208541E-02		3.9	20
Carbon disulfide	A	100.0	85.74	0.6093037	0.5224242		-14.3	20
Carbon tetrachloride	A	100.0	91.42	0.484154	0.4426293		-8.6	20
Chlorobenzene	A	100.0	96.64	2.105777	2.034926	0.3	-3.4	20
Chloroethane	A	100.0	98.85	0.1372338	0.135659		-1.1	20
Chloroform	A	100.0	88.60	0.5183192	0.4592401		-11.4	20
Chloromethane	A	100.0	84.03	0.2232586	0.1876022	0.1	-16.0	20
Cyclohexane	A	100.0	94.66	0.2895896	0.2741363		-5.3	20
Dibromochloromethane	A	100.0	96.45	0.96157	0.9274602		-3.5	20
1,2-Dibromo-3-chloropropane	A	100.0	99.47	0.165218	0.1643396		-0.5	20
1,2-Dibromoethane (EDB)	A	100.0	98.03	0.7261361	0.7118423		-2.0	20
1,2-Dichlorobenzene	A	100.0	98.65	1.306003	1.288358		-1.4	20
1,3-Dichlorobenzene	A	100.0	96.97	1.348763	1.307847		-3.0	20
1,4-Dichlorobenzene	A	100.0	97.31	1.414025	1.376001		-2.7	20
Dichlorodifluoromethane	A	100.0	90.15	0.2646311	0.2385575		-9.9	20
1,1-Dichloroethane	A	100.0	91.90	0.4219782	0.3877804	0.1	-8.1	20
1,2-Dichloroethane	A	100.0	91.49	0.3881483	0.3551092		-8.5	20
1,1-Dichloroethene	A	100.0	90.10	0.2299039	0.2071465		-9.9	20
cis-1,2-Dichloroethene	A	100.0	96.15	0.2923164	0.2810583		-3.9	20
trans-1,2-Dichloroethene	A	100.0	95.30	0.2706481	0.2579408		-4.7	20
1,2-Dichloropropane	A	100.0	100.7	0.2208834	0.2225275		0.7	20
cis-1,3-Dichloropropene	A	100.0	101.6	0.4014071	0.4077756		1.6	20
trans-1,3-Dichloropropene	A	100.0	92.23	0.9928947	0.9157918		-7.8	20

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA3	Calibration:	2213002
Lab File ID:	SEQICV2.D	Calibration Date:	07/30/12 09:48
Sequence:	2G21301	Injection Date:	07/30/12
Lab Sample ID:	2G21301-ICV2	Injection Time:	15:03

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Ethylbenzene	A	100.0	103.2	2.993416	3.090646		3.2	20
2-Hexanone	A	200.0	215.6	0.2794217	0.3012799		7.8	20
Isopropylbenzene	A	100.0	98.25	2.843894	2.794159		-1.7	20
Methylene chloride	A	100.0	85.85	0.2732269	0.2345743		-14.1	20
Methyl Acetate	A	100.0	103.3	0.1184226	0.1222805		3.3	20
Methylcyclohexane	A	100.0	99.96	0.2857842	0.2856567		-0.04	20
4-Methyl-2-pentanone	A	200.0	210.9	0.1703177	0.1796329		5.5	20
Methyl t-Butyl Ether	A	100.0	97.87	0.6006161	0.5877969		-2.1	20
Styrene	A	100.0	104.4	2.183883	2.278802		4.3	20
1,1,2,2-Tetrachloroethane	A	100.0	98.11	0.4961926	0.4868005	0.3	-1.9	20
Tetrachloroethene	A	100.0	98.09	0.888101	0.8711469		-1.9	20
Toluene	A	100.0	100.3	1.582424	1.587772		0.3	20
1,2,3-Trichlorobenzene	A	100.0	104.0	0.7234561	0.7525423		4.0	20
1,2,4-Trichlorobenzene	A	100.0	104.5	0.7784328	0.8132379		4.5	20
1,1,2-Trichloroethane	A	100.0	101.9	0.4518993	0.4606312		1.9	20
1,1,1-Trichloroethane	A	100.0	94.05	0.4808123	0.4521803		-6.0	20
Trichloroethene	A	100.0	97.40	0.2875668	0.2800962		-2.6	20
Trichlorofluoromethane	A	100.0	92.42	0.448402	0.4144215		-7.6	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	100.0	89.60	0.2397551	0.2148221		-10.4	20
Vinyl chloride	A	100.0	103.4	0.2136571	0.2210024		3.4	20
m,p-Xylene	A	200.0	204.8	2.381184	2.438497		2.4	20
o-Xylene	A	100.0	102.3	2.487692	2.545601		2.3	20
Xylenes (total)	A	300.0	307.1	2.416686	2.474198		2.4	20
Bromofluorobenzene	A	30.00	30.06	1.013563	1.015605		0.2	20
Dibromofluoromethane	A	30.00	28.49	0.3010273	0.2858489		-5.0	20
1,2-Dichloroethane-d4	A	30.00	28.50	7.164132E-02	6.806127E-02		-5.0	20
Toluene-d8	A	30.00	30.27	2.401311	2.422749		0.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29802	Instrument:	MS-VOA3
Calibration:	2213002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29802-TUN1	1023TUN1.D	10/23/12 09:41
Calibration Check	2J29802-CCV1	1023CCV1.D	10/23/12 10:10
LCS	2J23005-BS1	1023LCS1.D	10/23/12 10:38
Blank	2J23005-BLK1	1023BLK1.D	10/23/12 12:01
TB01308	1210138-12	1013812.D	10/23/12 12:28
PEN-44-10-10/12	1210138-01	1013801.D	10/23/12 17:32
PEN-44-19-10/12	1210138-02	1013802.D	10/23/12 18:00
PEN-44-13-10/12	1210138-04	1013804.D	10/23/12 18:27
PEN-44-11-10/12	1210138-06	1013806.D	10/23/12 18:55
PEN-44-12-10/12	1210138-08	1013808.D	10/23/12 19:23
PEN-44-14-10/12	1210138-10	1013810.D	10/23/12 19:50
LCS Dup	2J23005-BSD1	1023LCD1.D	10/23/12 21:13

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1023TUN1.D	Injection Date:	10/23/12
Instrument ID:	MS-VOA3	Injection Time:	09:41
Sequence:	2J29802	Lab Sample ID:	2J29802-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	15.7	PASS
75	30 - 60% of 95	41.4	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.12	PASS
173	Less than 2% of 174	0.477	PASS
174	50 - 200% of 95	89.5	PASS
175	5 - 9% of 174	7.41	PASS
176	95 - 101% of 174	95.8	PASS
177	5 - 9% of 176	6.84	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA3	Calibration:	2213002
Lab File ID:	1023CCV1.D	Calibration Date:	07/30/12 09:48
Sequence:	2J29802	Injection Date:	10/23/12
Lab Sample ID:	2J29802-CCV1	Injection Time:	10:10

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	Q	200.0	213.0	6.127911E-02	5.808814E-02		6.5	20
Benzene	A	100.0	112.1	0.9439093	1.057735		12.1	20
Bromochloromethane	A	100.0	105.1	0.1828541	0.19226		5.1	20
Bromodichloromethane	A	100.0	101.4	0.4300389	0.4360567		1.4	20
Bromoform	A	100.0	80.47	0.6947025	0.5590367	0.1	-19.5	20
Bromomethane	A	100.0	100.8	0.1767748	0.1782585		0.8	20
2-Butanone	A	200.0	250.7	7.898584E-02	0.0989932		25.3	20 *
Carbon disulfide	A	100.0	125.0	0.6093037	0.7617129		25.0	20 *
Carbon tetrachloride	A	100.0	92.33	0.484154	0.4470265		-7.7	20
Chlorobenzene	A	100.0	103.2	2.105777	2.17399	0.3	3.2	20
Chloroethane	A	100.0	113.6	0.1372338	0.1559258		13.6	20
Chloroform	A	100.0	100.9	0.5183192	0.5228708		0.9	20
Chloromethane	A	100.0	126.3	0.2232586	0.2820313	0.1	26.3	20 *
Cyclohexane	A	100.0	121.6	0.2895896	0.3522605		21.6	20 *
Dibromochloromethane	A	100.0	90.09	0.96157	0.8662483		-9.9	20
1,2-Dibromo-3-chloropropane	A	100.0	96.66	0.165218	0.1597014		-3.3	20
1,2-Dibromoethane (EDB)	A	100.0	92.17	0.7261361	0.6692866		-7.8	20
1,2-Dichlorobenzene	A	100.0	103.8	1.306003	1.355791		3.8	20
1,3-Dichlorobenzene	A	100.0	103.1	1.348763	1.39008		3.1	20
1,4-Dichlorobenzene	A	100.0	98.81	1.414025	1.397209		-1.2	20
Dichlorodifluoromethane	A	100.0	125.9	0.2646311	0.3330594		25.9	20 *
1,1-Dichloroethane	A	100.0	114.1	0.4219782	0.4813958	0.1	14.1	20
1,2-Dichloroethane	A	100.0	103.0	0.3881483	0.3999531		3.0	20
1,1-Dichloroethene	A	100.0	112.0	0.2299039	0.2574744		12.0	20
cis-1,2-Dichloroethene	A	100.0	115.2	0.2923164	0.3369016		15.3	20
trans-1,2-Dichloroethene	A	100.0	109.4	0.2706481	0.2961628		9.4	20
1,2-Dichloropropane	A	100.0	118.0	0.2208834	0.2607586		18.1	20
cis-1,3-Dichloropropene	A	100.0	119.8	0.4014071	0.4810302		19.8	20
trans-1,3-Dichloropropene	A	100.0	102.5	0.9928947	1.017519		2.5	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA3	Calibration:	2213002
Lab File ID:	1023CCV1.D	Calibration Date:	07/30/12 09:48
Sequence:	2J29802	Injection Date:	10/23/12
Lab Sample ID:	2J29802-CCV1	Injection Time:	10:10

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Ethylbenzene	A	100.0	106.0	2.993416	3.172782		6.0	20	
2-Hexanone	A	200.0	235.4	0.2794217	0.328804		17.7	20	
Isopropylbenzene	A	100.0	101.1	2.843894	2.87515		1.1	20	
Methylene chloride	A	100.0	103.2	0.2732269	0.2819576		3.2	20	
Methyl Acetate	A	100.0	128.0	0.1184226	0.1515793		28.0	20	*
Methylcyclohexane	A	100.0	112.4	0.2857842	0.3213265		12.4	20	
4-Methyl-2-pentanone	A	200.0	254.1	0.1703177	0.2164244		27.1	20	*
Methyl t-Butyl Ether	A	100.0	122.8	0.6006161	0.7376622		22.8	20	*
Styrene	A	100.0	103.1	2.183883	2.251384		3.1	20	
1,1,2,2-Tetrachloroethane	A	100.0	105.0	0.4961926	0.5209007	0.3	5.0	20	
Tetrachloroethene	A	100.0	84.37	0.888101	0.7493221		-15.6	20	
Toluene	A	100.0	104.6	1.582424	1.655456		4.6	20	
1,2,3-Trichlorobenzene	A	100.0	97.56	0.7234561	0.7058024		-2.4	20	
1,2,4-Trichlorobenzene	A	100.0	97.27	0.7784328	0.7571821		-2.7	20	
1,1,2-Trichloroethane	A	100.0	98.97	0.4518993	0.4472485		-1.0	20	
1,1,1-Trichloroethane	A	100.0	99.61	0.4808123	0.4789235		-0.4	20	
Trichloroethene	A	100.0	111.2	0.2875668	0.3198198		11.2	20	
Trichlorofluoromethane	A	100.0	89.07	0.448402	0.3993994		-10.9	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	100.0	110.3	0.2397551	0.2644089		10.3	20	
Vinyl chloride	A	100.0	106.0	0.2136571	0.2263693		5.9	20	
m,p-Xylene	A	200.0	209.2	2.381184	2.490943		4.6	20	
o-Xylene	A	100.0	104.3	2.487692	2.594947		4.3	20	
Xylenes (total)	A	300.0	313.5	2.416686	2.525611		4.5	20	
Bromofluorobenzene	A	30.00	32.86	1.013563	1.11033		9.5	20	
Dibromofluoromethane	A	30.00	30.14	0.3010273	0.3024731		0.5	20	
1,2-Dichloroethane-d4	A	30.00	29.39	7.164132E-02	7.018015E-02		-2.0	20	
Toluene-d8	A	30.00	29.13	2.401311	2.331368		-2.9	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J23005 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-10-10/12	1210138-01	10/23/12 17:32	5.00	5.00
PEN-44-19-10/12	1210138-02	10/23/12 18:00	5.00	5.00
PEN-44-13-10/12	1210138-04	10/23/12 18:27	5.00	5.00
PEN-44-11-10/12	1210138-06	10/23/12 18:55	5.00	5.00
PEN-44-12-10/12	1210138-08	10/23/12 19:23	5.00	5.00
PEN-44-14-10/12	1210138-10	10/23/12 19:50	5.00	5.00
TB01308	1210138-12	10/23/12 12:28	5.00	5.00
Blank	2J23005-BLK1	10/23/12 12:01	5.00	5.00
LCS	2J23005-BS1	10/23/12 10:38	5.00	5.00
LCS Dup	2J23005-BSD1	10/23/12 21:13	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23005-BLK1 File ID: 1023BLK1.D

Sampled: Prepared: Analyzed: 10/23/12 12:01

Solids: Preparation: 5030B Dilution:

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	X, U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	Q, U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	Q, U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	X, U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	X, U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	X, U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23005-BLK1 File ID: 1023BLK1.D

Sampled: Prepared: Analyzed: 10/23/12 12:01

Solids: Preparation: 5030B Dilution:

Batch: 2J23005 Sequence: 2J29802 Calibration: 2213002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	Q, U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.59	105	75 - 120	
Dibromofluoromethane	30.00	30.24	101	85 - 115	
1,2-Dichloroethane-d4	30.00	29.41	98.0	70 - 120	I
Toluene-d8	30.00	28.67	95.6	85 - 120	I

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I25803	Instrument:	MS-BNA3
Calibration:	2261001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I25803-TUN1	SEQ-TUN1.D	09/11/12 10:14
Cal Standard	2I25803-CAL1	SEQ-CAL1.D	09/11/12 10:38
Cal Standard	2I25803-CAL2	SEQ-CAL2.D	09/11/12 11:06
Cal Standard	2I25803-CAL3	SEQ-CAL3.D	09/11/12 11:34
Cal Standard	2I25803-CAL4	SEQ-CAL4.D	09/11/12 12:03
Cal Standard	2I25803-CAL5	SEQ-CAL5.D	09/11/12 12:31
Cal Standard	2I25803-CAL6	SEQ-CAL6.D	09/11/12 12:59
Cal Standard	2I25803-CAL7	SEQ-CAL7.D	09/11/12 13:27
Cal Standard	2I25803-CAL8	SEQ-CAL8.D	09/11/12 13:55
Cal Standard	2I25803-CAL9	SEQ-CAL9.D	09/11/12 14:23
Cal Standard	2I25803-CALA	SEQ-CALA.D	09/11/12 14:51
Cal Standard	2I25803-CALB	SEQ-CALB.D	09/11/12 15:20
Cal Standard	2I25803-CALC	SEQ-CALC.D	09/11/12 15:48
Cal Standard	2I25803-CALD	SEQ-CALD.D	09/11/12 16:16
Cal Standard	2I25803-CALE	SEQ-CALE.D	09/11/12 16:44
Cal Standard	2I25803-CALF	SEQ-CALF.D	09/11/12 17:11
Cal Standard	2I25803-CALG	SEQ-CALG.D	09/11/12 17:40
Initial Cal Check	2I25803-ICV1	SEQ-ICV1.D	09/11/12 18:08
Initial Cal Check	2I25803-ICV2	SEQ-ICV2.D	09/11/12 18:36
MS Tune	2I25803-TUN2	SEQ-TUN2.D	09/12/12 15:25
Initial Cal Check	2I25803-ICV3	SEQ-ICV3.D	09/12/12 15:49

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/11/12
Instrument ID:	MS-BNA3	Injection Time:	10:14
Sequence:	2I25803	Lab Sample ID:	2I25803-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	39.9	PASS
68	Less than 2% of 69	0.427	PASS
69	Less than 200% of 198	45	PASS
70	Less than 2% of 69	0.427	PASS
127	40 - 60% of 198	48.7	PASS
197	Less than 1% of 198	0.112	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.32	PASS
275	10 - 30% of 198	23.4	PASS
365	1 - 200% of 198	2.18	PASS
441	0.001 - 100% of 443	80	PASS
442	40 - 200% of 198	79.1	PASS
443	17 - 23% of 442	18.8	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/12/12
Instrument ID:	MS-BNA3	Injection Time:	15:25
Sequence:	2I25803	Lab Sample ID:	2I25803-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	38.9	PASS
68	Less than 2% of 69	1.04	PASS
69	Less than 200% of 198	42.9	PASS
70	Less than 2% of 69	0.427	PASS
127	40 - 60% of 198	48.8	PASS
197	Less than 1% of 198	0.0543	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.99	PASS
275	10 - 30% of 198	22.3	PASS
365	1 - 200% of 198	2.57	PASS
441	0.001 - 100% of 443	68.9	PASS
442	40 - 200% of 198	78.2	PASS
443	17 - 23% of 442	20.5	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2261001
Instrument: MS-BNA3
Matrix: Water
Calibration Dates: 9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.10566	8.941982	9.541375	5.759679E-02			CCC (20)	
Acenaphthylene	1.65984	11.47408	9.309875	5.149462E-02			CCC (20)	
Acetophenone	1.761778	4.548734	6.15075	0.029436			CCC (20)	
Aniline	1.975584	6.156998	5.21875	8.840861E-03			CCC (20)	
Anthracene	1.081887	12.14042	11.38375	4.965419E-02			CCC (20)	
Atrazine	0.2286444	3.743847	11.014	2.800227E-02			CCC (20)	
Benzaldehyde	0.9974323	8.489099	5.032875	0.0350803			CCC (20)	
Benzidine	0.650866	4.862256	12.96125	7.03444E-03			CCC (20)	
Benzo(a)anthracene	1.096178	5.859442	14.68275	0.0361667			CCC (20)	
Benzo(a)pyrene	1.020199	5.91785	16.89375	4.367248E-02			CCC (20)	
Benzo(b)fluoranthene	1.062636	8.32804	16.3765	4.687998E-02			CCC (20)	
Benzo(g,h,i)perylene	0.9945587	5.662765	19.13462	6.322926E-02			CCC (20)	
Benzoic acid	0.2585828	19.18735	7.002875	0.5416775	0.9968332		CCC (20)	
Benzo(k)fluoranthene	1.300594	10.47456	16.41512	4.428847E-02			CCC (20)	
Benzyl alcohol	0.8350847	3.232369	5.801	8.006347E-02			CCC (20)	
1,1-Biphenyl	1.358172	8.14203	8.777	3.752441E-02			CCC (20)	
4-Bromophenyl-phenylether	0.2362641	2.694889	10.759	4.506461E-02			CCC (20)	
Butylbenzylphthalate	0.5337897	6.795952	13.95313	1.982893E-02			CCC (20)	
Caprolactam	0.1054972	6.369373	7.769375	0.1428007			CCC (20)	
Carbazole	1.029924	10.35465	11.592	4.012654E-02			CCC (20)	
4-Chloro-3-methylphenol	0.3241539	4.484259	8.02375	2.422232E-02			CCC (20)	
4-Chloroaniline	0.4387603	4.499309	7.395	6.407021E-02			CCC (20)	
Bis(2-chloroethoxy)methane	0.4361706	4.861304	6.99	5.257221E-02			CCC (20)	
Bis(2-chloroethyl)ether	1.284228	4.005468	5.29525	0.1014556			CCC (20)	
2,2'-Oxybis-1-chloropropane	1.662963	5.286827	6.008	7.846643E-02			CCC (20)	
2-Chloronaphthalene	1.10867	7.247886	8.782	5.276285E-02			CCC (20)	
2-Chlorophenol	1.266695	3.235977	5.356	8.851782E-02			CCC (20)	
4-Chlorophenyl phenyl ether	0.6443488	6.230529	10.16638	5.729773E-03			CCC (20)	
Chrysene	1.072128	8.541599	14.74763	3.641467E-02			CCC (20)	
Dibenz(a,h)anthracene	0.968097	8.317117	18.71425	4.210554E-02			CCC (20)	
Dibenzofuran	1.531191	11.0083	9.734	4.736714E-02			CCC (20)	
Di-n-butylphthalate	1.117323	11.87776	12.081	2.243919E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2261001
Instrument: MS-BNA3
Matrix: Water
Calibration Dates: 9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.454535	5.818776	5.61225	0.013037			CCC (20)	
1,3-Dichlorobenzene	1.438718	4.610703	5.53975	1.248566E-02			CCC (20)	
1,2-Dichlorobenzene	1.382609	5.210718	5.860625	0.0201332			CCC (20)	
3,3'-Dichlorobenzidine	0.3990372	6.177841	14.68175	2.892872E-02			CCC (20)	
2,6-Dichlorophenol	0.3076612	2.595722	7.40325	2.436204E-02			15	
2,4-Dichlorophenol	0.3172443	5.18606	7.101375	4.761375E-02			CCC (20)	
Diethylphthalate	1.246346	6.574405	10.103	6.670748E-02			CCC (20)	
2,4-Dimethylphenol	0.3802932	3.960326	6.8645	1.752451E-02			CCC (20)	
Dimethyl phthalate	1.25703	8.5773	9.232125	5.107294E-02			CCC (20)	
4,6-Dinitro-2-methylphenol	0.1376067	22.31038	10.28925	8.292123E-02	0.9995831 ✓		CCC (20)	*
2,4-Dinitrophenol	0.1586589	30.52087	9.602375	5.674957E-02	0.9965146 ✓		CCC (20)	*
2,4-Dinitrotoluene	0.4130027	6.633871	9.796125	4.871438E-02			CCC (20)	
2,6-Dinitrotoluene	0.3035821	5.167856	9.315	4.886391E-02			CCC (20)	
Di-n-octylphthalate	1.122715	10.64814	15.776	1.209158E-02			CCC (20)	
1,4-Dioxane	0.5337955	4.869741	2.414375	7.061711E-02			15	
1,2-Diphenylhydrazine	0.7871146	8.877235	10.355	4.530772E-02			CCC (20)	
Bis(2-ethylhexyl)phthalate	0.6994262	7.777001	14.8135	7.521677E-03			CCC (20)	
Fluoranthene	1.164281	11.37119	12.78475	7.212182E-03			CCC (20)	
Fluorene	1.322497	9.629889	10.15838	0.047539			CCC (20)	
2-Fluorobiphenyl	1.269863	8.146411	8.668	5.397084E-02			CCC (20)	
2-Fluorophenol	1.119802	5.107841	4.039	1.607769E-02			CCC (20)	
Hexachlorobenzene	0.2557988	3.811211	10.93875	0.0483882			CCC (20)	
Hexachlorobutadiene	0.2021383	2.894676	7.537375	1.656083E-02			CCC (20)	
Hexachlorocyclopentadiene	0.3471121	8.069592	8.46875	1.743379E-02			CCC (20)	
Hexachloroethane	0.606057	2.830271	6.25375	5.98945E-03			CCC (20)	
Indeno(1,2,3-cd)pyrene	1.18309	7.999515	18.68575	3.410259E-02			CCC (20)	
Isophorone	0.694789	5.463283	6.678375	9.487201E-03			CCC (20)	
1-Methylnaphthalene	0.5852855	7.165809	8.311	5.573635E-02			CCC (20)	
2-Methylnaphthalene	0.6105231	7.071532	8.168625	0.0152489			CCC (20)	
2-Methylphenol	1.15948	3.037164	5.977	7.574059E-02			CCC (20)	
3-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	
4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2261001
Instrument: MS-BNA3
Matrix: Water
Calibration Dates: 9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
3-Methylphenol/4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			15	
Naphthalene	0.9922437	12.28808	7.288875	1.449498E-02			CCC (20)	
4-Nitroaniline	0.3237232	5.187175	10.24375	9.360202E-02			CCC (20)	
3-Nitroaniline	0.3275855	3.191586	9.4845	6.968371E-02			CCC (20)	
2-Nitroaniline	0.3368371	4.692985	8.965625	2.313171E-02			CCC (20)	
Nitrobenzene	0.4042427	3.277603	6.37825	1.726574E-02			CCC (20)	
Nitrobenzene-d5	0.3989519	3.300556	6.357375	2.012303E-02			CCC (20)	
4-Nitrophenol	0.263969	9.91531	9.692875	0.0512375			CCC (20)	
2-Nitrophenol	0.1877485	8.18829	6.8025	0.0109992			CCC (20)	
N-Nitrosodimethylamine	0.6512354	3.595621	2.705	0.1357375			CCC (20)	
N-Nitrosodiphenylamine	0.6783385	6.967624	10.324	4.608146E-02			CCC (20)	
N-Nitroso-di-n-propylamine	0.977041	4.270567	6.194375	7.506511E-02			CCC (20)	
Pentachlorophenol	0.1662584	12.1407	11.15975	0.0122687			CCC (20)	
Phenanthrene	1.082295	13.7748	11.32925	4.510804E-02			CCC (20)	
Phenol	1.701202	4.253285	5.197	0.128711			CCC (20)	
Phenol-d6	1.476584	6.577862	5.18125	0.1022497			CCC (20)	
Pyrene	1.182005	12.0001	13.058	3.821264E-02			CCC (20)	
Pyridine	1.443915	2.816602	2.7155	0.1280989			CCC (20)	
Terphenyl-d14	0.755263	6.374122	13.26762	4.197651E-02			CCC (20)	
1,2,4,5-Tetrachlorobenzene	0.3539919	4.108493	8.43825	1.427966E-02			CCC (20)	
2,3,4,6-Tetrachlorophenol	0.3406087	4.554587	9.94875	1.854361E-02			CCC (20)	
2,4,6-Tribromophenol	0.1129158	6.053375	10.48725	7.380264E-03			CCC (20)	
1,2,4-Trichlorobenzene	0.3379206	3.985092	7.2165	8.724103E-03			CCC (20)	
2,4,6-Trichlorophenol	0.3893444	3.105104	8.572375	2.137935E-02			CCC (20)	
2,4,5-Trichlorophenol	0.3894227	5.904797	8.613625	1.934255E-02			CCC (20)	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30001	Instrument:	MS-BNA3
Calibration:	2261001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J30001-TUN1	SEQ-TUN1.D	10/24/12 11:37
Calibration Check	2J30001-CCV1	SEQ-CCV1.D	10/24/12 12:01
Calibration Check	2J30001-CCV2	SEQ-CCV2.D	10/24/12 12:29
Blank	2J17024-BLK1	J17024B1.D	10/24/12 15:16
LCS	2J17024-BS1	J17024L1.D	10/24/12 15:44
LCS Dup	2J17024-BSD1	J17024L2.D	10/24/12 16:12
PEN-44-19-10/12	1210138-02	1013802.D	10/24/12 16:39
PEN-44-13-10/12	1210138-04	1013804.D	10/24/12 17:07
PEN-44-11-10/12	1210138-06	1013806.D	10/24/12 17:35
PEN-44-12-10/12	1210138-08	1013808.D	10/24/12 18:03
PEN-44-14-10/12	1210138-10	1013810.D	10/24/12 18:30

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/24/12
Instrument ID:	MS-BNA3	Injection Time:	11:37
Sequence:	2J30001	Lab Sample ID:	2J30001-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	35.9	PASS
68	Less than 2% of 69	1.49	PASS
69	Less than 200% of 198	41.1	PASS
70	Less than 2% of 69	1.05	PASS
127	40 - 60% of 198	47.3	PASS
197	Less than 1% of 198	0.649	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.89	PASS
275	10 - 30% of 198	25.1	PASS
365	1 - 200% of 198	2.08	PASS
441	0.001 - 100% of 443	70.7	PASS
442	40 - 200% of 198	84	PASS
443	17 - 23% of 442	19.1	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2J30001	Injection Date:	10/24/12
Lab Sample ID:	2J30001-CCV1	Injection Time:	12:01

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Bromophenyl-phenylether	A	50.00	53.10	0.2362641	0.2509019	0.1	6.2	20	
Butylbenzylphthalate	A	50.00	56.25	0.5337897	0.6005564	0.01	12.5	20	
Carbazole	A	50.00	52.14	1.029924	1.073904	0.01	4.3	20	
4-Chloro-3-methylphenol	A	50.00	52.70	0.3241539	0.3416366	0.2	5.4	20	
4-Chloroaniline	A	50.00	52.80	0.4387603	0.4633109	0.01	5.6	20	
Bis(2-chloroethoxy)methane	A	50.00	51.73	0.4361706	0.4512589	0.3	3.5	20	
Bis(2-chloroethyl)ether	A	50.00	54.94	1.284228	1.411048	0.7	9.9	20	
2,2'-Oxybis-1-chloropropane	A	50.00	53.49	1.662963	1.779085	0.01	7.0	20	
2-Chloronaphthalene	A	50.00	49.84	1.10867	1.105182	0.8	-0.3	20	
2-Chlorophenol	A	50.00	55.74	1.266695	1.412024	0.8	11.5	20	
4-Chlorophenyl phenyl ether	A	50.00	49.38	0.6443488	0.6364348	0.4	-1.2	20	
Dibenzofuran	A	50.00	49.33	1.531191	1.510552	0.8	-1.3	20	
Di-n-butylphthalate	A	50.00	52.38	1.117323	1.170576	0.01	4.8	20	
2,4-Dichlorophenol	A	50.00	53.96	0.3172443	0.3423978	0.2	7.9	20	
Diethylphthalate	A	50.00	48.26	1.246346	1.203094	0.01	-3.5	20	
2,4-Dimethylphenol	A	50.00	50.74	0.3802932	0.3859233	0.2	1.5	20	
Dimethyl phthalate	A	50.00	48.97	1.25703	1.231254	0.01	-2.1	20	
4,6-Dinitro-2-methylphenol	L	50.00	59.23	0.1376067	0.1868361	0.01	18.5	20	
2,4-Dinitrophenol	L	50.00	61.02	0.1586589	0.2377907	0.05	22.0	20	*
2,4-Dinitrotoluene	A	50.00	53.91	0.4130027	0.4452742	0.2	7.8	20	
2,6-Dinitrotoluene	A	50.00	54.62	0.3035821	0.3316372	0.2	9.2	20	
Di-n-octylphthalate	A	50.00	56.02	1.122715	1.257955	0.01	12.0	20	
Bis(2-ethylhexyl)phthalate	A	50.00	56.02	0.6994262	0.7836764	0.01	12.0	20	
Hexachlorobenzene	A	50.00	52.86	0.2557988	0.2704143	0.1	5.7	20	
Hexachlorobutadiene	A	50.00	49.27	0.2021383	0.1991925	0.01	-1.5	20	
Hexachlorocyclopentadiene	A	50.00	55.00	0.3471121	0.3818474	0.05	10.0	20	
Hexachloroethane	A	50.00	51.10	0.606057	0.6193764	0.3	2.2	20	
Isophorone	A	50.00	50.79	0.694789	0.7057672	0.4	1.6	20	
2-Methylphenol	A	50.00	56.05	1.15948	1.299839	0.7	12.1	20	

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2J30001	Injection Date:	10/24/12
Lab Sample ID:	2J30001-CCV1	Injection Time:	12:01

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Methylphenol	A	50.00	56.74	1.219104	1.383559	0.6	13.5	20	
4-Nitroaniline	A	50.00	56.47	0.3237232	0.3656236	0.01	12.9	20	
3-Nitroaniline	A	50.00	54.69	0.3275855	0.3583433	0.01	9.4	20	
2-Nitroaniline	A	50.00	50.99	0.3368371	0.3435321	0.01	2.0	20	
Nitrobenzene	A	50.00	50.27	0.4042427	0.4064017	0.2	0.5	20	
4-Nitrophenol	A	50.00	53.85	0.263969	0.2843141	0.05	7.7	20	
2-Nitrophenol	A	50.00	61.49	0.1877485	0.2309104	0.1	23.0	20	*
N-Nitrosodimethylamine	A	50.00	46.83	0.6512354	0.6099191	0.01	-6.3	20	
N-Nitroso-di-n-propylamine	A	50.00	51.89	0.977041	1.014065	0.5	3.8	20	
Pentachlorophenol	A	50.00	59.82	0.1662584	0.1989207	0.05	19.6	20	
Phenol	A	50.00	55.07	1.701202	1.87379	0.8	10.1	20	
2,3,4,6-Tetrachlorophenol	A	50.00	53.01	0.3406087	0.3610945	0.01	6.0	20	
2,4,6-Trichlorophenol	A	50.00	53.36	0.3893444	0.4154934	0.2	6.7	20	
2,4,5-Trichlorophenol	A	50.00	53.38	0.3894227	0.4157304	0.2	6.8	20	
Nitrobenzene-d5	A	50.00	51.97	0.3989519	0.4146549	0.01	3.9	20	
Phenol-d6	A	100.0	108.3	1.476584	1.598968	0.01	8.3	20	
Terphenyl-d14	A	50.00	60.49	0.755263	0.9137775	0.01	21.0	20	*
2,4,6-Tribromophenol	A	100.0	111.2	0.1129158	0.1255388	0.01	11.2	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV2.D	Calibration Date:	09/11/12 10:38
Sequence:	2J30001	Injection Date:	10/24/12
Lab Sample ID:	2J30001-CCV2	Injection Time:	12:29

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Atrazine	A	50.00	51.42	0.2286444	0.2351523	0.01	2.8	20	
Benzaldehyde	A	50.00	56.59	0.9974323	1.128978	0.01	13.2	20	
1,1-Biphenyl	A	50.00	47.68	1.358172	1.295093	0.01	-4.6	20	
Caprolactam	A	50.00	61.18	0.1054972	0.1290887	0.01	22.4	20	*
3,3'-Dichlorobenzidine	A	50.00	57.86	0.3990372	0.4618014	0.01	15.7	20	
1,2,4,5-Tetrachlorobenzene	A	50.00	48.96	0.3539919	0.3466139	0.01	-2.1	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J17024 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-19-10/12	1210138-02	10/18/12 10:00	1,060.00	1.00
PEN-44-13-10/12	1210138-04	10/18/12 10:00	1,080.00	1.00
PEN-44-11-10/12	1210138-06	10/18/12 10:00	1,060.00	1.00
PEN-44-12-10/12	1210138-08	10/18/12 10:00	1,080.00	1.00
PEN-44-14-10/12	1210138-10	10/18/12 10:00	1,080.00	1.00
Blank	2J17024-BLK1	10/18/12 10:00	1,000.00	1.00
LCS	2J17024-BS1	10/18/12 10:00	1,000.00	1.00
LCS Dup	2J17024-BSD1	10/18/12 10:00	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17024-BLK1 File ID: J17024B1.D

Sampled: Prepared: Analyzed: 10/24/12 15:16

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.25	2.50	5.00	U
100-52-7	Benzaldehyde		1.25	2.50	5.00	U
92-52-4	1,1-Biphenyl		1.25	2.50	5.00	U
101-55-3	4-Bromophenyl-phenylether		1.25	2.50	5.00	U
85-68-7	Butylbenzylphthalate		1.25	2.50	5.00	U
105-60-2	Caprolactam		1.25	2.50	5.00	X, U
86-74-8	Carbazole		1.25	2.50	5.00	U
59-50-7	4-Chloro-3-methylphenol		1.25	2.50	5.00	U
106-47-8	4-Chloroaniline		1.25	2.50	5.00	U
111-91-1	Bis(2-chloroethoxy)methane		1.25	2.50	5.00	U
111-44-4	Bis(2-chloroethyl)ether		1.25	2.50	5.00	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.25	2.50	5.00	U
91-58-7	2-Chloronaphthalene		1.25	2.50	5.00	U
95-57-8	2-Chlorophenol		1.25	2.50	5.00	U
7005-72-3	4-Chlorophenyl phenyl ether		1.25	2.50	5.00	U
132-64-9	Dibenzofuran		1.25	2.50	5.00	U
84-74-2	Di-n-butylphthalate		1.25	2.50	5.00	U
91-94-1	3,3'-Dichlorobenzidine		1.25	2.50	5.00	U
120-83-2	2,4-Dichlorophenol		1.25	2.50	5.00	U
84-66-2	Diethylphthalate		1.25	2.50	5.00	U
105-67-9	2,4-Dimethylphenol		5.00	10.0	20.0	U
131-11-3	Dimethyl phthalate		1.25	2.50	5.00	U
534-52-1	4,6-Dinitro-2-methylphenol		5.00	10.0	20.0	U
51-28-5	2,4-Dinitrophenol		8.33	25.0	50.0	X, U
121-14-2	2,4-Dinitrotoluene		1.25	2.50	5.00	U
606-20-2	2,6-Dinitrotoluene		1.25	2.50	5.00	U
117-84-0	Di-n-octylphthalate		1.25	2.50	5.00	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.25	2.50	5.00	U
118-74-1	Hexachlorobenzene		1.25	2.50	5.00	U
87-68-3	Hexachlorobutadiene		1.25	2.50	5.00	U
77-47-4	Hexachlorocyclopentadiene		1.25	5.00	10.0	U
67-72-1	Hexachloroethane		1.25	2.50	5.00	U
78-59-1	Isophorone		1.25	2.50	5.00	U
95-48-7	2-Methylphenol		1.25	2.50	5.00	U
106-44-5	4-Methylphenol		1.25	2.50	5.00	U
100-01-6	4-Nitroaniline		5.00	10.0	20.0	U
99-09-2	3-Nitroaniline		5.00	10.0	20.0	U
88-74-4	2-Nitroaniline		5.00	10.0	20.0	U
98-95-3	Nitrobenzene		1.25	2.50	5.00	U
100-02-7	4-Nitrophenol		5.00	10.0	20.0	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17024-BLK1 File ID: J17024B1.D

Sampled: Prepared: Analyzed: 10/24/12 15:16

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17024 Sequence: 2J30001 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
88-75-5	2-Nitrophenol		1.25	2.50	5.00	X, U
62-75-9	N-Nitrosodimethylamine		1.25	2.50	5.00	Q, U
621-64-7	N-Nitroso-di-n-propylamine		1.25	2.50	5.00	U
87-86-5	Pentachlorophenol		5.00	10.0	20.0	U
108-95-2	Phenol		1.25	2.50	5.00	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.25	2.50	5.00	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.50	5.00	10.0	U
88-06-2	2,4,6-Trichlorophenol		1.25	2.50	5.00	U
95-95-4	2,4,5-Trichlorophenol		1.25	2.50	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5	50.00	38.31	76.6	40 - 110	
Phenol-d6	100.0	20.37	20.4	0 - 110	
Terphenyl-d14	50.00	43.81	87.6	50 - 135	X
2,4,6-Tribromophenol	100.0	84.72	84.7	40 - 125	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I26212	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I26212-TUN1	SEQ-TUN1.D	09/17/12 16:19
Cal Standard	2I26212-CAL1	SEQCAL1.D	09/17/12 16:37
Cal Standard	2I26212-CAL2	SEQCAL2.D	09/17/12 17:04
Cal Standard	2I26212-CAL3	SEQCAL3.D	09/17/12 17:32
Cal Standard	2I26212-CAL4	SEQCAL4.D	09/17/12 18:00
Cal Standard	2I26212-CAL5	SEQCAL5.D	09/17/12 18:27
Cal Standard	2I26212-CAL7	SEQCAL7.D	09/17/12 19:22
Cal Standard	2I26212-CAL8	SEQCAL8.D	09/17/12 19:50
Initial Cal Check	2I26212-ICV1	SEQICV1.D	09/17/12 20:45
MS Tune	2I26212-TUN2	SEQ-TUN2.D	09/18/12 09:45
Initial Cal Check	2I26212-ICV3	SEQICV6.D	09/18/12 10:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/17/12
Instrument ID:	MS-BNA4	Injection Time:	16:19
Sequence:	2I26212	Lab Sample ID:	2I26212-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	55.7	PASS
68	Less than 2% of 69	1.62	PASS
69	Less than 200% of 198	45.5	PASS
70	Less than 2% of 69	0.47	PASS
127	40 - 60% of 198	50.3	PASS
197	Less than 1% of 198	0.97	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.1	PASS
275	10 - 30% of 198	23.8	PASS
365	1 - 200% of 198	2.46	PASS
441	0.001 - 100% of 443	82	PASS
442	40 - 200% of 198	81	PASS
443	17 - 23% of 442	19.9	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/18/12
Instrument ID:	MS-BNA4	Injection Time:	09:45
Sequence:	2I26212	Lab Sample ID:	2I26212-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	56	PASS
68	Less than 2% of 69	1.57	PASS
69	Less than 200% of 198	46.5	PASS
70	Less than 2% of 69	0.546	PASS
127	40 - 60% of 198	51.2	PASS
197	Less than 1% of 198	0.947	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	22.8	PASS
365	1 - 200% of 198	2.51	PASS
441	0.001 - 100% of 443	86	PASS
442	40 - 200% of 198	75.1	PASS
443	17 - 23% of 442	18.7	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2263001
Instrument: MS-BNA4
Matrix: Water
Calibration Dates: 9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.6437384	4.43344	9.826428	2.985676E-02			15	
Acenaphthylene	0.9742916	4.035626	9.595428	1.918522E-02			15	
Anthracene	1.099743	2.563612	11.661	2.252376E-02			15	
Benzo(a)anthracene	1.229242	6.441806	15.02286	1.745497E-02			15	
Benzo(a)pyrene	1.07648	6.419449	17.30657	3.859793E-02			15	
Benzo(b)fluoranthene	1.13689	8.675422	16.776	4.277508E-02			15	
Benzo(g,h,i)perylene	1.047311	4.920087	19.51071	5.631089E-02			15	
Benzo(k)fluoranthene	1.24554	3.34658	16.81471	4.942397E-02			15	
1,4-Dioxane	0.1353576	8.293508	2.807714	0.3439013			15	
Carbazole	0.9802225	2.241632	11.86814	2.504839E-02			15	
Chrysene	1.208255	4.137079	15.088	3.491361E-02			15	
Dibenz(a,h)anthracene	0.9978242	7.835988	19.12857	4.851823E-02			15	
Dibenzofuran	0.8884622	2.303766	10.01886	1.864152E-02			15	
Di-n-octylphthalate	1.086216	29.06585	16.1744	2.245235E-02	0.999354		0.995	
Bis(2-ethylhexyl)phthalate	0.6840102	19.96093	15.176	1.107344E-02	0.9997681		0.995	
Fluoranthene	1.285226	3.369817	13.06243	2.192161E-02			15	
Fluorene	0.7105484	2.132605	10.44243	2.405673E-02			15	
2-Fluorobiphenyl	0.711319	4.922771	8.959429	2.274919E-02			15	
Hexachlorobenzene	0.2596715	3.133576	11.21714	1.535378E-02			15	
Hexachlorobutadiene	0.2192212	7.351404	7.841	1.360725E-02			15	
Hexachlorocyclopentadiene	0.1679048	12.80219	8.7625	1.864214E-02			15	
Hexachloroethane	0.1525449	2.904575	6.596143	4.437949E-02			15	
Indeno(1,2,3-cd)pyrene	1.186493	8.935141	19.09971	5.454845E-02			15	
Isophorone	0.5537188	9.391578	7.004428	3.986617E-02			15	
1-Methylnaphthalene	0.5918516	7.284457	8.607715	3.795704E-03			15	
2-Methylnaphthalene	0.6355094	7.594757	8.469143	2.944197E-02			15	
Naphthalene	0.9715298	9.419315	7.597143	3.351781E-02			15	
N-Nitrosodiphenylamine	0.5730382	5.63645	10.60214	3.741727E-02			15	
N-Nitroso-di-n-propylamine	0.2204215	14.9536	6.530286	4.997956E-02			15	
Pentachloroethane	0.1495348	7.718331	5.587714	3.061233E-02			CCC (20)	
Pentachlorophenol	0.1281745	27.63764	11.435	2.819468E-02	0.9982283		0.995	
Phenanthrene	1.114392	5.345567	11.60814	1.843103E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Calibration: 2263001

Matrix: Water

SDG: 1210138

Project: NAS Pensacola CTO 0079 Site 44

Instrument: MS-BNA4

Calibration Dates: 9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Phenol	0.423713	8.39034	5.563429	9.658823E-02			CCC (30)	
Pyrene	1.313745	3.59993	13.33786	2.306796E-02			15	
Terphenyl-d14	0.8895742	7.28489	13.55414	2.079779E-02			15	
2,4,6-Tribromophenol	0.104865	17.39735	10.766	2.069718E-02	0.9993091		0.995	

INITIAL CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQICV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2126212	Injection Date:	09/17/12
Lab Sample ID:	2126212-ICV1	Injection Time:	20:45

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.716	0.6437384	0.7359407		14.3	20
Acenaphthylene	A	5.000	5.514	0.9742916	1.07452		10.3	20
Anthracene	A	5.000	5.152	1.099743	1.13324		3.0	20
Benzo(a)anthracene	A	5.000	5.029	1.229242	1.236324		0.6	20
Benzo(a)pyrene	A	5.000	5.314	1.07648	1.144191		6.3	20
Benzo(b)fluoranthene	A	5.000	5.390	1.13689	1.22551		7.8	20
Benzo(g,h,i)perylene	A	5.000	5.332	1.047311	1.116792		6.6	20
Benzo(k)fluoranthene	A	5.000	5.629	1.24554	1.402156		12.6	20
1,4-Dioxane	A	5.000	4.594	0.1353576	0.1243548		-8.1	20
Chrysene	A	5.000	5.192	1.208255	1.254605		3.8	20
Dibenz(a,h)anthracene	A	5.000	5.517	0.9978242	1.101007		10.3	20
Fluoranthene	A	5.000	4.985	1.285226	1.281433		-0.3	20
Fluorene	A	5.000	5.078	0.7105484	0.7216262		1.6	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.592	1.186493	1.326924		11.8	20
2-Methylnaphthalene	A	5.000	5.055	0.6355094	0.6425195		1.1	20
Phenanthrene	A	5.000	5.038	1.114392	1.122845		0.8	20
Pyrene	A	5.000	5.072	1.313745	1.33268		1.4	20
2-Fluorobiphenyl	A	5.000	5.018	0.711319	0.7138889		0.4	20
Terphenyl-d14	A	5.000	5.109	0.8895742	0.908954		2.2	20
2,4,6-Tribromophenol	L	10.00	9.916	0.104865	0.1121514		-0.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQICV6.D	Calibration Date:	09/17/12 16:37
Sequence:	2I26212	Injection Date:	09/18/12
Lab Sample ID:	2I26212-ICV3	Injection Time:	10:42

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Naphthalene	A	5.000	4.802	0.9715298	0.9330565		-4.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29915	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29915-TUN1	SEQ-TUN1.D	10/24/12 17:40
Calibration Check	2J29915-CCV1	SEQ-CCV1.D	10/24/12 17:57
Blank	2J17024-BLK2	J17024B1.D	10/24/12 18:25
LCS	2J17024-BS2	J17024L1.D	10/24/12 18:53
LCS Dup	2J17024-BSD2	J17024L2.D	10/24/12 19:21
PEN-44-19-10/12	1210138-02	1013802.D	10/25/12 00:04
PEN-44-13-10/12	1210138-04	1013804.D	10/25/12 00:32
PEN-44-11-10/12	1210138-06	1013806.D	10/25/12 01:00
PEN-44-12-10/12	1210138-08	1013808.D	10/25/12 01:28
PEN-44-14-10/12	1210138-10	1013810.D	10/25/12 01:57

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/24/12
Instrument ID:	MS-BNA4	Injection Time:	17:40
Sequence:	2J29915	Lab Sample ID:	2J29915-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	46.3	PASS
68	Less than 2% of 69	1.67	PASS
69	Less than 200% of 198	43.1	PASS
70	Less than 2% of 69	0.569	PASS
127	40 - 60% of 198	48.8	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.81	PASS
275	10 - 30% of 198	24.7	PASS
365	1 - 200% of 198	2.72	PASS
441	0.001 - 100% of 443	82.2	PASS
442	40 - 200% of 198	91.2	PASS
443	17 - 23% of 442	19.7	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2J29915	Injection Date:	10/24/12
Lab Sample ID:	2J29915-CCV1	Injection Time:	17:57

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	5.000	4.889	0.6437384	0.6294192		-2.2	20	
Acenaphthylene	A	5.000	4.955	0.9742916	0.9654575		-0.9	20	
Anthracene	A	5.000	4.880	1.099743	1.073448		-2.4	20	
Benzo(a)anthracene	A	5.000	5.255	1.229242	1.291838		5.1	20	
Benzo(a)pyrene	A	5.000	5.043	1.07648	1.085733		0.9	20	
Benzo(b)fluoranthene	A	5.000	5.034	1.13689	1.144588		0.7	20	
Benzo(g,h,i)perylene	A	5.000	5.149	1.047311	1.078536		3.0	20	
Benzo(k)fluoranthene	A	5.000	4.819	1.24554	1.200522		-3.6	20	
1,4-Dioxane	A	5.000	3.844	0.1353576	0.1040734		-23.1	20	*
Chrysene	A	5.000	4.990	1.208255	1.205744		-0.2	20	
Dibenz(a,h)anthracene	A	5.000	5.431	0.9978242	1.083924		8.6	20	
Fluoranthene	A	5.000	4.875	1.285226	1.25305		-2.5	20	
Fluorene	A	5.000	4.953	0.7105484	0.703816		-0.9	20	
Indeno(1,2,3-cd)pyrene	A	5.000	5.392	1.186493	1.279621		7.8	20	
2-Methylnaphthalene	A	5.000	4.889	0.6355094	0.6214293		-2.2	20	
Naphthalene	A	5.000	4.600	0.9715298	0.8938674		-8.0	20	
Phenanthrene	A	5.000	4.709	1.114392	1.049569		-5.8	20	
Pyrene	A	5.000	4.892	1.313745	1.28529		-2.2	20	
2-Fluorobiphenyl	A	5.000	4.994	0.711319	0.7105225		-0.1	20	
Terphenyl-d14	A	5.000	5.337	0.8895742	0.9495535		6.7	20	
2,4,6-Tribromophenol	L	10.00	12.11	0.104865	0.1396543		21.1	20	*

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17024 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-19-10/12	1210138-02	10/18/12 10:00	1,060.00	1.00
PEN-44-13-10/12	1210138-04	10/18/12 10:00	1,080.00	1.00
PEN-44-11-10/12	1210138-06	10/18/12 10:00	1,060.00	1.00
PEN-44-12-10/12	1210138-08	10/18/12 10:00	1,080.00	1.00
PEN-44-14-10/12	1210138-10	10/18/12 10:00	1,080.00	1.00
Blank	2J17024-BLK2	10/18/12 10:00	1,000.00	1.00
LCS	2J17024-BS2	10/18/12 10:00	1,000.00	1.00
LCS Dup	2J17024-BSD2	10/18/12 10:00	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17024-BLK2 File ID: J17024B1.D

Sampled: Prepared: Analyzed: 10/24/12 18:25

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17024 Sequence: 2J29915 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	U
120-12-7	Anthracene		0.0500	0.100	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
191-24-2	Benzo(g,h,i)perylene		0.0500	0.100	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	U
123-91-1	1,4-Dioxane		0.500	1.00	2.00	Q, Y, U
218-01-9	Chrysene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	U
206-44-0	Fluoranthene		0.0500	0.100	0.200	U
86-73-7	Fluorene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.100	0.200	U
91-20-3	Naphthalene		0.0500	0.100	0.200	U
85-01-8	Phenanthrene		0.0500	0.200	0.400	U
129-00-0	Pyrene		0.0500	0.100	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	38.27	76.5	34 - 167	
Terphenyl-d14	50.00	39.72	79.4	34 - 167	
2,4,6-Tribromophenol	100.0	92.77	92.8	34 - 167	X

INITIAL CALIBRATION STANDARDS

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001F0101.D	10/08/12 15:32
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001R0101.D	10/08/12 15:32
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002F0201.D	10/08/12 15:51
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002R0201.D	10/08/12 15:51
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003F0301.D	10/08/12 16:10
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003R0301.D	10/08/12 16:10
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004R0401.D	10/08/12 16:29
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004F0401.D	10/08/12 16:29
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005F0501.D	10/08/12 16:48
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005R0501.D	10/08/12 16:48
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006F0601.D	10/08/12 17:07
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006R0601.D	10/08/12 17:07
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007F0701.D	10/08/12 17:26
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007R0701.D	10/08/12 17:26
12F0458	Toxaphene CAL1 (2000ppb)	2J28406-CAL8	009F0901.D	10/08/12 18:04
12F0458	Toxaphene CAL1 (2000ppb)	2J28406-CAL8	009R0901.D	10/08/12 18:04
12F0459	Toxaphene CAL2 (1000ppb)	2J28406-CAL9	010R1001.D	10/08/12 18:24
12F0459	Toxaphene CAL2 (1000ppb)	2J28406-CAL9	010F1001.D	10/08/12 18:24
12F0460	Toxaphene CAL3 (750ppb)	2J28406-CALA	011F1101.D	10/08/12 18:43
12F0460	Toxaphene CAL3 (750ppb)	2J28406-CALA	011R1101.D	10/08/12 18:43
12F0461	Toxaphene CAL4 (500ppb)	2J28406-CALB	012F1201.D	10/08/12 19:02
12F0461	Toxaphene CAL4 (500ppb)	2J28406-CALB	012R1201.D	10/08/12 19:02
12F0462	Toxaphene CAL5 (250ppb)	2J28406-CALC	013F1301.D	10/08/12 19:21
12F0462	Toxaphene CAL5 (250ppb)	2J28406-CALC	013R1301.D	10/08/12 19:21
12F0463	Toxaphene CAL6 (100ppb)	2J28406-CALD	014F1401.D	10/08/12 19:40
12F0463	Toxaphene CAL6 (100ppb)	2J28406-CALD	014R1401.D	10/08/12 19:40
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023R2301.D	10/08/12 22:31
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024R2401.D	10/08/12 22:50
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025R2501.D	10/08/12 23:09
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026R2601.D	10/08/12 23:29
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027R2701.D	10/08/12 23:48
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028R2801.D	10/09/12 00:07

12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030R3001.D	10/09/12 00:45
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031R3101.D	10/09/12 01:04
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032R3201.D	10/09/12 01:23
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033R3301.D	10/09/12 01:42
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034R3401.D	10/09/12 02:01
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035R3501.D	10/09/12 02:20

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J28406
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J28406-PEM1	002R0201pem.D	10/08/12 07:40
Performance Mix	2J28406-PEM1	002F0201pem.D	10/08/12 07:40
Cal Standard	2J28406-CAL1	001R0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL1	001F0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL2	002F0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL2	002R0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL3	003F0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL3	003R0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL4	004F0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL4	004R0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL5	005F0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL5	005R0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL6	006F0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL6	006R0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL7	007F0701.D	10/08/12 17:26
Cal Standard	2J28406-CAL7	007R0701.D	10/08/12 17:26
Initial Cal Check	2J28406-ICV1	008R0801.D	10/08/12 17:46
Initial Cal Check	2J28406-ICV1	008F0801.D	10/08/12 17:46
Cal Standard	2J28406-CAL8	009R0901.D	10/08/12 18:04
Cal Standard	2J28406-CAL8	009F0901.D	10/08/12 18:04
Cal Standard	2J28406-CAL9	010R1001.D	10/08/12 18:24
Cal Standard	2J28406-CAL9	010F1001.D	10/08/12 18:24
Cal Standard	2J28406-CALA	011R1101.D	10/08/12 18:43
Cal Standard	2J28406-CALA	011F1101.D	10/08/12 18:43
Cal Standard	2J28406-CALB	012F1201.D	10/08/12 19:02
Cal Standard	2J28406-CALB	012R1201.D	10/08/12 19:02
Cal Standard	2J28406-CALC	013F1301.D	10/08/12 19:21
Cal Standard	2J28406-CALC	013R1301.D	10/08/12 19:21
Cal Standard	2J28406-CALD	014F1401.D	10/08/12 19:40
Cal Standard	2J28406-CALD	014R1401.D	10/08/12 19:40
Initial Cal Check	2J28406-ICV2	015F1501.D	10/08/12 19:59
Initial Cal Check	2J28406-ICV2	015R1501.D	10/08/12 19:59

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J28406-PEM2	002R0201.D	10/11/12 13:19
Performance Mix	2J28406-PEM2	002F0201.D	10/11/12 13:19
Initial Cal Check	2J28406-ICV6	004F0401.D	10/11/12 13:57
Initial Cal Check	2J28406-ICV6	004R0401.D	10/11/12 13:57

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
4,4'-DDE	51094.47	13.36793	8.727857	5.825639E-02			20	
4,4'-DDE [2C]	50321.72	5.365485	7.795143	2.925106E-02			20	
4,4'-DDD	41428.21	16.34301	9.37	4.665635E-02			20	
4,4'-DDD [2C]	45332.02	6.910073	8.467143	3.733103E-02			20	
4,4'-DDT	41951.39	14.66624	9.765571	5.224335E-02			20	
4,4'-DDT [2C]	44183.69	5.572004	8.781	3.233758E-02			20	
Aldrin	63496.28	10.96892	7.636857	0.0705073			20	
Aldrin [2C]	62700.35	11.94878	6.682143	2.737238E-02			20	
alpha-BHC	72070.6	13.68616	6.244571	8.187212E-02			20	
alpha-BHC [2C]	75274.46	7.693702	5.667143	2.084635E-02			20	
alpha-Chlordane	56005.2	8.575271	8.528572	6.546021E-02			20	
alpha-Chlordane [2C]	57042.46	12.34952	7.594571	2.656618E-02			20	
beta-BHC	26102.06	6.530916	6.793	7.130419E-02			20	
beta-BHC [2C]	31407.75	9.952564	6.293	2.354579E-02			20	
delta-BHC	55943.6	17.97339	7.073571	7.731066E-02			20	
delta-BHC [2C]	61726.37	4.757049	6.556143	2.689054E-02			20	
Dieldrin	57719.49	11.60028	8.929572	6.286051E-02			20	
Dieldrin [2C]	60838.72	11.61915	7.985429	1.836013E-02			20	
Endosulfan I	53958.87	10.13715	8.595	6.083858E-02			20	
Endosulfan I [2C]	54945.66	11.77728	7.672429	0.0312186			20	
Endosulfan II	48331.97	9.989613	9.487143	5.679254E-02			20	
Endosulfan II [2C]	51135.22	11.56956	8.677	3.540361E-02			20	
Endosulfan sulfate	40280.74	9.889046	9.945714	5.093722E-02			20	
Endosulfan sulfate [2C]	42025.14	9.677244	9.174714	1.667823E-02			20	
Endrin	42937.13	12.93175	9.217143	5.742018E-02			20	
Endrin [2C]	46591.55	11.76563	8.325286	2.016478E-02			20	
Endrin aldehyde	39912.39	8.237052	9.65	5.515379E-02			20	
Endrin aldehyde [2C]	43719.7	10.52404	8.898572	2.524229E-02			20	
Endrin ketone	52202.94	7.902905	10.57014	4.691657E-02			20	
Endrin ketone [2C]	59552.03	17.25021	9.835714	6.401645E-03			20	
gamma-BHC (Lindane)	63404.4	12.44694	6.595286	7.922886E-02			20	
gamma-BHC (Lindane) [2C]	68059.61	7.772349	6.006571	2.894988E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2284005	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
gamma-Chlordane	57479.09	10.32669	8.433571	6.918914E-02			20	
gamma-Chlordane [2C]	57877.86	11.6952	7.518572	2.115394E-02			20	
Heptachlor	56022.6	13.02672	7.244143	7.659515E-02			20	
Heptachlor [2C]	57138.09	10.64037	6.370857	5.805038E-03			20	
Heptachlor epoxide	57511.77	8.934334	8.128429	7.437776E-02			20	
Heptachlor epoxide [2C]	58027.29	14.05335	7.234571	2.189043E-02			20	
Methoxychlor	20681.87	10.91639	10.36786	5.205519E-02			20	
Methoxychlor [2C]	21957.26	12.52895	9.497714	2.541327E-02			20	
Chlordane (tech)	4739.676	3.425129	9.584	9.884912E-03			20	
Chlordane (1)	9184.691	2.907131	8.528667	1.278337E-02			20	
Chlordane (2)	2136.475	3.72727	7.003167	0.0186218			20	
Chlordane (3)	2941.406	8.609028	7.2415	1.387489E-02			20	
Chlordane (4)	7720.052	4.22816	8.4315	1.785286E-02			20	
Chlordane (5)	1715.758	3.872244	9.584	9.884912E-03			20	
Chlordane (tech) [2C]	3734.494	12.02405	8.689333	1.386043E-02			20	
Chlordane (1) [2C]	7793.493	15.09109	7.594	1.267471E-02			20	
Chlordane (2) [2C]	2683.884	11.96028	6.185	1.570752E-02			20	
Chlordane (3) [2C]	3340.631	12.26069	6.369667	1.488498E-02			20	
Chlordane (4) [2C]	2492.994	7.867662	6.797833	1.332475E-02			20	
Chlordane (5) [2C]	2361.467	9.962445	8.689333	1.386043E-02			20	
Toxaphene	1698.308	11.93069	10.94117	1.541817E-02			20	
Toxaphene (1)	2840.514	15.58817	10.47183	0.0179704			20	
Toxaphene (2)	943.6576	13.52652	9.042167	1.496001E-02			20	
Toxaphene (3)	1285.613	11.47967	9.564167	1.877273E-02			20	
Toxaphene (4)	2281.984	10.50788	9.935667	2.013178E-02			20	
Toxaphene (5)	1139.769	12.8342	10.94117	1.541817E-02			20	
Toxaphene [2C]	1972.125	3.895161	10.25417	1.221345E-02			20	
Toxaphene (1) [2C]	4049.199	4.647507	9.693	2.986822E-02			20	
Toxaphene (2) [2C]	690.2388	3.832762	7.926833	3.407985E-03			20	
Toxaphene (3) [2C]	1470.725	2.510751	8.675167	1.934436E-02			20	
Toxaphene (4) [2C]	2525.314	4.315087	9.5225	1.019319E-02			20	
Toxaphene (5) [2C]	1125.146	3.465383	10.25417	1.221345E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2284005	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	008F0801.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV1	Injection Time:	17:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
4,4'-DDE	A	100.0	114.7	51094.47	58598.24		14.7	20
4,4'-DDE [2C]	A	100.0	100.1	50321.72	50358.88		0.07	20
4,4'-DDD	A	100.0	115.7	41428.21	47923.4		15.7	20
4,4'-DDD [2C]	A	100.0	94.97	45332.02	43053.56		-5.0	20
Aldrin	A	100.0	111.0	63496.28	70501.14		11.0	20
Aldrin [2C]	A	100.0	92.92	62700.35	58259.47		-7.1	20
alpha-BHC	A	100.0	111.7	72070.6	80508.52		11.7	20
alpha-BHC [2C]	A	100.0	96.36	75274.46	72538.13		-3.6	20
alpha-Chlordane	A	100.0	110.1	56005.2	61652.03		10.1	20
alpha-Chlordane [2C]	A	100.0	92.42	57042.46	52717.42		-7.6	20
beta-BHC	A	100.0	107.9	26102.06	28161.76		7.9	20
beta-BHC [2C]	A	100.0	95.30	31407.75	29931.54		-4.7	20
delta-BHC	A	100.0	108.3	55943.6	60577.68		8.3	20
delta-BHC [2C]	A	100.0	95.29	61726.37	58821.65		-4.7	20
Dieldrin	A	100.0	110.4	57719.49	63708.22		10.4	20
Dieldrin [2C]	A	100.0	91.15	60838.72	55456.9		-8.8	20
Endosulfan I	A	100.0	107.8	53958.87	58187.84		7.8	20
Endosulfan I [2C]	A	100.0	90.41	54945.66	49675.09		-9.6	20
Endosulfan II	A	100.0	107.6	48331.97	51994.04		7.6	20
Endosulfan II [2C]	A	100.0	90.14	51135.22	46093.52		-9.9	20
Endosulfan sulfate	A	100.0	110.0	40280.74	44310.72		10.0	20
Endosulfan sulfate [2C]	A	100.0	95.03	42025.14	39936.24		-5.0	20
Endrin	A	100.0	103.2	42937.13	44291.58		3.2	20
Endrin [2C]	A	100.0	84.48	46591.55	39361.73		-15.5	20
Endrin aldehyde	A	100.0	95.48	39912.39	38110.6		-4.5	20
Endrin aldehyde [2C]	A	100.0	82.76	43719.7	36184.6		-17.2	20
Endrin ketone	A	100.0	111.2	52202.94	58028.46		11.2	20
Endrin ketone [2C]	A	100.0	89.68	59552.03	53406.72		-10.3	20
gamma-BHC (Lindane)	A	100.0	111.6	63404.4	70790.23		11.6	20

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	008R0801.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV1	Injection Time:	17:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
gamma-BHC (Lindane) [2C]	A	100.0	96.85	68059.61	65916.07		-3.1	20
gamma-Chlordane	A	100.0	110.9	57479.09	63755.35		10.9	20
gamma-Chlordane [2C]	A	100.0	93.06	57877.86	53859.79		-6.9	20
Heptachlor	A	100.0	118.1	56022.6	66141.72		18.1	20
Heptachlor [2C]	A	100.0	97.55	57138.09	55739.47		-2.4	20
Heptachlor epoxide	A	100.0	110.5	57511.77	63567.08		10.5	20
Heptachlor epoxide [2C]	A	100.0	92.46	58027.29	53651.1		-7.5	20
Methoxychlor	A	100.0	117.4	20681.87	24287.46		17.4	20
Methoxychlor [2C]	A	100.0	93.87	21957.26	20610.58		-6.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	015F1501.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV2	Injection Time:	19:59

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)	
Toxaphene (1)	A	1000	900.8	2840.514	2558.741		-9.9	20	
Toxaphene (2)	A	1000	1268	943.6576	1196.603		26.8	20	*
Toxaphene (3)	A	1000	817.4	1285.613	1050.829		-18.3	20	
Toxaphene (4)	A	1000	1042	2281.984	2378.043		4.2	20	
Toxaphene (5)	A	1000	1213	1139.769	1382.38		21.3	20	*
Toxaphene (1) [2C]	A	1000	805.1	4049.199	3260.021		-19.5	20	
Toxaphene (2) [2C]	A	1000	1176	690.2388	811.876		17.6	20	
Toxaphene (3) [2C]	A	1000	496.3	1470.725	729.874		-50.4	20	*
Toxaphene (4) [2C]	A	1000	1063	2525.314	2684.678		6.3	20	
Toxaphene (5) [2C]	A	1000	1086	1125.146	1221.706		8.6	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	004F0401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/11/12
Lab Sample ID:	2J28406-ICV6	Injection Time:	13:57

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
4,4'-DDT	A	100.0	118.2	41951.39	49590.68		18.2	20
4,4'-DDT [2C]	A	100.0	100.2	44183.69	44278.24		0.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J29706-PEM1	002R0201.D	10/18/12 10:02
Performance Mix	2J29706-PEM1	002F0201.D	10/18/12 10:02
Calibration Check	2J29706-CCV1	003R0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV1	003F0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV2	004R0401.D	10/18/12 10:40
Calibration Check	2J29706-CCV2	004F0401.D	10/18/12 10:40
Blank	2J16016-BLK1	008R0801.D	10/18/12 11:56
Blank	2J16016-BLK1	008F0801.D	10/18/12 11:56
LCS	2J16016-BS1	009F0901.D	10/18/12 12:16
LCS	2J16016-BS1	009R0901.D	10/18/12 12:16
LCS Dup	2J16016-BSD1	010R1001.D	10/18/12 12:35
LCS Dup	2J16016-BSD1	010F1001.D	10/18/12 12:35
Calibration Check	2J29706-CCV6	026R2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV6	026F2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV7	027R2701.D	10/18/12 17:58
Calibration Check	2J29706-CCV7	027F2701.D	10/18/12 17:58
Calibration Check	2J29706-CCVB	040F4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVB	040R4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVC	041F4101.D	10/18/12 22:25
Calibration Check	2J29706-CCVC	041R4101.D	10/18/12 22:25
Performance Mix	2J29706-PEM2	045R4501.D	10/18/12 23:41
Performance Mix	2J29706-PEM2	045F4501.D	10/18/12 23:41
PEN-44-19-10/12	1210138-02	049R4901.D	10/19/12 00:58
PEN-44-19-10/12	1210138-02	049F4901.D	10/19/12 00:58
PEN-44-13-10/12	1210138-04	050R5001.D	10/19/12 01:17
PEN-44-13-10/12	1210138-04	050F5001.D	10/19/12 01:17
PEN-44-11-10/12	1210138-06	051R5101.D	10/19/12 01:36
PEN-44-11-10/12	1210138-06	051F5101.D	10/19/12 01:36
PEN-44-12-10/12	1210138-08	052R5201.D	10/19/12 01:55
PEN-44-12-10/12	1210138-08	052F5201.D	10/19/12 01:55
PEN-44-14-10/12	1210138-10	053R5301.D	10/19/12 02:14
PEN-44-14-10/12	1210138-10	053F5301.D	10/19/12 02:14

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29706-CCVG	060F6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVG	060R6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVH	061R6101.D	10/19/12 04:47
Calibration Check	2J29706-CCVH	061F6101.D	10/19/12 04:47

BREAKDOWN REPORT

Lab Sample ID: 2J29706-PEM1 **Analyzed:** 10/18/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	2.95
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J29706-PEM2 **Analyzed:** 10/18/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	11.25
Endrin	8.57

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	12.64
Endrin	8.98

BREAKDOWN REPORT

Lab Sample ID: 2J28406-PEM1 **Analyzed:** 10/08/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	3.06
Endrin	5.91

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J28406-PEM2 **Analyzed:** 10/11/2012

Column Number: 1

Analyte	% Breakdown
4,4'-DDT	2.38
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4,4'-DDT	3.36
Endrin	7.01

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	106.1	51094.47	54217.78		6.1	20
4,4'-DDE [2C]	A	100.0	96.94	50321.72	48780.3		-3.1	20
4,4'-DDD	A	100.0	108.2	41428.21	44805.13		8.2	20
4,4'-DDD [2C]	A	100.0	95.01	45332.02	43069.74		-5.0	20
4,4'-DDT	A	100.0	108.2	41951.39	45395.85		8.2	20
4,4'-DDT [2C]	A	100.0	95.76	44183.69	42308.96		-4.2	20
Aldrin	A	100.0	102.5	63496.28	65068.38		2.5	20
Aldrin [2C]	A	100.0	84.85	62700.35	53201.65		-15.1	20
alpha-BHC	A	100.0	104.2	72070.6	75092.54		4.2	20
alpha-BHC [2C]	A	100.0	90.54	75274.46	68157.08		-9.5	20
alpha-Chlordane	A	100.0	98.49	56005.2	55159.08		-1.5	20
alpha-Chlordane [2C]	A	100.0	86.56	57042.46	49377.83		-13.4	20
beta-BHC	A	100.0	98.94	26102.06	25824.67		-1.1	20
beta-BHC [2C]	A	100.0	91.91	31407.75	28867.07		-8.1	20
delta-BHC	A	100.0	106.9	55943.6	59782.12		6.9	20
delta-BHC [2C]	A	100.0	93.90	61726.37	57960.14		-6.1	20
Dieldrin	A	100.0	103.3	57719.49	59609.77		3.3	20
Dieldrin [2C]	A	100.0	89.76	60838.72	54609.62		-10.2	20
Endosulfan I	A	100.0	101.1	53958.87	54570.89		1.1	20
Endosulfan I [2C]	A	100.0	89.22	54945.66	49023.44		-10.8	20
Endosulfan II	A	100.0	104.6	48331.97	50576.5		4.6	20
Endosulfan II [2C]	A	100.0	88.97	51135.22	45495.9		-11.0	20
Endosulfan sulfate	A	100.0	106.5	40280.74	42887.37		6.5	20
Endosulfan sulfate [2C]	A	100.0	94.34	42025.14	39648.68		-5.7	20
Endrin	A	100.0	108.4	42937.13	46544.45		8.4	20
Endrin [2C]	A	100.0	92.11	46591.55	42917.33		-7.9	20
Endrin aldehyde	A	100.0	102.8	39912.39	41031.8		2.8	20
Endrin aldehyde [2C]	A	100.0	92.76	43719.7	40555.7		-7.2	20
Endrin ketone	A	100.0	101.9	52202.94	53185.87		1.9	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003R0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	87.04	59552.03	51832.16		-13.0	20
gamma-BHC (Lindane)	A	100.0	101.7	63404.4	64473.69		1.7	20
gamma-BHC (Lindane) [2C]	A	100.0	91.22	68059.61	62084.42		-8.8	20
gamma-Chlordane	A	100.0	102.9	57479.09	59168.16		2.9	20
gamma-Chlordane [2C]	A	100.0	89.33	57877.86	51702.53		-10.7	20
Heptachlor	A	100.0	108.2	56022.6	60645.28		8.3	20
Heptachlor [2C]	A	100.0	92.45	57138.09	52824.09		-7.6	20
Heptachlor epoxide	A	100.0	101.3	57511.77	58270.66		1.3	20
Heptachlor epoxide [2C]	A	100.0	88.27	58027.29	51220.3		-11.7	20
Methoxychlor	A	100.0	109.6	20681.87	22657.21		9.6	20
Methoxychlor [2C]	A	100.0	94.00	21957.26	20639.2		-6.0	20
Tetrachloro-m-xylene	A	100.0	96.27	48154.4	46356.45		-3.7	20
Tetrachloro-m-xylene [2C]	A	100.0	83.40	56983.64	47527.17		-16.6	20
Decachlorobiphenyl	A	100.0	96.23	41014.66	39470.06		-3.8	20
Decachlorobiphenyl [2C]	A	100.0	88.94	36168.37	32168.73		-11.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	004F0401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV2	Injection Time:	10:40

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	903.0	2840.514	2564.94		-9.7	20
Toxaphene (2)	A	1000	920.9	943.6576	868.98		-7.9	20
Toxaphene (3)	A	1000	928.6	1285.613	1193.803		-7.1	20
Toxaphene (4)	A	1000	922.1	2281.984	2104.306		-7.8	20
Toxaphene (5)	A	1000	956.5	1139.769	1090.21		-4.3	20
Toxaphene (1) [2C]	A	1000	919.1	4049.199	3721.751		-8.1	20
Toxaphene (2) [2C]	A	1000	938.9	690.2388	648.062		-6.1	20
Toxaphene (3) [2C]	A	1000	923.6	1470.725	1358.353		-7.6	20
Toxaphene (4) [2C]	A	1000	941.0	2525.314	2376.325		-5.9	20
Toxaphene (5) [2C]	A	1000	951.5	1125.146	1070.6		-4.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	026F2601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV6	Injection Time:	17:39

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	106.7	51094.47	54532.3		6.7	20
4,4'-DDE [2C]	A	100.0	98.52	50321.72	49574.78		-1.5	20
4,4'-DDD	A	100.0	110.6	41428.21	45815.01		10.6	20
4,4'-DDD [2C]	A	100.0	100.2	45332.02	45444.68		0.2	20
4,4'-DDT	A	100.0	100.5	41951.39	42153.59		0.5	20
4,4'-DDT [2C]	A	100.0	91.55	44183.69	40450.17		-8.4	20
Aldrin	A	100.0	102.1	63496.28	64831.81		2.1	20
Aldrin [2C]	A	100.0	90.13	62700.35	56511.08		-9.9	20
alpha-BHC	A	100.0	108.3	72070.6	78054.83		8.3	20
alpha-BHC [2C]	A	100.0	97.24	75274.46	73193.58		-2.8	20
alpha-Chlordane	A	100.0	90.01	56005.2	50410.41		-10.0	20
alpha-Chlordane [2C]	A	100.0	90.55	57042.46	51651.29		-9.5	20
beta-BHC	A	100.0	101.7	26102.06	26557.25		1.7	20
beta-BHC [2C]	A	100.0	96.46	31407.75	30296.06		-3.5	20
delta-BHC	A	100.0	113.7	55943.6	63585.83		13.7	20
delta-BHC [2C]	A	100.0	101.6	61726.37	62714.02		1.6	20
Dieldrin	A	100.0	98.04	57719.49	56591.57		-2.0	20
Dieldrin [2C]	A	100.0	90.57	60838.72	55099.36		-9.4	20
Endosulfan I	A	100.0	95.59	53958.87	51577.33		-4.4	20
Endosulfan I [2C]	A	100.0	91.07	54945.66	50040.21		-8.9	20
Endosulfan II	A	100.0	102.2	48331.97	49372.24		2.2	20
Endosulfan II [2C]	A	100.0	90.16	51135.22	46101.52		-9.8	20
Endosulfan sulfate	A	100.0	109.0	40280.74	43905.43		9.0	20
Endosulfan sulfate [2C]	A	100.0	89.58	42025.14	37645.27		-10.4	20
Endrin	A	100.0	106.4	42937.13	45684.09		6.4	20
Endrin [2C]	A	100.0	96.64	46591.55	45026.21		-3.4	20
Endrin aldehyde	A	100.0	103.6	39912.39	41347.79		3.6	20
Endrin aldehyde [2C]	A	100.0	91.58	43719.7	40038.89		-8.4	20
Endrin ketone	A	100.0	106.7	52202.94	55680.56		6.7	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	026R2601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV6	Injection Time:	17:39

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	86.28	59552.03	51381.4		-13.7	20
gamma-BHC (Lindane)	A	100.0	106.6	63404.4	67576.83		6.6	20
gamma-BHC (Lindane) [2C]	A	100.0	96.88	68059.61	65935.85		-3.1	20
gamma-Chlordane	A	100.0	90.39	57479.09	51958.12		-9.6	20
gamma-Chlordane [2C]	A	100.0	92.11	57877.86	53310.09		-7.9	20
Heptachlor	A	100.0	112.0	56022.6	62751.57		12.0	20
Heptachlor [2C]	A	100.0	96.43	57138.09	55100.52		-3.6	20
Heptachlor epoxide	A	100.0	102.5	57511.77	58961.99		2.5	20
Heptachlor epoxide [2C]	A	100.0	91.60	58027.29	53156.31		-8.4	20
Methoxychlor	A	100.0	101.8	20681.87	21047.77		1.8	20
Methoxychlor [2C]	A	100.0	90.37	21957.26	19843.08		-9.6	20
Tetrachloro-m-xylene	A	100.0	100.2	48154.4	48273.33		0.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.43	56983.64	52098.02		-8.6	20
Decachlorobiphenyl	A	100.0	101.9	41014.66	41796.14		1.9	20
Decachlorobiphenyl [2C]	A	100.0	86.65	36168.37	31339.41		-13.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	027F2701.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV7	Injection Time:	17:58

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Toxaphene (1)	A	1000	868.1	2840.514	2465.906		-13.2	20	
Toxaphene (2)	A	1000	1038	943.6576	980.035		3.9	20	
Toxaphene (3)	A	1000	902.4	1285.613	1160.075		-9.8	20	
Toxaphene (4)	A	1000	965.6	2281.984	2203.559		-3.4	20	
Toxaphene (5)	A	1000	961.7	1139.769	1096.169		-3.8	20	
Toxaphene (1) [2C]	A	1000	878.2	4049.199	3555.908		-12.2	20	
Toxaphene (2) [2C]	A	1000	1087	690.2388	750.302		8.7	20	
Toxaphene (3) [2C]	A	1000	960.4	1470.725	1412.536		-4.0	20	
Toxaphene (4) [2C]	A	1000	921.2	2525.314	2326.251		-7.9	20	
Toxaphene (5) [2C]	A	1000	781.5	1125.146	879.302		-21.8	20	*

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040F4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	110.2	51094.47	56316		10.2	20
4,4'-DDE [2C]	A	100.0	94.08	50321.72	47341.24		-5.9	20
4,4'-DDD	A	100.0	119.1	41428.21	49329.86		19.1	20
4,4'-DDD [2C]	A	100.0	100.4	45332.02	45525.77		0.4	20
4,4'-DDT	A	100.0	101.4	41951.39	42558.86		1.4	20
4,4'-DDT [2C]	A	100.0	87.08	44183.69	38475.2		-12.9	20
Aldrin	A	100.0	105.3	63496.28	66884.37		5.3	20
Aldrin [2C]	A	100.0	82.44	62700.35	51690.64		-17.6	20
alpha-BHC	A	100.0	111.3	72070.6	80238.38		11.3	20
alpha-BHC [2C]	A	100.0	80.97	75274.46	60950.97		-19.0	20
alpha-Chlordane	A	100.0	95.88	56005.2	53698.13		-4.1	20
alpha-Chlordane [2C]	A	100.0	84.90	57042.46	48427.37		-15.1	20
beta-BHC	A	100.0	105.4	26102.06	27501.7		5.4	20
beta-BHC [2C]	A	100.0	80.68	31407.75	25341.61		-19.3	20
delta-BHC	A	100.0	117.6	55943.6	65762.94		17.6	20
delta-BHC [2C]	A	100.0	90.35	61726.37	55771.28		-9.6	20
Dieldrin	A	100.0	102.0	57719.49	58865.96		2.0	20
Dieldrin [2C]	A	100.0	87.34	60838.72	53139.33		-12.7	20
Endosulfan I	A	100.0	100.6	53958.87	54289.69		0.6	20
Endosulfan I [2C]	A	100.0	86.23	54945.66	47377.68		-13.8	20
Endosulfan II	A	100.0	107.3	48331.97	51858.69		7.3	20
Endosulfan II [2C]	A	100.0	88.75	51135.22	45383.01		-11.2	20
Endosulfan sulfate	A	100.0	111.3	40280.74	44824.97		11.3	20
Endosulfan sulfate [2C]	A	100.0	96.53	42025.14	40567.3		-3.5	20
Endrin	A	100.0	110.0	42937.13	47209.82		10.0	20
Endrin [2C]	A	100.0	93.69	46591.55	43653.55		-6.3	20
Endrin aldehyde	A	100.0	107.5	39912.39	42893.55		7.5	20
Endrin aldehyde [2C]	A	100.0	90.99	43719.7	39779.74		-9.0	20
Endrin ketone	A	100.0	108.8	52202.94	56801.79		8.8	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040R4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Endrin ketone [2C]	A	100.0	88.07	59552.03	52449.98		-11.9	20	
gamma-BHC (Lindane)	A	100.0	109.2	63404.4	69255.24		9.2	20	
gamma-BHC (Lindane) [2C]	A	100.0	81.67	68059.61	55584.47		-18.3	20	
gamma-Chlordane	A	100.0	95.96	57479.09	55159.83		-4.0	20	
gamma-Chlordane [2C]	A	100.0	86.03	57877.86	49792.91		-14.0	20	
Heptachlor	A	100.0	114.7	56022.6	64255.36		14.7	20	
Heptachlor [2C]	A	100.0	81.16	57138.09	46373.55		-18.8	20	
Heptachlor epoxide	A	100.0	105.7	57511.77	60811.35		5.7	20	
Heptachlor epoxide [2C]	A	100.0	85.60	58027.29	49674.33		-14.4	20	
Methoxychlor	A	100.0	103.4	20681.87	21377.13		3.4	20	
Methoxychlor [2C]	A	100.0	88.49	21957.26	19429.92		-11.5	20	
Tetrachloro-m-xylene	A	100.0	102.8	48154.4	49529.4		2.9	20	
Tetrachloro-m-xylene [2C]	A	100.0	68.33	56983.64	38937.33		-31.7	20	*
Decachlorobiphenyl	A	100.0	100.1	41014.66	41065.71		0.1	20	
Decachlorobiphenyl [2C]	A	100.0	85.53	36168.37	30934.69		-14.5	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	041F4101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVC	Injection Time:	22:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	876.1	2840.514	2488.515		-12.4	20
Toxaphene (2)	A	1000	1098	943.6576	1036.172		9.8	20
Toxaphene (3)	A	1000	902.2	1285.613	1159.945		-9.8	20
Toxaphene (4)	A	1000	991.9	2281.984	2263.575		-0.8	20
Toxaphene (5)	A	1000	938.4	1139.769	1069.622		-6.2	20
Toxaphene (1) [2C]	A	1000	867.6	4049.199	3513.319		-13.2	20
Toxaphene (2) [2C]	A	1000	1077	690.2388	743.203		7.7	20
Toxaphene (3) [2C]	A	1000	947.1	1470.725	1392.886		-5.3	20
Toxaphene (4) [2C]	A	1000	897.9	2525.314	2267.59		-10.2	20
Toxaphene (5) [2C]	A	1000	749.5	1125.146	843.256		-25.1	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060F6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4,4'-DDE	A	100.0	116.8	51094.47	59695.14		16.8	20	
4,4'-DDE [2C]	A	100.0	103.6	50321.72	52149.43		3.6	20	
4,4'-DDD	A	100.0	128.4	41428.21	53189.21		28.4	20	*
4,4'-DDD [2C]	A	100.0	112.1	45332.02	50800.63		12.1	20	
4,4'-DDT	A	100.0	108.8	41951.39	45626.09		8.8	20	
4,4'-DDT [2C]	A	100.0	98.09	44183.69	43340.29		-1.9	20	
Aldrin	A	100.0	110.2	63496.28	69977.03		10.2	20	
Aldrin [2C]	A	100.0	94.94	62700.35	59525.94		-5.1	20	
alpha-BHC	A	100.0	113.3	72070.6	81635.79		13.3	20	
alpha-BHC [2C]	A	100.0	97.43	75274.46	73342.63		-2.6	20	
alpha-Chlordane	A	100.0	108.1	56005.2	60569.55		8.1	20	
alpha-Chlordane [2C]	A	100.0	94.85	57042.46	54107.22		-5.1	20	
beta-BHC	A	100.0	107.7	26102.06	28124.11		7.7	20	
beta-BHC [2C]	A	100.0	99.36	31407.75	31205.81		-0.6	20	
delta-BHC	A	100.0	120.8	55943.6	67587.8		20.8	20	*
delta-BHC [2C]	A	100.0	106.2	61726.37	65586.37		6.3	20	
Dieldrin	A	100.0	113.2	57719.49	65323.26		13.2	20	
Dieldrin [2C]	A	100.0	96.98	60838.72	59002.47		-3.0	20	
Endosulfan I	A	100.0	108.2	53958.87	58404.11		8.2	20	
Endosulfan I [2C]	A	100.0	96.15	54945.66	52831.72		-3.8	20	
Endosulfan II	A	100.0	114.3	48331.97	55264.33		14.3	20	
Endosulfan II [2C]	A	100.0	98.80	51135.22	50523.92		-1.2	20	
Endosulfan sulfate	A	100.0	119.4	40280.74	48107.85		19.4	20	
Endosulfan sulfate [2C]	A	100.0	106.9	42025.14	44921.12		6.9	20	
Endrin	A	100.0	115.2	42937.13	49457.23		15.2	20	
Endrin [2C]	A	100.0	101.5	46591.55	47292.43		1.5	20	
Endrin aldehyde	A	100.0	113.7	39912.39	45398.36		13.7	20	
Endrin aldehyde [2C]	A	100.0	101.7	43719.7	44465.32		1.7	20	
Endrin ketone	A	100.0	116.4	52202.94	60766.65		16.4	20	

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060R6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	98.46	59552.03	58634.95		-1.5	20
gamma-BHC (Lindane)	A	100.0	111.7	63404.4	70805.09		11.7	20
gamma-BHC (Lindane) [2C]	A	100.0	98.10	68059.61	66764.99		-1.9	20
gamma-Chlordane	A	100.0	111.3	57479.09	63976.75		11.3	20
gamma-Chlordane [2C]	A	100.0	96.32	57877.86	55751.13		-3.7	20
Heptachlor	A	100.0	119.3	56022.6	66852.62		19.3	20
Heptachlor [2C]	A	100.0	98.82	57138.09	56465.58		-1.2	20
Heptachlor epoxide	A	100.0	109.5	57511.77	62964.61		9.5	20
Heptachlor epoxide [2C]	A	100.0	95.81	58027.29	55598.23		-4.2	20
Methoxychlor	A	100.0	113.4	20681.87	23451.04		13.4	20
Methoxychlor [2C]	A	100.0	97.57	21957.26	21423.65		-2.4	20
Tetrachloro-m-xylene	A	100.0	104.2	48154.4	50182.73		4.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.00	56983.64	51855.59		-9.0	20
Decachlorobiphenyl	A	100.0	108.6	41014.66	44551.56		8.6	20
Decachlorobiphenyl [2C]	A	100.0	100.1	36168.37	36207.27		0.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	061F6101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVH	Injection Time:	04:47

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	875.5	2840.514	2486.913		-12.4	20
Toxaphene (2)	A	1000	1121	943.6576	1057.943		12.1	20
Toxaphene (3)	A	1000	935.2	1285.613	1202.344		-6.5	20
Toxaphene (4)	A	1000	1016	2281.984	2319.499		1.6	20
Toxaphene (5)	A	1000	977.7	1139.769	1114.332		-2.2	20
Toxaphene (1) [2C]	A	1000	866.8	4049.199	3510.085		-13.3	20
Toxaphene (2) [2C]	A	1000	1088	690.2388	750.658		8.8	20
Toxaphene (3) [2C]	A	1000	949.8	1470.725	1396.84		-5.0	20
Toxaphene (4) [2C]	A	1000	937.4	2525.314	2367.339		-6.3	20
Toxaphene (5) [2C]	A	1000	842.2	1125.146	947.618		-15.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J16016 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-19-10/12	1210138-02	10/16/12 14:38	1,060.00	10.00
PEN-44-13-10/12	1210138-04	10/16/12 14:38	1,060.00	10.00
PEN-44-11-10/12	1210138-06	10/16/12 14:38	1,060.00	10.00
PEN-44-12-10/12	1210138-08	10/16/12 14:38	1,080.00	10.00
PEN-44-14-10/12	1210138-10	10/16/12 14:38	1,080.00	10.00
Blank	2J16016-BLK1	10/16/12 14:38	1,000.00	10.00
LCS	2J16016-BS1	10/16/12 14:38	1,000.00	10.00
LCS Dup	2J16016-BSD1	10/16/12 14:38	1,000.00	10.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J16016-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/16/12 14:38 Analyzed: 10/18/12 11:56

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00500	0.0100	0.0200	U
72-54-8	4,4'-DDD		0.00500	0.0100	0.0200	U
50-29-3	4,4'-DDT		0.00500	0.0100	0.0200	U
309-00-2	Aldrin		0.00330	0.0100	0.0200	U
319-84-6	alpha-BHC		0.00330	0.0100	0.0200	U
5103-71-9	alpha-Chlordane		0.00330	0.0100	0.0200	U
319-85-7	beta-BHC		0.00330	0.0100	0.0200	U
319-86-8	delta-BHC		0.00330	0.0100	0.0200	U
60-57-1	Dieldrin		0.00500	0.0100	0.0200	U
959-98-8	Endosulfan I		0.00330	0.0100	0.0200	U
33213-65-9	Endosulfan II		0.00500	0.0100	0.0200	U
1031-07-8	Endosulfan sulfate		0.00500	0.0100	0.0200	U
72-20-8	Endrin		0.00500	0.0100	0.0200	U
7421-93-4	Endrin aldehyde		0.00500	0.0100	0.0200	U
53494-70-5	Endrin ketone		0.00500	0.0100	0.0200	U
58-89-9	gamma-BHC (Lindane)		0.00330	0.0100	0.0200	U
5103-74-2	gamma-Chlordane	0.00566	0.00330	0.0100	0.0200	JP
76-44-8	Heptachlor		0.00330	0.0100	0.0200	U
1024-57-3	Heptachlor epoxide		0.00330	0.0100	0.0200	U
72-43-5	Methoxychlor		0.00330	0.0100	0.0200	U
8001-35-2	Toxaphene		0.330	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.3744	74.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.5000	0.3476	69.5	25 - 140	
Decachlorobiphenyl	0.5000	0.3958	79.2	30 - 135	
Decachlorobiphenyl [2C]	0.5000	0.3851	77.0	30 - 135	

* Values outside of QC limits

INITIAL CALIBRATION STANDARDS

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001F0101.D	10/08/12 15:32
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001R0101.D	10/08/12 15:32
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002F0201.D	10/08/12 15:51
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002R0201.D	10/08/12 15:51
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003F0301.D	10/08/12 16:10
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003R0301.D	10/08/12 16:10
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004F0401.D	10/08/12 16:29
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004R0401.D	10/08/12 16:29
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005F0501.D	10/08/12 16:48
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005R0501.D	10/08/12 16:48
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006F0601.D	10/08/12 17:07
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006R0601.D	10/08/12 17:07
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007R0701.D	10/08/12 17:26
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007F0701.D	10/08/12 17:26
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023F2301.D	10/08/12 22:31
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023R2301.D	10/08/12 22:31
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024F2401.D	10/08/12 22:50
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024R2401.D	10/08/12 22:50
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025F2501.D	10/08/12 23:09
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025R2501.D	10/08/12 23:09
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026F2601.D	10/08/12 23:29
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026R2601.D	10/08/12 23:29
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027F2701.D	10/08/12 23:48
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027R2701.D	10/08/12 23:48
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028F2801.D	10/09/12 00:07
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028R2801.D	10/09/12 00:07
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030R3001.D	10/09/12 00:45
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030F3001.D	10/09/12 00:45
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031F3101.D	10/09/12 01:04
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031R3101.D	10/09/12 01:04
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032F3201.D	10/09/12 01:23
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032R3201.D	10/09/12 01:23

12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033F3301.D	10/09/12 01:42
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033R3301.D	10/09/12 01:42
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034F3401.D	10/09/12 02:01
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034R3401.D	10/09/12 02:01
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035R3501.D	10/09/12 02:20
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035F3501.D	10/09/12 02:20

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J28406-CAL1	001R0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL1	001F0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL2	002F0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL2	002R0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL3	003F0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL3	003R0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL4	004F0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL4	004R0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL5	005R0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL5	005F0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL6	006F0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL6	006R0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL7	007F0701.D	10/08/12 17:26
Cal Standard	2J28406-CAL7	007R0701.D	10/08/12 17:26
Cal Standard	2J28406-CALK	023F2301.D	10/08/12 22:31
Cal Standard	2J28406-CALK	023R2301.D	10/08/12 22:31
Cal Standard	2J28406-CALL	024F2401.D	10/08/12 22:50
Cal Standard	2J28406-CALL	024R2401.D	10/08/12 22:50
Cal Standard	2J28406-CALM	025F2501.D	10/08/12 23:09
Cal Standard	2J28406-CALM	025R2501.D	10/08/12 23:09
Cal Standard	2J28406-CALN	026R2601.D	10/08/12 23:29
Cal Standard	2J28406-CALN	026F2601.D	10/08/12 23:29
Cal Standard	2J28406-CALO	027F2701.D	10/08/12 23:48
Cal Standard	2J28406-CALO	027R2701.D	10/08/12 23:48
Cal Standard	2J28406-CALP	028F2801.D	10/09/12 00:07
Cal Standard	2J28406-CALP	028R2801.D	10/09/12 00:07
Initial Cal Check	2J28406-ICV4	029R2901.D	10/09/12 00:26
Initial Cal Check	2J28406-ICV4	029F2901.D	10/09/12 00:26
Cal Standard	2J28406-CALQ	030F3001.D	10/09/12 00:45
Cal Standard	2J28406-CALQ	030R3001.D	10/09/12 00:45
Cal Standard	2J28406-CALR	031F3101.D	10/09/12 01:04
Cal Standard	2J28406-CALR	031R3101.D	10/09/12 01:04

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J28406-CALS	032F3201.D	10/09/12 01:23
Cal Standard	2J28406-CALS	032R3201.D	10/09/12 01:23
Cal Standard	2J28406-CALT	033R3301.D	10/09/12 01:42
Cal Standard	2J28406-CALT	033F3301.D	10/09/12 01:42
Cal Standard	2J28406-CALU	034F3401.D	10/09/12 02:01
Cal Standard	2J28406-CALU	034R3401.D	10/09/12 02:01
Cal Standard	2J28406-CALV	035F3501.D	10/09/12 02:20
Cal Standard	2J28406-CALV	035R3501.D	10/09/12 02:20
Initial Cal Check	2J28406-ICV5	013R1301.D	10/09/12 17:14
Initial Cal Check	2J28406-ICV5	013F1301.D	10/09/12 17:14

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1016	1211.68	2.651423	7.412	0.0162173			20	
Aroclor-1016 (1)	1998.279	1.868085	7.111833	3.466751E-03			20	
Aroclor-1016 (2)	737.4585	4.861005	6.183167	1.530938E-02			20	
Aroclor-1016 (3)	1103.083	4.159952	6.5585	1.416792E-02			20	
Aroclor-1016 (4)	1381.051	7.475082	7.087	1.81205E-03			20	
Aroclor-1016 (5)	838.5294	4.403324	7.412	0.0162173			20	
Aroclor-1016 [2C]	1436.644	10.70371	6.6695	2.588352E-03			20	
Aroclor-1016 (1) [2C]	2181.91	12.63869	6.369	7.68006E-03			20	
Aroclor-1016 (2) [2C]	1375.587	12.43596	6.098333	1.222863E-02			20	
Aroclor-1016 (3) [2C]	1141.906	6.462062	6.568833	9.334152E-03			20	
Aroclor-1016 (4) [2C]	1158.223	11.14295	6.622833	1.693396E-02			20	
Aroclor-1016 (5) [2C]	1325.593	16.57982	6.6695	2.588352E-03			20	
Aroclor-1248	758.7065	7.267487	9.219333	7.873254E-02		0.9998429	0.995	
Aroclor-1248 (1)	952.0071	7.162791	8.538	0.2492864		0.999706	0.995	
Aroclor-1248 (2)	757.9911	6.082106	7.7715	5.295247E-02		0.9997806	0.995	
Aroclor-1248 (3)	482.7702	34.39494	8.480667	6.058882E-02		0.9995866	0.995	
Aroclor-1248 (4)	921.4139	14.51966	8.758333	5.075192E-02		0.9998197	0.995	
Aroclor-1248 (5)	679.3505	4.488466	9.219333	7.873254E-02		0.9998103	0.995	
Aroclor-1248 [2C]	937.5975	10.41717	7.544167	9.330969E-02	0.9991794		0.995	
Aroclor-1248 (1) [2C]	1361.915	38.26215	7.008833	0.2826843	0.9992803		0.995	
Aroclor-1248 (2) [2C]	1234.637	4.986944	6.357833	2.028725E-02	0.9998706		0.995	
Aroclor-1248 (3) [2C]	904.2617	6.705059	6.758167	4.643876E-02	0.9974451		0.995	
Aroclor-1248 (4) [2C]	606.4015	19.46593	7.440167	8.004361E-02	0.9988609		0.995	
Aroclor-1248 (5) [2C]	580.7719	8.125579	7.544167	9.330969E-02	0.9955324		0.995	
Aroclor-1254	2315.112	2.465993	9.729833	0.0230136			20	
Aroclor-1254 (1)	3197.742	3.274659	8.8325	8.978777E-03			20	
Aroclor-1254 (2)	1002.121	1.718671	7.411833	1.416199E-02			20	
Aroclor-1254 (3)	3051.415	2.544717	8.381667	1.699636E-03			20	
Aroclor-1254 (4)	1540.727	6.850945	9.377833	2.408567E-02			20	
Aroclor-1254 (5)	2783.555	3.866763	9.729833	0.0230136			20	
Aroclor-1254 [2C]	2492.935	13.91024	8.643333	4.776138E-02			20	
Aroclor-1254 (1) [2C]	3732.51	14.12391	7.961667	3.249477E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1254 (2) [2C]	2910.505	17.50065	7.287333	1.382676E-02			20	
Aroclor-1254 (3) [2C]	2546.45	14.73764	7.470333	3.081998E-02			20	
Aroclor-1254 (4) [2C]	1876.557	14.14564	8.126167	1.895317E-02			20	
Aroclor-1254 (5) [2C]	1398.651	8.183716	8.643333	4.776138E-02			20	
Aroclor-1260	3211.825	4.49341	11.635	0.0166325			20	
Aroclor-1260 (1)	5494.936	4.613131	10.52067	3.771478E-03			20	
Aroclor-1260 (2)	3224.326	3.711074	9.376667	0.0237599			20	
Aroclor-1260 (3)	3829.492	8.450002	9.727	9.356043E-03			20	
Aroclor-1260 (4)	2372.787	3.387169	9.832667	1.787885E-02			20	
Aroclor-1260 (5)	1137.586	3.214277	11.635	0.0166325			20	
Aroclor-1260 [2C]	3119.071	14.37388	9.471	2.433087E-02			20	
Aroclor-1260 (1) [2C]	4662.745	13.3188	9.471	2.433087E-02			20	
Aroclor-1260 (2) [2C]	2691.935	14.62566	8.123667	1.998328E-02			20	
Aroclor-1260 (3) [2C]	3128.594	12.98403	8.3665	3.214936E-02			20	
Aroclor-1260 (4) [2C]	2972.886	15.3638	8.5515	2.009633E-02			20	
Aroclor-1260 (5) [2C]	2139.196	17.43372	9.151167	1.639216E-02			20	
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	029F2901.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/09/12
Lab Sample ID:	2J28406-ICV4	Injection Time:	00:26

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1016 (1)	A	1003	1125	1998.279	2241.387		12.2	20
Aroclor-1016 (2)	A	1003	1041	737.4585	765.4786		3.8	20
Aroclor-1016 (3)	A	1003	1108	1103.083	1218.05		10.4	20
Aroclor-1016 (4)	A	1003	1184	1381.051	1630.296		18.0	20
Aroclor-1016 (5)	A	1003	1141	838.5294	953.8285		13.8	20
Aroclor-1016 (1) [2C]	A	1003	1051	2181.91	2285.794		4.8	20
Aroclor-1016 (2) [2C]	A	1003	1021	1375.587	1400.548		1.8	20
Aroclor-1016 (3) [2C]	A	1003	1105	1141.906	1258.596		10.2	20
Aroclor-1016 (4) [2C]	A	1003	1052	1158.223	1215.474		4.9	20
Aroclor-1016 (5) [2C]	A	1003	1050	1325.593	1388.168		4.7	20
Aroclor-1260 (1)	A	1002	1080	5494.936	5921.413		7.8	20
Aroclor-1260 (2)	A	1002	1124	3224.326	3616.337		12.2	20
Aroclor-1260 (3)	A	1002	1044	3829.492	3988.561		4.2	20
Aroclor-1260 (4)	A	1002	1083	2372.787	2565.43		8.1	20
Aroclor-1260 (5)	A	1002	1098	1137.586	1246.318		9.6	20
Aroclor-1260 (1) [2C]	A	1002	1038	4662.745	4830.391		3.6	20
Aroclor-1260 (2) [2C]	A	1002	1023	2691.935	2748.98		2.1	20
Aroclor-1260 (3) [2C]	A	1002	1054	3128.594	3292.769		5.2	20
Aroclor-1260 (4) [2C]	A	1002	1018	2972.886	3021.426		1.6	20
Aroclor-1260 (5) [2C]	A	1002	1004	2139.196	2144.726		0.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	013F1301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/09/12
Lab Sample ID:	2J28406-ICV5	Injection Time:	17:14

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1254 (1)	A	1000	986.9	3197.742	3155.955		-1.3	20
Aroclor-1254 (2)	A	1000	934.7	1002.121	936.697		-6.5	20
Aroclor-1254 (3)	A	1000	982.1	3051.415	2996.849		-1.8	20
Aroclor-1254 (4)	A	1000	1024	1540.727	1577.34		2.4	20
Aroclor-1254 (5)	A	1000	940.9	2783.555	2618.945		-5.9	20
Aroclor-1254 (1) [2C]	A	1000	916.4	3732.51	3420.667		-8.4	20
Aroclor-1254 (2) [2C]	A	1000	913.2	2910.505	2657.751		-8.7	20
Aroclor-1254 (3) [2C]	A	1000	918.0	2546.45	2337.619		-8.2	20
Aroclor-1254 (4) [2C]	A	1000	906.1	1876.557	1700.371		-9.4	20
Aroclor-1254 (5) [2C]	A	1000	972.8	1398.651	1360.628		-2.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29706-CCV1	003F0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV1	003R0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV4	006R0601.D	10/18/12 11:18
Calibration Check	2J29706-CCV4	006F0601.D	10/18/12 11:18
Calibration Check	2J29706-CCV5	007F0701.D	10/18/12 11:37
Calibration Check	2J29706-CCV5	007R0701.D	10/18/12 11:37
Blank	2J16016-BLK1	008R0801.D	10/18/12 11:56
Blank	2J16016-BLK1	008F0801.D	10/18/12 11:56
LCS	2J16016-BS2	011R1101.D	10/18/12 12:53
LCS	2J16016-BS2	011F1101.D	10/18/12 12:53
LCS Dup	2J16016-BSD2	012F1201.D	10/18/12 13:13
LCS Dup	2J16016-BSD2	012R1201.D	10/18/12 13:13
Calibration Check	2J29706-CCV6	026R2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV6	026F2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV9	029R2901.D	10/18/12 18:36
Calibration Check	2J29706-CCV9	029F2901.D	10/18/12 18:36
Calibration Check	2J29706-CCVA	030R3001.D	10/18/12 18:55
Calibration Check	2J29706-CCVA	030F3001.D	10/18/12 18:55
Calibration Check	2J29706-CCVB	040F4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVB	040R4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVE	043F4301.D	10/18/12 23:03
Calibration Check	2J29706-CCVE	043R4301.D	10/18/12 23:03
Calibration Check	2J29706-CCVF	044R4401.D	10/18/12 23:22
Calibration Check	2J29706-CCVF	044F4401.D	10/18/12 23:22
PEN-44-19-10/12	1210138-02	049F4901.D	10/19/12 00:58
PEN-44-19-10/12	1210138-02	049R4901.D	10/19/12 00:58
PEN-44-13-10/12	1210138-04	050R5001.D	10/19/12 01:17
PEN-44-13-10/12	1210138-04	050F5001.D	10/19/12 01:17
PEN-44-11-10/12	1210138-06	051R5101.D	10/19/12 01:36
PEN-44-11-10/12	1210138-06	051F5101.D	10/19/12 01:36
PEN-44-12-10/12	1210138-08	052R5201.D	10/19/12 01:55
PEN-44-12-10/12	1210138-08	052F5201.D	10/19/12 01:55

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PEN-44-14-10/12	1210138-10	053R5301.D	10/19/12 02:14
PEN-44-14-10/12	1210138-10	053F5301.D	10/19/12 02:14
Calibration Check	2J29706-CCVG	060R6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVG	060F6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVJ	063R6301.D	10/19/12 05:25
Calibration Check	2J29706-CCVJ	063F6301.D	10/19/12 05:25
Calibration Check	2J29706-CCVK	064R6401.D	10/19/12 05:44
Calibration Check	2J29706-CCVK	064F6401.D	10/19/12 05:44

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	96.27	48154.4	46356.45		-3.7	20
Tetrachloro-m-xylene [2C]	A	100.0	83.40	56983.64	47527.17		-16.6	20
Decachlorobiphenyl	A	100.0	96.23	41014.66	39470.06		-3.8	20
Decachlorobiphenyl [2C]	A	100.0	88.94	36168.37	32168.73		-11.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	006F0601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV4	Injection Time:	11:18

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1020	1998.279	2037.573		2.0	20
Aroclor-1016 (2)	A	1000	971.5	737.4585	716.464		-2.8	20
Aroclor-1016 (3)	A	1000	953.7	1103.083	1052.043		-4.6	20
Aroclor-1016 (4)	A	1000	943.8	1381.051	1303.467		-5.6	20
Aroclor-1016 (5)	A	1000	1025	838.5294	859.254		2.5	20
Aroclor-1016 (1) [2C]	A	1000	1015	2181.91	2213.767		1.5	20
Aroclor-1016 (2) [2C]	A	1000	941.6	1375.587	1295.238		-5.8	20
Aroclor-1016 (3) [2C]	A	1000	1051	1141.906	1200.232		5.1	20
Aroclor-1016 (4) [2C]	A	1000	980.0	1158.223	1135.104		-2.0	20
Aroclor-1016 (5) [2C]	A	1000	916.8	1325.593	1215.375		-8.3	20
Aroclor-1260 (1)	A	1000	1063	5494.936	5843.007		6.3	20
Aroclor-1260 (2)	A	1000	952.7	3224.326	3071.879		-4.7	20
Aroclor-1260 (3)	A	1000	920.7	3829.492	3525.813		-7.9	20
Aroclor-1260 (4)	A	1000	991.0	2372.787	2351.53		-0.9	20
Aroclor-1260 (5)	A	1000	1027	1137.586	1168.358		2.7	20
Aroclor-1260 (1) [2C]	A	1000	1063	4662.745	4957.045		6.3	20
Aroclor-1260 (2) [2C]	A	1000	961.8	2691.935	2589.122		-3.8	20
Aroclor-1260 (3) [2C]	A	1000	1049	3128.594	3281.612		4.9	20
Aroclor-1260 (4) [2C]	A	1000	993.2	2972.886	2952.573		-0.7	20
Aroclor-1260 (5) [2C]	A	1000	966.9	2139.196	2068.346		-3.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	007F0701.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV5	Injection Time:	11:37

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	900.7	3197.742	2880.232		-9.9	20
Aroclor-1254 (2)	A	1000	902.3	1002.121	904.227		-9.8	20
Aroclor-1254 (3)	A	1000	873.5	3051.415	2665.429		-12.6	20
Aroclor-1254 (4)	A	1000	885.5	1540.727	1364.321		-11.4	20
Aroclor-1254 (5)	A	1000	875.2	2783.555	2436.116		-12.5	20
Aroclor-1254 (1) [2C]	A	1000	919.5	3732.51	3432.149		-8.0	20
Aroclor-1254 (2) [2C]	A	1000	908.9	2910.505	2645.459		-9.1	20
Aroclor-1254 (3) [2C]	A	1000	920.7	2546.45	2344.548		-7.9	20
Aroclor-1254 (4) [2C]	A	1000	936.2	1876.557	1756.859		-6.4	20
Aroclor-1254 (5) [2C]	A	1000	996.5	1398.651	1393.793		-0.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	026F2601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV6	Injection Time:	17:39

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	100.2	48154.4	48273.33		0.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.43	56983.64	52098.02		-8.6	20
Decachlorobiphenyl	A	100.0	101.9	41014.66	41796.14		1.9	20
Decachlorobiphenyl [2C]	A	100.0	86.65	36168.37	31339.41		-13.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	029F2901.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV9	Injection Time:	18:36

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1055	1998.279	2107.563		5.5	20
Aroclor-1016 (2)	A	1000	1015	737.4585	748.447		1.5	20
Aroclor-1016 (3)	A	1000	1016	1103.083	1120.403		1.6	20
Aroclor-1016 (4)	A	1000	1078	1381.051	1488.515		7.8	20
Aroclor-1016 (5)	A	1000	1075	838.5294	901.122		7.5	20
Aroclor-1016 (1) [2C]	A	1000	1156	2181.91	2522.096		15.6	20
Aroclor-1016 (2) [2C]	A	1000	1024	1375.587	1409.124		2.4	20
Aroclor-1016 (3) [2C]	A	1000	1161	1141.906	1325.322		16.1	20
Aroclor-1016 (4) [2C]	A	1000	1038	1158.223	1202.723		3.8	20
Aroclor-1016 (5) [2C]	A	1000	1037	1325.593	1374.692		3.7	20
Aroclor-1260 (1)	A	1000	1048	5494.936	5758.192		4.8	20
Aroclor-1260 (2)	A	1000	1032	3224.326	3328.549		3.2	20
Aroclor-1260 (3)	A	1000	988.0	3829.492	3783.431		-1.2	20
Aroclor-1260 (4)	A	1000	1035	2372.787	2456.187		3.5	20
Aroclor-1260 (5)	A	1000	1090	1137.586	1240.034		9.0	20
Aroclor-1260 (1) [2C]	A	1000	1144	4662.745	5336.726		14.5	20
Aroclor-1260 (2) [2C]	A	1000	1042	2691.935	2806.05		4.2	20
Aroclor-1260 (3) [2C]	A	1000	1122	3128.594	3510.198		12.2	20
Aroclor-1260 (4) [2C]	A	1000	1064	2972.886	3161.72		6.4	20
Aroclor-1260 (5) [2C]	A	1000	1045	2139.196	2235.168		4.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	030F3001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVA	Injection Time:	18:55

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	963.1	3197.742	3079.661		-3.7	20
Aroclor-1254 (2)	A	1000	959.0	1002.121	960.985		-4.1	20
Aroclor-1254 (3)	A	1000	951.0	3051.415	2901.834		-4.9	20
Aroclor-1254 (4)	A	1000	959.1	1540.727	1477.726		-4.1	20
Aroclor-1254 (5)	A	1000	941.7	2783.555	2621.332		-5.8	20
Aroclor-1254 (1) [2C]	A	1000	1000	3732.51	3733.342		0.02	20
Aroclor-1254 (2) [2C]	A	1000	992.4	2910.505	2888.256		-0.8	20
Aroclor-1254 (3) [2C]	A	1000	1006	2546.45	2562.173		0.6	20
Aroclor-1254 (4) [2C]	A	1000	1042	1876.557	1955.657		4.2	20
Aroclor-1254 (5) [2C]	A	1000	1122	1398.651	1570.073		12.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040F4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	102.8	48154.4	49529.4		2.9	20
Tetrachloro-m-xylene [2C]	A	100.0	68.33	56983.64	38937.33		-31.7	20 *
Decachlorobiphenyl	A	100.0	100.1	41014.66	41065.71		0.1	20
Decachlorobiphenyl [2C]	A	100.0	85.53	36168.37	30934.69		-14.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	043F4301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVE	Injection Time:	23:03

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1055	1998.279	2108.136		5.5	20
Aroclor-1016 (2)	A	1000	1010	737.4585	745.108		1.0	20
Aroclor-1016 (3)	A	1000	1025	1103.083	1131.167		2.5	20
Aroclor-1016 (4)	A	1000	1090	1381.051	1505.523		9.0	20
Aroclor-1016 (5)	A	1000	1078	838.5294	904.381		7.9	20
Aroclor-1016 (1) [2C]	A	1000	1108	2181.91	2416.484		10.8	20
Aroclor-1016 (2) [2C]	A	1000	998.4	1375.587	1373.357		-0.2	20
Aroclor-1016 (3) [2C]	A	1000	1133	1141.906	1294.209		13.3	20
Aroclor-1016 (4) [2C]	A	1000	1018	1158.223	1179.346		1.8	20
Aroclor-1016 (5) [2C]	A	1000	1001	1325.593	1326.429		0.06	20
Aroclor-1260 (1)	A	1000	1099	5494.936	6038.542		9.9	20
Aroclor-1260 (2)	A	1000	1026	3224.326	3307.731		2.6	20
Aroclor-1260 (3)	A	1000	992.3	3829.492	3800.146		-0.8	20
Aroclor-1260 (4)	A	1000	1035	2372.787	2455.613		3.5	20
Aroclor-1260 (5)	A	1000	1053	1137.586	1197.529		5.3	20
Aroclor-1260 (1) [2C]	A	1000	1109	4662.745	5172.189		10.9	20
Aroclor-1260 (2) [2C]	A	1000	1022	2691.935	2751.189		2.2	20
Aroclor-1260 (3) [2C]	A	1000	1097	3128.594	3430.872		9.7	20
Aroclor-1260 (4) [2C]	A	1000	1031	2972.886	3064.285		3.1	20
Aroclor-1260 (5) [2C]	A	1000	1018	2139.196	2178.228		1.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	044F4401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVF	Injection Time:	23:22

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	910.8	3197.742	2912.35		-8.9	20
Aroclor-1254 (2)	A	1000	977.3	1002.121	979.341		-2.3	20
Aroclor-1254 (3)	A	1000	945.0	3051.415	2883.618		-5.5	20
Aroclor-1254 (4)	A	1000	886.6	1540.727	1365.958		-11.3	20
Aroclor-1254 (5)	A	1000	930.5	2783.555	2590.126		-6.9	20
Aroclor-1254 (1) [2C]	A	1000	970.7	3732.51	3623.263		-2.9	20
Aroclor-1254 (2) [2C]	A	1000	965.9	2910.505	2811.177		-3.4	20
Aroclor-1254 (3) [2C]	A	1000	968.9	2546.45	2467.174		-3.1	20
Aroclor-1254 (4) [2C]	A	1000	1010	1876.557	1895		1.0	20
Aroclor-1254 (5) [2C]	A	1000	1094	1398.651	1530.469		9.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060F6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	104.2	48154.4	50182.73		4.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.00	56983.64	51855.59		-9.0	20
Decachlorobiphenyl	A	100.0	108.6	41014.66	44551.56		8.6	20
Decachlorobiphenyl [2C]	A	100.0	100.1	36168.37	36207.27		0.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	063F6301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVJ	Injection Time:	05:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1060	1998.279	2117.455		6.0	20
Aroclor-1016 (2)	A	1000	1014	737.4585	748.225		1.5	20
Aroclor-1016 (3)	A	1000	1019	1103.083	1124.116		1.9	20
Aroclor-1016 (4)	A	1000	1084	1381.051	1497.609		8.4	20
Aroclor-1016 (5)	A	1000	1081	838.5294	906.48		8.1	20
Aroclor-1016 (1) [2C]	A	1000	1124	2181.91	2453.036		12.4	20
Aroclor-1016 (2) [2C]	A	1000	1002	1375.587	1378.274		0.2	20
Aroclor-1016 (3) [2C]	A	1000	1139	1141.906	1300.399		13.9	20
Aroclor-1016 (4) [2C]	A	1000	1016	1158.223	1176.232		1.6	20
Aroclor-1016 (5) [2C]	A	1000	1017	1325.593	1347.641		1.7	20
Aroclor-1260 (1)	A	1000	1035	5494.936	5686.082		3.5	20
Aroclor-1260 (2)	A	1000	1010	3224.326	3258.181		1.0	20
Aroclor-1260 (3)	A	1000	985.4	3829.492	3773.63		-1.5	20
Aroclor-1260 (4)	A	1000	1036	2372.787	2459.218		3.6	20
Aroclor-1260 (5)	A	1000	1074	1137.586	1221.721		7.4	20
Aroclor-1260 (1) [2C]	A	1000	1132	4662.745	5277.264		13.2	20
Aroclor-1260 (2) [2C]	A	1000	1024	2691.935	2757.419		2.4	20
Aroclor-1260 (3) [2C]	A	1000	1101	3128.594	3445.752		10.1	20
Aroclor-1260 (4) [2C]	A	1000	1042	2972.886	3096.826		4.2	20
Aroclor-1260 (5) [2C]	A	1000	1033	2139.196	2210.704		3.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	064F6401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVK	Injection Time:	05:44

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	936.6	3197.742	2995.119		-6.3	20
Aroclor-1254 (2)	A	1000	974.9	1002.121	976.93		-2.5	20
Aroclor-1254 (3)	A	1000	956.0	3051.415	2917.297		-4.4	20
Aroclor-1254 (4)	A	1000	883.9	1540.727	1361.815		-11.6	20
Aroclor-1254 (5)	A	1000	925.0	2783.555	2574.73		-7.5	20
Aroclor-1254 (1) [2C]	A	1000	990.6	3732.51	3697.616		-0.9	20
Aroclor-1254 (2) [2C]	A	1000	970.2	2910.505	2823.893		-3.0	20
Aroclor-1254 (3) [2C]	A	1000	978.3	2546.45	2491.204		-2.2	20
Aroclor-1254 (4) [2C]	A	1000	1026	1876.557	1924.944		2.6	20
Aroclor-1254 (5) [2C]	A	1000	1127	1398.651	1576.683		12.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J16016 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-19-10/12	1210138-02	10/16/12 14:38	1,060.00	10.00
PEN-44-13-10/12	1210138-04	10/16/12 14:38	1,060.00	10.00
PEN-44-11-10/12	1210138-06	10/16/12 14:38	1,060.00	10.00
PEN-44-12-10/12	1210138-08	10/16/12 14:38	1,080.00	10.00
PEN-44-14-10/12	1210138-10	10/16/12 14:38	1,080.00	10.00
Blank	2J16016-BLK1	10/16/12 14:38	1,000.00	10.00
LCS	2J16016-BS2	10/16/12 14:38	1,000.00	10.00
LCS Dup	2J16016-BSD2	10/16/12 14:38	1,000.00	10.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J16016-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/16/12 14:38 Analyzed: 10/18/12 11:56

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.120	0.250	0.500	U
11104-28-2	Aroclor-1221		0.120	0.250	0.500	U
11141-16-5	Aroclor-1232		0.120	0.250	0.500	U
53469-21-9	Aroclor-1242		0.120	0.250	0.500	U
12672-29-6	Aroclor-1248		0.120	0.250	0.500	U
11097-69-1	Aroclor-1254		0.120	0.250	0.500	U
11096-82-5	Aroclor-1260		0.120	0.250	0.500	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.3744	74.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.5000	0.3476	69.5	25 - 140	
Decachlorobiphenyl	0.5000	0.3958	79.2	40 - 135	
Decachlorobiphenyl [2C]	0.5000	0.3851	77.0	40 - 135	

* Values outside of QC limits

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 7, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION –TOTAL AND DISSOLVED METALS, ALKALINITY, BIOCHEMICAL OXYGEN DEMAND, CHEMICAL OXYGEN DEMAND, CHLORIDE, NITRATE, NITRITE, SULFATE**
CTO 0079 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 1210138

SAMPLES: 6/Aqueous/

PEN-44-10-10/12	PENN-44-11-10/12	PEN-44-12-10/12
PEN-44-13-10/12	PENN-44-14-10/12	PEN-44-19-10/12

Overview

The sample set for NAS Pensacola, CTO 0079, SDG 1210138, consists of six (6) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for dissolved iron and manganese, alkalinity, biochemical oxygen demand, chemical oxygen demand, chloride, nitrate, nitrite and sulfate. All samples except PEN-44-10-10/12 were also analyzed for target analyte list (TAL) metals. The samples were collected by Tetra Tech on October 12, 2012 and analyzed by Empirical Laboratories, LLC. under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010C. Mercury analyses were conducted using SW-846 method 7470A. Alkalinity analyses were conducted using Standard Method 2320B. Biochemical oxygen demand analyses were conducted using Standard Method 5210B. Chemical oxygen demand analyses were conducted using EPA method 410.4. Chloride, nitrate, nitrite and sulfate analyses were conducted using SW-846 method 9056.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

None.

Notes

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) were qualified as estimated, "J".

The nondetected results were reported to the MDL.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: Positive results reported below the LOQ but above the LOD were qualified as estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12			PEN-44-14-10/12		
SDG: 1210138	LAB_ID	1210138-06			1210138-08			1210138-04			1210138-10		
FRACTION: M	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		364			408			554			149	J	P
ANTIMONY		5	U		5	U		5	U		5	U	
ARSENIC		3	U		3	U		3	U		3	U	
BARIUM		5	U		5	U		5	U		5	U	
BERYLLIUM		1	U		1	U		1	U		1	U	
CADMIUM		1	U		1	U		1	U		1	U	
CALCIUM		43400			31200			27800			31500		
CHROMIUM		2.71	J	P	2	U		2	U		3.38	J	P
COBALT		5	U		5	U		5	U		5	U	
COPPER		4	U		4	U		4	U		4	U	
IRON		94	J	P	87	J	P	164			52.2	J	P
LEAD		1.5	U		1.5	U		1.5	U		1.5	U	
MAGNESIUM		2090	J	P	1410	J	P	1650	J	P	1200	J	P
MANGANESE		3	U		3	U		7.76	J	P	3	U	
MERCURY		0.08	U		0.08	U		0.08	U		0.08	U	
NICKEL		3	U		3	U		3	U		3	U	
POTASSIUM		1000	U		1000	U		1000	U		1000	U	
SELENIUM		3	U		3	U		3	U		3	U	
SILVER		1	U		1	U		1	U		1	U	
SODIUM		15800			8880			4570	J	P	29100		
THALLIUM		3	U		3	U		3	U		3	U	
VANADIUM		5	U		5	U		5	U		5	U	
ZINC		5	U		5	U		5	U		5	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-19-10/12		
SDG: 1210138	LAB_ID	1210138-02		
FRACTION: M	SAMP_DATE	10/12/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALUMINUM		71.2	J	P
ANTIMONY		5	U	
ARSENIC		3	U	
BARIUM		8.28	J	P
BERYLLIUM		1	U	
CADMIUM		1	U	
CALCIUM		39100		
CHROMIUM		2	U	
COBALT		5	U	
COPPER		4	U	
IRON		997		
LEAD		1.5	U	
MAGNESIUM		4680	J	P
MANGANESE		30.2		
MERCURY		0.08	U	
NICKEL		3	U	
POTASSIUM		1210	J	P
SELENIUM		3	U	
SILVER		1	U	
SODIUM		6540		
THALLIUM		3	U	
VANADIUM		5	U	
ZINC		5	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-10-10/12			PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12		
SDG: 1210138	LAB_ID	1210138-01			1210138-07			1210138-09			1210138-05		
FRACTION: MF	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		58	J	P	31.6	J	P	35.2	J	P	40.3	J	P
MANGANESE		3	U		3	U		3	U		5.54	J	P

PROJ_NO: 00784	NSAMPLE	PEN-44-14-10/12			PEN-44-19-10/12		
SDG: 1210138	LAB_ID	1210138-11			1210138-03		
FRACTION: MF	SAMP_DATE	10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		34.4	J	P	898		
MANGANESE		3	U		27.8		

PROJ_NO: 00784	NSAMPLE	PEN-44-10-10/12			PEN-44-11-10/12			PEN-44-12-10/12			PEN-44-13-10/12		
SDG: 1210138	LAB_ID	1210138-01			1210138-06			1210138-08			1210138-04		
FRACTION: MISC	SAMP_DATE	10/12/2012			10/12/2012			10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		69			122			74.7			64.6		
BIOCHEMICAL OXYGEN DEMAND		2	U		2	U		2	U		2	U	
CHEMICAL OXYGEN DEMAND		20	U		20	U		20	U		20	U	
CHLORIDE		7.85			6.72			7.14			6.72		
NITRATE-N		0.973			1.46			0.786			0.964		
NITRITE-N		0.033	U		0.033	U		0.033	U		0.033	U	
SULFATE		3.93			6.86			6.67			4.53		

PROJ_NO: 00784	NSAMPLE	PEN-44-14-10/12			PEN-44-19-10/12		
SDG: 1210138	LAB_ID	1210138-10			1210138-02		
FRACTION: MISC	SAMP_DATE	10/12/2012			10/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		117			110		
BIOCHEMICAL OXYGEN DEMAND		2	U		2	U	
CHEMICAL OXYGEN DEMAND		20	U		20	U	
CHLORIDE		6.21			10.5		
NITRATE-N		2.07			0.033	U	
NITRITE-N		0.033	U		0.033	U	
SULFATE		7.16			0.33	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 13:05
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-06
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:08
7429-90-5	Aluminum	364	50.0	100	200	1		SW6010C	2J26010	10/29/12 18:01
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J26010	10/29/12 18:01
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J26010	10/29/12 18:01
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J26010	10/29/12 18:01
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:01
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:01
7440-70-2	Calcium	43400	1000	2000	5000	1		SW6010C	2J26010	10/29/12 18:01
7440-47-3	Chromium	2.71	2.00	4.00	10.0	1	I	SW6010C	2J26010	10/29/12 18:01
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 18:01
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J26010	10/29/12 18:01
7439-89-6	Iron	94.0	30.0	60.0	100	1	I	SW6010C	2J26010	10/29/12 18:01
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J26010	10/29/12 18:01
7439-95-4	Magnesium	2090	1000	3000	5000	1	I	SW6010C	2J26010	10/29/12 18:01
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J26010	10/29/12 18:01
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J26010	10/29/12 18:01
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J26010	10/29/12 18:01
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:01
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J26010	10/29/12 18:01
7440-23-5	Sodium	15800	1000	3000	5000	1		SW6010C	2J26010	10/29/12 18:01
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J26010	10/29/12 18:01
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 18:01
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J26010	10/29/12 18:01

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 14:50
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-08
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:09
7429-90-5	Aluminum	408	50.0	100	200	1		SW6010C	2J26010	10/29/12 18:05
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J26010	10/29/12 18:05
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J26010	10/29/12 18:05
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J26010	10/29/12 18:05
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:05
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:05
7440-70-2	Calcium	31200	1000	2000	5000	1		SW6010C	2J26010	10/29/12 18:05
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J26010	10/29/12 18:05
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 18:05
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J26010	10/29/12 18:05
7439-89-6	Iron	87.0	30.0	60.0	100	1	1	SW6010C	2J26010	10/29/12 18:05
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J26010	10/29/12 18:05
7439-95-4	Magnesium	1410	1000	3000	5000	1	1	SW6010C	2J26010	10/29/12 18:05
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J26010	10/29/12 18:05
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J26010	10/29/12 18:05
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J26010	10/29/12 18:05
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:05
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J26010	10/29/12 18:05
7440-23-5	Sodium	8880	1000	3000	5000	1		SW6010C	2J26010	10/29/12 18:05
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J26010	10/29/12 18:05
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 18:05
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J26010	10/29/12 18:05

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 12:37
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-04
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:07
7429-90-5	Aluminum	554	50.0	100	200	1		SW6010C	2J26010	10/29/12 17:56
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J26010	10/29/12 17:56
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J26010	10/29/12 17:56
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J26010	10/29/12 17:56
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 17:56
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 17:56
7440-70-2	Calcium	27800	1000	2000	5000	1		SW6010C	2J26010	10/29/12 17:56
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J26010	10/29/12 17:56
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 17:56
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J26010	10/29/12 17:56
7439-89-6	Iron	164	30.0	60.0	100	1		SW6010C	2J26010	10/29/12 17:56
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J26010	10/29/12 17:56
7439-95-4	Magnesium	1650	1000	3000	5000	1	I	SW6010C	2J26010	10/29/12 17:56
7439-96-5	Manganese	7.76	3.00	6.00	15.0	1	I	SW6010C	2J26010	10/29/12 17:56
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J26010	10/29/12 17:56
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J26010	10/29/12 17:56
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J26010	10/29/12 17:56
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J26010	10/29/12 17:56
7440-23-5	Sodium	4570	1000	3000	5000	1	I	SW6010C	2J26010	10/29/12 17:56
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J26010	10/29/12 17:56
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 17:56
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J26010	10/29/12 17:56

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 14:45
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-10
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:10
7429-90-5	Aluminum	149	50.0	100	200	1	1	SW6010C	2J26010	10/29/12 18:10
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J26010	10/29/12 18:10
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J26010	10/29/12 18:10
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J26010	10/29/12 18:10
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:10
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:10
7440-70-2	Calcium	31500	1000	2000	5000	1		SW6010C	2J26010	10/29/12 18:10
7440-47-3	Chromium	3.38	2.00	4.00	10.0	1	1	SW6010C	2J26010	10/29/12 18:10
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 18:10
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J26010	10/29/12 18:10
7439-89-6	Iron	52.2	30.0	60.0	100	1	I	SW6010C	2J26010	10/29/12 18:10
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J26010	10/29/12 18:10
7439-95-4	Magnesium	1200	1000	3000	5000	1	1	SW6010C	2J26010	10/29/12 18:10
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J26010	10/29/12 18:10
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J26010	10/29/12 18:10
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J26010	10/29/12 18:10
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J26010	10/29/12 18:10
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J26010	10/29/12 18:10
7440-23-5	Sodium	29100	1000	3000	5000	1		SW6010C	2J26010	10/29/12 18:10
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J26010	10/29/12 18:10
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 18:10
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J26010	10/29/12 18:10

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 09:32
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-02
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:06
7429-90-5	Aluminum	71.2	50.0	100	200	1	I	SW6010C	2J26010	10/29/12 17:52
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J26010	10/29/12 17:52
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J26010	10/29/12 17:52
7440-39-3	Barium	8.28	5.00	10.0	40.0	1	1	SW6010C	2J26010	10/29/12 17:52
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 17:52
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J26010	10/29/12 17:52
7440-70-2	Calcium	39100	1000	2000	5000	1		SW6010C	2J26010	10/29/12 17:52
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J26010	10/29/12 17:52
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 17:52
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J26010	10/29/12 17:52
7439-89-6	Iron	997	30.0	60.0	100	1		SW6010C	2J26010	10/29/12 17:52
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J26010	10/29/12 17:52
7439-95-4	Magnesium	4680	1000	3000	5000	1	I	SW6010C	2J26010	10/29/12 17:52
7439-96-5	Manganese	30.2	3.00	6.00	15.0	1		SW6010C	2J26010	10/29/12 17:52
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J26010	10/29/12 17:52
7440-09-7	Potassium	1210	1000	3000	5000	1	I	SW6010C	2J26010	10/29/12 17:52
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J26010	10/29/12 17:52
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J26010	10/29/12 17:52
7440-23-5	Sodium	6540	1000	3000	5000	1		SW6010C	2J26010	10/29/12 17:52
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J26010	10/29/12 17:52
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J26010	10/29/12 17:52
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J26010	10/29/12 17:52

ANALYSIS DATA SHEET

PEN-44-10-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 08:12
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-01
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	58.0	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 14:38
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 14:38

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 13:05
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-07
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	31.6	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 14:51
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 14:51

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 14:50
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-09
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	35.2	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 14:56
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 14:56

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 12:37
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-05
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	40.3	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 14:47
7439-96-5	Manganese (dissolved)	5.54	3.00	6.00	15.0	1	I	SW6010C	2J17017	10/17/12 14:47

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 14:45
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-11
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	34.4	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 15:00
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 15:00

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 09:32
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-03
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	898	30.0	60.0	100	1		SW6010C	2J17017	10/17/12 14:42
7439-96-5	Manganese (dissolved)	27.8	3.00	6.00	15.0	1		SW6010C	2J17017	10/17/12 14:42

ANALYSIS DATA SHEET

PEN-44-10-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 08:12
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-01
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J13001	10/19/12 06:33
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:08
16887-00-6	Chloride	7.85	0.170	0.330	2.50	1	M	SW9056	2J13003	10/13/12 14:27
14797-55-8	Nitrate as N	0.973	0.0330	0.100	0.250	1		SW9056	2J13003	10/13/12 14:27
471-34-1	Alkalinity, Total (as CACO3)	69.0	1.00	1.00	1.00	1		SM2320B	2J26005	10/26/12 09:36
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J13003	10/13/12 14:27
14808-79-8	Sulfate as SO4	3.93	0.330	1.00	2.50	1		SW9056	2J13003	10/13/12 14:27

ANALYSIS DATA SHEET

PEN-44-11-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 13:05
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-06
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J13001	10/19/12 06:33
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:10
16887-00-6	Chloride	6.72	0.170	0.330	2.50	1	M	SW9056	2J13003	10/13/12 15:19
14797-55-8	Nitrate as N	1.46	0.0330	0.100	0.250	1		SW9056	2J13003	10/13/12 15:19
471-34-1	Alkalinity, Total (as CACO3)	122	1.00	1.00	1.00	1		SM2320B	2J26005	10/26/12 10:00
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J13003	10/13/12 15:19
14808-79-8	Sulfate as SO4	6.86	0.330	1.00	2.50	1		SW9056	2J13003	10/13/12 15:19

ANALYSIS DATA SHEET

PEN-44-12-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 14:50
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-08
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J13001	10/19/12 06:33
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:10
16887-00-6	Chloride	7.14	0.170	0.330	2.50	1	M	SW9056	2J13003	10/13/12 15:36
14797-55-8	Nitrate as N	0.786	0.0330	0.100	0.250	1		SW9056	2J13003	10/13/12 15:36
471-34-1	Alkalinity, Total (as CACO3)	74.7	1.00	1.00	1.00	1		SM2320B	2J26005	10/26/12 10:14
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J13003	10/13/12 15:36
14808-79-8	Sulfate as SO4	6.67	0.330	1.00	2.50	1		SW9056	2J13003	10/13/12 15:36

ANALYSIS DATA SHEET

PEN-44-13-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 12:37
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-04
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J13001	10/19/12 06:33
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:09
16887-00-6	Chloride	6.72	0.170	0.330	2.50	1	M	SW9056	2J13003	10/13/12 15:02
14797-55-8	Nitrate as N	0.964	0.0330	0.100	0.250	1		SW9056	2J13003	10/13/12 15:02
471-34-1	Alkalinity, Total (as CACO3)	64.6	1.00	1.00	1.00	1		SM2320B	2J26005	10/26/12 09:53
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J13003	10/13/12 15:02
14808-79-8	Sulfate as SO4	4.53	0.330	1.00	2.50	1		SW9056	2J13003	10/13/12 15:02

ANALYSIS DATA SHEET

PEN-44-14-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 14:45
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-10
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J13001	10/19/12 06:33
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:11
16887-00-6	Chloride	6.21	0.170	0.330	2.50	1	M	SW9056	2J13003	10/13/12 15:54
14797-55-8	Nitrate as N	2.07	0.0330	0.100	0.250	1		SW9056	2J13003	10/13/12 15:54
471-34-1	Alkalinity, Total (as CACO3)	117	1.00	1.00	1.00	1		SM2320B	2J26005	10/26/12 10:25
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J13003	10/13/12 15:54
14808-79-8	Sulfate as SO4	7.16	0.330	1.00	2.50	1		SW9056	2J13003	10/13/12 15:54

ANALYSIS DATA SHEET

PEN-44-19-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/12/12 09:32
% Solids: 0.00

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210138-02
Received: 10/13/12 08:40

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J13001	10/19/12 06:33
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:08
16887-00-6	Chloride	10.5	0.170	0.330	2.50	1	M	SW9056	2J13003	10/13/12 14:44
14797-55-8	Nitrate as N		0.0330	0.100	0.250	1	U	SW9056	2J13003	10/13/12 14:44
471-34-1	Alkalinity, Total (as CACO3)	110	1.00	1.00	1.00	1		SM2320B	2J26005	10/26/12 09:45
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J13003	10/13/12 14:44
14808-79-8	Sulfate as SO4		0.330	1.00	2.50	1	U	SW9056	2J13003	10/13/12 14:44

APPENDIX C
SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Sample PEN-44-14-10/12 had a sample collection time on the jar of 1455 but on the COC of 1445. The time on the COC was used.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following surrogates exceeded criteria:
Dibromofluoromethane in 1210138-10 with a positive bias

The following batch spikes exceeded criteria:
2J23005-BS1/BSD1 with a negative bias for Chlorobenzene and 1,2-Dibromoethane and exceeded relative percent difference criteria for Trichlorofluoromethane

The following continuing calibration verifications exceeded criteria:
2J29802-CCV1 with a positive bias for 2-Butanone, Carbon Disulfide, Chloromethane, Cyclohexane, Dichlorodifluoromethane, Methyl Acetate, 4-Methyl-2-pentanone, and Methyl t-Butyl Ether

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA:
The following batch spikes exceeded criteria:
2J17024-BSD1 with a negative bias for N-nitrosodimethylamine

The following continuing calibration verifications exceeded criteria:
2J30001-CCV1 with a positive bias for 2,4-Dinitrophenol, 2-Nitrophenol, and Terphenyl-d14
2J30001-CCV2 with a positive bias for Caprolactam

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA LOW:
Note - There was a mismatch between the bid and the SAP, and the 1,4-Dioxane was missed when the project was set up in the LIMS, which drives the spiking and reporting. When this was discovered, the samples were already outside of 1x holding time. As per the client's okay, samples are being reported with 1,4-Dioxane CCVs only and no batch, matrix spike, or matrix spike duplicates.

The following continuing calibration verifications exceeded criteria:
2J29915-CCV1 with a negative bias for 1,4-Dioxane and a positive bias for 2,4,6-Tribromophenol

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8081A:
The following batch spikes exceeded criteria:
2J16016-BS1 with a negative bias on column 2 for Endrin Ketone

The following blanks have reported results:
2J16016-BLK1 for Gamma-chlordane; note – no positive results were detected in the associated samples

The following initial calibration verifications exceeded criteria:
2J28406-ICV2 with a negative bias on column 2 for Toxaphene

The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 1 for Decachlorobiphenyl
2J29706-CCVG with a positive bias on column 1 for 4,4'-DDD and Delta-BHC

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8082A:
The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 1 for Decachlorobiphenyl

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C/SW7470A:
The following continuing calibration verifications exceeded criteria:
2J30316-CCV6 with a positive bias for Arsenic

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:
The following compounds are qualified with an M to indicate that the LOQ was raised to the level of the reporting limit standard within criteria:
Chloride (2.5mg/L) in 1210138-01, -02, -04, -06, -08, and -10

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

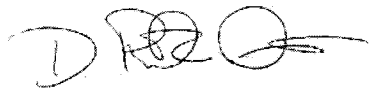
BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

1210138

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1988 | PAGE ___ OF ___

PROJECT NO: 112G00784	FACILITY: NAS Pensacola Site 44	PROJECT MANAGER Gerry Walker	PHONE NUMBER 850-385-9899	LABORATORY NAME AND CONTACT: Empirical Laboratory Attn Brian Kirkland
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Amber Igoe	PHONE NUMBER 850-322-9033	ADDRESS 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER		CITY, STATE Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: RE, TCE, cis-1,2, DCE, VC	TCL VOCs	TCL Pesticides, PCBs	TCL SVOCs w/ LL PAHs	TAL metals w/ Hg	Dissolved Fe, Mn	BOD + Alk	COD	Nitrate	COMMENTS
		CONTAINER TYPE PLASTIC (P) or GLASS (G)							G	G	G	G	P	P	P	P	P	
		PRESERVATIVE USED							HCl	HCl	ice	ice	HNO_3	HNO_3	Ice	H_2SO_4	Ice	
10/4/12	0802	PEN-44-10-10/12				GW	G	7	3					1	1	1	1	01
	0832	PEN-44-14-10/12				GW	G	11		3	1	2	1	1	1	1	1	02/03
	~~0832~~	~~PEN-3821-10-10/12~~				~~GW~~	~~G~~	~~11~~		~~3~~	~~1~~	~~2~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	
	1237	PEN-44-13-10/12				GW	G	11		3	1	2	1	1	1	1	1	04/05
	1305	PEN-44-11-10/12				GW	G	11		3	1	2	1	1	1	1	1	06/07
	1450	PEN-44-12-10/12				GW	G	11		3	1	2	1	1	1	1	1	08/09
	1445	PEN-44-14-10/12				GW	G	11		3	1	2	1	1	1	1	1	10/11
		TB01308				OI				3								12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/12/12	1745	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY Jack Derrick Jr.	10-13-12	0840

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

1210138 Summ Package 11

HOLDTIME

SDG 1210138

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
HG	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/27/2012	10/29/2012	15	2	17
M	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
M	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/26/2012	10/29/2012	14	3	17
MF	UG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-11-10/12	1210138-07	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-12-10/12	1210138-09	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-13-10/12	1210138-05	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
MF	UG/L	PEN-44-14-10/12	1210138-11	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	PEN-44-19-10/12	1210138-03	NM	10/12/2012	10/17/2012	10/17/2012	5	0	5
ALK	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
ALK	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/26/2012	10/26/2012	14	0	14
CL	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
CL	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
COD	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
COD	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
COD	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/29/2012	10/29/2012	17	0	17
FFE	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
FFE	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/19/2012	1	6	7
NTA	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTA	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
NTI	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTI	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-10-10/12	1210138-01	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
SO4	MG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/13/2012	10/13/2012	1	0	1
OS	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OS	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/18/2012	10/24/2012	6	6	12
OV	UG/L	PEN-44-19-10/12	1210138-02	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	TB01308	1210138-12	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-13-10/12	1210138-04	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-12-10/12	1210138-08	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-11-10/12	1210138-06	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11
OV	UG/L	PEN-44-14-10/12	1210138-10	NM	10/12/2012	10/23/2012	10/23/2012	11	0	11

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291004
Sequence: 2J29110

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29110-ICV1	Iron (dissolved)	10000	10140	101	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1020	102	ug/L	+/- 10.00%
2J29110-CCV1	Iron (dissolved)	10000	10420	104	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1066	107	ug/L	+/- 10.00%
2J29110-CCV3	Iron (dissolved)	10000	10120	101	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1034	103	ug/L	+/- 10.00%
2J29110-CCV4	Iron (dissolved)	10000	10540	105	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1035	104	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-ICV1	Aluminum	10000	10060	101	ug/L	+/- 10.00%
	Antimony	1000	1000	100	ug/L	+/- 10.00%
	Arsenic	1000	1019	102	ug/L	+/- 10.00%
	Barium	1000	979.9	98.0	ug/L	+/- 10.00%
	Beryllium	1000	1010	101	ug/L	+/- 10.00%
	Cadmium	1000	1063	106	ug/L	+/- 10.00%
	Calcium	50000	51340	103	ug/L	+/- 10.00%
	Chromium	1000	977.9	97.8	ug/L	+/- 10.00%
	Cobalt	1000	992.4	99.2	ug/L	+/- 10.00%
	Copper	1000	965.8	96.6	ug/L	+/- 10.00%
	Iron	10000	10600	106	ug/L	+/- 10.00%
	Lead	1000	972.1	97.2	ug/L	+/- 10.00%
	Magnesium	50000	51200	102	ug/L	+/- 10.00%
	Manganese	1000	1040	104	ug/L	+/- 10.00%
	Nickel	1000	978.6	97.9	ug/L	+/- 10.00%
	Potassium	10000	10110	101	ug/L	+/- 10.00%
	Selenium	1000	1010	101	ug/L	+/- 10.00%
	Silver	500.0	499.1	99.8	ug/L	+/- 10.00%
	Sodium	50000	51220	102	ug/L	+/- 10.00%
	Thallium	1000	978.4	97.8	ug/L	+/- 10.00%
	Vanadium	1000	1018	102	ug/L	+/- 10.00%
	Zinc	1000	1033	103	ug/L	+/- 10.00%
2J30316-CCV1	Aluminum	10000	10120	101	ug/L	+/- 10.00%
	Antimony	1000	999.8	100	ug/L	+/- 10.00%
	Arsenic	1000	997.1	99.7	ug/L	+/- 10.00%
	Barium	1000	986.4	98.6	ug/L	+/- 10.00%
	Beryllium	1000	1031	103	ug/L	+/- 10.00%
	Cadmium	1000	1040	104	ug/L	+/- 10.00%
	Calcium	50000	51460	103	ug/L	+/- 10.00%
	Chromium	1000	1005	100	ug/L	+/- 10.00%
	Cobalt	1000	983.0	98.3	ug/L	+/- 10.00%
	Copper	1000	980.3	98.0	ug/L	+/- 10.00%
	Iron	10000	10630	106	ug/L	+/- 10.00%
	Lead	1000	969.0	96.9	ug/L	+/- 10.00%
	Magnesium	50000	51190	102	ug/L	+/- 10.00%
	Manganese	1000	1036	104	ug/L	+/- 10.00%
	Nickel	1000	986.4	98.6	ug/L	+/- 10.00%
	Potassium	10000	10140	101	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-CCV1	Selenium	1000	1010	101	ug/L	+/- 10.00%
	Silver	500.0	492.1	98.4	ug/L	+/- 10.00%
	Sodium	50000	51500	103	ug/L	+/- 10.00%
	Thallium	1000	985.2	98.5	ug/L	+/- 10.00%
	Vanadium	1000	1013	101	ug/L	+/- 10.00%
	Zinc	1000	1016	102	ug/L	+/- 10.00%
2J30316-CCV4	Aluminum	10000	10090	101	ug/L	+/- 10.00%
	Antimony	1000	1028	103	ug/L	+/- 10.00%
	Arsenic	1000	1038	104	ug/L	+/- 10.00%
	Barium	1000	1006	101	ug/L	+/- 10.00%
	Beryllium	1000	1009	101	ug/L	+/- 10.00%
	Cadmium	1000	1043	104	ug/L	+/- 10.00%
	Calcium	50000	51700	103	ug/L	+/- 10.00%
	Chromium	1000	998.7	99.9	ug/L	+/- 10.00%
	Cobalt	1000	995.9	99.6	ug/L	+/- 10.00%
	Copper	1000	1007	101	ug/L	+/- 10.00%
	Iron	10000	10400	104	ug/L	+/- 10.00%
	Lead	1000	981.6	98.2	ug/L	+/- 10.00%
	Magnesium	50000	50360	101	ug/L	+/- 10.00%
	Manganese	1000	1048	105	ug/L	+/- 10.00%
	Nickel	1000	1002	100	ug/L	+/- 10.00%
	Potassium	10000	10040	100	ug/L	+/- 10.00%
	Selenium	1000	1030	103	ug/L	+/- 10.00%
	Silver	500.0	496.9	99.4	ug/L	+/- 10.00%
	Sodium	50000	51880	104	ug/L	+/- 10.00%
	Thallium	1000	1001	100	ug/L	+/- 10.00%
	Vanadium	1000	1004	100	ug/L	+/- 10.00%
	Zinc	1000	1015	101	ug/L	+/- 10.00%
2J30316-CCV5	Aluminum	10000	10110	101	ug/L	+/- 10.00%
	Antimony	1000	1064	106	ug/L	+/- 10.00%
	Arsenic	1000	1077	108	ug/L	+/- 10.00%
	Barium	1000	1039	104	ug/L	+/- 10.00%
	Beryllium	1000	1026	103	ug/L	+/- 10.00%
	Cadmium	1000	1058	106	ug/L	+/- 10.00%
	Calcium	50000	50880	102	ug/L	+/- 10.00%
	Chromium	1000	1015	102	ug/L	+/- 10.00%
	Cobalt	1000	1015	101	ug/L	+/- 10.00%
	Copper	1000	1033	103	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-CCV5	Iron	10000	10430	104	ug/L	+/- 10.00%
	Lead	1000	1002	100	ug/L	+/- 10.00%
	Magnesium	50000	49600	99.2	ug/L	+/- 10.00%
	Manganese	1000	1036	104	ug/L	+/- 10.00%
	Nickel	1000	1029	103	ug/L	+/- 10.00%
	Potassium	10000	10050	100	ug/L	+/- 10.00%
	Selenium	1000	1062	106	ug/L	+/- 10.00%
	Silver	500.0	500.0	100	ug/L	+/- 10.00%
	Sodium	50000	51140	102	ug/L	+/- 10.00%
	Thallium	1000	1011	101	ug/L	+/- 10.00%
	Vanadium	1000	1028	103	ug/L	+/- 10.00%
	Zinc	1000	1034	103	ug/L	+/- 10.00%
2J30316-CCV6	Aluminum	10000	9891	98.9	ug/L	+/- 10.00%
	Antimony	1000	1070	107	ug/L	+/- 10.00%
	Arsenic	**1000**	**1106**	**111** OL	**ug/L**	+/- 10.00%
	Barium	1000	1049	105	ug/L	+/- 10.00%
	Beryllium	1000	1017	102	ug/L	+/- 10.00%
	Cadmium	1000	1028	103	ug/L	+/- 10.00%
	Calcium	50000	48700	97.4	ug/L	+/- 10.00%
	Chromium	1000	1007	101	ug/L	+/- 10.00%
	Cobalt	1000	998.6	99.9	ug/L	+/- 10.00%
	Copper	1000	1073	107	ug/L	+/- 10.00%
	Iron	10000	10090	101	ug/L	+/- 10.00%
	Lead	1000	985.4	98.5	ug/L	+/- 10.00%
	Magnesium	50000	47150	94.3	ug/L	+/- 10.00%
	Manganese	1000	1008	101	ug/L	+/- 10.00%
	Nickel	1000	1033	103	ug/L	+/- 10.00%
	Potassium	10000	9846	98.5	ug/L	+/- 10.00%
	Selenium	1000	1051	105	ug/L	+/- 10.00%
	Silver	500.0	485.4	97.1	ug/L	+/- 10.00%
	Sodium	50000	49030	98.1	ug/L	+/- 10.00%
	Thallium	1000	976.5	97.7	ug/L	+/- 10.00%
	Vanadium	1000	1011	101	ug/L	+/- 10.00%
	Zinc	1000	1004	100	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2304001
Sequence: 2J30413

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30413-ICV1	Mercury	4.000	4.356	109	ug/L	+/- 20.00%
2J30413-CCV1	Mercury	2.000	2.189	109	ug/L	+/- 20.00%
2J30413-CCV2	Mercury	2.000	2.061	103	ug/L	+/- 20.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2291004

Sequence: 2J29110

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J29110-CRL1	Iron (dissolved)	60.00	64.82	108	ug/L	80 - 120
	Manganese (dissolved)	6.000	6.475	108	ug/L	80 - 120

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2303002

Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J30316-CRL1	Aluminum	100.0	97.46	97.5	ug/L	80 - 120
	Antimony	8.000	8.744	109	ug/L	80 - 120
	Barium	10.00	10.19	102	ug/L	80 - 120
	Beryllium	2.000	2.032	102	ug/L	80 - 120
	Cadmium	2.000	2.010	100	ug/L	80 - 120
	Calcium	2000	2035	102	ug/L	80 - 120
	Chromium	4.000	4.099	102	ug/L	80 - 120
	Cobalt	10.00	9.501	95.0	ug/L	80 - 120
	Copper	8.000	8.463	106	ug/L	80 - 120
	Iron	60.00	64.98	108	ug/L	80 - 120
	Lead	3.000	3.001	100	ug/L	80 - 120
	Magnesium	3000	3040	101	ug/L	80 - 120
	Manganese	6.000	6.319	105	ug/L	80 - 120
	Nickel	6.000	5.710	95.2	ug/L	80 - 120
	Potassium	3000	2978	99.2	ug/L	80 - 120
	Silver	2.000	1.788	89.4	ug/L	80 - 120
	Sodium	3000	2964	98.8	ug/L	80 - 120
	Thallium	4.000	3.922	98.1	ug/L	80 - 120
	Vanadium	10.00	10.09	101	ug/L	80 - 120
	Zinc	10.00	9.836	98.4	ug/L	80 - 120
2J30316-CRL2	Arsenic	5.000	4.397	87.9	ug/L	80 - 120
	Selenium	5.000	5.176	104	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29110
Calibration: 2291004

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29110-ICB1	Iron (dissolved)	1.866	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	-0.03475	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB1	Iron (dissolved)	1.48	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0143	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB3	Iron (dissolved)	8.29	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.132	3.00	15.0	ug/L	U	SW6010C
2J17017-BLK1	Iron (dissolved)	9.80	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.128	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB4	Iron (dissolved)	2.21	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0918	3.00	15.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-ICB1	Aluminum	-7.920	50.0	200	ug/L	U	SW6010C
	Antimony	0.01102	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.3140	3.00	10.0	ug/L	U	SW6010C
	Barium	0.01948	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.06545	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.03210	1.00	5.00	ug/L	U	SW6010C
	Calcium	2.540	1000	5000	ug/L	U	SW6010C
	Chromium	-0.008500	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.05513	5.00	12.5	ug/L	U	SW6010C
	Copper	0.8476	4.00	10.0	ug/L	U	SW6010C
	Iron	5.984	30.0	100	ug/L	U	SW6010C
	Lead	-0.07753	1.50	3.00	ug/L	U	SW6010C
	Magnesium	0.7400	1000	5000	ug/L	U	SW6010C
	Manganese	-0.05246	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.1583	3.00	10.0	ug/L	U	SW6010C
	Potassium	-16.73	1000	5000	ug/L	U	SW6010C
	Selenium	0.4348	3.00	5.00	ug/L	U	SW6010C
	Silver	0.08098	1.00	3.00	ug/L	U	SW6010C
	Sodium	-4.590	1000	5000	ug/L	U	SW6010C
	Thallium	0.4652	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.1075	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.02533	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB1	Aluminum	-7.73	50.0	200	ug/L	U	SW6010C
	Antimony	0.271	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.143	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0618	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.00370	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0348	1.00	5.00	ug/L	U	SW6010C
	Calcium	-0.770	1000	5000	ug/L	U	SW6010C
	Chromium	0.250	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.150	5.00	12.5	ug/L	U	SW6010C
	Copper	1.18	4.00	10.0	ug/L	U	SW6010C
	Iron	0.758	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-CCB1	Lead	-0.127	1.50	3.00	ug/L	U	SW6010C
	Magnesium	6.76	1000	5000	ug/L	U	SW6010C
	Manganese	-0.00744	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.322	3.00	10.0	ug/L	U	SW6010C
	Potassium	-13.5	1000	5000	ug/L	U	SW6010C
	Selenium	-0.0372	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.0259	1.00	3.00	ug/L	U	SW6010C
	Sodium	-1.17	1000	5000	ug/L	U	SW6010C
	Thallium	0.334	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.299	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.0530	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB4	Aluminum	-8.28	50.0	200	ug/L	U	SW6010C
	Antimony	-0.0132	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.550	3.00	10.0	ug/L	U	SW6010C
	Barium	0.186	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.150	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0979	1.00	5.00	ug/L	U	SW6010C
	Calcium	12.9	1000	5000	ug/L	U	SW6010C
	Chromium	0.0675	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0778	5.00	12.5	ug/L	U	SW6010C
	Copper	1.28	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.14	30.0	100	ug/L	U	SW6010C
	Lead	-0.198	1.50	3.00	ug/L	U	SW6010C
	Magnesium	14.4	1000	5000	ug/L	U	SW6010C
	Manganese	0.0406	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.106	3.00	10.0	ug/L	U	SW6010C
	Potassium	-2.66	1000	5000	ug/L	U	SW6010C
	Selenium	0.323	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.0102	1.00	3.00	ug/L	U	SW6010C
	Sodium	81.9	1000	5000	ug/L	U	SW6010C
	Thallium	-0.219	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.361	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.0376	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J26010-BLK1	Aluminum	-2.43	50.0	200	ug/L	U	SW6010C
	Antimony	0.314	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.651	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0370	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.105	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0944	1.00	5.00	ug/L	U	SW6010C
	Calcium	18.6	1000	5000	ug/L	U	SW6010C
	Chromium	0.270	2.00	10.0	ug/L	U	SW6010C
	Cobalt	-0.0257	5.00	12.5	ug/L	U	SW6010C
	Copper	1.22	4.00	10.0	ug/L	U	SW6010C
	Iron	-0.436	30.0	100	ug/L	U	SW6010C
	Lead	0.221	1.50	3.00	ug/L	U	SW6010C
	Magnesium	15.4	1000	5000	ug/L	U	SW6010C
	Manganese	0.0677	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.259	3.00	10.0	ug/L	U	SW6010C
	Potassium	8.80	1000	5000	ug/L	U	SW6010C
	Selenium	0.0494	3.00	5.00	ug/L	U	SW6010C
	Silver	0.0702	1.00	3.00	ug/L	U	SW6010C
	Sodium	68.8	1000	5000	ug/L	U	SW6010C
	Thallium	-0.302	3.00	8.00	ug/L	U	SW6010C
	Vanadium	-0.153	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.231	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB5	Aluminum	-13.0	50.0	200	ug/L	U	SW6010C
	Antimony	0.426	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.653	3.00	10.0	ug/L	U	SW6010C
	Barium	0.298	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.129	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.182	1.00	5.00	ug/L	U	SW6010C
	Calcium	14.8	1000	5000	ug/L	U	SW6010C
	Chromium	0.340	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0967	5.00	12.5	ug/L	U	SW6010C
	Copper	1.09	4.00	10.0	ug/L	U	SW6010C
	Iron	0.151	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-CCB5	Lead	0.393	1.50	3.00	ug/L	U	SW6010C
	Magnesium	11.0	1000	5000	ug/L	U	SW6010C
	Manganese	0.161	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.160	3.00	10.0	ug/L	U	SW6010C
	Potassium	3.74	1000	5000	ug/L	U	SW6010C
	Selenium	1.16	3.00	5.00	ug/L	U	SW6010C
	Silver	0.0364	1.00	3.00	ug/L	U	SW6010C
	Sodium	24.6	1000	5000	ug/L	U	SW6010C
	Thallium	0.347	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.270	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.116	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB6	Aluminum	-9.67	50.0	200	ug/L	U	SW6010C
	Antimony	-0.668	5.00	15.0	ug/L	U	SW6010C
	Arsenic	1.10	3.00	10.0	ug/L	U	SW6010C
	Barium	0.151	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.103	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.136	1.00	5.00	ug/L	U	SW6010C
	Calcium	52.2	1000	5000	ug/L	U	SW6010C
	Chromium	0.143	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.238	5.00	12.5	ug/L	U	SW6010C
	Copper	0.110	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.14	30.0	100	ug/L	U	SW6010C
	Lead	-0.692	1.50	3.00	ug/L	U	SW6010C
	Magnesium	16.2	1000	5000	ug/L	U	SW6010C
	Manganese	0.150	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.00734	3.00	10.0	ug/L	U	SW6010C
	Potassium	58.1	1000	5000	ug/L	U	SW6010C
	Selenium	0.926	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.292	1.00	3.00	ug/L	U	SW6010C
	Sodium	291	1000	5000	ug/L	U	SW6010C
	Thallium	0.457	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.182	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.138	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30413
Calibration: 2304001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30413-ICB1	Mercury	0.02571	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB1	Mercury	0.0177	0.0800	0.200	ug/L	U	SW7470A
2J27920-BLK1	Mercury	0.0356	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB2	Mercury	0.0267	0.0800	0.200	ug/L	U	SW7470A

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17017 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-10-10/12	I210138-01	10/17/12 10:58	50.00	50.00
PEN-44-19-10/12	1210138-03	10/17/12 10:58	50.00	50.00
PEN-44-13-10/12	1210138-05	10/17/12 10:58	50.00	50.00
PEN-44-11-10/12	1210138-07	10/17/12 10:58	50.00	50.00
PEN-44-12-10/12	1210138-09	10/17/12 10:58	50.00	50.00
PEN-44-14-10/12	1210138-11	10/17/12 10:58	50.00	50.00
Blank	2J17017-BLK1	10/17/12 10:58	50.00	50.00
LCS	2J17017-BS1	10/17/12 10:58	50.00	50.00

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J26010 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-19-10/12	1210138-02	10/26/12 09:00	50.00	50.00
PEN-44-13-10/12	1210138-04	10/26/12 09:00	50.00	50.00
PEN-44-11-10/12	1210138-06	10/26/12 09:00	50.00	50.00
PEN-44-12-10/12	1210138-08	10/26/12 09:00	50.00	50.00
PEN-44-14-10/12	1210138-10	10/26/12 09:00	50.00	50.00
Blank	2J26010-BLK1	10/26/12 09:00	50.00	50.00
LCS	2J26010-BS1	10/26/12 09:00	50.00	50.00

PREPARATION BATCH SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J27920 Batch Matrix: Water Preparation: pMercury-W SW 7470A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-19-10/12	1210138-02	10/27/12 00:00	30.00	30.00
PEN-44-13-10/12	1210138-04	10/27/12 00:00	30.00	30.00
PEN-44-11-10/12	1210138-06	10/27/12 00:00	30.00	30.00
PEN-44-12-10/12	1210138-08	10/27/12 00:00	30.00	30.00
PEN-44-14-10/12	1210138-10	10/27/12 00:00	30.00	30.00
Blank	2J27920-BLK1	10/27/12 00:00	30.00	30.00
LCS	2J27920-BS1	10/27/12 00:00	30.00	30.00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29110	Instrument:	ME-ICP
Calibration:	2291004		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29110-CAL1	10-17-12A-001	10/17/12 09:32
Cal Standard	2J29110-CAL2	10-17-12A-002	10/17/12 09:36
Cal Standard	2J29110-CAL3	10-17-12A-003	10/17/12 09:41
Cal Standard	2J29110-CAL4	10-17-12A-004	10/17/12 09:45
Cal Standard	2J29110-CAL5	10-17-12A-005	10/17/12 09:50
Cal Standard	2J29110-CAL6	10-17-12A-006	10/17/12 09:55
Cal Standard	2J29110-CAL7	10-17-12A-007	10/17/12 10:01
Cal Standard	2J29110-CAL8	10-17-12A-008	10/17/12 10:06
Initial Cal Check	2J29110-ICV1	10-17-12B-001	10/17/12 10:38
Initial Cal Blank	2J29110-ICB1	10-17-12B-002	10/17/12 10:45
Instrument RL Check	2J29110-CRL1	10-17-12B-004	10/17/12 10:56
Interference Check A	2J29110-IFA1	10-17-12B-007	10/17/12 11:11
Interference Check B	2J29110-IFB1	10-17-12B-008	10/17/12 11:16
Calibration Check	2J29110-CCV1	10-17-12B-010	10/17/12 11:27
Calibration Blank	2J29110-CCB1	10-17-12B-011	10/17/12 11:34
Calibration Check	2J29110-CCV3	10-17-12E-029	10/17/12 13:54
Calibration Blank	2J29110-CCB3	10-17-12E-030	10/17/12 14:02
Blank	2J17017-BLK1	101712C-001	10/17/12 14:09
LCS	2J17017-BS1	101712C-002	10/17/12 14:13
PEN-44-10-10/12	1210138-01	101712C-007	10/17/12 14:38
PEN-44-19-10/12	1210138-03	101712C-008	10/17/12 14:42
PEN-44-13-10/12	1210138-05	101712C-009	10/17/12 14:47
PEN-44-11-10/12	1210138-07	101712C-010	10/17/12 14:51
PEN-44-12-10/12	1210138-09	101712C-011	10/17/12 14:56
PEN-44-14-10/12	1210138-11	101712C-012	10/17/12 15:00
Calibration Check	2J29110-CCV4	101712C-043	10/17/12 17:31
Calibration Blank	2J29110-CCB4	101712C-044	10/17/12 17:38

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30316	Instrument:	ME-ICP
Calibration:	2303002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30316-CAL1	10-29-12A-002	10/29/12 09:53
Cal Standard	2J30316-CAL2	10-29-12A-003	10/29/12 09:57
Cal Standard	2J30316-CAL3	10-29-12A-004	10/29/12 10:02
Cal Standard	2J30316-CAL4	10-29-12A-005	10/29/12 10:06
Cal Standard	2J30316-CAL5	10-29-12A-006	10/29/12 10:11
Cal Standard	2J30316-CAL6	10-29-12A-007	10/29/12 10:16
Cal Standard	2J30316-CAL7	10-29-12A-008	10/29/12 10:21
Cal Standard	2J30316-CAL8	10-29-12A-009	10/29/12 10:26
Initial Cal Check	2J30316-ICV1	10-29-12B-001	10/29/12 11:01
Initial Cal Blank	2J30316-ICB1	10-29-12B-002	10/29/12 11:18
Instrument RL Check	2J30316-CRL1	10-29-12B-003	10/29/12 11:23
Instrument RL Check	2J30316-CRL2	10-29-12B-005	10/29/12 11:32
Interference Check A	2J30316-IFA1	10-29-12B-006	10/29/12 11:37
Interference Check B	2J30316-IFB1	10-29-12B-007	10/29/12 11:42
Calibration Check	2J30316-CCV1	10-29-12B-009	10/29/12 11:52
Calibration Blank	2J30316-CCB1	10-29-12B-010	10/29/12 11:59
Calibration Check	2J30316-CCV4	102912C-031	10/29/12 15:49
Calibration Blank	2J30316-CCB4	102912C-032	10/29/12 15:56
Blank	2J26010-BLK1	102912C-033	10/29/12 16:01
LCS	2J26010-BS1	102912C-034	10/29/12 16:05
Calibration Check	2J30316-CCV5	102912D-001	10/29/12 17:17
Calibration Blank	2J30316-CCB5	102912D-002	10/29/12 17:24
PEN-44-19-10/12	1210138-02	102912D-008	10/29/12 17:52
PEN-44-13-10/12	1210138-04	102912D-009	10/29/12 17:56
PEN-44-11-10/12	1210138-06	102912D-010	10/29/12 18:01
PEN-44-12-10/12	1210138-08	102912D-011	10/29/12 18:05
PEN-44-14-10/12	1210138-10	102912D-012	10/29/12 18:10
Calibration Check	2J30316-CCV6	102912D-015	10/29/12 18:25
Calibration Blank	2J30316-CCB6	102912D-016	10/29/12 18:33

ANALYSIS SEQUENCE SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30413
Instrument: ME-FIMS
Calibration: 2304001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30413-CAL1	COPY103012W-001	10/29/12 14:21
Cal Standard	2J30413-CAL2	COPY103012W-002	10/29/12 14:22
Cal Standard	2J30413-CAL3	COPY103012W-003	10/29/12 14:23
Cal Standard	2J30413-CAL4	COPY103012W-004	10/29/12 14:24
Cal Standard	2J30413-CAL5	COPY103012W-005	10/29/12 14:26
Cal Standard	2J30413-CAL6	COPY103012W-006	10/29/12 14:27
Cal Standard	2J30413-CAL7	COPY103012W-007	10/29/12 14:28
Cal Standard	2J30413-CAL8	COPY103012W-008	10/29/12 14:29
Initial Cal Check	2J30413-ICV1	COPY103012W-009	10/29/12 14:31
Initial Cal Blank	2J30413-ICB1	COPY103012W-010	10/29/12 14:32
Calibration Check	2J30413-CCV1	COPY103012W-027	10/29/12 14:52
Calibration Blank	2J30413-CCB1	COPY103012W-028	10/29/12 14:54
LCS	2J27920-BS1	COPY103012W-033	10/29/12 15:01
Blank	2J27920-BLK1	COPY103012W-034	10/29/12 15:02
PEN-44-19-10/12	1210138-02	COPY103012W-037	10/29/12 15:06
PEN-44-13-10/12	1210138-04	COPY103012W-038	10/29/12 15:07
PEN-44-11-10/12	1210138-06	COPY103012W-039	10/29/12 15:08
PEN-44-12-10/12	1210138-08	COPY103012W-040	10/29/12 15:09
PEN-44-14-10/12	1210138-10	COPY103012W-041	10/29/12 15:10
Calibration Check	2J30413-CCV2	COPY103012W-042	10/29/12 15:12
Calibration Blank	2J30413-CCB2	COPY103012W-043	10/29/12 15:13

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2E13609

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2E13609-ICV1	Chloride	4.800	4.613	96.1	mg/L	+/- 10.00%
	Nitrate as N	3.616	3.464	95.8	mg/L	+/- 10.00%
	Nitrite as N	4.864	4.659	95.8	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.62	98.4	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2138003
Sequence: 2E13809

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2E13809-CCV1	Chemical Oxygen Demand	100.0	95.76	95.8	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2138003
Sequence: 2J30308

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30308-CCV1	Chemical Oxygen Demand	100.0	102.2	102	mg/L	+/- 10.00%
2J30308-CCV2	Chemical Oxygen Demand	400.0	398.9	99.7	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210138
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2J30508

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30508-CCV1	Chloride	25.00	26.10	104	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.546	102	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.555	102	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.44	106	mg/L	+/- 10.00%
2J30508-CCV2	Chloride	25.00	26.46	106	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.586	103	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.681	107	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.94	108	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: WC-IC

Calibration: 2136002

Sequence: 2J30508

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J30508-CRL2	Nitrite as N	0.1000	0.1130	113	mg/L	75 - 125
2J30508-CRL3	Chloride	2.500	2.679	107	mg/L	75 - 125
	Nitrate as N	0.2500	0.2690	108	mg/L	75 - 125
	Sulfate as SO4	2.500	2.244	89.8	mg/L	75 - 125

METHOD BLANKS

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J13001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J13001-BLK1	Biochemical Oxygen Demand	-0.622	2.00	2.00	mg/L	U	SM5210B

METHOD BLANKS

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J13003

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J13003-BLK1	Chloride	0.00	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

METHOD BLANKS

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J26005

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J26005-BLK1	Alkalinity, Total (as CACO3)	0.00	1.00	1.00	mg/L	U	SM2320B

METHOD BLANKS

E410.4

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J29919

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29919-BLK1	Chemical Oxygen Demand	-5.29	20.0	60.0	mg/L	U	E410.4

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2E13609
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2E13609-ICB1	Chloride	0.000	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.000	0.330	2.50	mg/L	U	SW9056

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30308
Calibration: 2138003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30308-CCB1	Chemical Oxygen Demand	-7.40	20.0	60.0	mg/L	U	E410.4
2J30308-CCB2	Chemical Oxygen Demand	-7.40	20.0	60.0	mg/L	U	E410.4

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30508
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30508-CCB1	Chloride	0.00	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056
2J30508-CCB2	Chloride	0.00	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

PREPARATION BATCH SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J13001 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-10-10/12	1210138-01	10/13/12 08:11	250.00	250.00
PEN-44-19-10/12	1210138-02	10/13/12 08:11	250.00	250.00
PEN-44-13-10/12	1210138-04	10/13/12 08:11	250.00	250.00
PEN-44-11-10/12	1210138-06	10/13/12 08:11	250.00	250.00
PEN-44-12-10/12	1210138-08	10/13/12 08:11	250.00	250.00
PEN-44-14-10/12	1210138-10	10/13/12 08:11	250.00	250.00
Blank	2J13001-BLK1	10/13/12 08:11	250.00	250.00
LCS	2J13001-BS1	10/13/12 08:11	5.00	250.00

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J13003 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-10-10/12	1210138-01	10/13/12 11:16	5.00	5.00
PEN-44-19-10/12	1210138-02	10/13/12 11:16	5.00	5.00
PEN-44-13-10/12	1210138-04	10/13/12 11:16	5.00	5.00
PEN-44-11-10/12	1210138-06	10/13/12 11:16	5.00	5.00
PEN-44-12-10/12	1210138-08	10/13/12 11:16	5.00	5.00
PEN-44-14-10/12	1210138-10	10/13/12 11:16	5.00	5.00
Blank	2J13003-BLK1	10/13/12 11:16	5.00	5.00
LCS	2J13003-BS1	10/13/12 11:16	5.00	5.00

PREPARATION BATCH SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J26005 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-10-10/12	1210138-01	10/26/12 07:55	25.00	25.00
PEN-44-19-10/12	1210138-02	10/26/12 07:55	25.00	25.00
PEN-44-13-10/12	1210138-04	10/26/12 07:55	25.00	25.00
PEN-44-11-10/12	1210138-06	10/26/12 07:55	25.00	25.00
PEN-44-12-10/12	1210138-08	10/26/12 07:55	25.00	25.00
PEN-44-14-10/12	1210138-10	10/26/12 07:55	25.00	25.00
Blank	2J26005-BLK1	10/26/12 07:55	25.00	25.00
LCS	2J26005-BS1	10/26/12 07:55	5.00	25.00
PEN-44-10-10/12	2J26005-MS1	10/26/12 07:55	22.50	25.00
PEN-44-10-10/12	2J26005-MSD1	10/26/12 07:55	22.50	25.00

PREPARATION BATCH SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J29919 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-10-10/12	1210138-01	10/29/12 05:49	2.00	2.00
PEN-44-19-10/12	1210138-02	10/29/12 05:49	2.00	2.00
PEN-44-13-10/12	1210138-04	10/29/12 05:49	2.00	2.00
PEN-44-11-10/12	1210138-06	10/29/12 05:49	2.00	2.00
PEN-44-12-10/12	1210138-08	10/29/12 05:49	2.00	2.00
PEN-44-14-10/12	1210138-10	10/29/12 05:49	2.00	2.00
Blank	2J29919-BLK1	10/29/12 05:49	2.00	2.00
LCS	2J29919-BS1	10/29/12 05:49	2.00	2.00

ANALYSIS SEQUENCE SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: 1210138

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J26005-BS1	102612-002	10/26/12 09:10
Blank	2J26005-BLK1	102612-003	10/26/12 09:19
PEN-44-10-10/12	2J26005-MS1	102612-004	10/26/12 09:25
PEN-44-10-10/12	2J26005-MSD1	102612-005	10/26/12 09:31

ANALYSIS SEQUENCE SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Sequence:

Calibration:

SDG: 1210138

Project: NAS Pensacola CTO 0079 Site 44

Instrument:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J13001-BS1		10/19/12 06:33
Blank	2J13001-BLK1		10/19/12 06:33

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2E13609	Instrument:	WC-IC
Calibration:	2136002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13609-CAL1	051412-010	05/14/12 18:29
Cal Standard	2E13609-CAL2	051412-011	05/14/12 18:46
Cal Standard	2E13609-CAL3	051412-012	05/14/12 19:04
Cal Standard	2E13609-CAL4	051412-013	05/14/12 19:21
Cal Standard	2E13609-CAL5	051412-014	05/14/12 19:38
Cal Standard	2E13609-CAL6	051412-015	05/14/12 19:56
Cal Standard	2E13609-CAL7	051412-016	05/14/12 20:13
Cal Standard	2E13609-CAL8	051412-017	05/14/12 20:31
Initial Cal Check	2E13609-ICV1	051412-018	05/14/12 20:48
Initial Cal Blank	2E13609-ICB1	051412-019	05/14/12 21:06

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210138
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2E13809
Instrument: WC-Gensys
Calibration: 2138003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13809-CAL2	051412-003	05/14/12 11:44
Cal Standard	2E13809-CAL1	051412-002	05/14/12 11:44
Cal Standard	2E13809-CAL4	051412-005	05/14/12 11:45
Cal Standard	2E13809-CAL3	051412-004	05/14/12 11:45
Cal Standard	2E13809-CAL6	051412-007	05/14/12 11:46
Cal Standard	2E13809-CAL5	051412-006	05/14/12 11:46
Cal Standard	2E13809-CAL7	051412-008	05/14/12 11:47
Calibration Check	2E13809-CCV1	051612-002	05/17/12 06:20

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30308	Instrument:	WC-Gensys
Calibration:	2138003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J30308-CCV1		10/29/12 11:05
Calibration Blank	2J30308-CCB1		10/29/12 11:06
LCS	2J29919-BS1	102912-004	10/29/12 11:06
Blank	2J29919-BLK1	102912-005	10/29/12 11:07
PEN-44-19-10/12	1210138-02	102912-009	10/29/12 11:08
PEN-44-10-10/12	1210138-01	102912-008	10/29/12 11:08
PEN-44-13-10/12	1210138-04	102912-010	10/29/12 11:09
PEN-44-12-10/12	1210138-08	102912-012	10/29/12 11:10
PEN-44-11-10/12	1210138-06	102912-011	10/29/12 11:10
PEN-44-14-10/12	1210138-10	102912-013	10/29/12 11:11
Calibration Check	2J30308-CCV2		10/29/12 11:12
Calibration Blank	2J30308-CCB2		10/29/12 11:13

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	1210138
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30508	Instrument:	WC-IC
Calibration:	2136002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J30508-CCV1	101312-003	10/13/12 12:25
Calibration Blank	2J30508-CCB1	101312-004	10/13/12 12:42
Instrument RL Check	2J30508-CRL2	101312-006	10/13/12 13:17
Instrument RL Check	2J30508-CRL3	101312-007	10/13/12 13:35
LCS	2J13003-BS1	101312-008	10/13/12 13:52
Blank	2J13003-BLK1	101312-009	10/13/12 14:09
PEN-44-10-10/12	1210138-01	101312-010	10/13/12 14:27
PEN-44-19-10/12	1210138-02	101312-011	10/13/12 14:44
PEN-44-13-10/12	1210138-04	101312-012	10/13/12 15:02
PEN-44-11-10/12	1210138-06	101312-013	10/13/12 15:19
PEN-44-12-10/12	1210138-08	101312-014	10/13/12 15:36
PEN-44-14-10/12	1210138-10	101312-015	10/13/12 15:54
Calibration Check	2J30508-CCV2	101312-016	10/13/12 16:11
Calibration Blank	2J30508-CCB2	101312-017	10/13/12 16:29

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 13, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- VOC/SVOC/PAH/PCB/PEST**
CTO 0079, NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 1210154

SAMPLES: 17/Aqueous/VOC

FD10141201*	FD10151201	PEN-3221-04-10/12
PEN-3221-06-10/12	PEN-3221-08-10/12	PEN-44-15-10/12
PEN-44-16-10/12*	PEN-44-17-10/12*	PEN-44-18-10/12
PEN-44-20-10/12*	PEN-44-21-10/12	PEN-44-22-10/12*
PEN-44-23-10/12*	PEN-44-24-10/12	PEN-44-25-10/12*
PEN-44-26-10/12*	TB	

8/Aqueous/SVOC/PAH/PCB/PEST

FD0151201	PEN-3221-04-10/12	PEN-3221-06-10/12
PEN-3221-08-10/12	PEN-44-15-10/12	PEN-44-18-10/12
PEN-44-21-10/12	PEN-44-24-10/12	

OVERVIEW

The sample set for CTO 0079 NAS PENSACOLA, SDG 1210154 consists of sixteen (16) aqueous environmental samples and trip blank analyzed for Volatile Organic Compounds (VOCs). Samples denoted with an (*) were analyzed for the select VOCs, cis 1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride. Eight (8) aqueous environmental samples were also analyzed for semivolatile organic compounds (SVOCs), Polycyclic Aromatic Hydrocarbons (PAH), pesticides (PEST) and polychlorinated biphenyls (PCB). There are two field duplicate pairs contained within this SDG: PEN-44-26-10/12 and FD0141201 and PEN-44-18-10/12 and FD10151201.

The samples were collected by Tetra Tech on October 14 and 15, 2012 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8260B, 8270D, 8082A and 8081A analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
• Initial/Continuing Calibrations
• Laboratory Method Blank Results
* • Detection Limits
* • Field Duplicate Precision

The symbol (*) indicates that quality control criteria were met for this parameter. Issues affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The continuing calibration percent differences (%Ds) for acetone, carbon tetrachloride, dichlorodifluoromethane and vinyl chloride were greater than the 20% quality control limit on October 23, 2012 @ 23:13 on instrument MS-VOA6. The nondetected results of the aforementioned analytes were qualified as estimated (UJ) in the affected trip blank.

The continuing calibration %Ds for carbon disulfide, chloromethane, dichlorodifluoromethane, 1,2,3-trichlorobenzene, 1,1,2-trichlorotrifluoroethane and vinyl chloride were greater than the 20% quality control limit on October 24, 2012 @ 8:06 on instrument MS-VOA5. The nondetected results of the aforementioned analytes were qualified as estimated (UJ).

SVOC

The continuing calibration %Ds for hexachlorocyclopentadiene and N-nitrosodimethylamine were greater than the 20% quality control limit on October 22, 2012 @ 18:16 on instrument MS-BNA-1. The nondetected hexachlorocyclopentadiene and N-nitrosodimethylamine results were qualified as estimated (UJ).

PEST

The PEST laboratory method blank associated with batch 2J17029 contained a contaminant.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
Gamma-chlordane	0.00881	0.044

An action level of 5X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot and dilution factors were taken into consideration when applying the action level. Positive results less than the action level were qualified as (U).

ADDITIONAL COMMENTS

Sample PEN-3221-04-10/12 did not have any analyses marked on the chain of custody. The laboratory contacted the project manager and the analyses were determined. No action was taken.

The continuing calibration verification (CCV) %Ds for 4,4'-DDD and delta-BHC exceeded the 20% quality control limit on October 19, 2012 @4:28 on column 1. In addition, the CCV %D for 4,4'-DDD exceeded the 20% quality control limit on column 1 on October 19, 2012 @8:55. No action was taken on the nondetected 4,4'-DDD and delta-BHC results.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Continuing calibration %D noncompliances were found in the VOC and SVOC fractions. Gamma-chlordane was detected in the laboratory method blank.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	FD10141201			FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12		
SDG: 1210154	LAB_ID	1210154-04			1210154-14			1210154-08			1210154-06		
FRACTION: OV	SAMP_DATE	10/14/2012			10/15/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-26-10/12			PEN-44-18-10/12								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.25	U		0.25	U		0.25	U	
1,1,2,2-TETRACHLOROETHANE					0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROETHANE					0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
1,1-DICHLOROETHANE					1.16			0.25	U		0.25	U	
1,1-DICHLOROETHENE					0.25	U		0.25	U		0.25	U	
1,2,3-TRICHLOROBENZENE					0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
1,2,4-TRICHLOROBENZENE					0.25	U		0.25	U		0.25	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.25	U		0.25	U		0.25	U	
1,2-DICHLOROBENZENE					0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE					0.25	U		0.25	U		0.25	U	
1,2-DICHLOROPROPANE					0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE					0.25	U		0.25	U		0.25	U	
1,4-DICHLOROBENZENE					0.25	U		0.25	U		0.25	U	
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					1.25	U		1.25	U		1.25	U	
4-METHYL-2-PENTANONE					1.25	U		1.25	U		1.25	U	
ACETONE					2.5	U		2.5	U		2.5	U	
BENZENE					0.25	U		0.25	U		0.25	U	
BROMOCHLOROMETHANE					0.25	U		0.25	U		0.25	U	
BROMODICHLOROMETHANE					0.25	U		0.25	U		0.25	U	
BROMOFORM					0.25	U		0.25	U		0.25	U	
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CARBON TETRACHLORIDE					0.25	U		0.25	U		0.25	U	
CHLOROBENZENE					0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE					0.25	U		0.25	U		0.25	U	
CHLOROETHANE					0.5	U		0.5	U		0.5	U	
CHLOROFORM					0.25	U		0.25	U		0.25	U	
CHLOROMETHANE					0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CIS-1,2-DICHLOROETHENE		0.25	U		2.56	J	G	0.25	U		0.25	U	
CIS-1,3-DICHLOROPROPENE					0.25	U		0.25	U		0.25	U	
CYCLOHEXANE					0.25	U		0.25	U		0.25	U	
DICHLORODIFLUOROMETHANE					0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ETHYLBENZENE					0.25	U		0.25	U		0.25	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-08-10/12			PEN-44-15-10/12			PEN-44-16-10/12			PEN-44-17-10/12		
SDG: 1210154	LAB_ID	1210154-07			1210154-20			1210154-01			1210154-05		
FRACTION: OV	SAMP_DATE	10/14/2012			10/15/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.25	U		0.25	U							
1,1,2,2-TETRACHLOROETHANE	0.25	U		0.25	U							
1,1,2-TRICHLOROETHANE	0.25	U		0.25	U							
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	UJ	C	0.5	UJ	C						
1,1-DICHLOROETHANE	0.25	U		0.25	U							
1,1-DICHLOROETHENE	0.25	U		0.25	U							
1,2,3-TRICHLOROBENZENE	0.25	UJ	C	0.25	UJ	C						
1,2,4-TRICHLOROBENZENE	0.25	U		0.25	U							
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U		0.5	U							
1,2-DIBROMOETHANE	0.25	U		0.25	U							
1,2-DICHLOROBENZENE	0.25	U		0.25	U							
1,2-DICHLOROETHANE	0.25	U		0.25	U							
1,2-DICHLOROPROPANE	0.25	U		0.25	U							
1,3-DICHLOROBENZENE	0.25	U		0.25	U							
1,4-DICHLOROBENZENE	0.25	U		0.25	U							
2-BUTANONE	2.5	U		2.5	U							
2-HEXANONE	1.25	U		1.25	U							
4-METHYL-2-PENTANONE	1.25	U		1.25	U							
ACETONE	2.5	U		2.5	U							
BENZENE	0.25	U		0.25	U							
BROMOCHLOROMETHANE	0.25	U		0.25	U							
BROMODICHLOROMETHANE	0.25	U		0.25	U							
BROMOFORM	0.25	U		0.25	U							
BROMOMETHANE	0.5	U		0.5	U							
CARBON DISULFIDE	0.25	UJ	C	0.25	UJ	C						
CARBON TETRACHLORIDE	0.25	U		0.25	U							
CHLOROBENZENE	0.25	U		0.25	U							
CHLORODIBROMOMETHANE	0.25	U		0.25	U							
CHLOROETHANE	0.5	U		0.5	U							
CHLOROFORM	0.25	U		0.25	U							
CHLOROMETHANE	0.25	UJ	C	0.25	UJ	C						
CIS-1,2-DICHLOROETHENE	0.25	UJ	G	0.77	J	P	0.25	U		0.25	U	
CIS-1,3-DICHLOROPROPENE	0.25	U		0.25	U							
CYCLOHEXANE	0.25	U		0.25	U							
DICHLORODIFLUOROMETHANE	0.5	UJ	C	0.5	UJ	C						
ETHYLBENZENE	0.25	U		0.25	U							

PROJ_NO: 00784	NSAMPLE	PEN-44-18-10/12			PEN-44-20-10/12			PEN-44-21-10/12			PEN-44-22-10/12		
SDG: 1210154	LAB_ID	1210154-12			1210154-02			1210154-16			1210154-23		
FRACTION: OV	SAMP_DATE	10/15/2012			10/14/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.25	U					0.5	U				
1,1,2,2-TETRACHLOROETHANE	0.25	U					0.5	U				
1,1,2-TRICHLOROETHANE	0.25	U					0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	UJ	C				1	UJ	C			
1,1-DICHLOROETHANE	1.07						0.5	U				
1,1-DICHLOROETHENE	0.25	U					0.5	U				
1,2,3-TRICHLOROBENZENE	0.25	UJ	C				0.5	UJ	C			
1,2,4-TRICHLOROBENZENE	0.25	U					0.5	U				
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U					1	U				
1,2-DIBROMOETHANE	0.25	U					0.5	U				
1,2-DICHLOROBENZENE	0.25	U					0.5	U				
1,2-DICHLOROETHANE	0.25	U					0.5	U				
1,2-DICHLOROPROPANE	0.25	U					0.5	U				
1,3-DICHLOROBENZENE	0.25	U					0.5	U				
1,4-DICHLOROBENZENE	0.25	U					0.5	U				
2-BUTANONE	2.5	U					5	U				
2-HEXANONE	1.25	U					2.5	U				
4-METHYL-2-PENTANONE	1.25	U					2.5	U				
ACETONE	2.5	U					5	U				
BENZENE	0.25	U					0.5	U				
BROMOCHLOROMETHANE	0.25	U					0.5	U				
BROMODICHLOROMETHANE	0.25	U					0.5	U				
BROMOFORM	0.25	U					0.5	U				
BROMOMETHANE	0.5	U					1	U				
CARBON DISULFIDE	0.25	UJ	C				0.5	UJ	C			
CARBON TETRACHLORIDE	0.25	U					0.5	U				
CHLOROBENZENE	0.25	U					0.5	U				
CHLORODIBROMOMETHANE	0.25	U					0.5	U				
CHLOROETHANE	0.5	U					1	U				
CHLOROFORM	0.25	U					0.5	U				
CHLOROMETHANE	0.25	UJ	C				0.5	UJ	C			
CIS-1,2-DICHLOROETHENE	2.81			0.25	U		6.22			0.32	J	P
CIS-1,3-DICHLOROPROPENE	0.25	U					0.5	U				
CYCLOHEXANE	0.25	U					0.5	U				
DICHLORODIFLUOROMETHANE	0.5	UJ	C				1	UJ	C			
ETHYLBENZENE	0.25	U					0.5	U				

PROJ_NO: 00784	NSAMPLE	PEN-44-23-10/12			PEN-44-24-10/12			PEN-44-25-10/12			PEN-44-26-10/12		
SDG: 1210154	LAB_ID	1210154-10			1210154-18			1210154-22			1210154-03		
FRACTION: OV	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.25	U							
1,1,2,2-TETRACHLOROETHANE					0.25	U							
1,1,2-TRICHLOROETHANE					0.25	U							
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	UJ	C						
1,1-DICHLOROETHANE					0.25	U							
1,1-DICHLOROETHENE					0.25	U							
1,2,3-TRICHLOROBENZENE					0.25	UJ	C						
1,2,4-TRICHLOROBENZENE					0.25	U							
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U							
1,2-DIBROMOETHANE					0.25	U							
1,2-DICHLOROBENZENE					0.25	U							
1,2-DICHLOROETHANE					0.25	U							
1,2-DICHLOROPROPANE					0.25	U							
1,3-DICHLOROBENZENE					0.25	U							
1,4-DICHLOROBENZENE					0.25	U							
2-BUTANONE					2.5	U							
2-HEXANONE					1.25	U							
4-METHYL-2-PENTANONE					1.25	U							
ACETONE					2.5	U							
BENZENE					0.25	U							
BROMOCHLOROMETHANE					0.25	U							
BROMODICHLOROMETHANE					0.25	U							
BROMOFORM					0.25	U							
BROMOMETHANE					0.5	U							
CARBON DISULFIDE					0.25	UJ	C						
CARBON TETRACHLORIDE					0.25	U							
CHLOROBENZENE					0.25	U							
CHLORODIBROMOMETHANE					0.25	U							
CHLOROETHANE					0.5	U							
CHLOROFORM					0.25	U							
CHLOROMETHANE					0.25	UJ	C						
CIS-1,2-DICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
CIS-1,3-DICHLOROPROPENE					0.25	U							
CYCLOHEXANE					0.25	U							
DICHLORODIFLUOROMETHANE					0.5	UJ	C						
ETHYLBENZENE					0.25	U							

PROJ_NO: 00784	NSAMPLE	TB
SDG: 1210154	LAB_ID	1210154-09
FRACTION: OV	SAMP_DATE	10/14/2012
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.25	U	
1,1,2,2-TETRACHLOROETHANE	0.25	U	
1,1,2-TRICHLOROETHANE	0.25	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U	
1,1-DICHLOROETHANE	0.25	U	
1,1-DICHLOROETHENE	0.25	U	
1,2,3-TRICHLOROBENZENE	0.25	U	
1,2,4-TRICHLOROBENZENE	0.25	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U	
1,2-DIBROMOETHANE	0.25	U	
1,2-DICHLOROBENZENE	0.25	U	
1,2-DICHLOROETHANE	0.25	U	
1,2-DICHLOROPROPANE	0.25	U	
1,3-DICHLOROBENZENE	0.25	U	
1,4-DICHLOROBENZENE	0.25	U	
2-BUTANONE	2.5	U	
2-HEXANONE	1.25	U	
4-METHYL-2-PENTANONE	1.25	U	
ACETONE	2.5	UJ	C
BENZENE	0.25	U	
BROMOCHLOROMETHANE	0.25	U	
BROMODICHLOROMETHANE	0.25	U	
BROMOFORM	0.25	U	
BROMOMETHANE	0.5	U	
CARBON DISULFIDE	0.25	U	
CARBON TETRACHLORIDE	0.25	UJ	C
CHLOROBENZENE	0.25	U	
CHLORODIBROMOMETHANE	0.25	U	
CHLOROETHANE	0.5	U	
CHLOROFORM	0.25	U	
CHLOROMETHANE	0.25	U	
CIS-1,2-DICHLOROETHENE	0.25	U	
CIS-1,3-DICHLOROPROPENE	0.25	U	
CYCLOHEXANE	0.25	U	
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.25	U	

PROJ_NO: 00784	NSAMPLE	FD10141201			FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12		
SDG: 1210154	LAB_ID	1210154-04			1210154-14			1210154-08			1210154-06		
FRACTION: OV	SAMP_DATE	10/14/2012			10/15/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-26-10/12			PEN-44-18-10/12								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE					0.25	U		0.25	U		0.25	U	
M+P-XYLENES					0.5	U		0.5	U		0.5	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.25	U		0.25	U		0.25	U	
METHYL TERT-BUTYL ETHER					0.25	U		0.25	U		0.25	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.25	U		0.25	U		0.25	U	
STYRENE					0.25	U		0.25	U		0.25	U	
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOLUENE					0.25	U		0.25	U		0.25	U	
TOTAL XYLENES					0.75	U		0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE					0.25	U		0.25	U		0.25	U	
TRANS-1,3-DICHLOROPROPENE					0.25	U		0.25	U		0.25	U	
TRICHLOROETHENE		0.25	U		0.39	J	P	0.25	U		0.25	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C

PROJ_NO: 00784	NSAMPLE	PEN-3221-08-10/12			PEN-44-15-10/12			PEN-44-16-10/12			PEN-44-17-10/12		
SDG: 1210154	LAB_ID	1210154-07			1210154-20			1210154-01			1210154-05		
FRACTION: OV	SAMP_DATE	10/14/2012			10/15/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE		0.25	U		0.25	U							
M+P-XYLENES		0.5	U		0.5	U							
METHYL ACETATE		0.5	U		0.5	U							
METHYL CYCLOHEXANE		0.25	U		0.25	U							
METHYL TERT-BUTYL ETHER		0.25	U		0.25	U							
METHYLENE CHLORIDE		0.5	U		0.5	U							
O-XYLENE		0.25	U		0.25	U							
STYRENE		0.25	U		0.25	U							
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOLUENE		0.25	U		0.25	U							
TOTAL XYLENES		0.75	U		0.75	U							
TRANS-1,2-DICHLOROETHENE		0.25	U		0.25	U							
TRANS-1,3-DICHLOROPROPENE		0.25	U		0.25	U							
TRICHLOROETHENE		0.25	U		7.93			0.25	U		0.25	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U							
VINYL CHLORIDE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C

PROJ_NO: 00784	NSAMPLE	PEN-44-18-10/12			PEN-44-20-10/12			PEN-44-21-10/12			PEN-44-22-10/12		
SDG: 1210154	LAB_ID	1210154-12			1210154-02			1210154-16			1210154-23		
FRACTION: OV	SAMP_DATE	10/15/2012			10/14/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE		0.25	U					0.5	U				
M+P-XYLENES		0.5	U					1	U				
METHYL ACETATE		0.5	U					1	U				
METHYL CYCLOHEXANE		0.25	U					0.5	U				
METHYL TERT-BUTYL ETHER		0.25	U					0.5	U				
METHYLENE CHLORIDE		0.5	U					1	U				
O-XYLENE		0.25	U					0.5	U				
STYRENE		0.25	U					0.5	U				
TETRACHLOROETHENE		0.25	U		0.25	U		0.5	U		0.25	U	
TOLUENE		0.25	U					0.5	U				
TOTAL XYLENES		0.75	U					1.5	U				
TRANS-1,2-DICHLOROETHENE		0.25	U					0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.25	U					0.5	U				
TRICHLOROETHENE		0.37	J	P	0.25	U		109			6.07		
TRICHLOROFLUOROMETHANE		0.5	U					1	U				
VINYL CHLORIDE		0.25	UJ	C	0.25	UJ	C	0.5	UJ	C	0.25	UJ	C

PROJ_NO: 00784	NSAMPLE	PEN-44-23-10/12			PEN-44-24-10/12			PEN-44-25-10/12			PEN-44-26-10/12		
SDG: 1210154	LAB_ID	1210154-10			1210154-18			1210154-22			1210154-03		
FRACTION: OV	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE					0.25	U							
M+P-XYLENES					0.5	U							
METHYL ACETATE					0.5	U							
METHYL CYCLOHEXANE					0.25	U							
METHYL TERT-BUTYL ETHER					0.25	U							
METHYLENE CHLORIDE					0.5	U							
O-XYLENE					0.25	U							
STYRENE					0.25	U							
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOLUENE					0.25	U							
TOTAL XYLENES					0.75	U							
TRANS-1,2-DICHLOROETHENE					0.25	U							
TRANS-1,3-DICHLOROPROPENE					0.25	U							
TRICHLOROETHENE		0.25	U		0.42	J	P	1.66			0.25	U	
TRICHLOROFLUOROMETHANE					0.5	U							
VINYL CHLORIDE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C

PROJ_NO: 00784	NSAMPLE	TB
SDG: 1210154	LAB_ID	1210154-09
FRACTION: OV	SAMP_DATE	10/14/2012
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
ISOPROPYLBENZENE	0.25	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.5	U	
METHYL CYCLOHEXANE	0.25	U	
METHYL TERT-BUTYL ETHER	0.25	U	
METHYLENE CHLORIDE	0.5	U	
O-XYLENE	0.25	U	
STYRENE	0.25	U	
TETRACHLOROETHENE	0.25	U	
TOLUENE	0.25	U	
TOTAL XYLENES	0.75	U	
TRANS-1,2-DICHLOROETHENE	0.25	U	
TRANS-1,3-DICHLOROPROPENE	0.25	U	
TRICHLOROETHENE	0.25	U	
TRICHLOROFLUOROMETHANE	0.5	U	
VINYL CHLORIDE	0.25	UJ	C

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12			PEN-3221-08-10/12		
SDG: 1210154	LAB_ID	1210154-14			1210154-08			1210154-06			1210154-07		
FRACTION: OS	SAMP_DATE	10/15/2012			10/14/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1-BIPHENYL		1.16	U		1.16	U		1.16	U		1.16	U	
1,2,4,5-TETRACHLOROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		1.16	U		1.16	U		1.16	U		1.16	U	
2,3,4,6-TETRACHLOROPHENOL		2.31	U		2.31	U		2.31	U		2.31	U	
2,4,5-TRICHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2,4,6-TRICHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2,4-DICHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2,4-DIMETHYLPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
2,4-DINITROPHENOL		7.71	U		7.71	U		7.71	U		7.71	U	
2,4-DINITROTOLUENE		1.16	U		1.16	U		1.16	U		1.16	U	
2,6-DINITROTOLUENE		1.16	U		1.16	U		1.16	U		1.16	U	
2-CHLORONAPHTHALENE		1.16	U		1.16	U		1.16	U		1.16	U	
2-CHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2-METHYLPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
2-NITROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
3,3'-DICHLOROBENZIDINE		1.16	U		1.16	U		1.16	U		1.16	U	
3-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
4,6-DINITRO-2-METHYLPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
4-BROMOPHENYL PHENYL ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLORO-3-METHYLPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLOROANILINE		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLOROPHENYL PHENYL ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
4-METHYLPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
4-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
4-NITROPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
ATRAZINE		1.16	U		1.16	U		1.16	U		1.16	U	
BENZALDEHYDE		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHOXY)METHANE		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHYL)ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-ETHYLHEXYL)PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
BUTYL BENZYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
CAPROLACTAM		1.16	U		1.16	U		1.16	U		1.16	U	
CARBAZOLE		1.16	U		1.16	U		1.16	U		1.16	U	
DIBENZOFURAN		1.16	U		1.16	U		1.16	U		1.16	U	
DIETHYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12			PEN-44-24-10/12		
SDG: 1210154	LAB_ID	1210154-20			1210154-12			1210154-16			1210154-18		
FRACTION: OS	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1-BIPHENYL		1.16	U		1.16	U		1.16	U		1.16	U	
1,2,4,5-TETRACHLOROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		1.16	U		1.16	U		1.16	U		1.16	U	
2,3,4,6-TETRACHLOROPHENOL		2.31	U		2.31	U		2.31	U		2.31	U	
2,4,5-TRICHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2,4,6-TRICHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2,4-DICHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2,4-DIMETHYLPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
2,4-DINITROPHENOL		7.71	U		7.71	U		7.71	U		7.71	U	
2,4-DINITROTOLUENE		1.16	U		1.16	U		1.16	U		1.16	U	
2,6-DINITROTOLUENE		1.16	U		1.16	U		1.16	U		1.16	U	
2-CHLORONAPHTHALENE		1.16	U		1.16	U		1.16	U		1.16	U	
2-CHLOROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2-METHYLPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
2-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
2-NITROPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
3,3'-DICHLOROBENZIDINE		1.16	U		1.16	U		1.16	U		1.16	U	
3-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
4,6-DINITRO-2-METHYLPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
4-BROMOPHENYL PHENYL ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLORO-3-METHYLPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLOROANILINE		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLOROPHENYL PHENYL ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
4-METHYLPHENOL		1.16	U		1.16	U		1.16	U		1.16	U	
4-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
4-NITROPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
ATRAZINE		1.16	U		1.16	U		1.16	U		1.16	U	
BENZALDEHYDE		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHOXY)METHANE		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHYL)ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-ETHYLHEXYL)PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
BUTYL BENZYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
CAPROLACTAM		1.16	U		1.16	U		1.16	U		1.16	U	
CARBAZOLE		1.16	U		1.16	U		1.16	U		1.16	U	
DIBENZOFURAN		1.16	U		1.16	U		1.16	U		1.16	U	
DIETHYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12			PEN-3221-08-10/12		
SDG: 1210154	LAB_ID	1210154-14			1210154-08			1210154-06			1210154-07		
FRACTION: OS	SAMP_DATE	10/15/2012			10/14/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DIMETHYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
DI-N-BUTYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
DI-N-OCTYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBUTADIENE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROCYCLOPENTADIENE		1.16	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
HEXACHLOROETHANE		1.16	U		1.16	U		1.16	U		1.16	U	
ISOPHORONE		1.16	U		1.16	U		1.16	U		1.16	U	
NITROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
N-NITROSODIMETHYLAMINE		1.16	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
N-NITROSO-DI-N-PROPYLAMINE		1.16	U		1.16	U		1.16	U		1.16	U	
PENTACHLOROPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
PHENOL		1.16	U		1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12			PEN-44-24-10/12		
SDG: 1210154	LAB_ID	1210154-20			1210154-12			1210154-16			1210154-18		
FRACTION: OS	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DIMETHYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
DI-N-BUTYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
DI-N-OCTYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBUTADIENE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROCYCLOPENTADIENE		1.16	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
HEXACHLOROETHANE		1.16	U		1.16	U		1.16	U		1.16	U	
ISOPHORONE		1.16	U		1.16	U		1.16	U		1.16	U	
NITROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
N-NITROSODIMETHYLAMINE		1.16	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
N-NITROSO-DI-N-PROPYLAMINE		1.16	U		1.16	U		1.16	U		1.16	U	
PENTACHLOROPHENOL		4.63	U		4.63	U		4.63	U		4.63	U	
PHENOL		1.16	U		1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12			PEN-3221-08-10/12		
SDG: 1210154	LAB_ID	1210154-14			1210154-08			1210154-06			1210154-07		
FRACTION: PAH	SAMP_DATE	10/15/2012			10/14/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.598	J	P	0.463	U		0.463	U		0.463	U	
2-METHYLNAPHTHALENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHYLENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
ANTHRACENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(A)ANTHRACENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(A)PYRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(B)FLUORANTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(G,H,I)PERYLENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(K)FLUORANTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
CHRYSENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
DIBENZO(A,H)ANTHRACENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
FLUORANTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
FLUORENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
INDENO(1,2,3-CD)PYRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
NAPHTHALENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
PHENANTHRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
PYRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12			PEN-44-24-10/12		
SDG: 1210154	LAB_ID	1210154-20			1210154-12			1210154-16			1210154-18		
FRACTION: PAH	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.463	U		0.635	J	P	0.463	U		0.463	U	
2-METHYLNAPHTHALENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHYLENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
ANTHRACENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(A)ANTHRACENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(A)PYRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(B)FLUORANTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(G,H,I)PERYLENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
BENZO(K)FLUORANTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
CHRYSENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
DIBENZO(A,H)ANTHRACENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
FLUORANTHENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
FLUORENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
INDENO(1,2,3-CD)PYRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
NAPHTHALENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
PHENANTHRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	
PYRENE		0.0463	U		0.0463	U		0.0463	U		0.0463	U	

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12			PEN-3221-08-10/12		
SDG: 1210154	LAB_ID	1210154-14			1210154-08			1210154-06			1210154-07		
FRACTION: PEST	SAMP_DATE	10/15/2012			10/14/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
4,4'-DDD		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
4,4'-DDE		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
4,4'-DDT		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
ALDRIN		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
ALPHA-BHC		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
ALPHA-CHLORDANE		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
BETA-BHC		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
DELTA-BHC		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
DIELDRIN		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
ENDOSULFAN I		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
ENDOSULFAN II		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
ENDOSULFAN SULFATE		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
ENDRIN		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
ENDRIN ALDEHYDE		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
ENDRIN KETONE		0.00472	U		0.00467	U		0.00476	U		0.00467	U	
GAMMA-BHC (LINDANE)		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
GAMMA-CHLORDANE		0.0054	U	A	0.00557	U	A	0.005	U	A	0.00811	U	A
HEPTACHLOR		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
HEPTACHLOR EPOXIDE		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
METHOXYCHLOR		0.00311	U		0.00308	U		0.00314	U		0.00308	U	
TOXAPHENE		0.311	U		0.308	U		0.314	U		0.308	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12			PEN-44-24-10/12		
SDG: 1210154	LAB_ID	1210154-20			1210154-12			1210154-16			1210154-18		
FRACTION: PEST	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
4,4'-DDD		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
4,4'-DDE		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
4,4'-DDT		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
ALDRIN		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
ALPHA-BHC		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
ALPHA-CHLORDANE		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
BETA-BHC		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
DELTA-BHC		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
DIELDRIN		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
ENDOSULFAN I		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
ENDOSULFAN II		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
ENDOSULFAN SULFATE		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
ENDRIN		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
ENDRIN ALDEHYDE		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
ENDRIN KETONE		0.00481	U		0.00467	U		0.00481	U		0.00481	U	
GAMMA-BHC (LINDANE)		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
GAMMA-CHLORDANE		0.00317	U		0.00308	U		0.00484	U	A	0.00504	U	A
HEPTACHLOR		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
HEPTACHLOR EPOXIDE		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
METHOXYCHLOR		0.00317	U		0.00308	U		0.00317	U		0.00317	U	
TOXAPHENE		0.317	U		0.308	U		0.317	U		0.317	U	

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12			PEN-3221-08-10/12		
SDG: 1210154	LAB_ID	1210154-14			1210154-08			1210154-06			1210154-07		
FRACTION: PCB	SAMP_DATE	10/15/2012			10/14/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.113	U		0.112	U		0.114	U		0.112	U	
AROCLOR-1221		0.113	U		0.112	U		0.114	U		0.112	U	
AROCLOR-1232		0.113	U		0.112	U		0.114	U		0.112	U	
AROCLOR-1242		0.113	U		0.112	U		0.114	U		0.112	U	
AROCLOR-1248		0.113	U		0.112	U		0.114	U		0.112	U	
AROCLOR-1254		0.113	U		0.112	U		0.114	U		0.112	U	
AROCLOR-1260		0.113	U		0.112	U		0.114	U		0.112	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12			PEN-44-24-10/12		
SDG: 1210154	LAB_ID	1210154-20			1210154-12			1210154-16			1210154-18		
FRACTION: PCB	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.115	U		0.112	U		0.115	U		0.115	U	
AROCLOR-1221		0.115	U		0.112	U		0.115	U		0.115	U	
AROCLOR-1232		0.115	U		0.112	U		0.115	U		0.115	U	
AROCLOR-1242		0.115	U		0.112	U		0.115	U		0.115	U	
AROCLOR-1248		0.115	U		0.112	U		0.115	U		0.115	U	
AROCLOR-1254		0.115	U		0.112	U		0.115	U		0.115	U	
AROCLOR-1260		0.115	U		0.112	U		0.115	U		0.115	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

FD10141201

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-04 File ID: 1015404.D

Sampled: 10/14/12 00:00 Prepared: 10/24/12 11:49 Analyzed: 10/24/12 11:49

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.04	93.5	75 - 120	I
Dibromofluoromethane	30.00	30.39	101	85 - 115	
1,2-Dichloroethane-d4	30.00	31.12	104	70 - 120	
Toluene-d8	30.00	29.72	99.1	85 - 120	I

ANALYSIS DATA SHEET

FD10151201

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-14	File ID:	1015414.D
Sampled:	10/15/12 00:00	Prepared:	10/24/12 15:03	Analyzed:	10/24/12 15:03
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane	1.16	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene	2.56	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-14 File ID: 1015414.D

Sampled: 10/15/12 00:00 Prepared: 10/24/12 15:03 Analyzed: 10/24/12 15:03

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	0.390	0.250	0.500	1.00	I
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.37	94.6	75 - 120	I
Dibromofluoromethane	30.00	30.25	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.27	101	70 - 120	
Toluene-d8	30.00	29.80	99.3	85 - 120	I

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-08	File ID:	1015408.D
Sampled:	10/14/12 15:45	Prepared:	10/24/12 13:40	Analyzed:	10/24/12 13:40
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-08 File ID: 1015408.D

Sampled: 10/14/12 15:45 Prepared: 10/24/12 13:40 Analyzed: 10/24/12 13:40

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.45	94.8	75 - 120	I
Dibromofluoromethane	30.00	30.12	100	85 - 115	
1.2-Dichloroethane-d4	30.00	31.84	106	70 - 120	
Toluene-d8	30.00	30.07	100	85 - 120	

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-06	File ID:	1015406.D
Sampled:	10/14/12 16:26	Prepared:	10/24/12 12:44	Analyzed:	10/24/12 12:44
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-06 File ID: 1015406.D

Sampled: 10/14/12 16:26 Prepared: 10/24/12 12:44 Analyzed: 10/24/12 12:44

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.99	93.3	75 - 120	I
Dibromofluoromethane	30.00	30.41	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.85	103	70 - 120	
Toluene-d8	30.00	29.87	99.6	85 - 120	I

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-07	File ID:	1015407.D
Sampled:	10/14/12 13:20	Prepared:	10/24/12 13:12	Analyzed:	10/24/12 13:12
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-07	File ID:	1015407.D
Sampled:	10/14/12 13:20	Prepared:	10/24/12 13:12	Analyzed:	10/24/12 13:12
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.80	96.0	75 - 120	I
Dibromofluoromethane	30.00	30.21	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.96	103	70 - 120	
Toluene-d8	30.00	29.94	99.8	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-20 File ID: 1015420.D

Sampled: 10/15/12 12:18 Prepared: 10/24/12 15:59 Analyzed: 10/24/12 15:59

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.770	0.250	0.500	1.00	I
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-20 File ID: 1015420.D

Sampled: 10/15/12 12:18 Prepared: 10/24/12 15:59 Analyzed: 10/24/12 15:59

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	7.93	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.51	95.0	75 - 120	I
Dibromofluoromethane	30.00	30.87	103	85 - 115	
1,2-Dichloroethane-d4	30.00	30.67	102	70 - 120	
Toluene-d8	30.00	30.21	101	85 - 120	

ANALYSIS DATA SHEET

PEN-44-16-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-01	File ID:	1015401.D
Sampled:	10/14/12 13:10	Prepared:	10/24/12 10:26	Analyzed:	10/24/12 10:26
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.28	97.6	75 - 120	I
Dibromofluoromethane	30.00	30.72	102	85 - 115	
1.2-Dichloroethane-d4	30.00	31.22	104	70 - 120	
Toluene-d8	30.00	29.38	97.9	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-17-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-05 File ID: 1015405.D

Sampled: 10/14/12 15:30 Prepared: 10/24/12 12:16 Analyzed: 10/24/12 12:16

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.99	93.3	75 - 120	I
Dibromofluoromethane	30.00	35.01	117	85 - 115	*
1,2-Dichloroethane-d4	30.00	35.95	120	70 - 120	
Toluene-d8	30.00	29.65	98.8	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-12	File ID:	1015412.D
Sampled:	10/15/12 09:51	Prepared:	10/24/12 14:35	Analyzed:	10/24/12 14:35
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane	1.07	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene	2.81	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-12 File ID: 1015412.D

Sampled: 10/15/12 09:51 Prepared: 10/24/12 14:35 Analyzed: 10/24/12 14:35

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	0.370	0.250	0.500	1.00	I
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.00	93.3	75 - 120	I
Dibromofluoromethane	30.00	29.97	99.9	85 - 115	I
1,2-Dichloroethane-d4	30.00	30.96	103	70 - 120	
Toluene-d8	30.00	29.82	99.4	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-20-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-02 File ID: 1015402.D

Sampled: 10/14/12 13:54 Prepared: 10/24/12 10:53 Analyzed: 10/24/12 10:53

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.74	95.8	75 - 120	I
Dibromofluoromethane	30.00	30.18	101	85 - 115	
1,2-Dichloroethane-d4	30.00	31.34	104	70 - 120	
Toluene-d8	30.00	29.83	99.4	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-16	File ID:	1015416D.D
Sampled:	10/15/12 10:27	Prepared:	10/24/12 17:22	Analyzed:	10/24/12 17:22
Solids:		Preparation:	5030B	Dilution:	2
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		5.00	10.0	20.0	U
71-43-2	Benzene		0.500	1.00	2.00	U
74-97-5	Bromochloromethane		0.500	1.00	2.00	U
75-27-4	Bromodichloromethane		0.500	1.00	2.00	U
75-25-2	Bromoform		0.500	1.00	2.00	U
74-83-9	Bromomethane		1.00	2.00	4.00	U
78-93-3	2-Butanone		5.00	10.0	20.0	U
75-15-0	Carbon disulfide		0.500	1.00	2.00	X, U
56-23-5	Carbon tetrachloride		0.500	1.00	2.00	U
108-90-7	Chlorobenzene		0.500	1.00	2.00	U
75-00-3	Chloroethane		1.00	2.00	4.00	U
67-66-3	Chloroform		0.500	1.00	2.00	U
74-87-3	Chloromethane		0.500	1.00	2.00	X, U
110-82-7	Cyclohexane		0.500	1.00	2.00	U
124-48-1	Dibromochloromethane		0.500	1.00	2.00	U
96-12-8	1,2-Dibromo-3-chloropropane		1.00	2.00	4.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.500	1.00	2.00	U
95-50-1	1,2-Dichlorobenzene		0.500	1.00	2.00	U
541-73-1	1,3-Dichlorobenzene		0.500	1.00	2.00	U
106-46-7	1,4-Dichlorobenzene		0.500	1.00	2.00	U
75-71-8	Dichlorodifluoromethane		1.00	2.00	4.00	X, U
75-34-3	1,1-Dichloroethane		0.500	1.00	2.00	U
107-06-2	1,2-Dichloroethane		0.500	1.00	2.00	U
75-35-4	1,1-Dichloroethene		0.500	1.00	2.00	U
156-59-2	cis-1,2-Dichloroethene	6.22	0.500	1.00	2.00	D
156-60-5	trans-1,2-Dichloroethene		0.500	1.00	2.00	U
78-87-5	1,2-Dichloropropane		0.500	1.00	2.00	U
10061-01-5	cis-1,3-Dichloropropene		0.500	1.00	2.00	U
10061-02-6	trans-1,3-Dichloropropene		0.500	1.00	2.00	U
100-41-4	Ethylbenzene		0.500	1.00	2.00	U
591-78-6	2-Hexanone		2.50	5.00	10.0	U
98-82-8	Isopropylbenzene		0.500	1.00	2.00	U
75-09-2	Methylene chloride		1.00	2.00	4.00	U
79-20-9	Methyl Acetate		1.00	2.00	4.00	U
108-87-2	Methylcyclohexane		0.500	1.00	2.00	U
108-10-1	4-Methyl-2-pentanone		2.50	5.00	10.0	U
1634-04-4	Methyl t-Butyl Ether		0.500	1.00	2.00	U
100-42-5	Styrene		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.500	1.00	2.00	U

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-16 File ID: 1015416D.D

Sampled: 10/15/12 10:27 Prepared: 10/24/12 17:22 Analyzed: 10/24/12 17:22

Solids: Preparation: 5030B Dilution: 2

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.500	1.00	2.00	U
108-88-3	Toluene		0.500	1.00	2.00	U
87-61-6	1,2,3-Trichlorobenzene		0.500	1.00	2.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.500	1.00	2.00	U
79-00-5	1,1,2-Trichloroethane		0.500	1.00	2.00	U
71-55-6	1,1,1-Trichloroethane		0.500	1.00	2.00	U
79-01-6	Trichloroethene	109	0.500	1.00	2.00	D
75-69-4	Trichlorofluoromethane		1.00	2.00	4.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		1.00	2.00	4.00	X, U
75-01-4	Vinyl chloride		0.500	1.00	2.00	X, U
108-38-3/106-42-	m,p-Xylene		1.00	2.00	4.00	U
95-47-6	o-Xylene		0.500	1.00	2.00	U
1330-20-7	Xylenes (total)		1.50	3.00	6.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.71	92.4	75 - 120	I
Dibromofluoromethane	30.00	29.84	99.5	85 - 115	I
1,2-Dichloroethane-d4	30.00	31.28	104	70 - 120	
Toluene-d8	30.00	29.84	99.5	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-22-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210154-23
File ID: 1015423.D
Sampled: 10/15/12 14:15
Prepared: 10/24/12 16:54
Analyzed: 10/24/12 16:54
Solids:
Preparation: 5030B
Dilution: 1
Batch: 2J24005
Sequence: 2J29903
Calibration: 2291001
Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene	0.320	0.250	0.500	1.00	I
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene	6.07	0.250	0.500	1.00	
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.54	95.1	75 - 120	I
Dibromofluoromethane	30.00	30.41	101	85 - 115	
1,2-Dichloroethane-d4	30.00	31.36	105	70 - 120	
Toluene-d8	30.00	30.65	102	85 - 120	

ANALYSIS DATA SHEET

PEN-44-23-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210154-10
File ID: 1015410.D
Sampled: 10/15/12 08:52
Prepared: 10/24/12 14:08
Analyzed: 10/24/12 14:08
Solids:
Preparation: 5030B
Dilution: 1
Batch: 2J24005
Sequence: 2J29903
Calibration: 2291001
Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.49	95.0	75 - 120	I
Dibromofluoromethane	30.00	30.30	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.26	101	70 - 120	
Toluene-d8	30.00	29.68	98.9	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-18 File ID: 1015418.D

Sampled: 10/15/12 12:15 Prepared: 10/24/12 15:31 Analyzed: 10/24/12 15:31

Solids: Preparation: 5030B Dilution: - 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-18	File ID:	1015418.D
Sampled:	10/15/12 12:15	Prepared:	10/24/12 15:31	Analyzed:	10/24/12 15:31
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J24005	Sequence:	2J29903	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	0.420	0.250	0.500	1.00	I
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.96	93.2	75 - 120	I
Dibromofluoromethane	30.00	30.19	101	85 - 115	
1,2-Dichloroethane-d4	30.00	31.27	104	70 - 120	
Toluene-d8	30.00	29.76	99.2	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-25-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-22 File ID: 1015422.D

Sampled: 10/15/12 14:00 Prepared: 10/24/12 16:27 Analyzed: 10/24/12 16:27

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene	1.66	0.250	0.500	1.00	
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.19	94.0	75 - 120	I
Dibromofluoromethane	30.00	30.20	101	85 - 115	
1.2-Dichloroethane-d4	30.00	31.49	105	70 - 120	
Toluene-d8	30.00	29.74	99.1	85 - 120	I

ANALYSIS DATA SHEET

PEN-44-26-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-03 File ID: 1015403.D

Sampled: 10/14/12 14:40 Prepared: 10/24/12 11:21 Analyzed: 10/24/12 11:21

Solids: Preparation: 5030B Dilution: 1

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.92	96.4	75 - 120	I
Dibromofluoromethane	30.00	29.49	98.3	85 - 115	I
1,2-Dichloroethane-d4	30.00	30.62	102	70 - 120	
Toluene-d8	30.00	29.58	98.6	85 - 120	I

ANALYSIS DATA SHEET

TB

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-09 File ID: 1015409.D

Sampled: 10/14/12 00:01 Prepared: 10/24/12 01:36 Analyzed: 10/24/12 01:36

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23020 Sequence: 2J29805 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	X, U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

TB

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-09 File ID: 1015409.D

Sampled: 10/14/12 00:01 Prepared: 10/24/12 01:36 Analyzed: 10/24/12 01:36

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23020 Sequence: 2J29805 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.49	105	75 - 120	
Dibromofluoromethane	30.00	32.58	109	85 - 115	
1,2-Dichloroethane-d4	30.00	29.77	99.2	70 - 120	I
Toluene-d8	30.00	30.89	103	85 - 120	

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-14 File ID: 1015414.D

Sampled: 10/15/12 00:00 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 23:43

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-14 File ID: 1015414.D

Sampled: 10/15/12 00:00 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 23:43

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	24.99	54.0	50 - 110	
2-Fluorophenol	92.59	21.13	22.8	20 - 110	
Nitrobenzene-d5	46.30	26.58	57.4	40 - 110	
Phenol-d6	92.59	12.55	13.6	0 - 110	
Terphenyl-d14	46.30	36.22	78.2	50 - 135	X
2,4,6-Tribromophenol	92.59	64.37	69.5	40 - 125	

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-08	File ID:	1015408.D
Sampled:	10/14/12 15:45	Prepared:	10/19/12 12:23	Analyzed:	10/22/12 22:49
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29718	Calibration:	2272005
				Instrument:	MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-08 File ID: 1015408.D

Sampled: 10/14/12 15:45 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 22:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	34.24	74.0	50 - 110	
2-Fluorophenol	92.59	10.29	11.1	20 - 110	*
Nitrobenzene-d5	46.30	35.40	76.5	40 - 110	
Phenol-d6	92.59	10.12	10.9	0 - 110	
Terphenyl-d14	46.30	44.30	95.7	50 - 135	X
2,4,6-Tribromophenol	92.59	35.64	38.5	40 - 125	*

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-06 File ID: 1015406.D

Sampled: 10/14/12 16:26 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 21:00

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-06 File ID: 1015406.D

Sampled: 10/14/12 16:26 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 21:00

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	42.13	91.0	50 - 110	
2-Fluorophenol	92.59	11.06	11.9	20 - 110	*
Nitrobenzene-d5	46.30	40.46	87.4	40 - 110	
Phenol-d6	92.59	13.26	14.3	0 - 110	
Terphenyl-d14	46.30	46.77	101	50 - 135	X
2,4,6-Tribromophenol	92.59	30.80	33.3	40 - 125	*

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-07	File ID:	1015407.D
Sampled:	10/14/12 13:20	Prepared:	10/19/12 12:23	Analyzed:	10/22/12 21:27
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29718	Calibration:	2272005
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	N, U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	N, U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	N, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-07 File ID: 1015407.D

Sampled: 10/14/12 13:20 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 21:27

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	N, U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	N, U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	N, U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	N, U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	N, U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	N, U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	38.30	82.7	50 - 110	
2-Fluorophenol	92.59	15.80	17.1	20 - 110	*
Nitrobenzene-d5	46.30	37.87	81.8	40 - 110	
Phenol-d6	92.59	14.09	15.2	0 - 110	
Terphenyl-d14	46.30	45.92	99.2	50 - 135	X
2,4,6-Tribromophenol	92.59	46.73	50.5	40 - 125	

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-20	File ID:	1015420.D
Sampled:	10/15/12 12:18	Prepared:	10/19/12 12:23	Analyzed:	10/23/12 01:05
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29718	Calibration:	2272005
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-20 File ID: 1015420.D

Sampled: 10/15/12 12:18 Prepared: 10/19/12 12:23 Analyzed: 10/23/12 01:05

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	38.64	83.5	50 - 110	
2-Fluorophenol	92.59	18.05	19.5	20 - 110	*
Nitrobenzene-d5	46.30	39.43	85.2	40 - 110	
Phenol-d6	92.59	14.33	15.5	0 - 110	
Terphenyl-d14	46.30	46.59	101	50 - 135	X
2,4,6-Tribromophenol	92.59	51.50	55.6	40 - 125	

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-12	File ID:	1015412.D
Sampled:	10/15/12 09:51	Prepared:	10/19/12 12:23	Analyzed:	10/22/12 23:16
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29718	Calibration:	2272005
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-12 File ID: 1015412.D

Sampled: 10/15/12 09:51 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 23:16

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	34.77	75.1	50 - 110	
2-Fluorophenol	92.59	26.07	28.2	20 - 110	
Nitrobenzene-d5	46.30	33.10	71.5	40 - 110	
Phenol-d6	92.59	15.09	16.3	0 - 110	
Terphenyl-d14	46.30	41.75	90.2	50 - 135	X
2,4,6-Tribromophenol	92.59	83.13	89.8	40 - 125	

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-16	File ID:	1015416.D
Sampled:	10/15/12 10:27	Prepared:	10/19/12 12:23	Analyzed:	10/23/12 00:10
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29718	Calibration:	2272005
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-16	File ID:	1015416.D
Sampled:	10/15/12 10:27	Prepared:	10/19/12 12:23	Analyzed:	10/23/12 00:10
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29718	Calibration:	2272005
Instrument:	MS-BNA1				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	35.76	77.2	50 - 110	
2-Fluorophenol	92.59	18.43	19.9	20 - 110	*
Nitrobenzene-d5	46.30	35.54	76.8	40 - 110	
Phenol-d6	92.59	13.83	14.9	0 - 110	
Terphenyl-d14	46.30	43.92	94.9	50 - 135	X
2,4,6-Tribromophenol	92.59	60.29	65.1	40 - 125	

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-18 File ID: 1015418.D

Sampled: 10/15/12 12:15 Prepared: 10/19/12 12:23 Analyzed: 10/23/12 00:38

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	X, U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210154-18
File ID: 1015418.D
Sampled: 10/15/12 12:15
Prepared: 10/19/12 12:23
Analyzed: 10/23/12 00:38
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J19004
Sequence: 2J29718
Calibration: 2272005
Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	41.90	90.5	50 - 110	
2-Fluorophenol	92.59	28.45	30.7	20 - 110	
Nitrobenzene-d5	46.30	40.07	86.6	40 - 110	
Phenol-d6	92.59	17.84	19.3	0 - 110	
Terphenyl-d14	46.30	46.24	99.9	50 - 135	X
2,4,6-Tribromophenol	92.59	85.53	92.4	40 - 125	

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-14 File ID: 1015414.D

Sampled: 10/15/12 00:00 Prepared: 10/19/12 12:23 Analyzed: 10/23/12 01:01

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29710 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane	0.598	0.463	0.926	1.85	Q, 1
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	23.56	50.9	34 - 167	
Terphenyl-d14	46.30	31.96	69.0	34 - 167	
2,4,6-Tribromophenol	92.59	61.06	65.9	34 - 167	

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-08	File ID:	1015408.D
Sampled:	10/14/12 15:45	Prepared:	10/19/12 12:23	Analyzed:	10/23/12 00:04
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29710	Calibration:	2263001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	30.20	65.2	34 - 167	
Terphenyl-d14	46.30	36.10	78.0	34 - 167	
2,4,6-Tribromophenol	92.59	33.04	35.7	34 - 167	

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-06 File ID: 1015406.D

Sampled: 10/14/12 16:26 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 23:06

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29710 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	38.24	82.6	34 - 167	
Terphenyl-d14	46.30	42.14	91.0	34 - 167	
2,4,6-Tribromophenol	92.59	31.54	34.1	34 - 167	

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-07 File ID: 1015407.D

Sampled: 10/14/12 13:20 Prepared: 10/19/12 12:23 Analyzed: 10/22/12 23:35

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29710 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, N, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	35.96	77.7	34 - 167	
Terphenyl-d14	46.30	40.62	87.7	34 - 167	
2,4,6-Tribromophenol	92.59	49.53	53.5	34 - 167	

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-20 File ID: 1015420.D

Sampled: 10/15/12 12:18 Prepared: 10/19/12 12:23 Analyzed: 10/23/12 03:18

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29803 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	30.67	66.3	34 - 167	
Terphenyl-d14	46.30	39.55	85.4	34 - 167	
2,4,6-Tribromophenol	92.59	48.57	52.5	34 - 167	

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-12 File ID: 1015412.D

Sampled: 10/15/12 09:51 Prepared: 10/19/12 12:23 Analyzed: 10/23/12 00:32

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29710 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane	0.635	0.463	0.926	1.85	Q, I
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	30.24	65.3	34 - 167	
Terphenyl-d14	46.30	35.22	76.1	34 - 167	
2,4,6-Tribromophenol	92.59	74.82	80.8	34 - 167	

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-16	File ID:	1015416.D
Sampled:	10/15/12 10:27	Prepared:	10/19/12 12:23	Analyzed:	10/23/12 02:21
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J19004	Sequence:	2J29803	Calibration:	2263001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	30.22	65.3	34 - 167	
Terphenyl-d14	46.30	39.98	86.3	34 - 167	
2,4,6-Tribromophenol	92.59	58.98	63.7	34 - 167	

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-18 File ID: 1015418.D

Sampled: 10/15/12 12:15 Prepared: 10/19/12 12:23 Analyzed: 10/23/12 02:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J19004 Sequence: 2J29803 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	Q, U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	Q, U
120-12-7	Anthracene		0.0463	0.0926	0.185	Q, U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	Q, U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	Q, U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	Q, U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	Q, U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	Q, U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	Q, U
86-73-7	Fluorene		0.0463	0.0926	0.185	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	Q, U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	Q, U
91-20-3	Naphthalene		0.0463	0.0926	0.185	Q, U
85-01-8	Phenanthrene		0.0463	0.185	0.370	Q, U
129-00-0	Pyrene		0.0463	0.0926	0.185	Q, U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	34.36	74.2	34 - 167	
Terphenyl-d14	46.30	39.63	85.6	34 - 167	
2,4,6-Tribromophenol	92.59	78.14	84.4	34 - 167	

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-14 File ID: 070F7001.D

Sampled: 10/15/12 00:00 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 07:39

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00472	0.00943	0.0189	U
72-54-8	4,4'-DDD		0.00472	0.00943	0.0189	UX
50-29-3	4,4'-DDT		0.00472	0.00943	0.0189	U
309-00-2	Aldrin		0.00311	0.00943	0.0189	U
319-84-6	alpha-BHC		0.00311	0.00943	0.0189	U
5103-71-9	alpha-Chlordane		0.00311	0.00943	0.0189	U
319-85-7	beta-BHC		0.00311	0.00943	0.0189	U
319-86-8	delta-BHC		0.00311	0.00943	0.0189	UX
60-57-1	Dieldrin		0.00472	0.00943	0.0189	U
959-98-8	Endosulfan I		0.00311	0.00943	0.0189	U
33213-65-9	Endosulfan II		0.00472	0.00943	0.0189	U
1031-07-8	Endosulfan sulfate		0.00472	0.00943	0.0189	U
72-20-8	Endrin		0.00472	0.00943	0.0189	U
7421-93-4	Endrin aldehyde		0.00472	0.00943	0.0189	U
53494-70-5	Endrin ketone		0.00472	0.00943	0.0189	U
58-89-9	gamma-BHC (Lindane)		0.00311	0.00943	0.0189	U
5103-74-2	gamma-Chlordane [2C]	0.00540	0.00311	0.00943	0.0189	JBP
76-44-8	Heptachlor		0.00311	0.00943	0.0189	U
1024-57-3	Heptachlor epoxide		0.00311	0.00943	0.0189	U
72-43-5	Methoxychlor		0.00311	0.00943	0.0189	U
8001-35-2	Toxaphene		0.311	0.472	0.943	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3508	74.4	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3251	68.9	25 - 140	
Decachlorobiphenyl	0.4717	0.3589	76.1	30 - 135	
Decachlorobiphenyl [2C]	0.4717	0.3446	73.1	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-08	File ID:	068F6801.D
Sampled:	10/14/12 15:45	Prepared:	10/17/12 15:05	Analyzed:	10/19/12 07:01
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17029	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00467	0.00935	0.0187	U
72-54-8	4,4'-DDD		0.00467	0.00935	0.0187	UX
50-29-3	4,4'-DDT		0.00467	0.00935	0.0187	U
309-00-2	Aldrin		0.00308	0.00935	0.0187	U
319-84-6	alpha-BHC		0.00308	0.00935	0.0187	U
5103-71-9	alpha-Chlordane		0.00308	0.00935	0.0187	U
319-85-7	beta-BHC		0.00308	0.00935	0.0187	U
319-86-8	delta-BHC		0.00308	0.00935	0.0187	UX
60-57-1	Dieldrin		0.00467	0.00935	0.0187	U
959-98-8	Endosulfan I		0.00308	0.00935	0.0187	U
33213-65-9	Endosulfan II		0.00467	0.00935	0.0187	U
1031-07-8	Endosulfan sulfate		0.00467	0.00935	0.0187	U
72-20-8	Endrin		0.00467	0.00935	0.0187	U
7421-93-4	Endrin aldehyde		0.00467	0.00935	0.0187	U
53494-70-5	Endrin ketone		0.00467	0.00935	0.0187	U
58-89-9	gamma-BHC (Lindane)		0.00308	0.00935	0.0187	U
5103-74-2	gamma-Chlordane [2C]	0.00557	0.00308	0.00935	0.0187	JB
76-44-8	Heptachlor		0.00308	0.00935	0.0187	U
1024-57-3	Heptachlor epoxide		0.00308	0.00935	0.0187	U
72-43-5	Methoxychlor		0.00308	0.00935	0.0187	U
8001-35-2	Toxaphene		0.308	0.467	0.935	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4673	0.3442	73.7	25 - 140	
Tetrachloro-m-xylene [2C]	0.4673	0.3217	68.9	25 - 140	
Decachlorobiphenyl	0.4673	0.3352	71.7	30 - 135	
Decachlorobiphenyl [2C]	0.4673	0.3183	68.1	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-06	File ID:	054F5401.D
Sampled:	10/14/12 16:26	Prepared:	10/17/12 15:05	Analyzed:	10/19/12 02:33
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17029	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00476	0.00952	0.0190	U
72-54-8	4,4'-DDD		0.00476	0.00952	0.0190	UX
50-29-3	4,4'-DDT		0.00476	0.00952	0.0190	U
309-00-2	Aldrin		0.00314	0.00952	0.0190	U
319-84-6	alpha-BHC		0.00314	0.00952	0.0190	U
5103-71-9	alpha-Chlordane		0.00314	0.00952	0.0190	U
319-85-7	beta-BHC		0.00314	0.00952	0.0190	U
319-86-8	delta-BHC		0.00314	0.00952	0.0190	UX
60-57-1	Dieldrin		0.00476	0.00952	0.0190	U
959-98-8	Endosulfan I		0.00314	0.00952	0.0190	U
33213-65-9	Endosulfan II		0.00476	0.00952	0.0190	U
1031-07-8	Endosulfan sulfate		0.00476	0.00952	0.0190	U
72-20-8	Endrin		0.00476	0.00952	0.0190	U
7421-93-4	Endrin aldehyde		0.00476	0.00952	0.0190	U
53494-70-5	Endrin ketone		0.00476	0.00952	0.0190	U
58-89-9	gamma-BHC (Lindane)		0.00314	0.00952	0.0190	U
5103-74-2	gamma-Chlordane [2C]	0.00500	0.00314	0.00952	0.0190	JB
76-44-8	Heptachlor		0.00314	0.00952	0.0190	U
1024-57-3	Heptachlor epoxide		0.00314	0.00952	0.0190	U
72-43-5	Methoxychlor		0.00314	0.00952	0.0190	U
8001-35-2	Toxaphene		0.314	0.476	0.952	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4762	0.3816	80.1	25 - 140	
Tetrachloro-m-xylene [2C]	0.4762	0.3598	75.6	25 - 140	Y
Decachlorobiphenyl	0.4762	0.3907	82.1	30 - 135	
Decachlorobiphenyl [2C]	0.4762	0.3728	78.3	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-07 File ID: 055F5501.D

Sampled: 10/14/12 13:20 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 02:52

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00467	0.00935	0.0187	U
72-54-8	4,4'-DDD		0.00467	0.00935	0.0187	UX
50-29-3	4,4'-DDT		0.00467	0.00935	0.0187	U
309-00-2	Aldrin		0.00308	0.00935	0.0187	U
319-84-6	alpha-BHC		0.00308	0.00935	0.0187	UN
5103-71-9	alpha-Chlordane		0.00308	0.00935	0.0187	UN
319-85-7	beta-BHC		0.00308	0.00935	0.0187	UN
319-86-8	delta-BHC		0.00308	0.00935	0.0187	UX
60-57-1	Dieldrin		0.00467	0.00935	0.0187	UN
959-98-8	Endosulfan I		0.00308	0.00935	0.0187	UN
33213-65-9	Endosulfan II		0.00467	0.00935	0.0187	U
1031-07-8	Endosulfan sulfate		0.00467	0.00935	0.0187	UNN
72-20-8	Endrin		0.00467	0.00935	0.0187	UN
7421-93-4	Endrin aldehyde		0.00467	0.00935	0.0187	UN
53494-70-5	Endrin ketone		0.00467	0.00935	0.0187	UN
58-89-9	gamma-BHC (Lindane)		0.00308	0.00935	0.0187	U
5103-74-2	gamma-Chlordane [2C]	0.00811	0.00308	0.00935	0.0187	JBPN
76-44-8	Heptachlor		0.00308	0.00935	0.0187	U
1024-57-3	Heptachlor epoxide		0.00308	0.00935	0.0187	UN
72-43-5	Methoxychlor		0.00308	0.00935	0.0187	UN
8001-35-2	Toxaphene		0.308	0.467	0.935	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4673	0.3296	70.5	25 - 140	
Tetrachloro-m-xylene [2C]	0.4673	0.2988	63.9	25 - 140	Y
Decachlorobiphenyl	0.4673	0.3587	76.8	30 - 135	
Decachlorobiphenyl [2C]	0.4673	0.3381	72.4	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-20 File ID: 073F7301.D

Sampled: 10/15/12 12:18 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 08:36

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00481	0.00962	0.0192	U
72-54-8	4,4'-DDD		0.00481	0.00962	0.0192	UX
50-29-3	4,4'-DDT		0.00481	0.00962	0.0192	U
309-00-2	Aldrin		0.00317	0.00962	0.0192	U
319-84-6	alpha-BHC		0.00317	0.00962	0.0192	U
5103-71-9	alpha-Chlordane		0.00317	0.00962	0.0192	U
319-85-7	beta-BHC		0.00317	0.00962	0.0192	U
319-86-8	delta-BHC		0.00317	0.00962	0.0192	UX
60-57-1	Dieldrin		0.00481	0.00962	0.0192	U
959-98-8	Endosulfan I		0.00317	0.00962	0.0192	U
33213-65-9	Endosulfan II		0.00481	0.00962	0.0192	U
1031-07-8	Endosulfan sulfate		0.00481	0.00962	0.0192	U
72-20-8	Endrin		0.00481	0.00962	0.0192	U
7421-93-4	Endrin aldehyde		0.00481	0.00962	0.0192	U
53494-70-5	Endrin ketone		0.00481	0.00962	0.0192	U
58-89-9	gamma-BHC (Lindane)		0.00317	0.00962	0.0192	U
5103-74-2	gamma-Chlordane		0.00317	0.00962	0.0192	U
76-44-8	Heptachlor		0.00317	0.00962	0.0192	U
1024-57-3	Heptachlor epoxide		0.00317	0.00962	0.0192	U
72-43-5	Methoxychlor		0.00317	0.00962	0.0192	U
8001-35-2	Toxaphene		0.317	0.481	0.962	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4808	0.3263	67.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.4808	0.3057	63.6	25 - 140	
Decachlorobiphenyl	0.4808	0.3329	69.2	30 - 135	
Decachlorobiphenyl [2C]	0.4808	0.3184	66.2	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-12 File ID: 069F6901.D

Sampled: 10/15/12 09:51 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 07:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00467	0.00935	0.0187	U
72-54-8	4,4'-DDD		0.00467	0.00935	0.0187	UX
50-29-3	4,4'-DDT		0.00467	0.00935	0.0187	U
309-00-2	Aldrin		0.00308	0.00935	0.0187	U
319-84-6	alpha-BHC		0.00308	0.00935	0.0187	U
5103-71-9	alpha-Chlordane		0.00308	0.00935	0.0187	U
319-85-7	beta-BHC		0.00308	0.00935	0.0187	U
319-86-8	delta-BHC		0.00308	0.00935	0.0187	UX
60-57-1	Dieldrin		0.00467	0.00935	0.0187	U
959-98-8	Endosulfan I		0.00308	0.00935	0.0187	U
33213-65-9	Endosulfan II		0.00467	0.00935	0.0187	U
1031-07-8	Endosulfan sulfate		0.00467	0.00935	0.0187	U
72-20-8	Endrin		0.00467	0.00935	0.0187	U
7421-93-4	Endrin aldehyde		0.00467	0.00935	0.0187	U
53494-70-5	Endrin ketone		0.00467	0.00935	0.0187	U
58-89-9	gamma-BHC (Lindane)		0.00308	0.00935	0.0187	U
5103-74-2	gamma-Chlordane		0.00308	0.00935	0.0187	U
76-44-8	Heptachlor		0.00308	0.00935	0.0187	U
1024-57-3	Heptachlor epoxide		0.00308	0.00935	0.0187	U
72-43-5	Methoxychlor		0.00308	0.00935	0.0187	U
8001-35-2	Toxaphene		0.308	0.467	0.935	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4673	0.3473	74.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4673	0.3197	68.4	25 - 140	
Decachlorobiphenyl	0.4673	0.3619	77.4	30 - 135	
Decachlorobiphenyl [2C]	0.4673	0.3502	74.9	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210154-16
File ID: 071F7101.D
Sampled: 10/15/12 10:27
Prepared: 10/17/12 15:05
Analyzed: 10/19/12 07:58
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17029
Sequence: 2J29706
Calibration: 2284005
Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00481	0.00962	0.0192	U
72-54-8	4,4'-DDD		0.00481	0.00962	0.0192	UX
50-29-3	4,4'-DDT		0.00481	0.00962	0.0192	U
309-00-2	Aldrin		0.00317	0.00962	0.0192	U
319-84-6	alpha-BHC		0.00317	0.00962	0.0192	U
5103-71-9	alpha-Chlordane		0.00317	0.00962	0.0192	U
319-85-7	beta-BHC		0.00317	0.00962	0.0192	U
319-86-8	delta-BHC		0.00317	0.00962	0.0192	UX
60-57-1	Dieldrin		0.00481	0.00962	0.0192	U
959-98-8	Endosulfan I		0.00317	0.00962	0.0192	U
33213-65-9	Endosulfan II		0.00481	0.00962	0.0192	U
1031-07-8	Endosulfan sulfate		0.00481	0.00962	0.0192	U
72-20-8	Endrin		0.00481	0.00962	0.0192	U
7421-93-4	Endrin aldehyde		0.00481	0.00962	0.0192	U
53494-70-5	Endrin ketone		0.00481	0.00962	0.0192	U
58-89-9	gamma-BHC (Lindane)		0.00317	0.00962	0.0192	U
5103-74-2	gamma-Chlordane [2C]	0.00484	0.00317	0.00962	0.0192	JB
76-44-8	Heptachlor		0.00317	0.00962	0.0192	U
1024-57-3	Heptachlor epoxide		0.00317	0.00962	0.0192	U
72-43-5	Methoxychlor		0.00317	0.00962	0.0192	U
8001-35-2	Toxaphene		0.317	0.481	0.962	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4808	0.3101	64.5	25 - 140	
Tetrachloro-m-xylene [2C]	0.4808	0.2971	61.8	25 - 140	
Decachlorobiphenyl	0.4808	0.2960	61.6	30 - 135	
Decachlorobiphenyl [2C]	0.4808	0.2851	59.3	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-18 File ID: 072F7201.D

Sampled: 10/15/12 12:15 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 08:17

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00481	0.00962	0.0192	U
72-54-8	4,4'-DDD		0.00481	0.00962	0.0192	UX
50-29-3	4,4'-DDT		0.00481	0.00962	0.0192	U
309-00-2	Aldrin		0.00317	0.00962	0.0192	U
319-84-6	alpha-BHC		0.00317	0.00962	0.0192	U
5103-71-9	alpha-Chlordane		0.00317	0.00962	0.0192	U
319-85-7	beta-BHC		0.00317	0.00962	0.0192	U
319-86-8	delta-BHC		0.00317	0.00962	0.0192	UX
60-57-1	Dieldrin		0.00481	0.00962	0.0192	U
959-98-8	Endosulfan I		0.00317	0.00962	0.0192	U
33213-65-9	Endosulfan II		0.00481	0.00962	0.0192	U
1031-07-8	Endosulfan sulfate		0.00481	0.00962	0.0192	U
72-20-8	Endrin		0.00481	0.00962	0.0192	U
7421-93-4	Endrin aldehyde		0.00481	0.00962	0.0192	U
53494-70-5	Endrin ketone		0.00481	0.00962	0.0192	U
58-89-9	gamma-BHC (Lindane)		0.00317	0.00962	0.0192	U
5103-74-2	gamma-Chlordane [2C]	0.00504	0.00317	0.00962	0.0192	JB
76-44-8	Heptachlor		0.00317	0.00962	0.0192	U
1024-57-3	Heptachlor epoxide		0.00317	0.00962	0.0192	U
72-43-5	Methoxychlor		0.00317	0.00962	0.0192	U
8001-35-2	Toxaphene		0.317	0.481	0.962	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4808	0.3621	75.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4808	0.3368	70.1	25 - 140	
Decachlorobiphenyl	0.4808	0.4003	83.3	30 - 135	
Decachlorobiphenyl [2C]	0.4808	0.3793	78.9	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-14 File ID: 070F7001.D

Sampled: 10/15/12 00:00 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 07:39

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.113	0.236	0.472	U
11104-28-2	Aroclor-1221		0.113	0.236	0.472	U
11141-16-5	Aroclor-1232		0.113	0.236	0.472	U
53469-21-9	Aroclor-1242		0.113	0.236	0.472	U
12672-29-6	Aroclor-1248		0.113	0.236	0.472	U
11097-69-1	Aroclor-1254		0.113	0.236	0.472	U
11096-82-5	Aroclor-1260		0.113	0.236	0.472	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3508	74.4	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3251	68.9	25 - 140	
Decachlorobiphenyl	0.4717	0.3589	76.1	40 - 135	
Decachlorobiphenyl [2C]	0.4717	0.3446	73.1	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-08	File ID:	068F6801.D
Sampled:	10/14/12 15:45	Prepared:	10/17/12 15:05	Analyzed:	10/19/12 07:01
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17029	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.112	0.234	0.467	U
11104-28-2	Aroclor-1221		0.112	0.234	0.467	U
11141-16-5	Aroclor-1232		0.112	0.234	0.467	U
53469-21-9	Aroclor-1242		0.112	0.234	0.467	U
12672-29-6	Aroclor-1248		0.112	0.234	0.467	U
11097-69-1	Aroclor-1254		0.112	0.234	0.467	U
11096-82-5	Aroclor-1260		0.112	0.234	0.467	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4673	0.3442	73.7	25 - 140	
Tetrachloro-m-xylene [2C]	0.4673	0.3217	68.9	25 - 140	
Decachlorobiphenyl	0.4673	0.3352	71.7	40 - 135	
Decachlorobiphenyl [2C]	0.4673	0.3183	68.1	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory: Empirical Laboratories, LLC . SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-06 File ID: 054F5401.D

Sampled: 10/14/12 16:26 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 02:33

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.114	0.238	0.476	U
11104-28-2	Aroclor-1221		0.114	0.238	0.476	U
11141-16-5	Aroclor-1232		0.114	0.238	0.476	U
53469-21-9	Aroclor-1242		0.114	0.238	0.476	U
12672-29-6	Aroclor-1248		0.114	0.238	0.476	U
11097-69-1	Aroclor-1254		0.114	0.238	0.476	U
11096-82-5	Aroclor-1260		0.114	0.238	0.476	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4762	0.3816	80.1	25 - 140	
Tetrachloro-m-xylene [2C]	0.4762	0.3598	75.6	25 - 140	Y
Decachlorobiphenyl	0.4762	0.3907	82.1	40 - 135	
Decachlorobiphenyl [2C]	0.4762	0.3728	78.3	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210154-07 File ID: 055F5501.D

Sampled: 10/14/12 13:20 Prepared: 10/17/12 15:05 Analyzed: 10/19/12 02:52

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.112	0.234	0.467	U
11104-28-2	Aroclor-1221		0.112	0.234	0.467	U
11141-16-5	Aroclor-1232		0.112	0.234	0.467	U
53469-21-9	Aroclor-1242		0.112	0.234	0.467	U
12672-29-6	Aroclor-1248		0.112	0.234	0.467	U
11097-69-1	Aroclor-1254		0.112	0.234	0.467	U
11096-82-5	Aroclor-1260		0.112	0.234	0.467	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4673	0.3296	70.5	25 - 140	
Tetrachloro-m-xylene [2C]	0.4673	0.2988	63.9	25 - 140	Y
Decachlorobiphenyl	0.4673	0.3587	76.8	40 - 135	
Decachlorobiphenyl [2C]	0.4673	0.3381	72.4	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210154-12
File ID: 069F6901.D
Sampled: 10/15/12 09:51
Prepared: 10/17/12 15:05
Analyzed: 10/19/12 07:20
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17029
Sequence: 2J29706
Calibration: 2284005
Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.112	0.234	0.467	U
11104-28-2	Aroclor-1221		0.112	0.234	0.467	U
11141-16-5	Aroclor-1232		0.112	0.234	0.467	U
53469-21-9	Aroclor-1242		0.112	0.234	0.467	U
12672-29-6	Aroclor-1248		0.112	0.234	0.467	U
11097-69-1	Aroclor-1254		0.112	0.234	0.467	U
11096-82-5	Aroclor-1260		0.112	0.234	0.467	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4673	0.3473	74.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4673	0.3197	68.4	25 - 140	
Decachlorobiphenyl	0.4673	0.3619	77.4	40 - 135	
Decachlorobiphenyl [2C]	0.4673	0.3502	74.9	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210154-20	File ID:	073F7301.D
Sampled:	10/15/12 12:18	Prepared:	10/17/12 15:05	Analyzed:	10/19/12 08:36
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17029	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.115	0.240	0.481	U
11104-28-2	Aroclor-1221		0.115	0.240	0.481	U
11141-16-5	Aroclor-1232		0.115	0.240	0.481	U
53469-21-9	Aroclor-1242		0.115	0.240	0.481	U
12672-29-6	Aroclor-1248		0.115	0.240	0.481	U
11097-69-1	Aroclor-1254		0.115	0.240	0.481	U
11096-82-5	Aroclor-1260		0.115	0.240	0.481	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4808	0.3263	67.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.4808	0.3057	63.6	25 - 140	
Decachlorobiphenyl	0.4808	0.3329	69.2	40 - 135	
Decachlorobiphenyl [2C]	0.4808	0.3184	66.2	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210154-16
File ID: 071F7101.D
Sampled: 10/15/12 10:27
Prepared: 10/17/12 15:05
Analyzed: 10/19/12 07:58
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17029
Sequence: 2J29706
Calibration: 2284005
Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.115	0.240	0.481	U
11104-28-2	Aroclor-1221		0.115	0.240	0.481	U
11141-16-5	Aroclor-1232		0.115	0.240	0.481	U
53469-21-9	Aroclor-1242		0.115	0.240	0.481	U
12672-29-6	Aroclor-1248		0.115	0.240	0.481	U
11097-69-1	Aroclor-1254		0.115	0.240	0.481	U
11096-82-5	Aroclor-1260		0.115	0.240	0.481	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4808	0.3101	64.5	25 - 140	
Tetrachloro-m-xylene [2C]	0.4808	0.2971	61.8	25 - 140	
Decachlorobiphenyl	0.4808	0.2960	61.6	40 - 135	
Decachlorobiphenyl [2C]	0.4808	0.2851	59.3	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210154-18
File ID: 072F7201.D
Sampled: 10/15/12 12:15
Prepared: 10/17/12 15:05
Analyzed: 10/19/12 08:17
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17029
Sequence: 2J29706
Calibration: 2284005
Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.115	0.240	0.481	U
11104-28-2	Aroclor-1221		0.115	0.240	0.481	U
11141-16-5	Aroclor-1232		0.115	0.240	0.481	U
53469-21-9	Aroclor-1242		0.115	0.240	0.481	U
12672-29-6	Aroclor-1248		0.115	0.240	0.481	U
11097-69-1	Aroclor-1254		0.115	0.240	0.481	U
11096-82-5	Aroclor-1260		0.115	0.240	0.481	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4808	0.3621	75.3	25 - 140	
Tetrachloro-m-xylene [2C]	0.4808	0.3368	70.1	25 - 140	
Decachlorobiphenyl	0.4808	0.4003	83.3	40 - 135	
Decachlorobiphenyl [2C]	0.4808	0.3793	78.9	40 - 135	

* Values outside of QC limits

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Sample PEN-3221-06-10/12 had a sample collection time on the container of 1426 and on the COC of 1626. As per the client, the correct sample time is 1626. It was also missing a metals container which was poured in log-in per the client's request. Sample PEN-3221-04-10/12 did not have any analyses marked on the COC and as per the client requires the same analyses as sample PEN-3221-08-10/12. The COC was marked for MS/MSD on sample PEN-3221-06-10/12 but no sample volume was received for an MS/MSD. Extra sample was received for sample PEN-3221-08-10/12 and as per the client, the MS/MSD should be on this sample.

Changes to the Revision

This is an original submittal of the final report package.

Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
Note – Sample 1210154-16 was analyzed at a 2x only due to the sample foaming during screening. No lower analyses were able to be performed.

The following surrogates exceeded criteria:
Dibromofluoromethane in 1210154-05 with a positive bias

The following was analyzed after the 12-hour tune criteria:
2J24005-MSD2 was analyzed 12 hours 5 minutes after the associated tune standard

The following continuing calibration verifications exceeded criteria:
2J29805-CCV1 with a negative bias for Acetone and with a positive bias for Carbon Disulfide, Dichlorodifluoromethane, and Vinyl Chloride
2J29903-CCV1 with a positive bias for Carbon Disulfide, Chloromethane, Dichlorodifluoromethane, 1,2,3-Trichlorobenzene, 1,1,2-Trichloro-1,2,2-trifluoroethane, and Vinyl Chloride

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA:
The following surrogates exceeded criteria:
2-Fluorophenol with a negative bias in 1210154-06, -07, -08, -16, -20, and 2J19004-BLK1
2,4,6-Tribromophenol with a negative bias in 1210154-06 and -08

The following matrix spikes exceeded criteria:
2J19004-MS1/MSD1 (1210154-07) with a negative bias for 2,4-Dichlorophenol, 4,6-Dinitro-2-methylphenol, 2-Nitrophenol, Pentachlorophenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol and exceeded relative percent difference criteria for 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, 4-Nitrophenol, 2-Nitrophenol, Pentachlorophenol, 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol

The following continuing calibration verifications exceeded criteria:
2J29718-CCV1 with a positive bias for Hexachlorocyclopentadiene, N-nitrosodimethylamine, and Terphenyl-d14

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA LOW:
Note - There was a mismatch between the bid and the SAP, and the 1,4-Dioxane was

missed when the project was set up in the LIMS, which drives the spiking and reporting. When this was discovered, the samples were already outside of 1x holding time. As per the client's okay, samples are being reported with 1,4-Dioxane CCVs only and no batch, matrix spike, or matrix spike duplicates.

The following batch spikes exceeded criteria:
2J19004-BS2/BSD2 with a positive bias for Benzo(a)anthracene and exceeded relative percent difference criteria for Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, 2-Methylnaphthalene, Naphthanele, Phenanthrene, and Pyrene

The following matrix spikes exceeded criteria:
2J19004-MS2/MSD2 (1210154-07) exceeded relative percent difference criteria for Benzo(b)fluoranthene

The following continuing calibration verifications exceeded criteria:
2J29915-CCV1 with a negative bias for 1,4-Dioxane and a positive bias for 2,4,6-Tribromophenol

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8081A:
The following matrix spikes exceeded criteria:
2J17029-MS1/MSD1 (1210154-07) with a negative bias on both columns for Alpha-BHC, Alpha-chlordane, Beta-BHC, Dieldrin, Endosulfan I, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Endrin Ketone, Gamma-chlordane, Heptachlor Epoxide, and Methoxychlor and on column 2 for Delta-BHC

The following blanks have reported results:
2J17029-BLK1 for Gamma-chlordane; note – no positive results were detected in the associated samples

The following initial calibration verifications exceeded criteria:
2J28406-ICV2 with a negative bias on column 2 for Toxaphene

The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 2 for Tetrachloro-m-xylene
2J29706-CCVG with a positive bias on column 1 for 4,4'-DDD and Delta-BHC
2J29706-CCVL with a positive bias on column 1 for 4,4'-DDD

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8082A:
The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 2 for Tetrachloro-m-xylene

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C/SW7470A:
The following continuing calibration verifications exceeded criteria:
2J30316-CCV6 with a positive bias for Arsenic
2J30316-CCV7 with a positive bias for Arsenic

The following matrix spikes exceeded criteria:
2J27917-MSD1 (1210154-07) with a positive bias for Arsenic

The following post spikes exceeded criteria:
2J27917-PS1 (1210154-07) with a positive bias for Copper

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:
No anomalies or deviations are noted.

1210154

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER | PAGE ___ OF ___

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G-00 784	NAS Pensacola Site 44	Greg Walker 850-385-9899	Empirical Laboratory c/o Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Amber Jones 850-322-8033	ADDRESS: 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER: 8003 2540 7400	CITY, STATE: Nashville, TN 37228

STANDARD TAT [X]
RUSH TAT [ ]
[ ] 24 hr. [ ] 48 hr. [ ] 72 hr. [ ] 7 day [ ] 14 day

DATE YEAR 2012	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: PCE, TCE, cis-1,2-DCE, VC	TCL VOCs	TCL Pesticides, PCBs	TCL SVOCs w/ LC PAHs	TAL metals w/ Hg	Dissolved Fe, Mn	BOD, TAL IC	COD	Ammonia	COMMENTS
						G	HCl	HCl	HCl	ice	ice	HNO_3	HNO_3	ice	H_2SO_4	ice	
10/14/12	1310	PEN-44-16-10/12	GW	G	3	3										01	
	1354	PEN-44-20-10/12	GW	G	3	3										02	
	1440	PEN-44-26-10/12	GW	G	9	9										03	MS/MSD
	0000	FD 10141201	GW	G	3	3										04	
	1530	PEN-44-17-10/12	GW	G	3	3										05	
	1626	PEN-3221-06-10/12	GW	G	7		3	1	2	1						06	MS/MSD
	1320	PEN-3221-08-10/12	GW	G	21		9	3	6	3						07	
	1545	PEN-3221-04-10/12														08	
		TB	GW		3	3	3									09	
10/15/12	0852	PEN-44-23-10/12	GW		7	3					1	1		1	1	10/11	
	0951	PEN-44-18-10/12	GW		11		3	1	2	1	1	1		1	1	12/13	
	0000	FD 10151201	GW		11		3	1	2	1	1	1		1	1	14/15	
	1027	PEN-44-21-10/12	GW		11		3	1	2	1	1	1		1	1	16/17	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/15/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	10/16/12	0845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TINUS-001

12

1210154 Sump Package

Tetra Tech, Inc. 1210154

CHAIN OF CUSTODY | NUMBER No. 0041 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112600784	Site 44 NAS Pcola	Gerry Walker	850-385-9899	Empirical Lab Brian ~~Richard~~
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Tyre	PHONE NUMBER: 850-332-8033	ADDRESS: 621 Mainstream Dr. Suite 270
		CARRIER/WAYBILL NUMBER: 8003 2540 7400		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)										
									G	G	G	G	P	P	P	P			
									PRESERVATIVE USED		HCl	HCl	ice	ice	HNO_3	ice	HNO_3	H_2SO_4	ice
									TYPE OF ANALYSIS		PCE, TCE, cis-1,2-DCE, VC	TCL VOCs	TCL Pest / PCBs	TCL SVOCs w/ LL PAHs	TAL metals w/ Hg	BOD + Alk	Dissolved Fe, Mn	COD	Anions	COMMENTS
10/15/12	1215	PEN-44-24-10/12						11		3	1	2	1	1	1	1	1		18/19
	1218	PEN-44-15-10/12						11		3	1	2	1	1	1	1	1		20/21
	~~1400~~ 1415	PEN-44-25-10/12						7	3				AI ~~X~~	1	1	1	1		no TAL metal 22
↓	1415	PEN-44-22-10/12						7	3					1	1	1	1		23

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/15/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	10/16/12	0845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

1210154

Cooler Received/Opened On: 10/16/12 @ 0845 Workorder# 1210154 1210155 1210156

1. Tracking # 8927 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.3 °C + *correction factor (+ 0.2)* = 3.5 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

   If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13. a. Were VOA vials received? YES...NO...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) _____

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) _____

I certify that I attached a label with the unique LIMS number to each container (initial) _____

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES NO Was a NCR generated? YES NO...#_____

Additional Details: *"PEN-3221-06-10/12" SAMPLE TIME DOES NOT MATCH THE TIME ON THE CONTAINERS (COC-16260, CONTAINERS-16260); MISSING METALS CONTAINER FOR SAMPLE "PEN-3221-04-10/12." NO ANALYSIS MARKED FOR SAMPLE "PEN-3221-04-10/12." MS/MSD IS MARKED FOR "PEN-3221-06-10/12" BUT DID NOT SEND IN THE "TRIPLE" AMOUNT BUT "PEN-3221-08-10/12" HAS "TRIPLE THE AMOUNT OF CONTAINERS BUT IS NOT MARKED FOR MS/MSD

~~"PEN-3221-10/12" ONLY HAS 2 AMBER LITERS INSTEAD OF 3 AS MARKED ON THE COC~~

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/16/12 @ 0845 Workorder# 1210454

1. Tracking # 8890 (last 4 digits, FedEx)

   Courier: FED-EX

2. Temperature of rep. sample or temp blank when opened: 0.5 °C + *correction factor (+ 0.2)* = 0.7 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES NO...NA

   If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) BC

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13. a. Were VOA vials received? YES...NO...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 2

I certify that I unloaded the cooler and answered questions 7-14 (initial) KW

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) KW

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) KB

I certify that I attached a label with the unique LIMS number to each container (initial) KB

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES NO Was a NCR generated? YES NO...#_____

Additional Details:

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/16/12 @ 0845 Workorder# 1210154

1. Tracking # 8916 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.2 °C + *correction factor (+ 0.2)* = 3.4 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES (NO)..NA

4. Were custody seals on outside of cooler? (YES)...NO...NA

   If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? YES..(NO)...NA

I certify that I opened the cooler and answered questions 1-6 (initial) BW

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)..NO...NA

13. a. Were VOA vials received? YES..(NO)..NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES..(NO)..NA If multiple coolers, sequence # 3

I certify that I unloaded the cooler and answered questions 7-14 (initial) BW

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)..NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES..(NO)...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) BW

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)..NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) BW

I certify that I attached a label with the unique LIMS number to each container (initial) BW

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) BW

21. Were there Non-Conformance issues at login? YES (NO) Was a NCR generated? YES NO...#_____

Additional Details:

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/16/12 @ 0845 Workorder# 1210154

1. Tracking # 8930 (last 4 digits, FedEx)

   Courier: FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.3 °C + correction factor (+ 0.2) = 3.5 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES (NO)...NA

4. Were custody seals on outside of cooler? (YES)...NO...NA

   If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) BW

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? ~~Bubblewrap~~ ~~Plastic bag~~ Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES...(NO)...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence # 4

I certify that I unloaded the cooler and answered questions 7-14 (initial) BW

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...(NO)...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) BW

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) BW

I certify that I attached a label with the unique LIMS number to each container (initial) BW

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES (NO) Was a NCR generated? YES (NO)...#_____

Additional Details:

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/16/12 @ 0845 Workorder# 1210154

1. Tracking # 8880 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 1.6 °C + correction factor (+ 0.2) = 1.8 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES (NO) ...NA

4. Were custody seals on outside of cooler? (YES) ..NO...NA

   If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES) (NO)...NA

I certify that I opened the cooler and answered questions 1-6 (initial) BW

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES...(NO)...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence # 5

I certify that I unloaded the cooler and answered questions 7-14 (initial) BW

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES (NO)...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) BW

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) BW

I certify that I attached a label with the unique LIMS number to each container (initial) BW

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) BW

21. Were there Non-Conformance issues at login? YES (NO) Was a NCR generated? YES (NO)...#_____

Additional Details:

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/16/12 @ 0845 Workorder# 1210154

1. Tracking # 7480 (last 4 digits, FedEx)

   Courier: FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.6 °C + *correction factor (+ 0.2)* = 3.8 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

   If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) BW

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13. a. Were VOA vials received? YES...NO...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES NO...NA If multiple coolers, sequence # 1

I certify that I unloaded the cooler and answered questions 7-14 (initial) BW

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) BW

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) BW

I certify that I attached a label with the unique LIMS number to each container (initial) BW

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES NO Was a NCR generated? YES NO...#_____

Additional Details:

HOLDTIME

SDG 1210154

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
HG	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
HG	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
M	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
M	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
M	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
MF	UG/L	PEN-44-23-10/12	1210154-11	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-24-10/12	1210154-19	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-15-10/12	1210154-21	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-21-10/12	1210154-17	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-18-10/12	1210154-13	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	FD10151201	1210154-15	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
ALK	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
BOD	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
BOD	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
CL	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
CL	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
COD	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/29/2012	10/29/2012	14	0	14
COD	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
COD	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
COD	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/29/2012	10/29/2012	14	0	14
COD	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
COD	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/29/2012	10/29/2012	14	0	14
COD	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
COD	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
NTA	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTA	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTA	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTI	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTI	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTI	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
SO4	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
OS	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/19/2012	10/22/2012	4	3	7
OS	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
OS	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
OS	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
OS	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
OS	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
OS	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/19/2012	10/22/2012	4	3	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
OV	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9
OV	UG/L	PEN-44-26-10/12	1210154-03	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	TB	1210154-09	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9
OV	UG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9
OV	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9
OV	UG/L	PEN-44-20-10/12	1210154-02	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9
OV	UG/L	PEN-44-17-10/12	1210154-05	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9
OV	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9
OV	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	PEN-44-16-10/12	1210154-01	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	FD10141201	1210154-04	NM	10/14/2012	10/24/2012	10/24/2012	10	0	10
OV	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/24/2012	10/24/2012	9	0	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
PAH	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
PAH	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
PAH	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
PAH	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
PAH	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
PAH	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/19/2012	10/23/2012	5	4	9
PAH	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
PCB	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PCB	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PCB	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PCB	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/17/2012	10/19/2012	3	2	5
PCB	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/17/2012	10/19/2012	3	2	5
PCB	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/17/2012	10/19/2012	3	2	5
PCB	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PCB	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PEST	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/17/2012	10/19/2012	3	2	5
PEST	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/17/2012	10/19/2012	3	2	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PEST	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/17/2012	10/19/2012	3	2	5
PEST	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PEST	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PEST	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PEST	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4
PEST	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/17/2012	10/19/2012	2	2	4

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-16-10/12	10/14/12 13:10	10/16/12 08:45	10/24/12 10:26	N/A	14.00	10/24/12 10:26	9.89	14.00	
PEN-44-20-10/12	10/14/12 13:54	10/16/12 08:45	10/24/12 10:53	N/A	14.00	10/24/12 10:53	9.87	14.00	
PEN-44-26-10/12	10/14/12 14:40	10/16/12 08:45	10/24/12 11:21	N/A	14.00	10/24/12 11:21	9.86	14.00	
FD10141201	10/14/12 00:00	10/16/12 08:45	10/24/12 11:49	N/A	14.00	10/24/12 11:49	10.49	14.00	
PEN-44-17-10/12	10/14/12 15:30	10/16/12 08:45	10/24/12 12:16	N/A	14.00	10/24/12 12:16	9.87	14.00	
PEN-3221-06-10/12	10/14/12 16:26	10/16/12 08:45	10/24/12 12:44	N/A	14.00	10/24/12 12:44	9.85	14.00	
PEN-3221-08-10/12	10/14/12 13:20	10/16/12 08:45	10/24/12 13:12	N/A	14.00	10/24/12 13:12	9.99	14.00	
PEN-3221-04-10/12	10/14/12 15:45	10/16/12 08:45	10/24/12 13:40	N/A	14.00	10/24/12 13:40	9.91	14.00	
TB	10/14/12 00:01	10/16/12 08:45	10/24/12 01:36	N/A	14.00	10/24/12 01:36	10.07	14.00	
PEN-44-23-10/12	10/15/12 08:52	10/16/12 08:45	10/24/12 14:08	N/A	14.00	10/24/12 14:08	9.22	14.00	
PEN-44-18-10/12	10/15/12 09:51	10/16/12 08:45	10/24/12 14:35	N/A	14.00	10/24/12 14:35	9.20	14.00	
FD10151201	10/15/12 00:00	10/16/12 08:45	10/24/12 15:03	N/A	14.00	10/24/12 15:03	9.63	14.00	
PEN-44-21-10/12	10/15/12 10:27	10/16/12 08:45	10/24/12 17:22	N/A	14.00	10/24/12 17:22	9.29	14.00	
PEN-44-24-10/12	10/15/12 12:15	10/16/12 08:45	10/24/12 15:31	N/A	14.00	10/24/12 15:31	9.14	14.00	
PEN-44-15-10/12	10/15/12 12:18	10/16/12 08:45	10/24/12 15:59	N/A	14.00	10/24/12 15:59	9.15	14.00	
PEN-44-25-10/12	10/15/12 14:00	10/16/12 08:45	10/24/12 16:27	N/A	14.00	10/24/12 16:27	9.10	14.00	
PEN-44-22-10/12	10/15/12 14:15	10/16/12 08:45	10/24/12 16:54	N/A	14.00	10/24/12 16:54	9.11	14.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-06-10/12	10/14/12 16:26	10/16/12 08:45	10/19/12 12:23	4.83	7.00	10/22/12 21:00	3.36	40.00	
PEN-3221-08-10/12	10/14/12 13:20	10/16/12 08:45	10/19/12 12:23	4.96	7.00	10/22/12 21:27	3.38	40.00	
PEN-3221-04-10/12	10/14/12 15:45	10/16/12 08:45	10/19/12 12:23	4.86	7.00	10/22/12 22:49	3.43	40.00	
PEN-44-18-10/12	10/15/12 09:51	10/16/12 08:45	10/19/12 12:23	4.11	7.00	10/22/12 23:16	3.45	40.00	
FD10151201	10/15/12 00:00	10/16/12 08:45	10/19/12 12:23	4.52	7.00	10/22/12 23:43	3.47	40.00	
PEN-44-21-10/12	10/15/12 10:27	10/16/12 08:45	10/19/12 12:23	4.08	7.00	10/23/12 00:10	3.49	40.00	
PEN-44-24-10/12	10/15/12 12:15	10/16/12 08:45	10/19/12 12:23	4.01	7.00	10/23/12 00:38	3.51	40.00	
PEN-44-15-10/12	10/15/12 12:18	10/16/12 08:45	10/19/12 12:23	4.00	7.00	10/23/12 01:05	3.53	40.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-06-10/12	10/14/12 16:26	10/16/12 08:45	10/19/12 12:23	4.83	7.00	10/22/12 23:06	3.45	40.00	
PEN-3221-08-10/12	10/14/12 13:20	10/16/12 08:45	10/19/12 12:23	4.96	7.00	10/22/12 23:35	3.47	40.00	
PEN-3221-04-10/12	10/14/12 15:45	10/16/12 08:45	10/19/12 12:23	4.86	7.00	10/23/12 00:04	3.49	40.00	
PEN-44-18-10/12	10/15/12 09:51	10/16/12 08:45	10/19/12 12:23	4.11	7.00	10/23/12 00:32	3.51	40.00	
FD10151201	10/15/12 00:00	10/16/12 08:45	10/19/12 12:23	4.52	7.00	10/23/12 01:01	3.53	40.00	
PEN-44-21-10/12	10/15/12 10:27	10/16/12 08:45	10/19/12 12:23	4.08	7.00	10/23/12 02:21	3.58	40.00	
PEN-44-24-10/12	10/15/12 12:15	10/16/12 08:45	10/19/12 12:23	4.01	7.00	10/23/12 02:49	3.60	40.00	
PEN-44-15-10/12	10/15/12 12:18	10/16/12 08:45	10/19/12 12:23	4.00	7.00	10/23/12 03:18	3.62	40.00	

HOLDING TIME SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-06-10/12	10/14/12 16:26	10/16/12 08:45	10/17/12 15:05	2.94	7.00	10/19/12 02:33	1.48	40.00	
PEN-3221-08-10/12	10/14/12 13:20	10/16/12 08:45	10/17/12 15:05	3.07	7.00	10/19/12 02:52	1.49	40.00	
PEN-3221-04-10/12	10/14/12 15:45	10/16/12 08:45	10/17/12 15:05	2.97	7.00	10/19/12 07:01	1.66	40.00	
PEN-44-18-10/12	10/15/12 09:51	10/16/12 08:45	10/17/12 15:05	2.22	7.00	10/19/12 07:20	1.68	40.00	
FD10151201	10/15/12 00:00	10/16/12 08:45	10/17/12 15:05	2.63	7.00	10/19/12 07:39	1.69	40.00	
PEN-44-21-10/12	10/15/12 10:27	10/16/12 08:45	10/17/12 15:05	2.19	7.00	10/19/12 07:58	1.70	40.00	
PEN-44-24-10/12	10/15/12 12:15	10/16/12 08:45	10/17/12 15:05	2.12	7.00	10/19/12 08:17	1.72	40.00	
PEN-44-15-10/12	10/15/12 12:18	10/16/12 08:45	10/17/12 15:05	2.12	7.00	10/19/12 08:36	1.73	40.00	

HOLDING TIME SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-06-10/12	10/14/12 16:26	10/16/12 08:45	10/17/12 15:05	2.94	7.00	10/19/12 02:33	1.48	40.00	
PEN-3221-08-10/12	10/14/12 13:20	10/16/12 08:45	10/17/12 15:05	3.07	7.00	10/19/12 02:52	1.49	40.00	
PEN-3221-04-10/12	10/14/12 15:45	10/16/12 08:45	10/17/12 15:05	2.97	7.00	10/19/12 07:01	1.66	40.00	
PEN-44-18-10/12	10/15/12 09:51	10/16/12 08:45	10/17/12 15:05	2.22	7.00	10/19/12 07:20	1.68	40.00	
FD10151201	10/15/12 00:00	10/16/12 08:45	10/17/12 15:05	2.63	7.00	10/19/12 07:39	1.69	40.00	
PEN-44-21-10/12	10/15/12 10:27	10/16/12 08:45	10/17/12 15:05	2.19	7.00	10/19/12 07:58	1.70	40.00	
PEN-44-24-10/12	10/15/12 12:15	10/16/12 08:45	10/17/12 15:05	2.12	7.00	10/19/12 08:17	1.72	40.00	
PEN-44-15-10/12	10/15/12 12:18	10/16/12 08:45	10/17/12 15:05	2.12	7.00	10/19/12 08:36	1.73	40.00	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2D12109	Instrument:	MS-VOA6
Calibration:	2121003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2D12109-TUN1	0427TUN1.D	04/27/12 08:36
Cal Standard	2D12109-CAL1	0427CAL1.D	04/27/12 09:57
Cal Standard	2D12109-CAL2	0427CAL2.D	04/27/12 10:24
Cal Standard	2D12109-CAL3	0427CAL3.D	04/27/12 10:51
Cal Standard	2D12109-CAL4	0427CAL4.D	04/27/12 11:17
Cal Standard	2D12109-CAL5	0427CAL5.D	04/27/12 11:44
Cal Standard	2D12109-CAL6	0427CAL6.D	04/27/12 12:11
Cal Standard	2D12109-CAL7	0427CAL7.D	04/27/12 12:38
Cal Standard	2D12109-CAL8	0427CAL8.D	04/27/12 13:05
Cal Standard	2D12109-CAL9	0427CAL9.D	04/27/12 13:31
Initial Cal Check	2D12109-ICV2	0427ICV2.D	04/27/12 14:52

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	0427TUN1.D	Injection Date:	04/27/12
Instrument ID:	MS-VOA6	Injection Time:	08:36
Sequence:	2D12109	Lab Sample ID:	2D12109-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	22.1	PASS
75	30 - 60% of 95	46.9	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.51	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.6	PASS
175	5 - 9% of 174	7.25	PASS
176	95 - 101% of 174	97.2	PASS
177	5 - 9% of 176	6.42	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2121003
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 4/27/12 9:57 4/27/12 13:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	8.548666E-02	13.62246	3.79875	9.274653E-02			15	
Acrolein	3.525752E-02	14.25592	3.67625	0.1406711			15	
Acrylonitrile	8.527776E-02	5.393199	4.643333	0.1072277			15	
Benzene	0.9315107	2.122697	7.685555	9.539806E-02			15	
Bromobenzene	0.7087812	2.200287	12.42	2.226331E-02			15	
Bromochloromethane	0.1195172	3.640977	6.781111	8.876222E-02			15	
Tert-Amyl Methyl Ether	0.6634772	2.496612	7.881111	4.329758E-02			15	
Bromodichloromethane	0.2918713	8.490543	8.666667	5.634014E-02			15	
Bromoform	0.2807903	27.07999	11.82333	0.0385467		0.9999206	SPCC (0.1)	
Bromomethane	0.1508425	6.0413	2.827778	0.1564675			15	
Bromofluorobenzene	0.8581783	5.320451	12.25222	3.512838E-02			15	
n-Butylbenzene	1.996493	3.36345	13.84778	3.214818E-02			15	
2-Butanone	0.1504013	9.901311	6.253333	8.003784E-02			15	
sec-Butylbenzene	2.683693	3.138093	13.30222	2.896654E-02			15	
tert-Butylbenzene	1.962219	3.583794	13.07222	3.164283E-02			15	
Carbon disulfide	0.549092	7.8436	4.795556	0.1085594			15	
Carbon tetrachloride	0.2201406	14.06956	7.652222	5.963417E-02			15	
Chlorobenzene	1.46879	2.490997	11.1	1.265792E-02			SPCC (0.3)	
Chloroethane	0.1477522	6.651077	2.965556	0.177739			15	
Chloroform	0.4138944	2.873397	6.754445	7.677392E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1620108	4.014319	9.023334	5.188695E-02			15	
Chloromethane	0.2843574	12.91666	2.231111	0.1482605			SPCC (0.1)	
1-Chlorohexane	0.751668	11.54226	11.06222	3.856191E-02			15	
2-Chlorotoluene	2.089316	2.074047	12.63333	4.148019E-02			15	
4-Chlorotoluene	2.383943	2.617429	12.69444	3.969977E-02			15	
Cyclohexane	0.3976941	3.654048	7.583333	6.438874E-02			15	
Dibromochloromethane	0.4682909	19.58175	10.33111	3.516709E-02		0.9999077	0.99	
1,2-Dibromo-3-chloropropane	0.1119305	17.66175	14.45	1.563473E-02		0.9998905	0.99	
1,2-Dibromoethane (EDB)	0.5515188	4.059789	10.55	1.218384E-02			15	
Dibromomethane	0.159759	2.732959	8.607778	5.269306E-02			15	
1,2-Dichlorobenzene	1.203659	2.780049	13.81	8.95784E-03			15	
1,3-Dichlorobenzene	1.256964	2.176385	13.39333	3.806423E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2121003	Instrument:	MS-VOA6
Matrix:	Water	Calibration Dates:	4/27/12 9:57 4/27/12 13:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.26803	2.71936	13.48444	3.695711E-02			15	
Dichlorodifluoromethane	0.1924809	12.76598	2.02	0.0136054			15	
1,1-Dichloroethane	0.4594785	2.373803	5.8	1.821231E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3510167	2.112895	7.514445	7.102877E-02			15	
1,1-Dichloroethene	0.1816551	1.754323	4.266667	0.1186659			CCC (20)	
cis-1,2-Dichloroethene	0.2461851	1.74528	6.51	7.808219E-02			15	
trans-1,2-Dichloroethene	0.2335685	2.303894	5.422222	0.1220387			15	
1,2-Dichloroethene (total)	0.2398768	1.736859	6.51	7.808219E-02			15	
1,2-Dichloropropane	0.259293	2.312194	8.492222	4.863254E-02			CCC (20)	
1,3-Dichloropropane	0.8986729	1.994678	10.07333	4.862251E-02			15	
2,2-Dichloropropane	0.2935838	2.733695	6.614444	7.823592E-02			15	
1,1-Dichloropropene	0.319009	2.335894	7.533333	6.861941E-02			15	
cis-1,3-Dichloropropene	0.3521134	5.766677	9.241111	3.306317E-02			15	
trans-1,3-Dichloropropene	0.8239793	7.699482	9.71	1.779117E-02			15	
Diisopropyl Ether	1.014381	1.907698	6.173333	0.0812548			15	
Ethylbenzene	2.511121	2.398092	11.24778	3.875475E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.7722566	1.449832	6.641111	5.284476E-02			15	
Ethyl Methacrylate	0.7620413	5.994742	9.901111	0.0370684			15	
Hexachlorobutadiene	0.2973976	6.462892	15.81111	2.267311E-02			15	
2-Hexanone	0.4846361	3.044602	10.01222	6.526454E-02			15	
Iodomethane	0.2588278	17.84729	4.46125	7.694245E-02		0.9994425	0.99	
Isopropylbenzene	2.072041	2.992551	12.14222	3.773169E-02			15	
p-Isopropyltoluene	2.123426	3.336119	13.44222	3.452873E-02			15	
Methylene chloride	0.2190071	8.77048	4.755556	0.1109935			15	
Methyl Acetate	0.1792449	5.975949	4.631111	7.186884E-02			15	
Methylcyclohexane	0.3060391	3.107595	8.814445	5.861741E-02			15	
Naphthalene	1.40191	9.049186	15.68111	0.0229818			15	
Methyl Methacrylate	0.2622156	2.752967	8.627778	4.639833E-02			15	
4-Methyl-2-pentanone	0.2742899	2.362881	9.17	2.223127E-02			15	
Methyl t-Butyl Ether	0.6034362	2.078315	5.425555	0.0958311			15	
n-Propylbenzene	3.366424	2.705707	12.55111	4.793217E-02			15	
Styrene	1.582432	4.214249	11.72	2.468036E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2121003
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 4/27/12 9:57 4/27/12 13:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.8277083	3.040542	12.06444	0.0394937			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.4212623	13.45017	11.14111	3.262536E-02			15	
tert-Butyl alcohol	0.0177652	3.114812	4.438889	0.1349856			15	
Tetrachloroethene	0.5209978	4.094883	10.44222	4.320136E-02			15	
Toluene	1.306882	2.880498	9.711111	3.882733E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.6431937	6.053357	15.96444	3.389544E-02			15	
1,2,4-Trichlorobenzene	0.7381814	5.252041	15.53	7.599921E-03			15	
1,1,2-Trichloroethane	0.4426374	1.531824	9.867778	4.848003E-02			15	
1,1,1-Trichloroethane	0.2930192	6.725129	7.317778	5.889306E-02			15	
Tetrahydrofuran	2.682705E-02	4.716978	6.973333	7.377964E-02			15	
Trichloroethene	0.2340808	2.116677	8.442222	4.746849E-02			15	
Trichlorofluoromethane	0.3110129	6.814927	3.471111	0.1732996			15	
1,2,3-Trichloropropane	0.1727305	3.725216	12.19333	3.802018E-02			15	
1,3,5-Trimethylbenzene	2.198041	3.035595	12.73222	3.176895E-02			15	
1,2,4-Trimethylbenzene	2.208168	3.306208	13.10222	3.678199E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1847629	3.554268	4.348889	7.522899E-02			15	
Vinyl chloride	0.1848242	6.933849	2.381111	0.1402005			CCC (20)	
m,p-Xylene	1.895141	3.964217	11.35333	4.439117E-02			15	
o-Xylene	1.959051	2.382637	11.75	0			15	
Vinyl acetate	0.6467053	7.665063	5.88	1.287752E-02			15	
Xylenes (total)	1.916445	2.97403	11.75	0			15	
Dibromofluoromethane	0.2631144	3.397573	6.932222	0.0649494			15	
1,2-Dichloroethane-d4	6.156409E-02	3.607168	7.423333	6.721134E-02			15	
Toluene-d8	2.250463	5.782973	9.635556	5.182899E-02			15	
tert-Amyl alcohol	1.396476E-02	7.58956	7.14	7.130057E-02			15	
tert-Amyl ethyl ether	0.6279509	2.173103	8.757778	7.543113E-02			15	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29805	Instrument:	MS-VOA6
Calibration:	2121003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29805-TUN1	1023TUNE.D	10/23/12 22:44
Calibration Check	2J29805-CCV1	1023CCVE.D	10/23/12 23:13
LCS	2J23020-BS1	1023LCSE.D	10/23/12 23:42
Blank	2J23020-BLK1	1023BLKE.D	10/24/12 01:08
TB	1210154-09	1015409.D	10/24/12 01:36
LCS Dup	2J23020-BSD1	1023LCDE.D	10/24/12 09:43

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1023TUNE.D	Injection Date:	10/23/12
Instrument ID:	MS-VOA6	Injection Time:	22:44
Sequence:	2J29805	Lab Sample ID:	2J29805-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	24	PASS
75	30 - 60% of 95	48.9	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.56	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	76.7	PASS
175	5 - 9% of 174	7.26	PASS
176	95 - 101% of 174	96.6	PASS
177	5 - 9% of 176	6.71	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA6	Calibration:	2121003
Lab File ID:	1023CCVE.D	Calibration Date:	04/27/12 09:57
Sequence:	2J29805	Injection Date:	10/23/12
Lab Sample ID:	2J29805-CCV1	Injection Time:	23:13

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	200.0	158.4	8.548666E-02	6.770209E-02		-20.8	20 *
Benzene	A	100.0	90.88	0.9315107	0.8465379		-9.1	20
Bromochloromethane	A	100.0	103.2	0.1195172	0.1233788		3.2	20
Bromodichloromethane	A	100.0	105.8	0.2918713	0.30889		5.8	20
Bromoform	Q	100.0	100.7	0.2807903	0.3517457	0.1	0.7	20
Bromomethane	A	100.0	102.2	0.1508425	0.1541516		2.2	20
2-Butanone	A	200.0	175.7	0.1504013	0.1320961		-12.2	20
Carbon disulfide	A	100.0	103.1	0.549092	0.5660523		3.1	20
Carbon tetrachloride	A	100.0	122.2	0.2201406	0.2689395		22.2	20 *
Chlorobenzene	A	100.0	98.88	1.46879	1.452286	0.3	-1.1	20
Chloroethane	A	100.0	91.38	0.1477522	0.1350087		-8.6	20
Chloroform	A	100.0	96.45	0.4138944	0.3992099		-3.5	20
Chloromethane	A	100.0	91.63	0.2843574	0.260548	0.1	-8.4	20
Cyclohexane	A	100.0	100.8	0.3976941	0.4007586		0.8	20
Dibromochloromethane	Q	100.0	102.3	0.4682909	0.563889		2.3	20
1,2-Dibromo-3-chloropropane	Q	100.0	91.24	0.1119305	0.1254804		-8.8	20
1,2-Dibromoethane (EDB)	A	100.0	95.26	0.5515188	0.5253884		-4.7	20
1,2-Dichlorobenzene	A	100.0	95.51	1.203659	1.149573		-4.5	20
1,3-Dichlorobenzene	A	100.0	94.69	1.256964	1.19028		-5.3	20
1,4-Dichlorobenzene	A	100.0	96.18	1.26803	1.219641		-3.8	20
Dichlorodifluoromethane	A	100.0	140.0	0.1924809	0.2693995		40.0	20 *
1,1-Dichloroethane	A	100.0	92.43	0.4594785	0.4246917	0.1	-7.6	20
1,2-Dichloroethane	A	100.0	105.0	0.3510167	0.3685854		5.0	20
1,1-Dichloroethene	A	100.0	91.62	0.1816551	0.1664294		-8.4	20
cis-1,2-Dichloroethene	A	100.0	94.32	0.2461851	0.2321942		-5.7	20
trans-1,2-Dichloroethene	A	100.0	90.18	0.2335685	0.2106416		-9.8	20
1,2-Dichloropropane	A	100.0	94.46	0.259293	0.2449371		-5.5	20
cis-1,3-Dichloropropene	A	100.0	101.4	0.3521134	0.3568939		1.4	20
trans-1,3-Dichloropropene	A	100.0	103.0	0.8239793	0.8484374		3.0	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA6	Calibration:	2121003
Lab File ID:	1023CCVE.D	Calibration Date:	04/27/12 09:57
Sequence:	2J29805	Injection Date:	10/23/12
Lab Sample ID:	2J29805-CCV1	Injection Time:	23:13

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Ethylbenzene	A	100.0	94.21	2.511121	2.365665		-5.8	20	
2-Hexanone	A	200.0	201.1	0.4846361	0.4873557		0.6	20	
Isopropylbenzene	A	100.0	99.55	2.072041	2.062814		-0.4	20	
Methylene chloride	A	100.0	83.56	0.2190071	0.1830083		-16.4	20	
Methyl Acetate	A	100.0	90.20	0.1792449	0.1616726		-9.8	20	
Methylcyclohexane	A	100.0	94.74	0.3060391	0.2899522		-5.3	20	
4-Methyl-2-pentanone	A	200.0	211.1	0.2742899	0.2895122		5.5	20	
Methyl t-Butyl Ether	A	100.0	95.21	0.6034362	0.5745585		-4.8	20	
Styrene	A	100.0	100.7	1.582432	1.593047		0.7	20	
1,1,2,2-Tetrachloroethane	A	100.0	80.85	0.8277083	0.6691664	0.3	-19.2	20	
Tetrachloroethene	A	100.0	96.39	0.5209978	0.502169		-3.6	20	
Toluene	A	100.0	94.57	1.306882	1.235969		-5.4	20	
1,2,3-Trichlorobenzene	A	100.0	87.53	0.6431937	0.5629556		-12.5	20	
1,2,4-Trichlorobenzene	A	100.0	88.80	0.7381814	0.655476		-11.2	20	
1,1,2-Trichloroethane	A	100.0	88.60	0.4426374	0.3921915		-11.4	20	
1,1,1-Trichloroethane	A	100.0	110.4	0.2930192	0.3235547		10.4	20	
Trichloroethene	A	100.0	99.84	0.2340808	0.2337024		-0.2	20	
Trichlorofluoromethane	A	100.0	100.2	0.3110129	0.3116104		0.2	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	100.0	99.23	0.1847629	0.1833469		-0.8	20	
Vinyl chloride	A	100.0	123.8	0.1848242	0.2288182		23.8	20	*
m,p-Xylene	A	200.0	191.5	1.895141	1.81452		-4.3	20	
o-Xylene	A	100.0	96.03	1.959051	1.881241		-4.0	20	
Xylenes (total)	A	300.0	287.5	1.916445	1.83676		-4.2	20	
Bromofluorobenzene	A	30.00	31.84	0.8581783	0.9109015		6.1	20	
Dibromofluoromethane	A	30.00	32.69	0.2631144	0.2867469		9.0	20	
1,2-Dichloroethane-d4	A	30.00	29.99	6.156409E-02	6.153564E-02		-0.05	20	
Toluene-d8	A	30.00	30.62	2.250463	2.296894		2.1	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J23020 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
TB	1210154-09	10/24/12 01:36	5.00	5.00
Blank	2J23020-BLK1	10/24/12 01:08	5.00	5.00
LCS	2J23020-BS1	10/23/12 23:42	5.00	5.00
LCS Dup	2J23020-BSD1	10/24/12 09:43	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23020-BLK1 File ID: 1023BLKE.D

Sampled: Prepared: Analyzed: 10/24/12 01:08

Solids: Preparation: 5030B Dilution:

Batch: 2J23020 Sequence: 2J29805 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	X, U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23020-BLK1 File ID: 1023BLKE.D

Sampled: Prepared: Analyzed: 10/24/12 01:08

Solids: Preparation: 5030B Dilution:

Batch: 2J23020 Sequence: 2J29805 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.80	103	75 - 120	
Dibromofluoromethane	30.00	33.15	110	85 - 115	
1,2-Dichloroethane-d4	30.00	30.43	101	70 - 120	
Toluene-d8	30.00	30.28	101	85 - 120	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29101	Instrument:	MS-VOA5
Calibration:	2291001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29101-TUN1	1012TUN2.D	10/12/12 14:29
Cal Standard	2J29101-CAL1	1012CAL1.D	10/12/12 15:24
Cal Standard	2J29101-CAL2	1012CAL2.D	10/12/12 15:52
Cal Standard	2J29101-CAL3	1012CAL3.D	10/12/12 16:20
Cal Standard	2J29101-CAL4	1012CAL4.D	10/12/12 16:48
Cal Standard	2J29101-CAL5	1012CAL5.D	10/12/12 17:15
Cal Standard	2J29101-CAL6	1012CAL6.D	10/12/12 17:43
Cal Standard	2J29101-CAL7	1012CAL7.D	10/12/12 18:11
Cal Standard	2J29101-CAL8	1012CAL8.D	10/12/12 18:38
Cal Standard	2J29101-CAL9	1012CAL9.D	10/12/12 19:06
Initial Cal Check	2J29101-ICV2	1012ICV2.D	10/12/12 20:29
MS Tune	2J29101-TUN2	1012TUN3.D	10/16/12 13:45
Initial Cal Check	2J29101-ICV3	1012ICV3.D	10/16/12 14:13

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1012TUN3.D	Injection Date:	10/16/12
Instrument ID:	MS-VOA5	Injection Time:	13:45
Sequence:	2J29101	Lab Sample ID:	2J29101-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.7	PASS
75	30 - 60% of 95	49.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.69	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.7	PASS
175	5 - 9% of 174	7.11	PASS
176	95 - 101% of 174	97.4	PASS
177	5 - 9% of 176	6.57	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1012TUN2.D	Injection Date:	10/12/12
Instrument ID:	MS-VOA5	Injection Time:	14:29
Sequence:	2J29101	Lab Sample ID:	2J29101-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.6	PASS
75	30 - 60% of 95	50.8	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.98	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	75.5	PASS
175	5 - 9% of 174	7.42	PASS
176	95 - 101% of 174	95.6	PASS
177	5 - 9% of 176	6.6	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.1308263	7.169947	3.421429	0.1107739			15	
Acrolein	3.293869E-02	13.03005	3.321111	0.1019839			15	
Acrylonitrile	0.1050587	2.955386	4.224444	0.1237894			15	
Benzene	0.9492909	8.620587	7.344444	7.245944E-02			15	
Bromobenzene	0.9753776	12.01047	12.10889	0.0144915			15	
Bromochloromethane	0.1703055	4.507879	6.424444	8.158399E-02			15	
Tert-Amyl Methyl Ether	0.6946744	6.768849	7.543333	6.727492E-02			15	
Bromodichloromethane	0.3668169	6.534773	8.341111	4.022106E-02			15	
Bromoform	0.505661	17.59172	11.51143	2.797771E-02		0.9999593	SPCC (0.1)	
Bromomethane	0.2263207	11.54685	2.575555	0.2053272			15	
Bromofluorobenzene	0.9353573	4.777822	11.95	2.025372E-02			15	
n-Butylbenzene	1.316239	12.26201	13.54556	4.202676E-02			15	
2-Butanone	0.1900461	6.781548	5.87	1.747658E-02			15	
sec-Butylbenzene	2.066344	7.876697	13.00556	3.835336E-02			15	
tert-Butylbenzene	1.705204	6.245025	12.77111	2.030234E-02			15	
Carbon disulfide	0.6412047	4.171366	4.406667	0.1140858			15	
Carbon tetrachloride	0.3465177	8.348462	7.311111	8.229499E-02			15	
Chlorobenzene	1.561071	6.428212	10.79111	3.598659E-02			SPCC (0.3)	
Chloroethane	0.1885512	6.604544	2.696667	0.1857631			15	
Chloroform	0.524999	12.60127	6.401111	5.547756E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1771786	8.444776	8.712222	4.758714E-02			15	
Chloromethane	0.3854947	13.93974	2.037778	0.2150863			SPCC (0.1)	
1-Chlorohexane	0.8007468	8.500716	10.7675	4.454654E-02			15	
2-Chlorotoluene	2.094181	14.4823	12.33444	4.387552E-02			15	
4-Chlorotoluene	2.218103	10.33822	12.39444	4.712388E-02			15	
Cyclohexane	0.4069526	6.67736	7.241111	4.219525E-02			15	
Dibromochloromethane	0.7653683	9.53649	10.02	1.919963E-02			15	
1,2-Dibromo-3-chloropropane	0.1457781	10.28602	14.13889	1.933973E-02			15	
1,2-Dibromoethane (EDB)	0.6953223	7.645976	10.23444	5.380092E-02			15	
Dibromomethane	0.2156063	6.867565	8.275556	6.274539E-02			15	
1,2-Dichlorobenzene	1.322429	9.319326	13.49556	3.668195E-02			15	
1,3-Dichlorobenzene	1.422392	9.765556	13.08889	4.337518E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.504713	8.327264	13.18111	4.258517E-02			15	
Dichlorodifluoromethane	0.2651001	9.859331	1.845556	0.2856368			15	
1,1-Dichloroethane	0.5476241	4.780995	5.418889	5.933679E-02			SPCC (0.1)	
1,2-Dichloroethane	0.4528864	7.432713	7.172222	6.209681E-02			15	
1,1-Dichloroethene	0.219995	5.502211	3.871111	0.1550187			CCC (20)	
cis-1,2-Dichloroethene	0.299601	7.424506	6.144444	8.827927E-02			15	
trans-1,2-Dichloroethene	0.2718737	8.657721	5.04	9.962629E-02			15	
1,2-Dichloroethene (total)	0.2857373	7.486324	6.144444	8.827927E-02			15	
1,2-Dichloropropane	0.3128379	7.734725	8.164444	6.216083E-02			CCC (20)	
1,3-Dichloropropane	1.028184	5.028358	9.767778	6.969679E-02			15	
2,2-Dichloropropane	0.3982799	8.171856	6.252222	7.058938E-02			15	
1,1-Dichloropropene	0.3717116	5.417463	7.192222	6.275141E-02			15	
cis-1,3-Dichloropropene	0.4546126	6.453357	8.923333	5.284769E-02			15	
trans-1,3-Dichloropropene	0.9878761	7.795565	9.402222	4.663104E-02			15	
Diisopropyl Ether	1.371923	11.15829	5.802222	7.784852E-02			15	
Ethylbenzene	2.62125	10.36353	10.94444	4.993597E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.9841015	7.438849	6.275556	8.592307E-02			15	
Ethyl Methacrylate	0.8331089	7.325389	9.6	4.887049E-02			15	
Hexachlorobutadiene	0.2519403	14.9377	15.49778	2.865142E-02			15	
2-Hexanone	0.64531	14.68557	9.708889	6.396247E-02			15	
Iodomethane	0.4141218	9.941711	4.062222	0.1064841			15	
Isopropylbenzene	2.060659	6.880268	11.84444	4.914158E-02			15	
p-Isopropyltoluene	1.585513	6.678641	13.14444	0.0373946			15	
Methylene chloride	0.3058374	7.270345	4.355556	0.121083			15	
Methyl Acetate	0.2709814	5.229151	4.21	0.1259766			15	
Methylcyclohexane	0.2757224	4.97078	8.495555	6.049599E-02			15	
Naphthalene	0.8628979	13.76505	15.36	1.759729E-02			15	
Methyl Methacrylate	0.3369681	10.31889	8.306667	5.808503E-02			15	
4-Methyl-2-pentanone	0.3461514	10.63507	8.851111	0.0427818			15	
Methyl t-Butyl Ether	0.6443611	5.590097	5.03	1.761348E-02			15	
n-Propylbenzene	2.867866	13.93909	12.25333	3.966289E-02			15	
Styrene	1.57265	7.853373	11.41889	2.195589E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.891879	12.88279	11.76778	5.755305E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.6412186	6.505399	10.83444	4.503166E-02			15	
tert-Butyl alcohol	2.145603E-02	9.323035	3.998889	8.342015E-02			15	
Tetrachloroethene	0.7104583	4.599011	10.13333	5.271432E-02			15	
Toluene	1.442954	5.337669	9.4	4.407662E-03			CCC (20)	
1,2,3-Trichlorobenzene	0.4083448	11.43467	15.64778	2.504416E-02			15	
1,2,4-Trichlorobenzene	0.4983989	11.29925	15.21222	2.863628E-02			15	
1,1,2-Trichloroethane	0.5170842	7.469048	9.554445	5.725395E-02			15	
1,1,1-Trichloroethane	0.4192187	4.558507	6.966667	7.320109E-02			15	
Tetrahydrofuran	0.0249648	16.34235	6.61	0.0180108	0.9995332		0.995	
Trichloroethene	0.2944908	6.692227	8.115555	6.266205E-02			15	
Trichlorofluoromethane	0.4689858	5.793276	3.15	0.1588719			15	
1,2,3-Trichloropropane	0.1991037	7.060199	11.89111	0.0147569			15	
1,3,5-Trimethylbenzene	2.039265	8.795024	12.43333	4.248275E-02			15	
1,2,4-Trimethylbenzene	1.766581	7.92246	12.80222	4.014229E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2264658	3.944156	3.947778	0.2110514			15	
Vinyl chloride	0.2359945	23.03148	2.175714	0.2462423	0.9988621		CCC (20)	*
m,p-Xylene	1.813543	13.97709	11.05778	5.889907E-02			15	
o-Xylene	1.905321	7.777756	11.44778	3.791632E-02			15	
Vinyl acetate	0.8911488	11.32924	5.49875	6.399563E-02			15	
Xylenes (total)	1.844136	11.38244	11.44778	3.791632E-02			15	
Dibromofluoromethane	0.3431068	1.223972	6.572222	6.593489E-02			15	
1,2-Dichloroethane-d4	6.230074E-02	1.652363	7.081111	4.893599E-02			15	
Toluene-d8	2.274744	4.528986	9.322222	4.878895E-02			15	
tert-Amyl alcohol	1.753356E-02	4.883647	6.7775	6.889731E-02			15	
tert-Amyl ethyl ether	0.790677	7.256792	8.443333	5.558737E-02			15	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29903	Instrument:	MS-VOA5
Calibration:	2291001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29903-TUN1	1024TUN1.D	10/24/12 07:08
Calibration Check	2J29903-CCV1	1024CCV2.D	10/24/12 08:06
LCS	2J24005-BS1	1024LCS1.D	10/24/12 08:34
Blank	2J24005-BLK1	1024BLK1.D	10/24/12 09:58
PEN-44-16-10/12	1210154-01	1015401.D	10/24/12 10:26
PEN-44-20-10/12	1210154-02	1015402.D	10/24/12 10:53
PEN-44-26-10/12	1210154-03	1015403.D	10/24/12 11:21
FD10141201	1210154-04	1015404.D	10/24/12 11:49
PEN-44-17-10/12	1210154-05	1015405.D	10/24/12 12:16
PEN-3221-06-10/12	1210154-06	1015406.D	10/24/12 12:44
PEN-3221-08-10/12	1210154-07	1015407.D	10/24/12 13:12
PEN-3221-04-10/12	1210154-08	1015408.D	10/24/12 13:40
PEN-44-23-10/12	1210154-10	1015410.D	10/24/12 14:08
PEN-44-18-10/12	1210154-12	1015412.D	10/24/12 14:35
FD10151201	1210154-14	1015414.D	10/24/12 15:03
PEN-44-24-10/12	1210154-18	1015418.D	10/24/12 15:31
PEN-44-15-10/12	1210154-20	1015420.D	10/24/12 15:59
PEN-44-25-10/12	1210154-22	1015422.D	10/24/12 16:27
PEN-44-22-10/12	1210154-23	1015423.D	10/24/12 16:54
PEN-44-21-10/12	1210154-16	1015416D.D	10/24/12 17:22
PEN-44-26-10/12	2J24005-MS1	1015403M.D	10/24/12 17:50
PEN-44-26-10/12	2J24005-MSD1	1015403S.D	10/24/12 18:17
PEN-3221-08-10/12	2J24005-MS2	1015407M.D	10/24/12 18:45
PEN-3221-08-10/12	2J24005-MSD2	1015407S.D	10/24/12 19:13

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1024TUN1.D	Injection Date:	10/24/12
Instrument ID:	MS-VOA5	Injection Time:	07:08
Sequence:	2J29903	Lab Sample ID:	2J29903-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.2	PASS
75	30 - 60% of 95	50	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.6	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	79.8	PASS
175	5 - 9% of 174	7.74	PASS
176	95 - 101% of 174	96.2	PASS
177	5 - 9% of 176	6.44	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA5	Calibration:	2291001
Lab File ID:	1024CCV2.D	Calibration Date:	10/12/12 03:24
Sequence:	2J29903	Injection Date:	10/24/12
Lab Sample ID:	2J29903-CCV1	Injection Time:	08:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100.0	80.09	0.1308263	0.1047837		-19.9	20	
Benzene	A	50.00	50.90	0.9492909	0.9663191		1.8	20	
Bromochloromethane	A	50.00	51.06	0.1703055	0.1739293		2.1	20	
Bromodichloromethane	A	50.00	54.79	0.3668169	0.4019714		9.6	20	
Bromoform	Q	50.00	48.25	0.505661	0.5701481	0.1	-3.5	20	
Bromomethane	A	50.00	52.75	0.2263207	0.2387575		5.5	20	
2-Butanone	A	100.0	96.84	0.1900461	0.1840411		-3.2	20	
Carbon disulfide	A	50.00	69.05	0.6412047	0.885506		38.1	20	*
Carbon tetrachloride	A	50.00	49.76	0.3465177	0.3448702		-0.5	20	
Chlorobenzene	A	50.00	53.91	1.561071	1.683	0.3	7.8	20	
Chloroethane	A	50.00	57.05	0.1885512	0.2151532		14.1	20	
Chloroform	A	50.00	50.45	0.524999	0.5297516		0.9	20	
Chloromethane	A	50.00	64.42	0.3854947	0.4966879	0.1	28.8	20	*
Cyclohexane	A	50.00	57.53	0.4069526	0.4682032		15.1	20	
Dibromochloromethane	A	50.00	53.85	0.7653683	0.8243479		7.7	20	
1,2-Dibromo-3-chloropropane	A	50.00	56.09	0.1457781	0.1635276		12.2	20	
1,2-Dibromoethane (EDB)	A	50.00	50.65	0.6953223	0.704369		1.3	20	
1,2-Dichlorobenzene	A	50.00	52.04	1.322429	1.376355		4.1	20	
1,3-Dichlorobenzene	A	50.00	51.26	1.422392	1.458202		2.5	20	
1,4-Dichlorobenzene	A	50.00	48.62	1.504713	1.463294		-2.8	20	
Dichlorodifluoromethane	A	50.00	78.21	0.2651001	0.4146581		56.4	20	*
1,1-Dichloroethane	A	50.00	52.37	0.5476241	0.5735734	0.1	4.7	20	
1,2-Dichloroethane	A	50.00	52.76	0.4528864	0.4778456		5.5	20	
1,1-Dichloroethene	A	50.00	57.43	0.219995	0.2526928		14.9	20	
cis-1,2-Dichloroethene	A	50.00	51.47	0.299601	0.3083986		2.9	20	
trans-1,2-Dichloroethene	A	50.00	51.49	0.2718737	0.2799914		3.0	20	
1,2-Dichloropropane	A	50.00	52.33	0.3128379	0.327409		4.7	20	
cis-1,3-Dichloropropene	A	50.00	51.19	0.4546126	0.4654225		2.4	20	
trans-1,3-Dichloropropene	A	50.00	57.66	0.9878761	1.139154		15.3	20	

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA5	Calibration:	2291001
Lab File ID:	1024CCV2.D	Calibration Date:	10/12/12 03:24
Sequence:	2J29903	Injection Date:	10/24/12
Lab Sample ID:	2J29903-CCV1	Injection Time:	08:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Ethylbenzene	A	50.00	50.03	2.62125	2.622565		0.05	20	
2-Hexanone	A	100.0	97.34	0.64531	0.6281441		-2.7	20	
Isopropylbenzene	A	50.00	50.07	2.060659	2.063685		0.1	20	
Methylene chloride	A	50.00	50.26	0.3058374	0.3074024		0.5	20	
Methyl Acetate	A	50.00	52.58	0.2709814	0.2849748		5.2	20	
Methylcyclohexane	A	50.00	56.88	0.2757224	0.3136628		13.8	20	
4-Methyl-2-pentanone	A	100.0	104.4	0.3461514	0.3615617		4.5	20	
Methyl t-Butyl Ether	A	50.00	54.67	0.6443611	0.7046008		9.3	20	
Styrene	A	50.00	53.87	1.57265	1.694405		7.7	20	
1,1,2,2-Tetrachloroethane	A	50.00	49.46	0.891879	0.8822571	0.3	-1.1	20	
Tetrachloroethene	A	50.00	47.11	0.7104583	0.6694013		-5.8	20	
Toluene	A	50.00	49.78	1.442954	1.436589		-0.4	20	
1,2,3-Trichlorobenzene	A	50.00	60.12	0.4083448	0.4909869		20.2	20	*
1,2,4-Trichlorobenzene	A	50.00	57.10	0.4983989	0.5691453		14.2	20	
1,1,2-Trichloroethane	A	50.00	49.53	0.5170842	0.5122259		-0.9	20	
1,1,1-Trichloroethane	A	50.00	48.91	0.4192187	0.4100641		-2.2	20	
Trichloroethene	A	50.00	50.21	0.2944908	0.295749		0.4	20	
Trichlorofluoromethane	A	50.00	52.00	0.4689858	0.4877778		4.0	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	50.00	60.35	0.2264658	0.2733589		20.7	20	*
Vinyl chloride	L	50.00	65.25	0.2359945	0.2561815		30.5	20	*
m,p-Xylene	A	100.0	106.5	1.813543	1.930655		6.5	20	
o-Xylene	A	50.00	55.78	1.905321	2.125388		11.6	20	
Xylenes (total)	A	150.0	162.2	1.844136	1.995566		8.2	20	
Bromofluorobenzene	A	30.00	29.80	0.9353573	0.9290562		-0.7	20	
Dibromofluoromethane	A	30.00	30.43	0.3431068	0.3480597		1.4	20	
1,2-Dichloroethane-d4	A	30.00	30.02	6.230074E-02	6.234899E-02		0.08	20	
Toluene-d8	A	30.00	29.76	2.274744	2.25638		-0.8	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J24005 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-16-10/12	1210154-01	10/24/12 10:26	5.00	5.00
PEN-44-20-10/12	1210154-02	10/24/12 10:53	5.00	5.00
PEN-44-26-10/12	1210154-03	10/24/12 11:21	5.00	5.00
FD10141201	1210154-04	10/24/12 11:49	5.00	5.00
PEN-44-17-10/12	1210154-05	10/24/12 12:16	5.00	5.00
PEN-3221-06-10/12	1210154-06	10/24/12 12:44	5.00	5.00
PEN-3221-08-10/12	1210154-07	10/24/12 13:12	5.00	5.00
PEN-3221-04-10/12	1210154-08	10/24/12 13:40	5.00	5.00
PEN-44-23-10/12	1210154-10	10/24/12 14:08	5.00	5.00
PEN-44-18-10/12	1210154-12	10/24/12 14:35	5.00	5.00
FD10151201	1210154-14	10/24/12 15:03	5.00	5.00
PEN-44-21-10/12	1210154-16	10/24/12 17:22	5.00	5.00
PEN-44-24-10/12	1210154-18	10/24/12 15:31	5.00	5.00
PEN-44-15-10/12	1210154-20	10/24/12 15:59	5.00	5.00
PEN-44-25-10/12	1210154-22	10/24/12 16:27	5.00	5.00
PEN-44-22-10/12	1210154-23	10/24/12 16:54	5.00	5.00
Blank	2J24005-BLK1	10/24/12 09:58	5.00	5.00
LCS	2J24005-BS1	10/24/12 08:34	5.00	5.00
PEN-44-26-10/12	2J24005-MS1	10/24/12 17:50	5.00	5.00
PEN-3221-08-10/12	2J24005-MS2	10/24/12 18:45	5.00	5.00
PEN-44-26-10/12	2J24005-MSD1	10/24/12 18:17	5.00	5.00
PEN-3221-08-10/12	2J24005-MSD2	10/24/12 19:13	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J24005-BLK1 File ID: 1024BLK1.D

Sampled: Prepared: Analyzed: 10/24/12 09:58

Solids: Preparation: 5030B Dilution:

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J24005-BLK1 File ID: 1024BLK1.D

Sampled: Prepared: Analyzed: 10/24/12 09:58

Solids: Preparation: 5030B Dilution:

Batch: 2J24005 Sequence: 2J29903 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	X, U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.20	94.0	75 - 120	I
Dibromofluoromethane	30.00	29.80	99.3	85 - 115	I
1,2-Dichloroethane-d4	30.00	29.38	97.9	70 - 120	I
Toluene-d8	30.00	29.18	97.3	85 - 120	I

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I27213	Instrument:	MS-BNA1
Calibration:	2272005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I27213-TUN1	SEQ-TUN1.D	09/26/12 17:40
Cal Standard	2I27213-CAL1	SEQ-CAL1.D	09/26/12 18:03
Cal Standard	2I27213-CAL2	SEQ-CAL2.D	09/26/12 18:30
Cal Standard	2I27213-CAL3	SEQ-CAL3.D	09/26/12 18:58
Cal Standard	2I27213-CAL4	SEQ-CAL4.D	09/26/12 19:25
Cal Standard	2I27213-CAL5	SEQ-CAL5.D	09/26/12 19:52
Cal Standard	2I27213-CAL6	SEQ-CAL6.D	09/26/12 20:20
Cal Standard	2I27213-CAL7	SEQ-CAL7.D	09/26/12 20:47
Cal Standard	2I27213-CAL8	SEQ-CAL8.D	09/26/12 21:14
Cal Standard	2I27213-CAL9	SEQ-CAL9.D	09/26/12 21:42
Cal Standard	2I27213-CALA	SEQ-CALA.D	09/26/12 22:09
Cal Standard	2I27213-CALB	SEQ-CALB.D	09/26/12 22:36
Cal Standard	2I27213-CALC	SEQ-CALC.D	09/26/12 23:04
Cal Standard	2I27213-CALD	SEQ-CALD.D	09/26/12 23:31
Cal Standard	2I27213-CALE	SEQ-CALE.D	09/26/12 23:59
Cal Standard	2I27213-CALF	SEQ-CALF.D	09/27/12 00:26
Cal Standard	2I27213-CALG	SEQ-CALG.D	09/27/12 00:53
Initial Cal Check	2I27213-ICV2	SEQ-ICV2.D	09/27/12 01:48
Initial Cal Check	2I27213-ICV3	SEQ-ICV3.D	09/27/12 02:16
MS Tune	2I27213-TUN2	SEQ-TUN2.D	09/27/12 15:42
Initial Cal Check	2I27213-ICV4	SEQ-ICV4.D	09/27/12 16:07

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/26/12
Instrument ID:	MS-BNA1	Injection Time:	17:40
Sequence:	2I27213	Lab Sample ID:	2I27213-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	41.4	PASS
68	Less than 2% of 69	0.277	PASS
69	Less than 200% of 198	53	PASS
70	Less than 2% of 69	0.589	PASS
127	40 - 60% of 198	48.9	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.91	PASS
275	10 - 30% of 198	18.4	PASS
365	1 - 200% of 198	2.13	PASS
441	0.001 - 100% of 443	72.2	PASS
442	40 - 200% of 198	59.2	PASS
443	17 - 23% of 442	19.3	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/27/12
Instrument ID:	MS-BNA1	Injection Time:	15:42
Sequence:	2I27213	Lab Sample ID:	2I27213-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	39.5	PASS
68	Less than 2% of 69	0.442	PASS
69	Less than 200% of 198	51.2	PASS
70	Less than 2% of 69	0.674	PASS
127	40 - 60% of 198	48.3	PASS
197	Less than 1% of 198	0.0185	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.76	PASS
275	10 - 30% of 198	18.5	PASS
365	1 - 200% of 198	2.14	PASS
441	0.001 - 100% of 443	74.7	PASS
442	40 - 200% of 198	59.6	PASS
443	17 - 23% of 442	19.9	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2272005	Instrument:	MS-BNA1
Matrix:	Water	Calibration Dates:	9/26/12 18:03 9/27/12 0:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.104581	3.667399	8.91525	4.192777E-02			CCC (20)	
Acenaphthylene	1.84018	3.632512	8.682375	3.114255E-02			CCC (20)	
Acetophenone	1.774174	3.851726	5.501125	2.361145E-02			CCC (20)	
Aniline	1.995644	4.626025	4.548875	9.483675E-02			CCC (20)	
Anthracene	1.041855	4.142428	10.737	4.386926E-02			CCC (20)	
Atrazine	0.2021629	4.235431	10.41287	6.554844E-02			CCC (20)	
Benzaldehyde	1.006348	4.459025	4.358	8.713657E-02			CCC (20)	
Benzidine	0.7586683	5.879218	12.31662	3.369084E-02			CCC (20)	
Benzo(a)anthracene	1.194761	4.851248	13.88937	3.244724E-02			CCC (20)	
Benzo(a)pyrene	1.056782	4.973005	15.90437	3.193249E-02			CCC (20)	
Benzo(b)fluoranthene	1.160008	5.331305	15.43212	3.248984E-02			CCC (20)	
Benzo(g,h,i)perylene	0.9556402	4.308529	17.9275	6.469576E-02			CCC (20)	
Benzoic acid	0.2287324	14.70025	6.4624	0.4386429			CCC (20)	
Benzo(k)fluoranthene	1.193894	4.101768	15.46912	0.0546399			CCC (20)	
Benzyl alcohol	0.9014304	6.108482	5.159625	8.622099E-02			CCC (20)	
1,1-Biphenyl	1.416163	2.651145	8.16025	5.658205E-02			CCC (20)	
4-Bromophenyl-phenylether	0.1876197	1.642047	10.138	2.504573E-02			CCC (20)	
Butylbenzylphthalate	0.7023635	11.18941	13.27325	1.993542E-02			CCC (20)	
Caprolactam	0.1025421	13.6366	7.15725	0.1932975			CCC (20)	
Carbazole	0.9972784	3.657535	10.959	3.609112E-02			CCC (20)	
4-Chloro-3-methylphenol	0.3117096	3.303953	7.44875	2.900505E-02			CCC (20)	
4-Chloroaniline	0.4447237	5.754276	6.7835	5.519815E-02			CCC (20)	
Bis(2-chloroethoxy)methane	0.4303265	3.846842	6.383375	3.673511E-02			CCC (20)	
Bis(2-chloroethyl)ether	1.371713	2.941024	4.639125	0.1018083			CCC (20)	
2,2'-Oxybis-1-chloropropane	1.969533	5.742854	5.368625	4.393517E-02			CCC (20)	
2-Chloronaphthalene	1.139168	2.77572	8.159125	6.302636E-02			CCC (20)	
2-Chlorophenol	1.420599	2.046808	4.6855	8.267222E-02			CCC (20)	
4-Chlorophenyl phenyl ether	0.6478706	3.083436	9.553	2.902302E-02			CCC (20)	
Chrysene	1.116409	3.008397	13.94612	3.815723E-02			CCC (20)	
Dibenz(a,h)anthracene	0.9571656	5.131775	17.5935	3.131882E-02			CCC (20)	
Dibenzofuran	1.590912	2.644566	9.110375	3.680324E-02			CCC (20)	
Di-n-butylphthalate	1.345652	7.626803	11.47675	1.523484E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2272005
Instrument: MS-BNA1
Matrix: Water
Calibration Dates: 9/26/12 18:03 9/27/12 0:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.442626	1.545015	4.93625	5.027495E-02			CCC (20)	
1,3-Dichlorobenzene	1.440848	1.903295	4.862875	7.552796E-02			CCC (20)	
1,2-Dichlorobenzene	1.358734	2.529233	5.18875	8.005298E-02			CCC (20)	
3,3'-Dichlorobenzidine	0.4083764	4.734066	13.90538	2.273012E-02			CCC (20)	
2,6-Dichlorophenol	0.2664213	4.565875	6.7815	6.321973E-02			15	
2,4-Dichlorophenol	0.2770677	4.521523	6.48225	3.371409E-02			CCC (20)	
Diethylphthalate	1.419629	4.096827	9.5105	7.334255E-02			CCC (20)	
2,4-Dimethylphenol	0.3753517	3.065619	6.266	3.594803E-02			CCC (20)	
Dimethyl phthalate	1.345741	2.629253	8.6395	6.825815E-02			CCC (20)	
4,6-Dinitro-2-methylphenol	0.1631567	13.40917	9.679714	7.663445E-02			CCC (20)	
2,4-Dinitrophenol	0.2426865	11.5747	8.997834	4.513503E-02			CCC (20)	
2,4-Dinitrotoluene	0.4412515	6.36668	9.185	5.476163E-02			CCC (20)	
2,6-Dinitrotoluene	0.3341051	2.899851	8.71275	4.684148E-02			CCC (20)	
Di-n-octylphthalate	1.625252	19.42695	14.95388	2.252079E-02	0.9995969		CCC (20)	
1,4-Dioxane	0.5295315	3.094231	1.882	0.2712203			15	
1,2-Diphenylhydrazine	0.8600535	3.561029	9.73925	3.184954E-02			CCC (20)	
Bis(2-ethylhexyl)phthalate	0.906002	12.58977	14.07613	1.959701E-02			CCC (20)	
Fluoranthene	1.121686	3.546909	12.12612	3.525315E-02			CCC (20)	
Fluorene	1.291009	2.070254	9.530125	4.048329E-02			CCC (20)	
2-Fluorobiphenyl	1.304973	2.550458	8.05825	3.909822E-02			CCC (20)	
2-Fluorophenol	1.364318	3.490521	3.41725	0.1410522			CCC (20)	
Hexachlorobenzene	0.2127339	2.307244	10.303	2.203108E-02			CCC (20)	
Hexachlorobutadiene	0.1878684	1.960866	6.914	5.031228E-02			CCC (20)	
Hexachlorocyclopentadiene	0.3883047	7.132773	7.8515	3.398346E-02			CCC (20)	
Hexachloroethane	0.6620999	2.557715	5.59625	7.371592E-02			CCC (20)	
Indeno(1,2,3-cd)pyrene	1.128654	4.291234	17.562	4.681499E-02			CCC (20)	
Isophorone	0.6907435	2.967858	6.04575	7.629027E-02			CCC (20)	
1-Methylnaphthalene	0.5245967	2.755911	7.68475	2.290911E-02			CCC (20)	
2-Methylnaphthalene	0.5500879	3.617338	7.54875	4.032424E-02			CCC (20)	
2-Methylphenol	1.23516	3.448355	5.357625	2.996493E-02			CCC (20)	
3-Methylphenol	1.283491	3.818632	5.568375	8.424321E-02			CCC (20)	
4-Methylphenol	1.283491	3.818632	5.568375	8.424321E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2272005
Instrument: MS-BNA1
Matrix: Water
Calibration Dates: 9/26/12 18:03 9/27/12 0:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
3-Methylphenol/4-Methylphenol	1.283491	3.818632	5.568375	8.424321E-02			15	
Naphthalene	1.045138	3.387294	6.650625	4.515734E-02			CCC (20)	
4-Nitroaniline	0.3726718	11.29913	9.632125	0.1008701			CCC (20)	
3-Nitroaniline	0.3814709	4.588481	8.87625	7.323247E-02			CCC (20)	
2-Nitroaniline	0.3519549	9.928968	8.35375	5.603041E-02			CCC (20)	
Nitrobenzene	0.3806992	3.059174	5.73	4.682199E-02			CCC (20)	
Nitrobenzene-d5	0.3758829	3.698424	5.709125	2.613411E-02			CCC (20)	
4-Nitrophenol	0.2753243	7.99335	9.122572	4.434523E-02			CCC (20)	
2-Nitrophenol	0.2015288	7.114383	6.162	5.347405E-02			CCC (20)	
N-Nitrosodimethylamine	0.6454241	3.308037	2.152625	0.1921502			CCC (20)	
N-Nitrosodiphenylamine	0.6060824	2.738114	9.712375	0.0476372			CCC (20)	
N-Nitroso-di-n-propylamine	0.9264115	3.847318	5.5585	8.229641E-02			CCC (20)	
Pentachlorophenol	0.1483397	7.142531	10.52857	3.303109E-02			CCC (20)	
Phenanthrene	1.036309	3.924071	10.68563	2.503092E-02			CCC (20)	
Phenol	1.847752	2.430352	4.569875	0.1188403			CCC (20)	
Phenol-d6	1.657278	3.092311	4.552625	9.935202E-02			CCC (20)	
Pyrene	1.419209	2.387319	12.3895	3.407473E-02			CCC (20)	
Pyridine	1.384519	8.014604	2.153875	0.2801215			CCC (20)	
Terphenyl-d14	0.7922755	2.429045	12.62238	2.535784E-02			CCC (20)	
1,2,4,5-Tetrachlorobenzene	0.3065383	4.049936	7.8175	0.0638879			CCC (20)	
2,3,4,6-Tetrachlorophenol	0.3342857	8.040752	9.335375	1.610042E-02			CCC (20)	
2,4,6-Tribromophenol	0.1150921	5.431977	9.8565	3.664511E-02			CCC (20)	
1,2,4-Trichlorobenzene	0.3215882	3.64138	6.581375	3.850313E-02			CCC (20)	
2,4,6-Trichlorophenol	0.4040255	6.82953	7.96475	4.460944E-02			CCC (20)	
2,4,5-Trichlorophenol	0.4126243	6.69412	8.009625	5.024523E-02			CCC (20)	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29718	Instrument:	MS-BNA1
Calibration:	2272005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29718-TUN1	SEQ-TUN1.D	10/22/12 17:53
Calibration Check	2J29718-CCV1	SEQ-CCV1.D	10/22/12 18:16
Calibration Check	2J29718-CCV2	SEQ-CCV2.D	10/22/12 18:43
Blank	2J19004-BLK1	J19004B1.D	10/22/12 19:10
LCS	2J19004-BS1	J19004L1.D	10/22/12 19:38
PEN-3221-06-10/12	1210154-06	1015406.D	10/22/12 21:00
PEN-3221-08-10/12	1210154-07	1015407.D	10/22/12 21:27
PEN-3221-08-10/12	2J19004-MS1	1015407M.D	10/22/12 21:54
PEN-3221-08-10/12	2J19004-MSD1	1015407S.D	10/22/12 22:21
PEN-3221-04-10/12	1210154-08	1015408.D	10/22/12 22:49
PEN-44-18-10/12	1210154-12	1015412.D	10/22/12 23:16
FD10151201	1210154-14	1015414.D	10/22/12 23:43
PEN-44-21-10/12	1210154-16	1015416.D	10/23/12 00:10
PEN-44-24-10/12	1210154-18	1015418.D	10/23/12 00:38
PEN-44-15-10/12	1210154-20	1015420.D	10/23/12 01:05

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/22/12
Instrument ID:	MS-BNA1	Injection Time:	17:53
Sequence:	2J29718	Lab Sample ID:	2J29718-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	36.9	PASS
68	Less than 2% of 69	1.04	PASS
69	Less than 200% of 198	48.9	PASS
70	Less than 2% of 69	0.802	PASS
127	40 - 60% of 198	47.6	PASS
197	Less than 1% of 198	0.0729	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.6	PASS
275	10 - 30% of 198	18.3	PASS
365	1 - 200% of 198	2.32	PASS
441	0.001 - 100% of 443	78	PASS
442	40 - 200% of 198	60.5	PASS
443	17 - 23% of 442	20	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA1	Calibration:	2272005
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/26/12 18:03
Sequence:	2J29718	Injection Date:	10/22/12
Lab Sample ID:	2J29718-CCV1	Injection Time:	18:16

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Bromophenyl-phenylether	A	50.00	55.63	0.1876197	0.2087357	0.1	11.3	20	
Butylbenzylphthalate	A	50.00	58.24	0.7023635	0.8180799	0.01	16.5	20	
Carbazole	A	50.00	53.09	0.9972784	1.058989	0.01	6.2	20	
4-Chloro-3-methylphenol	A	50.00	59.32	0.3117096	0.3698104	0.2	18.6	20	
4-Chloroaniline	A	50.00	53.14	0.4447237	0.4726151	0.01	6.3	20	
Bis(2-chloroethoxy)methane	A	50.00	50.89	0.4303265	0.4379687	0.3	1.8	20	
Bis(2-chloroethyl)ether	A	50.00	51.20	1.371713	1.404623	0.7	2.4	20	
2,2'-Oxybis-1-chloropropane	A	50.00	50.23	1.969533	1.978726	0.01	0.5	20	
2-Chloronaphthalene	A	50.00	51.19	1.139168	1.166367	0.8	2.4	20	
2-Chlorophenol	A	50.00	55.69	1.420599	1.582175	0.8	11.4	20	
4-Chlorophenyl phenyl ether	A	50.00	54.06	0.6478706	0.7004962	0.4	8.1	20	
Dibenzofuran	A	50.00	49.40	1.590912	1.571722	0.8	-1.2	20	
Di-n-butylphthalate	A	50.00	55.56	1.345652	1.495337	0.01	11.1	20	
2,4-Dichlorophenol	A	50.00	53.67	0.2770677	0.2973961	0.2	7.3	20	
Diethylphthalate	A	50.00	55.32	1.419629	1.570626	0.01	10.6	20	
2,4-Dimethylphenol	A	50.00	55.75	0.3753517	0.4185008	0.2	11.5	20	
Dimethyl phthalate	A	50.00	55.16	1.345741	1.4846	0.01	10.3	20	
4,6-Dinitro-2-methylphenol	A	50.00	55.43	0.1631567	0.1808887	0.01	10.9	20	
2,4-Dinitrophenol	A	50.00	52.85	0.2426865	0.256539	0.05	5.7	20	
2,4-Dinitrotoluene	A	50.00	54.33	0.4412515	0.4794921	0.2	8.7	20	
2,6-Dinitrotoluene	A	50.00	50.92	0.3341051	0.3402605	0.2	1.8	20	
Di-n-octylphthalate	L	50.00	51.26	1.625252	1.85681	0.01	2.5	20	
Bis(2-ethylhexyl)phthalate	A	50.00	55.98	0.906002	1.014449	0.01	12.0	20	
Hexachlorobenzene	A	50.00	58.90	0.2127339	0.2506172	0.1	17.8	20	
Hexachlorobutadiene	A	50.00	59.49	0.1878684	0.2235209	0.01	19.0	20	
Hexachlorocyclopentadiene	A	50.00	60.80	0.3883047	0.4721609	0.05	21.6	20	*
Hexachloroethane	A	50.00	58.36	0.6620999	0.7728017	0.3	16.7	20	
Isophorone	A	50.00	53.32	0.6907435	0.7366847	0.4	6.7	20	
2-Methylphenol	A	50.00	54.36	1.23516	1.342887	0.7	8.7	20	

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA1	Calibration:	2272005
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/26/12 18:03
Sequence:	2J29718	Injection Date:	10/22/12
Lab Sample ID:	2J29718-CCV1	Injection Time:	18:16

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Methylphenol	A	50.00	57.15	1.283491	1.467118	0.6	14.3	20	
4-Nitroaniline	A	50.00	50.09	0.3726718	0.3733252	0.01	0.2	20	
3-Nitroaniline	A	50.00	51.31	0.3814709	0.3915011	0.01	2.6	20	
2-Nitroaniline	A	50.00	55.50	0.3519549	0.3906823	0.01	11.0	20	
Nitrobenzene	A	50.00	52.68	0.3806992	0.4010824	0.2	5.4	20	
4-Nitrophenol	A	50.00	56.76	0.2753243	0.3125545	0.05	13.5	20	
2-Nitrophenol	A	50.00	54.35	0.2015288	0.219076	0.1	8.7	20	
N-Nitrosodimethylamine	A	50.00	60.88	0.6454241	0.7859194	0.01	21.8	20	*
N-Nitroso-di-n-propylamine	A	50.00	58.79	0.9264115	1.089302	0.5	17.6	20	
Pentachlorophenol	A	50.00	51.62	0.1483397	0.1531518	0.05	3.2	20	
Phenol	A	50.00	52.12	1.847752	1.92612	0.8	4.2	20	
2,3,4,6-Tetrachlorophenol	A	50.00	56.84	0.3342857	0.3800135	0.01	13.7	20	
2,4,6-Trichlorophenol	A	50.00	54.85	0.4040255	0.443188	0.2	9.7	20	
2,4,5-Trichlorophenol	A	50.00	54.09	0.4126243	0.4463741	0.2	8.2	20	
2-Fluorobiphenyl	A	50.00	52.80	1.304973	1.377953	0.01	5.6	20	
2-Fluorophenol	A	100.0	105.7	1.364318	1.442287	0.01	5.7	20	
Nitrobenzene-d5	A	50.00	55.72	0.3758829	0.418871	0.01	11.4	20	
Phenol-d6	A	100.0	103.4	1.657278	1.71382	0.01	3.4	20	
Terphenyl-d14	A	50.00	61.10	0.7922755	0.9681931	0.01	22.2	20	*
2,4,6-Tribromophenol	A	100.0	118.4	0.1150921	0.1362284	0.01	18.4	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA1	Calibration:	2272005
Lab File ID:	SEQ-CCV2.D	Calibration Date:	09/26/12 18:03
Sequence:	2J29718	Injection Date:	10/22/12
Lab Sample ID:	2J29718-CCV2	Injection Time:	18:43

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Atrazine	A	50.00	53.48	0.2021629	0.2162293	0.01	7.0	20
Benzaldehyde	A	50.00	55.58	1.006348	1.118642	0.01	11.2	20
1,1-Biphenyl	A	50.00	46.94	1.416163	1.329554	0.01	-6.1	20
Caprolactam	A	50.00	57.91	0.1025421	0.1187695	0.01	15.8	20
3,3'-Dichlorobenzidine	A	50.00	57.31	0.4083764	0.4680901	0.01	14.6	20
1,2,4,5-Tetrachlorobenzene	A	50.00	54.79	0.3065383	0.3359335	0.01	9.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J19004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-06-10/12	1210154-06	10/19/12 12:23	1,080.00	1.00
PEN-3221-08-10/12	1210154-07	10/19/12 12:23	1,080.00	1.00
PEN-3221-04-10/12	1210154-08	10/19/12 12:23	1,080.00	1.00
PEN-44-18-10/12	1210154-12	10/19/12 12:23	1,080.00	1.00
FD10151201	1210154-14	10/19/12 12:23	1,080.00	1.00
PEN-44-21-10/12	1210154-16	10/19/12 12:23	1,080.00	1.00
PEN-44-24-10/12	1210154-18	10/19/12 12:23	1,080.00	1.00
PEN-44-15-10/12	1210154-20	10/19/12 12:23	1,080.00	1.00
Blank	2J19004-BLK1	10/19/12 06:26	1,000.00	1.00
LCS	2J19004-BS1	10/19/12 06:26	1,000.00	1.00
PEN-3221-08-10/12	2J19004-MS1	10/19/12 06:26	500.00	0.50
PEN-3221-08-10/12	2J19004-MSD1	10/19/12 06:26	500.00	0.50

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19004-BLK1 File ID: J19004B1.D

Sampled: Prepared: Analyzed: 10/22/12 19:10

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.25	2.50	5.00	U
100-52-7	Benzaldehyde		1.25	2.50	5.00	U
92-52-4	1,1-Biphenyl		1.25	2.50	5.00	U
101-55-3	4-Bromophenyl-phenylether		1.25	2.50	5.00	U
85-68-7	Butylbenzylphthalate		1.25	2.50	5.00	U
105-60-2	Caprolactam		1.25	2.50	5.00	U
86-74-8	Carbazole		1.25	2.50	5.00	U
59-50-7	4-Chloro-3-methylphenol		1.25	2.50	5.00	U
106-47-8	4-Chloroaniline		1.25	2.50	5.00	U
111-91-1	Bis(2-chloroethoxy)methane		1.25	2.50	5.00	U
111-44-4	Bis(2-chloroethyl)ether		1.25	2.50	5.00	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.25	2.50	5.00	U
91-58-7	2-Chloronaphthalene		1.25	2.50	5.00	U
95-57-8	2-Chlorophenol		1.25	2.50	5.00	U
7005-72-3	4-Chlorophenyl phenyl ether		1.25	2.50	5.00	U
132-64-9	Dibenzofuran		1.25	2.50	5.00	U
84-74-2	Di-n-butylphthalate		1.25	2.50	5.00	U
91-94-1	3,3'-Dichlorobenzidine		1.25	2.50	5.00	U
120-83-2	2,4-Dichlorophenol		1.25	2.50	5.00	U
84-66-2	Diethylphthalate		1.25	2.50	5.00	U
105-67-9	2,4-Dimethylphenol		5.00	10.0	20.0	U
131-11-3	Dimethyl phthalate		1.25	2.50	5.00	U
534-52-1	4,6-Dinitro-2-methylphenol		5.00	10.0	20.0	U
51-28-5	2,4-Dinitrophenol		8.33	25.0	50.0	U
121-14-2	2,4-Dinitrotoluene		1.25	2.50	5.00	U
606-20-2	2,6-Dinitrotoluene		1.25	2.50	5.00	U
117-84-0	Di-n-octylphthalate		1.25	2.50	5.00	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.25	2.50	5.00	U
118-74-1	Hexachlorobenzene		1.25	2.50	5.00	U
87-68-3	Hexachlorobutadiene		1.25	2.50	5.00	U
77-47-4	Hexachlorocyclopentadiene		1.25	5.00	10.0	X, U
67-72-1	Hexachloroethane		1.25	2.50	5.00	U
78-59-1	Isophorone		1.25	2.50	5.00	U
95-48-7	2-Methylphenol		1.25	2.50	5.00	U
106-44-5	4-Methylphenol		1.25	2.50	5.00	U
100-01-6	4-Nitroaniline		5.00	10.0	20.0	U
99-09-2	3-Nitroaniline		5.00	10.0	20.0	U
88-74-4	2-Nitroaniline		5.00	10.0	20.0	U
98-95-3	Nitrobenzene		1.25	2.50	5.00	U
100-02-7	4-Nitrophenol		5.00	10.0	20.0	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19004-BLK1 File ID: J19004B1.D

Sampled: Prepared: Analyzed: 10/22/12 19:10

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J19004 Sequence: 2J29718 Calibration: 2272005 Instrument: MS-BNA1

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
88-75-5	2-Nitrophenol		1.25	2.50	5.00	U
62-75-9	N-Nitrosodimethylamine		1.25	2.50	5.00	X, U
621-64-7	N-Nitroso-di-n-propylamine		1.25	2.50	5.00	U
87-86-5	Pentachlorophenol		5.00	10.0	20.0	U
108-95-2	Phenol		1.25	2.50	5.00	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.25	2.50	5.00	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.50	5.00	10.0	U
88-06-2	2,4,6-Trichlorophenol		1.25	2.50	5.00	U
95-95-4	2,4,5-Trichlorophenol		1.25	2.50	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	25.02	50.0	50 - 110	
2-Fluorophenol	100.0	19.27	19.3	20 - 110	
Nitrobenzene-d5	50.00	24.18	48.4	40 - 110	
Phenol-d6	100.0	10.57	10.6	0 - 110	
Terphenyl-d14	50.00	27.88	55.8	50 - 135	X
2,4,6-Tribromophenol	100.0	56.01	56.0	40 - 125	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I26212	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I26212-TUN1	SEQ-TUN1.D	09/17/12 16:19
Cal Standard	2I26212-CAL1	SEQCAL1.D	09/17/12 16:37
Cal Standard	2I26212-CAL2	SEQCAL2.D	09/17/12 17:04
Cal Standard	2I26212-CAL3	SEQCAL3.D	09/17/12 17:32
Cal Standard	2I26212-CAL4	SEQCAL4.D	09/17/12 18:00
Cal Standard	2I26212-CAL5	SEQCAL5.D	09/17/12 18:27
Cal Standard	2I26212-CAL7	SEQCAL7.D	09/17/12 19:22
Cal Standard	2I26212-CAL8	SEQCAL8.D	09/17/12 19:50
Initial Cal Check	2I26212-ICV1	SEQICV1.D	09/17/12 20:45
MS Tune	2I26212-TUN2	SEQ-TUN2.D	09/18/12 09:45
Initial Cal Check	2I26212-ICV3	SEQICV6.D	09/18/12 10:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/17/12
Instrument ID:	MS-BNA4	Injection Time:	16:19
Sequence:	2I26212	Lab Sample ID:	2I26212-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	55.7	PASS
68	Less than 2% of 69	1.62	PASS
69	Less than 200% of 198	45.5	PASS
70	Less than 2% of 69	0.47	PASS
127	40 - 60% of 198	50.3	PASS
197	Less than 1% of 198	0.97	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.1	PASS
275	10 - 30% of 198	23.8	PASS
365	1 - 200% of 198	2.46	PASS
441	0.001 - 100% of 443	82	PASS
442	40 - 200% of 198	81	PASS
443	17 - 23% of 442	19.9	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/18/12
Instrument ID:	MS-BNA4	Injection Time:	09:45
Sequence:	2I26212	Lab Sample ID:	2I26212-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	56	PASS
68	Less than 2% of 69	1.57	PASS
69	Less than 200% of 198	46.5	PASS
70	Less than 2% of 69	0.546	PASS
127	40 - 60% of 198	51.2	PASS
197	Less than 1% of 198	0.947	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	22.8	PASS
365	1 - 200% of 198	2.51	PASS
441	0.001 - 100% of 443	86	PASS
442	40 - 200% of 198	75.1	PASS
443	17 - 23% of 442	18.7	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2263001
Instrument: MS-BNA4
Matrix: Water
Calibration Dates: 9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.6437384	4.43344	9.826428	2.985676E-02			15	
Acenaphthylene	0.9742916	4.035626	9.595428	1.918522E-02			15	
Anthracene	1.099743	2.563612	11.661	2.252376E-02			15	
Benzo(a)anthracene	1.229242	6.441806	15.02286	1.745497E-02			15	
Benzo(a)pyrene	1.07648	6.419449	17.30657	3.859793E-02			15	
Benzo(b)fluoranthene	1.13689	8.675422	16.776	4.277508E-02			15	
Benzo(g,h,i)perylene	1.047311	4.920087	19.51071	5.631089E-02			15	
Benzo(k)fluoranthene	1.24554	3.34658	16.81471	4.942397E-02			15	
1,4-Dioxane	0.1353576	8.293508	2.807714	0.3439013			15	
Carbazole	0.9802225	2.241632	11.86814	2.504839E-02			15	
Chrysene	1.208255	4.137079	15.088	3.491361E-02			15	
Dibenz(a,h)anthracene	0.9978242	7.835988	19.12857	4.851823E-02			15	
Dibenzofuran	0.8884622	2.303766	10.01886	1.864152E-02			15	
Di-n-octylphthalate	1.086216	29.06585	16.1744	2.245235E-02	0.999354		0.995	
Bis(2-ethylhexyl)phthalate	0.6840102	19.96093	15.176	1.107344E-02	0.9997681		0.995	
Fluoranthene	1.285226	3.369817	13.06243	2.192161E-02			15	
Fluorene	0.7105484	2.132605	10.44243	2.405673E-02			15	
2-Fluorobiphenyl	0.711319	4.922771	8.959429	2.274919E-02			15	
Hexachlorobenzene	0.2596715	3.133576	11.21714	1.535378E-02			15	
Hexachlorobutadiene	0.2192212	7.351404	7.841	1.360725E-02			15	
Hexachlorocyclopentadiene	0.1679048	12.80219	8.7625	1.864214E-02			15	
Hexachloroethane	0.1525449	2.904575	6.596143	4.437949E-02			15	
Indeno(1,2,3-cd)pyrene	1.186493	8.935141	19.09971	5.454845E-02			15	
Isophorone	0.5537188	9.391578	7.004428	3.986617E-02			15	
1-Methylnaphthalene	0.5918516	7.284457	8.607715	3.795704E-03			15	
2-Methylnaphthalene	0.6355094	7.594757	8.469143	2.944197E-02			15	
Naphthalene	0.9715298	9.419315	7.597143	3.351781E-02			15	
N-Nitrosodiphenylamine	0.5730382	5.63645	10.60214	3.741727E-02			15	
N-Nitroso-di-n-propylamine	0.2204215	14.9536	6.530286	4.997956E-02			15	
Pentachloroethane	0.1495348	7.718331	5.587714	3.061233E-02			CCC (20)	
Pentachlorophenol	0.1281745	27.63764	11.435	2.819468E-02	0.9982283		0.995	
Phenanthrene	1.114392	5.345567	11.60814	1.843103E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2263001	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Phenol	0.423713	8.39034	5.563429	9.658823E-02			CCC (30)	
Pyrene	1.313745	3.59993	13.33786	2.306796E-02			15	
Terphenyl-d14	0.8895742	7.28489	13.55414	2.079779E-02			15	
2,4,6-Tribromophenol	0.104865	17.39735	10.766	2.069718E-02	0.9993091		0.995	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29710	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29710-TUN1	SEQ-TUN1.D	10/22/12 13:39
Calibration Check	2J29710-CCV1	SEQ-CCV1.D	10/22/12 13:56
LCS	2J19004-BS2	J19004L1.D	10/22/12 14:57
LCS Dup	2J19004-BSD2	J19004L2.D	10/22/12 15:26
Blank	2J19004-BLK2	J19004B1.D	10/22/12 15:55
PEN-3221-06-10/12	1210154-06	1015406.D	10/22/12 23:06
PEN-3221-08-10/12	1210154-07	1015407.D	10/22/12 23:35
PEN-3221-04-10/12	1210154-08	1015408.D	10/23/12 00:04
PEN-44-18-10/12	1210154-12	1015412.D	10/23/12 00:32
FD10151201	1210154-14	1015414.D	10/23/12 01:01

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/22/12
Instrument ID:	MS-BNA4	Injection Time:	13:39
Sequence:	2J29710	Lab Sample ID:	2J29710-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	52.4	PASS
68	Less than 2% of 69	1.75	PASS
69	Less than 200% of 198	46.7	PASS
70	Less than 2% of 69	0.751	PASS
127	40 - 60% of 198	51.3	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.22	PASS
275	10 - 30% of 198	23.4	PASS
365	I - 200% of 198	2.51	PASS
441	0.001 - 100% of 443	77.6	PASS
442	40 - 200% of 198	71.5	PASS
443	17 - 23% of 442	20.9	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2J29710	Injection Date:	10/22/12
Lab Sample ID:	2J29710-CCV1	Injection Time:	13:56

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.696	0.6437384	0.604652		-6.1	20
Acenaphthylene	A	5.000	4.747	0.9742916	0.9250587		-5.1	20
Anthracene	A	5.000	4.999	1.099743	1.099519		-0.02	20
Benzo(a)anthracene	A	5.000	5.239	1.229242	1.288019		4.8	20
Benzo(a)pyrene	A	5.000	5.007	1.07648	1.077957		0.1	20
Benzo(b)fluoranthene	A	5.000	5.293	1.13689	1.203497		5.9	20
Benzo(g,h,i)perylene	A	5.000	5.098	1.047311	1.067947		2.0	20
Benzo(k)fluoranthene	A	5.000	4.546	1.24554	1.132462		-9.1	20
1,4-Dioxane	A	5.000	4.028	0.1353576	0.1090545		-19.4	20
Chrysene	A	5.000	5.060	1.208255	1.222648		1.2	20
Dibenz(a,h)anthracene	A	5.000	5.374	0.9978242	1.072459		7.5	20
Fluoranthene	A	5.000	4.887	1.285226	1.256118		-2.3	20
Fluorene	A	5.000	4.924	0.7105484	0.6997183		-1.5	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.355	1.186493	1.270838		7.1	20
2-Methylnaphthalene	A	5.000	4.743	0.6355094	0.6027942		-5.1	20
Naphthalene	A	5.000	4.656	0.9715298	0.9047576		-6.9	20
Phenanthrene	A	5.000	4.676	1.114392	1.042137		-6.5	20
Pyrene	A	5.000	4.838	1.313745	1.271055		-3.2	20
2-Fluorobiphenyl	A	5.000	4.794	0.711319	0.6819538		-4.1	20
Terphenyl-d14	A	5.000	5.242	0.8895742	0.9326446		4.8	20
2,4,6-Tribromophenol	L	10.00	11.77	0.104865	0.1354751		17.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J19004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-06-10/12	1210154-06	10/19/12 12:23	1,080.00	1.00
PEN-3221-08-10/12	1210154-07	10/19/12 12:23	1,080.00	1.00
PEN-3221-04-10/12	1210154-08	10/19/12 12:23	1,080.00	1.00
PEN-44-18-10/12	1210154-12	10/19/12 12:23	1,080.00	1.00
FD10151201	1210154-14	10/19/12 12:23	1,080.00	1.00
PEN-44-21-10/12	1210154-16	10/19/12 12:23	1,080.00	1.00
PEN-44-24-10/12	1210154-18	10/19/12 12:23	1,080.00	1.00
PEN-44-15-10/12	1210154-20	10/19/12 12:23	1,080.00	1.00
Blank	2J19004-BLK2	10/19/12 06:26	1,000.00	1.00
LCS	2J19004-BS2	10/19/12 06:26	1,000.00	1.00
LCS Dup	2J19004-BSD2	10/19/12 06:26	1,000.00	1.00
PEN-3221-08-10/12	2J19004-MS2	10/19/12 06:26	500.00	0.50
PEN-3221-08-10/12	2J19004-MSD2	10/19/12 06:26	500.00	0.50

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19004-BLK2 File ID: J19004B1.D

Sampled: Prepared: Analyzed: 10/22/12 15:55

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J19004 Sequence: 2J29710 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	Q, U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	Q, U
120-12-7	Anthracene		0.0500	0.100	0.200	Q, U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	Q, U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	Q, U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	Q, U
191-24-2	Benzo(g,h,i)perylene		0.0500	0.100	0.200	Q, U
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	Q, U
123-91-1	1,4-Dioxane		0.500	1.00	2.00	Q, U
218-01-9	Chrysene		0.0500	0.100	0.200	Q, U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	Q, U
206-44-0	Fluoranthene		0.0500	0.100	0.200	Q, U
86-73-7	Fluorene		0.0500	0.100	0.200	Q, U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	Q, U
91-57-6	2-Methylnaphthalene		0.0500	0.100	0.200	Q, U
91-20-3	Naphthalene		0.0500	0.100	0.200	Q, U
85-01-8	Phenanthrene		0.0500	0.200	0.400	Q, U
129-00-0	Pyrene		0.0500	0.100	0.200	Q, U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	18.37	36.7	34 - 167	
Terphenyl-d14	50.00	20.74	41.5	34 - 167	
2,4,6-Tribromophenol	100.0	45.82	45.8	34 - 167	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29803	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29803-TUN1	SEQ-TUNE.D	10/23/12 01:35
Calibration Check	2J29803-CCV1	SEQ-CCVE.D	10/23/12 01:52
PEN-44-21-10/12	1210154-16	1015416.D	10/23/12 02:21
PEN-44-24-10/12	1210154-18	1015418.D	10/23/12 02:49
PEN-44-15-10/12	1210154-20	1015420.D	10/23/12 03:18
PEN-3221-08-10/12	2J19004-MS2	1015407M.D	10/23/12 04:15

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUNE.D	Injection Date:	10/23/12
Instrument ID:	MS-BNA4	Injection Time:	01:35
Sequence:	2J29803	Lab Sample ID:	2J29803-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	47.7	PASS
68	Less than 2% of 69	1.63	PASS
69	Less than 200% of 198	43.3	PASS
70	Less than 2% of 69	0.521	PASS
127	40 - 60% of 198	49.5	PASS
197	Less than 1% of 198	0.834	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.99	PASS
275	10 - 30% of 198	24.7	PASS
365	1 - 200% of 198	2.82	PASS
441	0.001 - 100% of 443	81.8	PASS
442	40 - 200% of 198	88.4	PASS
443	17 - 23% of 442	20.1	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCVE.D	Calibration Date:	09/17/12 16:37
Sequence:	2J29803	Injection Date:	10/23/12
Lab Sample ID:	2J29803-CCV1	Injection Time:	01:52

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.702	0.6437384	0.6053372		-6.0	20
Acenaphthylene	A	5.000	4.722	0.9742916	0.9201574		-5.6	20
Anthracene	A	5.000	5.063	1.099743	1.113588		1.3	20
Benzo(a)anthracene	A	5.000	5.322	1.229242	1.308335		6.4	20
Benzo(a)pyrene	A	5.000	5.059	1.07648	1.08912		1.2	20
Benzo(b)fluoranthene	A	5.000	5.216	1.13689	1.1861		4.3	20
Benzo(g,h,i)perylene	A	5.000	5.088	1.047311	1.06567		1.8	20
Benzo(k)fluoranthene	A	5.000	4.596	1.24554	1.144813		-8.1	20
1,4-Dioxane	A	5.000	4.026	0.1353576	0.1089779		-19.5	20
Chrysene	A	5.000	5.160	1.208255	1.246915		3.2	20
Dibenz(a,h)anthracene	A	5.000	5.348	0.9978242	1.067382		7.0	20
Fluoranthene	A	5.000	4.986	1.285226	1.281646		-0.3	20
Fluorene	A	5.000	4.918	0.7105484	0.6989448		-1.6	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.407	1.186493	1.28318		8.1	20
2-Methylnaphthalene	A	5.000	4.623	0.6355094	0.5875587		-7.5	20
Naphthalene	A	5.000	4.568	0.9715298	0.8876798		-8.6	20
Phenanthrene	A	5.000	4.733	1.114392	1.054909		-5.3	20
Pyrene	A	5.000	4.966	1.313745	1.304847		-0.7	20
2-Fluorobiphenyl	A	5.000	4.699	0.711319	0.6684589		-6.0	20
Terphenyl-d14	A	5.000	5.466	0.8895742	0.9724923		9.3	20
2,4,6-Tribromophenol	L	10.00	11.91	0.104865	0.1372266		19.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29915	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29915-TUN1	SEQ-TUN1.D	10/24/12 17:40
Calibration Check	2J29915-CCV1	SEQ-CCV1.D	10/24/12 17:57
PEN-3221-08-10/12	2J19004-MSD2	1015407S.D	10/24/12 21:14

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/24/12
Instrument ID:	MS-BNA4	Injection Time:	17:40
Sequence:	2J29915	Lab Sample ID:	2J29915-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	46.3	PASS
68	Less than 2% of 69	1.67	PASS
69	Less than 200% of 198	43.1	PASS
70	Less than 2% of 69	0.569	PASS
127	40 - 60% of 198	48.8	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.81	PASS
275	10 - 30% of 198	24.7	PASS
365	1 - 200% of 198	2.72	PASS
441	0.001 - 100% of 443	82.2	PASS
442	40 - 200% of 198	91.2	PASS
443	17 - 23% of 442	19.7	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2J29915	Injection Date:	10/24/12
Lab Sample ID:	2J29915-CCV1	Injection Time:	17:57

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	5.000	4.889	0.6437384	0.6294192		-2.2	20	
Acenaphthylene	A	5.000	4.955	0.9742916	0.9654575		-0.9	20	
Anthracene	A	5.000	4.880	1.099743	1.073448		-2.4	20	
Benzo(a)anthracene	A	5.000	5.255	1.229242	1.291838		5.1	20	
Benzo(a)pyrene	A	5.000	5.043	1.07648	1.085733		0.9	20	
Benzo(b)fluoranthene	A	5.000	5.034	1.13689	1.144588		0.7	20	
Benzo(g,h,i)perylene	A	5.000	5.149	1.047311	1.078536		3.0	20	
Benzo(k)fluoranthene	A	5.000	4.819	1.24554	1.200522		-3.6	20	
1,4-Dioxane	A	5.000	3.844	0.1353576	0.1040734		-23.1	20	*
Chrysene	A	5.000	4.990	1.208255	1.205744		-0.2	20	
Dibenz(a,h)anthracene	A	5.000	5.431	0.9978242	1.083924		8.6	20	
Fluoranthene	A	5.000	4.875	1.285226	1.25305		-2.5	20	
Fluorene	A	5.000	4.953	0.7105484	0.703816		-0.9	20	
Indeno(1,2,3-cd)pyrene	A	5.000	5.392	1.186493	1.279621		7.8	20	
2-Methylnaphthalene	A	5.000	4.889	0.6355094	0.6214293		-2.2	20	
Naphthalene	A	5.000	4.600	0.9715298	0.8938674		-8.0	20	
Phenanthrene	A	5.000	4.709	1.114392	1.049569		-5.8	20	
Pyrene	A	5.000	4.892	1.313745	1.28529		-2.2	20	
2-Fluorobiphenyl	A	5.000	4.994	0.711319	0.7105225		-0.1	20	
Terphenyl-d14	A	5.000	5.337	0.8895742	0.9495535		6.7	20	
2,4,6-Tribromophenol	L	10.00	12.11	0.104865	0.1396543		21.1	20	*

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION STANDARDS

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001F0101.D	10/08/12 15:32
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001R0101.D	10/08/12 15:32
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002F0201.D	10/08/12 15:51
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002R0201.D	10/08/12 15:51
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003F0301.D	10/08/12 16:10
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003R0301.D	10/08/12 16:10
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004R0401.D	10/08/12 16:29
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004F0401.D	10/08/12 16:29
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005F0501.D	10/08/12 16:48
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005R0501.D	10/08/12 16:48
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006F0601.D	10/08/12 17:07
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006R0601.D	10/08/12 17:07
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007F0701.D	10/08/12 17:26
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007R0701.D	10/08/12 17:26
12F0458	Toxaphene CAL1 (2000ppb)	2J28406-CAL8	009F0901.D	10/08/12 18:04
12F0458	Toxaphene CAL1 (2000ppb)	2J28406-CAL8	009R0901.D	10/08/12 18:04
12F0459	Toxaphene CAL2 (1000ppb)	2J28406-CAL9	010R1001.D	10/08/12 18:24
12F0459	Toxaphene CAL2 (1000ppb)	2J28406-CAL9	010F1001.D	10/08/12 18:24
12F0460	Toxaphene CAL3 (750ppb)	2J28406-CALA	011F1101.D	10/08/12 18:43
12F0460	Toxaphene CAL3 (750ppb)	2J28406-CALA	011R1101.D	10/08/12 18:43
12F0461	Toxaphene CAL4 (500ppb)	2J28406-CALB	012F1201.D	10/08/12 19:02
12F0461	Toxaphene CAL4 (500ppb)	2J28406-CALB	012R1201.D	10/08/12 19:02
12F0462	Toxaphene CAL5 (250ppb)	2J28406-CALC	013F1301.D	10/08/12 19:21
12F0462	Toxaphene CAL5 (250ppb)	2J28406-CALC	013R1301.D	10/08/12 19:21
12F0463	Toxaphene CAL6 (100ppb)	2J28406-CALD	014F1401.D	10/08/12 19:40
12F0463	Toxaphene CAL6 (100ppb)	2J28406-CALD	014R1401.D	10/08/12 19:40
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023R2301.D	10/08/12 22:31
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024R2401.D	10/08/12 22:50
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025R2501.D	10/08/12 23:09
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026R2601.D	10/08/12 23:29
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027R2701.D	10/08/12 23:48
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028R2801.D	10/09/12 00:07

12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030R3001.D	10/09/12 00:45
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031R3101.D	10/09/12 01:04
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032R3201.D	10/09/12 01:23
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033R3301.D	10/09/12 01:42
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034R3401.D	10/09/12 02:01
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035R3501.D	10/09/12 02:20

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J28406-PEM1	002R0201pem.D	10/08/12 07:40
Performance Mix	2J28406-PEM1	002F0201pem.D	10/08/12 07:40
Cal Standard	2J28406-CAL1	001R0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL1	001F0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL2	002F0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL2	002R0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL3	003F0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL3	003R0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL4	004F0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL4	004R0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL5	005F0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL5	005R0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL6	006F0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL6	006R0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL7	007F0701.D	10/08/12 17:26
Cal Standard	2J28406-CAL7	007R0701.D	10/08/12 17:26
Initial Cal Check	2J28406-ICV1	008R0801.D	10/08/12 17:46
Initial Cal Check	2J28406-ICV1	008F0801.D	10/08/12 17:46
Cal Standard	2J28406-CAL8	009R0901.D	10/08/12 18:04
Cal Standard	2J28406-CAL8	009F0901.D	10/08/12 18:04
Cal Standard	2J28406-CAL9	010R1001.D	10/08/12 18:24
Cal Standard	2J28406-CAL9	010F1001.D	10/08/12 18:24
Cal Standard	2J28406-CALA	011R1101.D	10/08/12 18:43
Cal Standard	2J28406-CALA	011F1101.D	10/08/12 18:43
Cal Standard	2J28406-CALB	012F1201.D	10/08/12 19:02
Cal Standard	2J28406-CALB	012R1201.D	10/08/12 19:02
Cal Standard	2J28406-CALC	013F1301.D	10/08/12 19:21
Cal Standard	2J28406-CALC	013R1301.D	10/08/12 19:21
Cal Standard	2J28406-CALD	014F1401.D	10/08/12 19:40
Cal Standard	2J28406-CALD	014R1401.D	10/08/12 19:40
Initial Cal Check	2J28406-ICV2	015F1501.D	10/08/12 19:59
Initial Cal Check	2J28406-ICV2	015R1501.D	10/08/12 19:59

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J28406-PEM2	002R0201.D	10/11/12 13:19
Performance Mix	2J28406-PEM2	002F0201.D	10/11/12 13:19
Initial Cal Check	2J28406-ICV6	004F0401.D	10/11/12 13:57
Initial Cal Check	2J28406-ICV6	004R0401.D	10/11/12 13:57

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29706
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J29706-PEM1	002R0201.D	10/18/12 10:02
Performance Mix	2J29706-PEM1	002F0201.D	10/18/12 10:02
Calibration Check	2J29706-CCV1	003R0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV1	003F0301.D	10/18/12 10:21
Calibration Check	2J29706-CCVB	040R4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVB	040F4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVC	041F4101.D	10/18/12 22:25
Calibration Check	2J29706-CCVC	041R4101.D	10/18/12 22:25
Performance Mix	2J29706-PEM2	045F4501.D	10/18/12 23:41
Performance Mix	2J29706-PEM2	045R4501.D	10/18/12 23:41
PEN-3221-06-10/12	1210154-06	054F5401.D	10/19/12 02:33
PEN-3221-06-10/12	1210154-06	054R5401.D	10/19/12 02:33
PEN-3221-08-10/12	1210154-07	055F5501.D	10/19/12 02:52
PEN-3221-08-10/12	1210154-07	055R5501.D	10/19/12 02:52
PEN-3221-08-10/12	2J17029-MS1	056R5601.D	10/19/12 03:11
PEN-3221-08-10/12	2J17029-MS1	056F5601.D	10/19/12 03:11
PEN-3221-08-10/12	2J17029-MSD1	057R5701.D	10/19/12 03:31
PEN-3221-08-10/12	2J17029-MSD1	057F5701.D	10/19/12 03:31
Calibration Check	2J29706-CCVG	060F6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVG	060R6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVH	061R6101.D	10/19/12 04:47
Calibration Check	2J29706-CCVH	061F6101.D	10/19/12 04:47
Blank	2J17029-BLK1	065F6501.D	10/19/12 06:03
Blank	2J17029-BLK1	065R6501.D	10/19/12 06:03
LCS	2J17029-BS1	066R6601.D	10/19/12 06:22
LCS	2J17029-BS1	066F6601.D	10/19/12 06:22
PEN-3221-04-10/12	1210154-08	068R6801.D	10/19/12 07:01
PEN-3221-04-10/12	1210154-08	068F6801.D	10/19/12 07:01
PEN-44-18-10/12	1210154-12	069F6901.D	10/19/12 07:20
PEN-44-18-10/12	1210154-12	069R6901.D	10/19/12 07:20
FD10151201	1210154-14	070R7001.D	10/19/12 07:39
FD10151201	1210154-14	070F7001.D	10/19/12 07:39

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PEN-44-21-10/12	1210154-16	071R7101.D	10/19/12 07:58
PEN-44-21-10/12	1210154-16	071F7101.D	10/19/12 07:58
PEN-44-24-10/12	1210154-18	072F7201.D	10/19/12 08:17
PEN-44-24-10/12	1210154-18	072R7201.D	10/19/12 08:17
PEN-44-15-10/12	1210154-20	073F7301.D	10/19/12 08:36
PEN-44-15-10/12	1210154-20	073R7301.D	10/19/12 08:36
Calibration Check	2J29706-CCVL	074F7401.D	10/19/12 08:55
Calibration Check	2J29706-CCVL	074R7401.D	10/19/12 08:55
Calibration Check	2J29706-CCVM	075F7501.D	10/19/12 09:14
Calibration Check	2J29706-CCVM	075R7501.D	10/19/12 09:14

BREAKDOWN REPORT

Lab Sample ID: 2J29706-PEM1 **Analyzed:** 10/18/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	2.95
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J29706-PEM2 **Analyzed:** 10/18/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	11.25
Endrin	8.57

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	12.64
Endrin	8.98

BREAKDOWN REPORT

Lab Sample ID: 2J28406-PEM1 **Analyzed:** 10/08/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	3.06
Endrin	5.91

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J28406-PEM2 **Analyzed:** 10/11/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	2.38
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	3.36
Endrin	7.01

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
4,4'-DDE	51094.47	13.36793	8.727857	5.825639E-02			20	
4,4'-DDE [2C]	50321.72	5.365485	7.795143	2.925106E-02			20	
4,4'-DDD	41428.21	16.34301	9.37	4.665635E-02			20	
4,4'-DDD [2C]	45332.02	6.910073	8.467143	3.733103E-02			20	
4,4'-DDT	41951.39	14.66624	9.765571	5.224335E-02			20	
4,4'-DDT [2C]	44183.69	5.572004	8.781	3.233758E-02			20	
Aldrin	63496.28	10.96892	7.636857	0.0705073			20	
Aldrin [2C]	62700.35	11.94878	6.682143	2.737238E-02			20	
alpha-BHC	72070.6	13.68616	6.244571	8.187212E-02			20	
alpha-BHC [2C]	75274.46	7.693702	5.667143	2.084635E-02			20	
alpha-Chlordane	56005.2	8.575271	8.528572	6.546021E-02			20	
alpha-Chlordane [2C]	57042.46	12.34952	7.594571	2.656618E-02			20	
beta-BHC	26102.06	6.530916	6.793	7.130419E-02			20	
beta-BHC [2C]	31407.75	9.952564	6.293	2.354579E-02			20	
delta-BHC	55943.6	17.97339	7.073571	7.731066E-02			20	
delta-BHC [2C]	61726.37	4.757049	6.556143	2.689054E-02			20	
Dieldrin	57719.49	11.60028	8.929572	6.286051E-02			20	
Dieldrin [2C]	60838.72	11.61915	7.985429	1.836013E-02			20	
Endosulfan I	53958.87	10.13715	8.595	6.083858E-02			20	
Endosulfan I [2C]	54945.66	11.77728	7.672429	0.0312186			20	
Endosulfan II	48331.97	9.989613	9.487143	5.679254E-02			20	
Endosulfan II [2C]	51135.22	11.56956	8.677	3.540361E-02			20	
Endosulfan sulfate	40280.74	9.889046	9.945714	5.093722E-02			20	
Endosulfan sulfate [2C]	42025.14	9.677244	9.174714	1.667823E-02			20	
Endrin	42937.13	12.93175	9.217143	5.742018E-02			20	
Endrin [2C]	46591.55	11.76563	8.325286	2.016478E-02			20	
Endrin aldehyde	39912.39	8.237052	9.65	5.515379E-02			20	
Endrin aldehyde [2C]	43719.7	10.52404	8.898572	2.524229E-02			20	
Endrin ketone	52202.94	7.902905	10.57014	4.691657E-02			20	
Endrin ketone [2C]	59552.03	17.25021	9.835714	6.401645E-03			20	
gamma-BHC (Lindane)	63404.4	12.44694	6.595286	7.922886E-02			20	
gamma-BHC (Lindane) [2C]	68059.61	7.772349	6.006571	2.894988E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
gamma-Chlordane	57479.09	10.32669	8.433571	6.918914E-02			20	
gamma-Chlordane [2C]	57877.86	11.6952	7.518572	2.115394E-02			20	
Heptachlor	56022.6	13.02672	7.244143	7.659515E-02			20	
Heptachlor [2C]	57138.09	10.64037	6.370857	5.805038E-03			20	
Heptachlor epoxide	57511.77	8.934334	8.128429	7.437776E-02			20	
Heptachlor epoxide [2C]	58027.29	14.05335	7.234571	2.189043E-02			20	
Methoxychlor	20681.87	10.91639	10.36786	5.205519E-02			20	
Methoxychlor [2C]	21957.26	12.52895	9.497714	2.541327E-02			20	
Chlordane (tech)	4739.676	3.425129	9.584	9.884912E-03			20	
Chlordane (1)	9184.691	2.907131	8.528667	1.278337E-02			20	
Chlordane (2)	2136.475	3.72727	7.003167	0.0186218			20	
Chlordane (3)	2941.406	8.609028	7.2415	1.387489E-02			20	
Chlordane (4)	7720.052	4.22816	8.4315	1.785286E-02			20	
Chlordane (5)	1715.758	3.872244	9.584	9.884912E-03			20	
Chlordane (tech) [2C]	3734.494	12.02405	8.689333	1.386043E-02			20	
Chlordane (1) [2C]	7793.493	15.09109	7.594	1.267471E-02			20	
Chlordane (2) [2C]	2683.884	11.96028	6.185	1.570752E-02			20	
Chlordane (3) [2C]	3340.631	12.26069	6.369667	1.488498E-02			20	
Chlordane (4) [2C]	2492.994	7.867662	6.797833	1.332475E-02			20	
Chlordane (5) [2C]	2361.467	9.962445	8.689333	1.386043E-02			20	
Toxaphene	1698.308	11.93069	10.94117	1.541817E-02			20	
Toxaphene (1)	2840.514	15.58817	10.47183	0.0179704			20	
Toxaphene (2)	943.6576	13.52652	9.042167	1.496001E-02			20	
Toxaphene (3)	1285.613	11.47967	9.564167	1.877273E-02			20	
Toxaphene (4)	2281.984	10.50788	9.935667	2.013178E-02			20	
Toxaphene (5)	1139.769	12.8342	10.94117	1.541817E-02			20	
Toxaphene [2C]	1972.125	3.895161	10.25417	1.221345E-02			20	
Toxaphene (1) [2C]	4049.199	4.647507	9.693	2.986822E-02			20	
Toxaphene (2) [2C]	690.2388	3.832762	7.926833	3.407985E-03			20	
Toxaphene (3) [2C]	1470.725	2.510751	8.675167	1.934436E-02			20	
Toxaphene (4) [2C]	2525.314	4.315087	9.5225	1.019319E-02			20	
Toxaphene (5) [2C]	1125.146	3.465383	10.25417	1.221345E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	008F0801.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV1	Injection Time:	17:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
4,4'-DDE	A	100.0	114.7	51094.47	58598.24		14.7	20
4,4'-DDE [2C]	A	100.0	100.1	50321.72	50358.88		0.07	20
4,4'-DDD	A	100.0	115.7	41428.21	47923.4		15.7	20
4,4'-DDD [2C]	A	100.0	94.97	45332.02	43053.56		-5.0	20
Aldrin	A	100.0	111.0	63496.28	70501.14		11.0	20
Aldrin [2C]	A	100.0	92.92	62700.35	58259.47		-7.1	20
alpha-BHC	A	100.0	111.7	72070.6	80508.52		11.7	20
alpha-BHC [2C]	A	100.0	96.36	75274.46	72538.13		-3.6	20
alpha-Chlordane	A	100.0	110.1	56005.2	61652.03		10.1	20
alpha-Chlordane [2C]	A	100.0	92.42	57042.46	52717.42		-7.6	20
beta-BHC	A	100.0	107.9	26102.06	28161.76		7.9	20
beta-BHC [2C]	A	100.0	95.30	31407.75	29931.54		-4.7	20
delta-BHC	A	100.0	108.3	55943.6	60577.68		8.3	20
delta-BHC [2C]	A	100.0	95.29	61726.37	58821.65		-4.7	20
Dieldrin	A	100.0	110.4	57719.49	63708.22		10.4	20
Dieldrin [2C]	A	100.0	91.15	60838.72	55456.9		-8.8	20
Endosulfan I	A	100.0	107.8	53958.87	58187.84		7.8	20
Endosulfan I [2C]	A	100.0	90.41	54945.66	49675.09		-9.6	20
Endosulfan II	A	100.0	107.6	48331.97	51994.04		7.6	20
Endosulfan II [2C]	A	100.0	90.14	51135.22	46093.52		-9.9	20
Endosulfan sulfate	A	100.0	110.0	40280.74	44310.72		10.0	20
Endosulfan sulfate [2C]	A	100.0	95.03	42025.14	39936.24		-5.0	20
Endrin	A	100.0	103.2	42937.13	44291.58		3.2	20
Endrin [2C]	A	100.0	84.48	46591.55	39361.73		-15.5	20
Endrin aldehyde	A	100.0	95.48	39912.39	38110.6		-4.5	20
Endrin aldehyde [2C]	A	100.0	82.76	43719.7	36184.6		-17.2	20
Endrin ketone	A	100.0	111.2	52202.94	58028.46		11.2	20
Endrin ketone [2C]	A	100.0	89.68	59552.03	53406.72		-10.3	20
gamma-BHC (Lindane)	A	100.0	111.6	63404.4	70790.23		11.6	20

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	008R0801.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV1	Injection Time:	17:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
gamma-BHC (Lindane) [2C]	A	100.0	96.85	68059.61	65916.07		-3.1	20
gamma-Chlordane	A	100.0	110.9	57479.09	63755.35		10.9	20
gamma-Chlordane [2C]	A	100.0	93.06	57877.86	53859.79		-6.9	20
Heptachlor	A	100.0	118.1	56022.6	66141.72		18.1	20
Heptachlor [2C]	A	100.0	97.55	57138.09	55739.47		-2.4	20
Heptachlor epoxide	A	100.0	110.5	57511.77	63567.08		10.5	20
Heptachlor epoxide [2C]	A	100.0	92.46	58027.29	53651.1		-7.5	20
Methoxychlor	A	100.0	117.4	20681.87	24287.46		17.4	20
Methoxychlor [2C]	A	100.0	93.87	21957.26	20610.58		-6.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	015F1501.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV2	Injection Time:	19:59

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)	
Toxaphene (1)	A	1000	900.8	2840.514	2558.741		-9.9	20	
Toxaphene (2)	A	1000	1268	943.6576	1196.603		26.8	20	*
Toxaphene (3)	A	1000	817.4	1285.613	1050.829		-18.3	20	
Toxaphene (4)	A	1000	1042	2281.984	2378.043		4.2	20	
Toxaphene (5)	A	1000	1213	1139.769	1382.38		21.3	20	*
Toxaphene (1) [2C]	A	1000	805.1	4049.199	3260.021		-19.5	20	
Toxaphene (2) [2C]	A	1000	1176	690.2388	811.876		17.6	20	
Toxaphene (3) [2C]	A	1000	496.3	1470.725	729.874		-50.4	20	*
Toxaphene (4) [2C]	A	1000	1063	2525.314	2684.678		6.3	20	
Toxaphene (5) [2C]	A	1000	1086	1125.146	1221.706		8.6	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	004F0401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/11/12
Lab Sample ID:	2J28406-ICV6	Injection Time:	13:57

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
4,4'-DDT	A	100.0	118.2	41951.39	49590.68		18.2	20
4,4'-DDT [2C]	A	100.0	100.2	44183.69	44278.24		0.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	106.1	51094.47	54217.78		6.1	20
4,4'-DDE [2C]	A	100.0	96.94	50321.72	48780.3		-3.1	20
4,4'-DDD	A	100.0	108.2	41428.21	44805.13		8.2	20
4,4'-DDD [2C]	A	100.0	95.01	45332.02	43069.74		-5.0	20
4,4'-DDT	A	100.0	108.2	41951.39	45395.85		8.2	20
4,4'-DDT [2C]	A	100.0	95.76	44183.69	42308.96		-4.2	20
Aldrin	A	100.0	102.5	63496.28	65068.38		2.5	20
Aldrin [2C]	A	100.0	84.85	62700.35	53201.65		-15.1	20
alpha-BHC	A	100.0	104.2	72070.6	75092.54		4.2	20
alpha-BHC [2C]	A	100.0	90.54	75274.46	68157.08		-9.5	20
alpha-Chlordane	A	100.0	98.49	56005.2	55159.08		-1.5	20
alpha-Chlordane [2C]	A	100.0	86.56	57042.46	49377.83		-13.4	20
beta-BHC	A	100.0	98.94	26102.06	25824.67		-1.1	20
beta-BHC [2C]	A	100.0	91.91	31407.75	28867.07		-8.1	20
delta-BHC	A	100.0	106.9	55943.6	59782.12		6.9	20
delta-BHC [2C]	A	100.0	93.90	61726.37	57960.14		-6.1	20
Dieldrin	A	100.0	103.3	57719.49	59609.77		3.3	20
Dieldrin [2C]	A	100.0	89.76	60838.72	54609.62		-10.2	20
Endosulfan I	A	100.0	101.1	53958.87	54570.89		1.1	20
Endosulfan I [2C]	A	100.0	89.22	54945.66	49023.44		-10.8	20
Endosulfan II	A	100.0	104.6	48331.97	50576.5		4.6	20
Endosulfan II [2C]	A	100.0	88.97	51135.22	45495.9		-11.0	20
Endosulfan sulfate	A	100.0	106.5	40280.74	42887.37		6.5	20
Endosulfan sulfate [2C]	A	100.0	94.34	42025.14	39648.68		-5.7	20
Endrin	A	100.0	108.4	42937.13	46544.45		8.4	20
Endrin [2C]	A	100.0	92.11	46591.55	42917.33		-7.9	20
Endrin aldehyde	A	100.0	102.8	39912.39	41031.8		2.8	20
Endrin aldehyde [2C]	A	100.0	92.76	43719.7	40555.7		-7.2	20
Endrin ketone	A	100.0	101.9	52202.94	53185.87		1.9	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003R0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	87.04	59552.03	51832.16		-13.0	20
gamma-BHC (Lindane)	A	100.0	101.7	63404.4	64473.69		1.7	20
gamma-BHC (Lindane) [2C]	A	100.0	91.22	68059.61	62084.42		-8.8	20
gamma-Chlordane	A	100.0	102.9	57479.09	59168.16		2.9	20
gamma-Chlordane [2C]	A	100.0	89.33	57877.86	51702.53		-10.7	20
Heptachlor	A	100.0	108.2	56022.6	60645.28		8.3	20
Heptachlor [2C]	A	100.0	92.45	57138.09	52824.09		-7.6	20
Heptachlor epoxide	A	100.0	101.3	57511.77	58270.66		1.3	20
Heptachlor epoxide [2C]	A	100.0	88.27	58027.29	51220.3		-11.7	20
Methoxychlor	A	100.0	109.6	20681.87	22657.21		9.6	20
Methoxychlor [2C]	A	100.0	94.00	21957.26	20639.2		-6.0	20
Tetrachloro-m-xylene	A	100.0	96.27	48154.4	46356.45		-3.7	20
Tetrachloro-m-xylene [2C]	A	100.0	83.40	56983.64	47527.17		-16.6	20
Decachlorobiphenyl	A	100.0	96.23	41014.66	39470.06		-3.8	20
Decachlorobiphenyl [2C]	A	100.0	88.94	36168.37	32168.73		-11.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040F4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	110.2	51094.47	56316		10.2	20
4,4'-DDE [2C]	A	100.0	94.08	50321.72	47341.24		-5.9	20
4,4'-DDD	A	100.0	119.1	41428.21	49329.86		19.1	20
4,4'-DDD [2C]	A	100.0	100.4	45332.02	45525.77		0.4	20
4,4'-DDT	A	100.0	101.4	41951.39	42558.86		1.4	20
4,4'-DDT [2C]	A	100.0	87.08	44183.69	38475.2		-12.9	20
Aldrin	A	100.0	105.3	63496.28	66884.37		5.3	20
Aldrin [2C]	A	100.0	82.44	62700.35	51690.64		-17.6	20
alpha-BHC	A	100.0	111.3	72070.6	80238.38		11.3	20
alpha-BHC [2C]	A	100.0	80.97	75274.46	60950.97		-19.0	20
alpha-Chlordane	A	100.0	95.88	56005.2	53698.13		-4.1	20
alpha-Chlordane [2C]	A	100.0	84.90	57042.46	48427.37		-15.1	20
beta-BHC	A	100.0	105.4	26102.06	27501.7		5.4	20
beta-BHC [2C]	A	100.0	80.68	31407.75	25341.61		-19.3	20
delta-BHC	A	100.0	117.6	55943.6	65762.94		17.6	20
delta-BHC [2C]	A	100.0	90.35	61726.37	55771.28		-9.6	20
Dieldrin	A	100.0	102.0	57719.49	58865.96		2.0	20
Dieldrin [2C]	A	100.0	87.34	60838.72	53139.33		-12.7	20
Endosulfan I	A	100.0	100.6	53958.87	54289.69		0.6	20
Endosulfan I [2C]	A	100.0	86.23	54945.66	47377.68		-13.8	20
Endosulfan II	A	100.0	107.3	48331.97	51858.69		7.3	20
Endosulfan II [2C]	A	100.0	88.75	51135.22	45383.01		-11.2	20
Endosulfan sulfate	A	100.0	111.3	40280.74	44824.97		11.3	20
Endosulfan sulfate [2C]	A	100.0	96.53	42025.14	40567.3		-3.5	20
Endrin	A	100.0	110.0	42937.13	47209.82		10.0	20
Endrin [2C]	A	100.0	93.69	46591.55	43653.55		-6.3	20
Endrin aldehyde	A	100.0	107.5	39912.39	42893.55		7.5	20
Endrin aldehyde [2C]	A	100.0	90.99	43719.7	39779.74		-9.0	20
Endrin ketone	A	100.0	108.8	52202.94	56801.79		8.8	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040R4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	88.07	59552.03	52449.98		-11.9	20
gamma-BHC (Lindane)	A	100.0	109.2	63404.4	69255.24		9.2	20
gamma-BHC (Lindane) [2C]	A	100.0	81.67	68059.61	55584.47		-18.3	20
gamma-Chlordane	A	100.0	95.96	57479.09	55159.83		-4.0	20
gamma-Chlordane [2C]	A	100.0	86.03	57877.86	49792.91		-14.0	20
Heptachlor	A	100.0	114.7	56022.6	64255.36		14.7	20
Heptachlor [2C]	A	100.0	81.16	57138.09	46373.55		-18.8	20
Heptachlor epoxide	A	100.0	105.7	57511.77	60811.35		5.7	20
Heptachlor epoxide [2C]	A	100.0	85.60	58027.29	49674.33		-14.4	20
Methoxychlor	A	100.0	103.4	20681.87	21377.13		3.4	20
Methoxychlor [2C]	A	100.0	88.49	21957.26	19429.92		-11.5	20
Tetrachloro-m-xylene	A	100.0	102.8	48154.4	49529.4		2.9	20
Tetrachloro-m-xylene [2C]	A	100.0	68.33	56983.64	38937.33		-31.7	20 *
Decachlorobiphenyl	A	100.0	100.1	41014.66	41065.71		0.1	20
Decachlorobiphenyl [2C]	A	100.0	85.53	36168.37	30934.69		-14.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	041F4101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVC	Injection Time:	22:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	876.1	2840.514	2488.515		-12.4	20
Toxaphene (2)	A	1000	1098	943.6576	1036.172		9.8	20
Toxaphene (3)	A	1000	902.2	1285.613	1159.945		-9.8	20
Toxaphene (4)	A	1000	991.9	2281.984	2263.575		-0.8	20
Toxaphene (5)	A	1000	938.4	1139.769	1069.622		-6.2	20
Toxaphene (1) [2C]	A	1000	867.6	4049.199	3513.319		-13.2	20
Toxaphene (2) [2C]	A	1000	1077	690.2388	743.203		7.7	20
Toxaphene (3) [2C]	A	1000	947.1	1470.725	1392.886		-5.3	20
Toxaphene (4) [2C]	A	1000	897.9	2525.314	2267.59		-10.2	20
Toxaphene (5) [2C]	A	1000	749.5	1125.146	843.256		-25.1	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060F6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	116.8	51094.47	59695.14		16.8	20
4,4'-DDE [2C]	A	100.0	103.6	50321.72	52149.43		3.6	20
4,4'-DDD	A	100.0	128.4	41428.21	53189.21		28.4	20 *
4,4'-DDD [2C]	A	100.0	112.1	45332.02	50800.63		12.1	20
4,4'-DDT	A	100.0	108.8	41951.39	45626.09		8.8	20
4,4'-DDT [2C]	A	100.0	98.09	44183.69	43340.29		-1.9	20
Aldrin	A	100.0	110.2	63496.28	69977.03		10.2	20
Aldrin [2C]	A	100.0	94.94	62700.35	59525.94		-5.1	20
alpha-BHC	A	100.0	113.3	72070.6	81635.79		13.3	20
alpha-BHC [2C]	A	100.0	97.43	75274.46	73342.63		-2.6	20
alpha-Chlordane	A	100.0	108.1	56005.2	60569.55		8.1	20
alpha-Chlordane [2C]	A	100.0	94.85	57042.46	54107.22		-5.1	20
beta-BHC	A	100.0	107.7	26102.06	28124.11		7.7	20
beta-BHC [2C]	A	100.0	99.36	31407.75	31205.81		-0.6	20
delta-BHC	A	100.0	120.8	55943.6	67587.8		20.8	20 *
delta-BHC [2C]	A	100.0	106.2	61726.37	65586.37		6.3	20
Dieldrin	A	100.0	113.2	57719.49	65323.26		13.2	20
Dieldrin [2C]	A	100.0	96.98	60838.72	59002.47		-3.0	20
Endosulfan I	A	100.0	108.2	53958.87	58404.11		8.2	20
Endosulfan I [2C]	A	100.0	96.15	54945.66	52831.72		-3.8	20
Endosulfan II	A	100.0	114.3	48331.97	55264.33		14.3	20
Endosulfan II [2C]	A	100.0	98.80	51135.22	50523.92		-1.2	20
Endosulfan sulfate	A	100.0	119.4	40280.74	48107.85		19.4	20
Endosulfan sulfate [2C]	A	100.0	106.9	42025.14	44921.12		6.9	20
Endrin	A	100.0	115.2	42937.13	49457.23		15.2	20
Endrin [2C]	A	100.0	101.5	46591.55	47292.43		1.5	20
Endrin aldehyde	A	100.0	113.7	39912.39	45398.36		13.7	20
Endrin aldehyde [2C]	A	100.0	101.7	43719.7	44465.32		1.7	20
Endrin ketone	A	100.0	116.4	52202.94	60766.65		16.4	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060R6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	98.46	59552.03	58634.95		-1.5	20
gamma-BHC (Lindane)	A	100.0	111.7	63404.4	70805.09		11.7	20
gamma-BHC (Lindane) [2C]	A	100.0	98.10	68059.61	66764.99		-1.9	20
gamma-Chlordane	A	100.0	111.3	57479.09	63976.75		11.3	20
gamma-Chlordane [2C]	A	100.0	96.32	57877.86	55751.13		-3.7	20
Heptachlor	A	100.0	119.3	56022.6	66852.62		19.3	20
Heptachlor [2C]	A	100.0	98.82	57138.09	56465.58		-1.2	20
Heptachlor epoxide	A	100.0	109.5	57511.77	62964.61		9.5	20
Heptachlor epoxide [2C]	A	100.0	95.81	58027.29	55598.23		-4.2	20
Methoxychlor	A	100.0	113.4	20681.87	23451.04		13.4	20
Methoxychlor [2C]	A	100.0	97.57	21957.26	21423.65		-2.4	20
Tetrachloro-m-xylene	A	100.0	104.2	48154.4	50182.73		4.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.00	56983.64	51855.59		-9.0	20
Decachlorobiphenyl	A	100.0	108.6	41014.66	44551.56		8.6	20
Decachlorobiphenyl [2C]	A	100.0	100.1	36168.37	36207.27		0.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	061F6101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVH	Injection Time:	04:47

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	875.5	2840.514	2486.913		-12.4	20
Toxaphene (2)	A	1000	1121	943.6576	1057.943		12.1	20
Toxaphene (3)	A	1000	935.2	1285.613	1202.344		-6.5	20
Toxaphene (4)	A	1000	1016	2281.984	2319.499		1.6	20
Toxaphene (5)	A	1000	977.7	1139.769	1114.332		-2.2	20
Toxaphene (1) [2C]	A	1000	866.8	4049.199	3510.085		-13.3	20
Toxaphene (2) [2C]	A	1000	1088	690.2388	750.658		8.8	20
Toxaphene (3) [2C]	A	1000	949.8	1470.725	1396.84		-5.0	20
Toxaphene (4) [2C]	A	1000	937.4	2525.314	2367.339		-6.3	20
Toxaphene (5) [2C]	A	1000	842.2	1125.146	947.618		-15.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	074F7401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVL	Injection Time:	08:55

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	114.1	51094.47	58287.21		14.1	20
4,4'-DDE [2C]	A	100.0	102.6	50321.72	51613.65		2.6	20
4,4'-DDD	A	100.0	126.8	41428.21	52544.14		26.8	20 *
4,4'-DDD [2C]	A	100.0	109.4	45332.02	49607.72		9.4	20
4,4'-DDT	A	100.0	102.8	41951.39	43118.87		2.8	20
4,4'-DDT [2C]	A	100.0	92.69	44183.69	40952.81		-7.3	20
Aldrin	A	100.0	108.8	63496.28	69115.92		8.9	20
Aldrin [2C]	A	100.0	93.61	62700.35	58694.97		-6.4	20
alpha-BHC	A	100.0	111.7	72070.6	80525.75		11.7	20
alpha-BHC [2C]	A	100.0	95.71	75274.46	72046.49		-4.3	20
alpha-Chlordane	A	100.0	106.5	56005.2	59639.33		6.5	20
alpha-Chlordane [2C]	A	100.0	93.57	57042.46	53376.74		-6.4	20
beta-BHC	A	100.0	105.6	26102.06	27571.6		5.6	20
beta-BHC [2C]	A	100.0	97.42	31407.75	30597.47		-2.6	20
delta-BHC	A	100.0	116.9	55943.6	65414.6		16.9	20
delta-BHC [2C]	A	100.0	103.9	61726.37	64151.08		3.9	20
Dieldrin	A	100.0	111.1	57719.49	64135.77		11.1	20
Dieldrin [2C]	A	100.0	95.34	60838.72	58005.41		-4.7	20
Endosulfan I	A	100.0	106.5	53958.87	57478.85		6.5	20
Endosulfan I [2C]	A	100.0	94.75	54945.66	52061.79		-5.2	20
Endosulfan II	A	100.0	112.9	48331.97	54558.31		12.9	20
Endosulfan II [2C]	A	100.0	97.17	51135.22	49687.72		-2.8	20
Endosulfan sulfate	A	100.0	117.1	40280.74	47185.98		17.1	20
Endosulfan sulfate [2C]	A	100.0	104.8	42025.14	44043.85		4.8	20
Endrin	A	100.0	110.8	42937.13	47558.38		10.8	20
Endrin [2C]	A	100.0	96.92	46591.55	45156.04		-3.1	20
Endrin aldehyde	A	100.0	112.5	39912.39	44892.6		12.5	20
Endrin aldehyde [2C]	A	100.0	100.4	43719.7	43897.34		0.4	20
Endrin ketone	A	100.0	115.5	52202.94	60286.31		15.5	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	074R7401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVL	Injection Time:	08:55

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	97.72	59552.03	58197.19		-2.3	20
gamma-BHC (Lindane)	A	100.0	110.0	63404.4	69713.56		10.0	20
gamma-BHC (Lindane) [2C]	A	100.0	96.77	68059.61	65863.41		-3.2	20
gamma-Chlordane	A	100.0	109.4	57479.09	62875.05		9.4	20
gamma-Chlordane [2C]	A	100.0	94.64	57877.86	54775.01		-5.4	20
Heptachlor	A	100.0	115.4	56022.6	64657.49		15.4	20
Heptachlor [2C]	A	100.0	96.34	57138.09	55046.95		-3.7	20
Heptachlor epoxide	A	100.0	108.0	57511.77	62136.49		8.0	20
Heptachlor epoxide [2C]	A	100.0	93.94	58027.29	54510.28		-6.1	20
Methoxychlor	A	100.0	107.3	20681.87	22186.2		7.3	20
Methoxychlor [2C]	A	100.0	92.84	21957.26	20385.08		-7.2	20
Tetrachloro-m-xylene	A	100.0	102.7	48154.4	49440.05		2.7	20
Tetrachloro-m-xylene [2C]	A	100.0	89.40	56983.64	50943.02		-10.6	20
Decachlorobiphenyl	A	100.0	106.1	41014.66	43513.76		6.1	20
Decachlorobiphenyl [2C]	A	100.0	97.62	36168.37	35306.35		-2.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	075F7501.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVM	Injection Time:	09:14

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	900.9	2840.514	2558.998		-9.9	20
Toxaphene (2)	A	1000	1149	943.6576	1084.727		14.9	20
Toxaphene (3)	A	1000	975.1	1285.613	1253.573		-2.5	20
Toxaphene (4)	A	1000	1039	2281.984	2370.987		3.9	20
Toxaphene (5)	A	1000	986.2	1139.769	1124.098		-1.4	20
Toxaphene (1) [2C]	A	1000	894.7	4049.199	3622.805		-10.5	20
Toxaphene (2) [2C]	A	1000	1089	690.2388	751.419		8.9	20
Toxaphene (3) [2C]	A	1000	979.5	1470.725	1440.594		-2.0	20
Toxaphene (4) [2C]	A	1000	957.8	2525.314	2418.763		-4.2	20
Toxaphene (5) [2C]	A	1000	827.6	1125.146	931.218		-17.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17029 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-06-10/12	1210154-06	10/17/12 15:05	1,050.00	10.00
PEN-3221-08-10/12	1210154-07	10/17/12 15:05	1,070.00	10.00
PEN-3221-04-10/12	1210154-08	10/17/12 15:05	1,070.00	10.00
PEN-44-18-10/12	1210154-12	10/17/12 15:05	1,070.00	10.00
FD10151201	1210154-14	10/17/12 15:05	1,060.00	10.00
PEN-44-21-10/12	1210154-16	10/17/12 15:05	1,040.00	10.00
PEN-44-24-10/12	1210154-18	10/17/12 15:05	1,040.00	10.00
PEN-44-15-10/12	1210154-20	10/17/12 15:05	1,040.00	10.00
Blank	2J17029-BLK1	10/17/12 13:57	1,000.00	10.00
LCS	2J17029-BS1	10/17/12 13:57	1,000.00	10.00
PEN-3221-08-10/12	2J17029-MS1	10/17/12 13:57	500.00	5.00
PEN-3221-08-10/12	2J17029-MSD1	10/17/12 13:57	500.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17029-BLK1 File ID: 065F6501.D

Sampled: Prepared: 10/17/12 13:57 Analyzed: 10/19/12 06:03

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00500	0.0100	0.0200	U
72-54-8	4,4'-DDD		0.00500	0.0100	0.0200	UX
50-29-3	4,4'-DDT		0.00500	0.0100	0.0200	U
309-00-2	Aldrin		0.00330	0.0100	0.0200	U
319-84-6	alpha-BHC		0.00330	0.0100	0.0200	U
5103-71-9	alpha-Chlordane		0.00330	0.0100	0.0200	U
319-85-7	beta-BHC		0.00330	0.0100	0.0200	U
319-86-8	delta-BHC		0.00330	0.0100	0.0200	UX
60-57-1	Dieldrin		0.00500	0.0100	0.0200	U
959-98-8	Endosulfan I		0.00330	0.0100	0.0200	U
33213-65-9	Endosulfan II		0.00500	0.0100	0.0200	U
1031-07-8	Endosulfan sulfate		0.00500	0.0100	0.0200	U
72-20-8	Endrin		0.00500	0.0100	0.0200	U
7421-93-4	Endrin aldehyde		0.00500	0.0100	0.0200	U
53494-70-5	Endrin ketone		0.00500	0.0100	0.0200	U
58-89-9	gamma-BHC (Lindane)		0.00330	0.0100	0.0200	U
5103-74-2	gamma-Chlordane	0.00881	0.00330	0.0100	0.0200	JP
76-44-8	Heptachlor		0.00330	0.0100	0.0200	U
1024-57-3	Heptachlor epoxide		0.00330	0.0100	0.0200	U
72-43-5	Methoxychlor		0.00330	0.0100	0.0200	U
8001-35-2	Toxaphene		0.330	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.4219	84.4	25 - 140	
Tetrachloro-m-xylene [2C]	0.5000	0.3922	78.4	25 - 140	
Decachlorobiphenyl	0.5000	0.4355	87.1	30 - 135	
Decachlorobiphenyl [2C]	0.5000	0.4240	84.8	30 - 135	

* Values outside of QC limits

INITIAL CALIBRATION STANDARDS

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001F0101.D	10/08/12 15:32
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001R0101.D	10/08/12 15:32
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002F0201.D	10/08/12 15:51
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002R0201.D	10/08/12 15:51
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003F0301.D	10/08/12 16:10
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003R0301.D	10/08/12 16:10
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004F0401.D	10/08/12 16:29
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004R0401.D	10/08/12 16:29
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005F0501.D	10/08/12 16:48
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005R0501.D	10/08/12 16:48
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006F0601.D	10/08/12 17:07
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006R0601.D	10/08/12 17:07
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007R0701.D	10/08/12 17:26
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007F0701.D	10/08/12 17:26
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023F2301.D	10/08/12 22:31
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023R2301.D	10/08/12 22:31
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024F2401.D	10/08/12 22:50
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024R2401.D	10/08/12 22:50
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025F2501.D	10/08/12 23:09
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025R2501.D	10/08/12 23:09
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026F2601.D	10/08/12 23:29
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026R2601.D	10/08/12 23:29
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027F2701.D	10/08/12 23:48
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027R2701.D	10/08/12 23:48
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028F2801.D	10/09/12 00:07
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028R2801.D	10/09/12 00:07
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030R3001.D	10/09/12 00:45
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030F3001.D	10/09/12 00:45
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031F3101.D	10/09/12 01:04
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031R3101.D	10/09/12 01:04
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032F3201.D	10/09/12 01:23
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032R3201.D	10/09/12 01:23

12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033F3301.D	10/09/12 01:42
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033R3301.D	10/09/12 01:42
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034F3401.D	10/09/12 02:01
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034R3401.D	10/09/12 02:01
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035R3501.D	10/09/12 02:20
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035F3501.D	10/09/12 02:20

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J28406-CAL1	001R0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL1	001F0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL2	002F0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL2	002R0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL3	003F0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL3	003R0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL4	004F0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL4	004R0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL5	005R0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL5	005F0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL6	006F0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL6	006R0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL7	007F0701.D	10/08/12 17:26
Cal Standard	2J28406-CAL7	007R0701.D	10/08/12 17:26
Cal Standard	2J28406-CALK	023F2301.D	10/08/12 22:31
Cal Standard	2J28406-CALK	023R2301.D	10/08/12 22:31
Cal Standard	2J28406-CALL	024F2401.D	10/08/12 22:50
Cal Standard	2J28406-CALL	024R2401.D	10/08/12 22:50
Cal Standard	2J28406-CALM	025F2501.D	10/08/12 23:09
Cal Standard	2J28406-CALM	025R2501.D	10/08/12 23:09
Cal Standard	2J28406-CALN	026R2601.D	10/08/12 23:29
Cal Standard	2J28406-CALN	026F2601.D	10/08/12 23:29
Cal Standard	2J28406-CALO	027F2701.D	10/08/12 23:48
Cal Standard	2J28406-CALO	027R2701.D	10/08/12 23:48
Cal Standard	2J28406-CALP	028F2801.D	10/09/12 00:07
Cal Standard	2J28406-CALP	028R2801.D	10/09/12 00:07
Initial Cal Check	2J28406-ICV4	029R2901.D	10/09/12 00:26
Initial Cal Check	2J28406-ICV4	029F2901.D	10/09/12 00:26
Cal Standard	2J28406-CALQ	030F3001.D	10/09/12 00:45
Cal Standard	2J28406-CALQ	030R3001.D	10/09/12 00:45
Cal Standard	2J28406-CALR	031F3101.D	10/09/12 01:04
Cal Standard	2J28406-CALR	031R3101.D	10/09/12 01:04

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J28406-CALS	032F3201.D	10/09/12 01:23
Cal Standard	2J28406-CALS	032R3201.D	10/09/12 01:23
Cal Standard	2J28406-CALT	033R3301.D	10/09/12 01:42
Cal Standard	2J28406-CALT	033F3301.D	10/09/12 01:42
Cal Standard	2J28406-CALU	034F3401.D	10/09/12 02:01
Cal Standard	2J28406-CALU	034R3401.D	10/09/12 02:01
Cal Standard	2J28406-CALV	035F3501.D	10/09/12 02:20
Cal Standard	2J28406-CALV	035R3501.D	10/09/12 02:20
Initial Cal Check	2J28406-ICV5	013R1301.D	10/09/12 17:14
Initial Cal Check	2J28406-ICV5	013F1301.D	10/09/12 17:14

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29706-CCV1	003F0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV1	003R0301.D	10/18/12 10:21
Calibration Check	2J29706-CCVB	040R4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVB	040F4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVE	043R4301.D	10/18/12 23:03
Calibration Check	2J29706-CCVE	043F4301.D	10/18/12 23:03
Calibration Check	2J29706-CCVF	044F4401.D	10/18/12 23:22
Calibration Check	2J29706-CCVF	044R4401.D	10/18/12 23:22
PEN-3221-06-10/12	1210154-06	054F5401.D	10/19/12 02:33
PEN-3221-06-10/12	1210154-06	054R5401.D	10/19/12 02:33
PEN-3221-08-10/12	1210154-07	055F5501.D	10/19/12 02:52
PEN-3221-08-10/12	1210154-07	055R5501.D	10/19/12 02:52
PEN-3221-08-10/12	2J17029-MS2	058F5801.D	10/19/12 03:50
PEN-3221-08-10/12	2J17029-MS2	058R5801.D	10/19/12 03:50
PEN-3221-08-10/12	2J17029-MSD2	059R5901.D	10/19/12 04:09
PEN-3221-08-10/12	2J17029-MSD2	059F5901.D	10/19/12 04:09
Calibration Check	2J29706-CCVG	060R6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVG	060F6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVJ	063R6301.D	10/19/12 05:25
Calibration Check	2J29706-CCVJ	063F6301.D	10/19/12 05:25
Calibration Check	2J29706-CCVK	064F6401.D	10/19/12 05:44
Calibration Check	2J29706-CCVK	064R6401.D	10/19/12 05:44
Blank	2J17029-BLK1	065R6501.D	10/19/12 06:03
Blank	2J17029-BLK1	065F6501.D	10/19/12 06:03
LCS	2J17029-BS2	067F6701.D	10/19/12 06:42
LCS	2J17029-BS2	067R6701.D	10/19/12 06:42
PEN-3221-04-10/12	1210154-08	068F6801.D	10/19/12 07:01
PEN-3221-04-10/12	1210154-08	068R6801.D	10/19/12 07:01
PEN-44-18-10/12	1210154-12	069F6901.D	10/19/12 07:20
PEN-44-18-10/12	1210154-12	069R6901.D	10/19/12 07:20
FD10151201	1210154-14	070R7001.D	10/19/12 07:39
FD10151201	1210154-14	070F7001.D	10/19/12 07:39

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PEN-44-21-10/12	1210154-16	071R7101.D	10/19/12 07:58
PEN-44-21-10/12	1210154-16	071F7101.D	10/19/12 07:58
PEN-44-24-10/12	1210154-18	072R7201.D	10/19/12 08:17
PEN-44-24-10/12	1210154-18	072F7201.D	10/19/12 08:17
PEN-44-15-10/12	1210154-20	073F7301.D	10/19/12 08:36
PEN-44-15-10/12	1210154-20	073R7301.D	10/19/12 08:36
Calibration Check	2J29706-CCVL	074F7401.D	10/19/12 08:55
Calibration Check	2J29706-CCVL	074R7401.D	10/19/12 08:55
Calibration Check	2J29706-CCVO	077F7701.D	10/19/12 09:53
Calibration Check	2J29706-CCVO	077R7701.D	10/19/12 09:53
Calibration Check	2J29706-CCVP	078R7801.D	10/19/12 10:12
Calibration Check	2J29706-CCVP	078F7801.D	10/19/12 10:12

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1016	1211.68	2.651423	7.412	0.0162173			20	
Aroclor-1016 (1)	1998.279	1.868085	7.111833	3.466751E-03			20	
Aroclor-1016 (2)	737.4585	4.861005	6.183167	1.530938E-02			20	
Aroclor-1016 (3)	1103.083	4.159952	6.5585	1.416792E-02			20	
Aroclor-1016 (4)	1381.051	7.475082	7.087	1.81205E-03			20	
Aroclor-1016 (5)	838.5294	4.403324	7.412	0.0162173			20	
Aroclor-1016 [2C]	1436.644	10.70371	6.6695	2.588352E-03			20	
Aroclor-1016 (1) [2C]	2181.91	12.63869	6.369	7.68006E-03			20	
Aroclor-1016 (2) [2C]	1375.587	12.43596	6.098333	1.222863E-02			20	
Aroclor-1016 (3) [2C]	1141.906	6.462062	6.568833	9.334152E-03			20	
Aroclor-1016 (4) [2C]	1158.223	11.14295	6.622833	1.693396E-02			20	
Aroclor-1016 (5) [2C]	1325.593	16.57982	6.6695	2.588352E-03			20	
Aroclor-1248	758.7065	7.267487	9.219333	7.873254E-02		0.9998429	0.995	
Aroclor-1248 (1)	952.0071	7.162791	8.538	0.2492864		0.999706	0.995	
Aroclor-1248 (2)	757.9911	6.082106	7.7715	5.295247E-02		0.9997806	0.995	
Aroclor-1248 (3)	482.7702	34.39494	8.480667	6.058882E-02		0.9995866	0.995	
Aroclor-1248 (4)	921.4139	14.51966	8.758333	5.075192E-02		0.9998197	0.995	
Aroclor-1248 (5)	679.3505	4.488466	9.219333	7.873254E-02		0.9998103	0.995	
Aroclor-1248 [2C]	937.5975	10.41717	7.544167	9.330969E-02	0.9991794		0.995	
Aroclor-1248 (1) [2C]	1361.915	38.26215	7.008833	0.2826843	0.9992803		0.995	
Aroclor-1248 (2) [2C]	1234.637	4.986944	6.357833	2.028725E-02	0.9998706		0.995	
Aroclor-1248 (3) [2C]	904.2617	6.705059	6.758167	4.643876E-02	0.9974451		0.995	
Aroclor-1248 (4) [2C]	606.4015	19.46593	7.440167	8.004361E-02	0.9988609		0.995	
Aroclor-1248 (5) [2C]	580.7719	8.125579	7.544167	9.330969E-02	0.9955324		0.995	
Aroclor-1254	2315.112	2.465993	9.729833	0.0230136			20	
Aroclor-1254 (1)	3197.742	3.274659	8.8325	8.978777E-03			20	
Aroclor-1254 (2)	1002.121	1.718671	7.411833	1.416199E-02			20	
Aroclor-1254 (3)	3051.415	2.544717	8.381667	1.699636E-03			20	
Aroclor-1254 (4)	1540.727	6.850945	9.377833	2.408567E-02			20	
Aroclor-1254 (5)	2783.555	3.866763	9.729833	0.0230136			20	
Aroclor-1254 [2C]	2492.935	13.91024	8.643333	4.776138E-02			20	
Aroclor-1254 (1) [2C]	3732.51	14.12391	7.961667	3.249477E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2284005	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1254 (2) [2C]	2910.505	17.50065	7.287333	1.382676E-02			20	
Aroclor-1254 (3) [2C]	2546.45	14.73764	7.470333	3.081998E-02			20	
Aroclor-1254 (4) [2C]	1876.557	14.14564	8.126167	1.895317E-02			20	
Aroclor-1254 (5) [2C]	1398.651	8.183716	8.643333	4.776138E-02			20	
Aroclor-1260	3211.825	4.49341	11.635	0.0166325			20	
Aroclor-1260 (1)	5494.936	4.613131	10.52067	3.771478E-03			20	
Aroclor-1260 (2)	3224.326	3.711074	9.376667	0.0237599			20	
Aroclor-1260 (3)	3829.492	8.450002	9.727	9.356043E-03			20	
Aroclor-1260 (4)	2372.787	3.387169	9.832667	1.787885E-02			20	
Aroclor-1260 (5)	1137.586	3.214277	11.635	0.0166325			20	
Aroclor-1260 [2C]	3119.071	14.37388	9.471	2.433087E-02			20	
Aroclor-1260 (1) [2C]	4662.745	13.3188	9.471	2.433087E-02			20	
Aroclor-1260 (2) [2C]	2691.935	14.62566	8.123667	1.998328E-02			20	
Aroclor-1260 (3) [2C]	3128.594	12.98403	8.3665	3.214936E-02			20	
Aroclor-1260 (4) [2C]	2972.886	15.3638	8.5515	2.009633E-02			20	
Aroclor-1260 (5) [2C]	2139.196	17.43372	9.151167	1.639216E-02			20	
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	029F2901.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/09/12
Lab Sample ID:	2J28406-ICV4	Injection Time:	00:26

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1016 (1)	A	1003	1125	1998.279	2241.387		12.2	20
Aroclor-1016 (2)	A	1003	1041	737.4585	765.4786		3.8	20
Aroclor-1016 (3)	A	1003	1108	1103.083	1218.05		10.4	20
Aroclor-1016 (4)	A	1003	1184	1381.051	1630.296		18.0	20
Aroclor-1016 (5)	A	1003	1141	838.5294	953.8285		13.8	20
Aroclor-1016 (1) [2C]	A	1003	1051	2181.91	2285.794		4.8	20
Aroclor-1016 (2) [2C]	A	1003	1021	1375.587	1400.548		1.8	20
Aroclor-1016 (3) [2C]	A	1003	1105	1141.906	1258.596		10.2	20
Aroclor-1016 (4) [2C]	A	1003	1052	1158.223	1215.474		4.9	20
Aroclor-1016 (5) [2C]	A	1003	1050	1325.593	1388.168		4.7	20
Aroclor-1260 (1)	A	1002	1080	5494.936	5921.413		7.8	20
Aroclor-1260 (2)	A	1002	1124	3224.326	3616.337		12.2	20
Aroclor-1260 (3)	A	1002	1044	3829.492	3988.561		4.2	20
Aroclor-1260 (4)	A	1002	1083	2372.787	2565.43		8.1	20
Aroclor-1260 (5)	A	1002	1098	1137.586	1246.318		9.6	20
Aroclor-1260 (1) [2C]	A	1002	1038	4662.745	4830.391		3.6	20
Aroclor-1260 (2) [2C]	A	1002	1023	2691.935	2748.98		2.1	20
Aroclor-1260 (3) [2C]	A	1002	1054	3128.594	3292.769		5.2	20
Aroclor-1260 (4) [2C]	A	1002	1018	2972.886	3021.426		1.6	20
Aroclor-1260 (5) [2C]	A	1002	1004	2139.196	2144.726		0.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	013F1301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/09/12
Lab Sample ID:	2J28406-ICV5	Injection Time:	17:14

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1254 (1)	A	1000	986.9	3197.742	3155.955		-1.3	20
Aroclor-1254 (2)	A	1000	934.7	1002.121	936.697		-6.5	20
Aroclor-1254 (3)	A	1000	982.1	3051.415	2996.849		-1.8	20
Aroclor-1254 (4)	A	1000	1024	1540.727	1577.34		2.4	20
Aroclor-1254 (5)	A	1000	940.9	2783.555	2618.945		-5.9	20
Aroclor-1254 (1) [2C]	A	1000	916.4	3732.51	3420.667		-8.4	20
Aroclor-1254 (2) [2C]	A	1000	913.2	2910.505	2657.751		-8.7	20
Aroclor-1254 (3) [2C]	A	1000	918.0	2546.45	2337.619		-8.2	20
Aroclor-1254 (4) [2C]	A	1000	906.1	1876.557	1700.371		-9.4	20
Aroclor-1254 (5) [2C]	A	1000	972.8	1398.651	1360.628		-2.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	96.27	48154.4	46356.45		-3.7	20
Tetrachloro-m-xylene [2C]	A	100.0	83.40	56983.64	47527.17		-16.6	20
Decachlorobiphenyl	A	100.0	96.23	41014.66	39470.06		-3.8	20
Decachlorobiphenyl [2C]	A	100.0	88.94	36168.37	32168.73		-11.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040F4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	102.8	48154.4	49529.4		2.9	20
Tetrachloro-m-xylene [2C]	A	100.0	68.33	56983.64	38937.33		-31.7	20 *
Decachlorobiphenyl	A	100.0	100.1	41014.66	41065.71		0.1	20
Decachlorobiphenyl [2C]	A	100.0	85.53	36168.37	30934.69		-14.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	043F4301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVE	Injection Time:	23:03

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1055	1998.279	2108.136		5.5	20
Aroclor-1016 (2)	A	1000	1010	737.4585	745.108		1.0	20
Aroclor-1016 (3)	A	1000	1025	1103.083	1131.167		2.5	20
Aroclor-1016 (4)	A	1000	1090	1381.051	1505.523		9.0	20
Aroclor-1016 (5)	A	1000	1078	838.5294	904.381		7.9	20
Aroclor-1016 (1) [2C]	A	1000	1108	2181.91	2416.484		10.8	20
Aroclor-1016 (2) [2C]	A	1000	998.4	1375.587	1373.357		-0.2	20
Aroclor-1016 (3) [2C]	A	1000	1133	1141.906	1294.209		13.3	20
Aroclor-1016 (4) [2C]	A	1000	1018	1158.223	1179.346		1.8	20
Aroclor-1016 (5) [2C]	A	1000	1001	1325.593	1326.429		0.06	20
Aroclor-1260 (1)	A	1000	1099	5494.936	6038.542		9.9	20
Aroclor-1260 (2)	A	1000	1026	3224.326	3307.731		2.6	20
Aroclor-1260 (3)	A	1000	992.3	3829.492	3800.146		-0.8	20
Aroclor-1260 (4)	A	1000	1035	2372.787	2455.613		3.5	20
Aroclor-1260 (5)	A	1000	1053	1137.586	1197.529		5.3	20
Aroclor-1260 (1) [2C]	A	1000	1109	4662.745	5172.189		10.9	20
Aroclor-1260 (2) [2C]	A	1000	1022	2691.935	2751.189		2.2	20
Aroclor-1260 (3) [2C]	A	1000	1097	3128.594	3430.872		9.7	20
Aroclor-1260 (4) [2C]	A	1000	1031	2972.886	3064.285		3.1	20
Aroclor-1260 (5) [2C]	A	1000	1018	2139.196	2178.228		1.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	044F4401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVF	Injection Time:	23:22

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	910.8	3197.742	2912.35		-8.9	20
Aroclor-1254 (2)	A	1000	977.3	1002.121	979.341		-2.3	20
Aroclor-1254 (3)	A	1000	945.0	3051.415	2883.618		-5.5	20
Aroclor-1254 (4)	A	1000	886.6	1540.727	1365.958		-11.3	20
Aroclor-1254 (5)	A	1000	930.5	2783.555	2590.126		-6.9	20
Aroclor-1254 (1) [2C]	A	1000	970.7	3732.51	3623.263		-2.9	20
Aroclor-1254 (2) [2C]	A	1000	965.9	2910.505	2811.177		-3.4	20
Aroclor-1254 (3) [2C]	A	1000	968.9	2546.45	2467.174		-3.1	20
Aroclor-1254 (4) [2C]	A	1000	1010	1876.557	1895		1.0	20
Aroclor-1254 (5) [2C]	A	1000	1094	1398.651	1530.469		9.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060F6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	104.2	48154.4	50182.73		4.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.00	56983.64	51855.59		-9.0	20
Decachlorobiphenyl	A	100.0	108.6	41014.66	44551.56		8.6	20
Decachlorobiphenyl [2C]	A	100.0	100.1	36168.37	36207.27		0.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	063F6301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVJ	Injection Time:	05:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1060	1998.279	2117.455		6.0	20
Aroclor-1016 (2)	A	1000	1014	737.4585	748.225		1.5	20
Aroclor-1016 (3)	A	1000	1019	1103.083	1124.116		1.9	20
Aroclor-1016 (4)	A	1000	1084	1381.051	1497.609		8.4	20
Aroclor-1016 (5)	A	1000	1081	838.5294	906.48		8.1	20
Aroclor-1016 (1) [2C]	A	1000	1124	2181.91	2453.036		12.4	20
Aroclor-1016 (2) [2C]	A	1000	1002	1375.587	1378.274		0.2	20
Aroclor-1016 (3) [2C]	A	1000	1139	1141.906	1300.399		13.9	20
Aroclor-1016 (4) [2C]	A	1000	1016	1158.223	1176.232		1.6	20
Aroclor-1016 (5) [2C]	A	1000	1017	1325.593	1347.641		1.7	20
Aroclor-1260 (1)	A	1000	1035	5494.936	5686.082		3.5	20
Aroclor-1260 (2)	A	1000	1010	3224.326	3258.181		1.0	20
Aroclor-1260 (3)	A	1000	985.4	3829.492	3773.63		-1.5	20
Aroclor-1260 (4)	A	1000	1036	2372.787	2459.218		3.6	20
Aroclor-1260 (5)	A	1000	1074	1137.586	1221.721		7.4	20
Aroclor-1260 (1) [2C]	A	1000	1132	4662.745	5277.264		13.2	20
Aroclor-1260 (2) [2C]	A	1000	1024	2691.935	2757.419		2.4	20
Aroclor-1260 (3) [2C]	A	1000	1101	3128.594	3445.752		10.1	20
Aroclor-1260 (4) [2C]	A	1000	1042	2972.886	3096.826		4.2	20
Aroclor-1260 (5) [2C]	A	1000	1033	2139.196	2210.704		3.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	064F6401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVK	Injection Time:	05:44

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	936.6	3197.742	2995.119		-6.3	20
Aroclor-1254 (2)	A	1000	974.9	1002.121	976.93		-2.5	20
Aroclor-1254 (3)	A	1000	956.0	3051.415	2917.297		-4.4	20
Aroclor-1254 (4)	A	1000	883.9	1540.727	1361.815		-11.6	20
Aroclor-1254 (5)	A	1000	925.0	2783.555	2574.73		-7.5	20
Aroclor-1254 (1) [2C]	A	1000	990.6	3732.51	3697.616		-0.9	20
Aroclor-1254 (2) [2C]	A	1000	970.2	2910.505	2823.893		-3.0	20
Aroclor-1254 (3) [2C]	A	1000	978.3	2546.45	2491.204		-2.2	20
Aroclor-1254 (4) [2C]	A	1000	1026	1876.557	1924.944		2.6	20
Aroclor-1254 (5) [2C]	A	1000	1127	1398.651	1576.683		12.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	074F7401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVL	Injection Time:	08:55

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	102.7	48154.4	49440.05		2.7	20
Tetrachloro-m-xylene [2C]	A	100.0	89.40	56983.64	50943.02		-10.6	20
Decachlorobiphenyl	A	100.0	106.1	41014.66	43513.76		6.1	20
Decachlorobiphenyl [2C]	A	100.0	97.62	36168.37	35306.35		-2.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	077F7701.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVO	Injection Time:	09:53

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1083	1998.279	2163.571		8.3	20
Aroclor-1016 (2)	A	1000	1010	737.4585	745.235		1.1	20
Aroclor-1016 (3)	A	1000	1034	1103.083	1140.493		3.4	20
Aroclor-1016 (4)	A	1000	1032	1381.051	1425.602		3.2	20
Aroclor-1016 (5)	A	1000	1092	838.5294	916.01		9.2	20
Aroclor-1016 (1) [2C]	A	1000	1067	2181.91	2328.129		6.7	20
Aroclor-1016 (2) [2C]	A	1000	1001	1375.587	1376.985		0.1	20
Aroclor-1016 (3) [2C]	A	1000	1137	1141.906	1298.189		13.7	20
Aroclor-1016 (4) [2C]	A	1000	1027	1158.223	1189.681		2.7	20
Aroclor-1016 (5) [2C]	A	1000	1025	1325.593	1358.596		2.5	20
Aroclor-1260 (1)	A	1000	1140	5494.936	6265.574		14.0	20
Aroclor-1260 (2)	A	1000	1030	3224.326	3319.833		3.0	20
Aroclor-1260 (3)	A	1000	1000	3829.492	3831.312		0.05	20
Aroclor-1260 (4)	A	1000	1055	2372.787	2503.724		5.5	20
Aroclor-1260 (5)	A	1000	1106	1137.586	1257.748		10.6	20
Aroclor-1260 (1) [2C]	A	1000	1149	4662.745	5355.769		14.9	20
Aroclor-1260 (2) [2C]	A	1000	1036	2691.935	2789.773		3.6	20
Aroclor-1260 (3) [2C]	A	1000	1117	3128.594	3494.461		11.7	20
Aroclor-1260 (4) [2C]	A	1000	1053	2972.886	3131.273		5.3	20
Aroclor-1260 (5) [2C]	A	1000	1047	2139.196	2240.03		4.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	078F7801.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVP	Injection Time:	10:12

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	996.4	3197.742	3186.338		-0.4	20
Aroclor-1254 (2)	A	1000	969.4	1002.121	971.411		-3.1	20
Aroclor-1254 (3)	A	1000	976.6	3051.415	2980.186		-2.3	20
Aroclor-1254 (4)	A	1000	971.0	1540.727	1496.022		-2.9	20
Aroclor-1254 (5)	A	1000	952.2	2783.555	2650.459		-4.8	20
Aroclor-1254 (1) [2C]	A	1000	977.7	3732.51	3649.461		-2.2	20
Aroclor-1254 (2) [2C]	A	1000	963.8	2910.505	2805.043		-3.6	20
Aroclor-1254 (3) [2C]	A	1000	981.1	2546.45	2498.235		-1.9	20
Aroclor-1254 (4) [2C]	A	1000	1028	1876.557	1928.581		2.8	20
Aroclor-1254 (5) [2C]	A	1000	1104	1398.651	1544.222		10.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17029 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-06-10/12	1210154-06	10/17/12 15:05	1,050.00	10.00
PEN-3221-08-10/12	1210154-07	10/17/12 15:05	1,070.00	10.00
PEN-3221-04-10/12	1210154-08	10/17/12 15:05	1,070.00	10.00
PEN-44-18-10/12	1210154-12	10/17/12 15:05	1,070.00	10.00
FD10151201	1210154-14	10/17/12 15:05	1,060.00	10.00
PEN-44-21-10/12	1210154-16	10/17/12 15:05	1,040.00	10.00
PEN-44-24-10/12	1210154-18	10/17/12 15:05	1,040.00	10.00
PEN-44-15-10/12	1210154-20	10/17/12 15:05	1,040.00	10.00
Blank	2J17029-BLK1	10/17/12 13:57	1,000.00	10.00
LCS	2J17029-BS2	10/17/12 13:57	1,000.00	10.00
PEN-3221-08-10/12	2J17029-MS2	10/17/12 13:57	500.00	5.00
PEN-3221-08-10/12	2J17029-MSD2	10/17/12 13:57	500.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17029-BLK1 File ID: 065F6501.D

Sampled: Prepared: 10/17/12 13:57 Analyzed: 10/19/12 06:03

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17029 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.120	0.250	0.500	U
11104-28-2	Aroclor-1221		0.120	0.250	0.500	U
11141-16-5	Aroclor-1232		0.120	0.250	0.500	U
53469-21-9	Aroclor-1242		0.120	0.250	0.500	U
12672-29-6	Aroclor-1248		0.120	0.250	0.500	U
11097-69-1	Aroclor-1254		0.120	0.250	0.500	U
11096-82-5	Aroclor-1260		0.120	0.250	0.500	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.4219	84.4	25 - 140	
Tetrachloro-m-xylene [2C]	0.5000	0.3922	78.4	25 - 140	
Decachlorobiphenyl	0.5000	0.4355	87.1	40 - 135	
Decachlorobiphenyl [2C]	0.5000	0.4240	84.8	40 - 135	

* Values outside of QC limits

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 13, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION –TOTAL AND DISSOLVED METALS, ALKALINITY, BIOCHEMICAL OXYGEN DEMAND, CHEMICAL OXYGEN DEMAND, CHLORIDE, NITRATE, NITRITE, SULFATE**
CTO 0079 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 1210154

SAMPLES: 11/Aqueous/

FD10151201	PEN-3221-04-10/12	PEN-3221-06-10/12
PEN-3221-08-10/12	PEN-44-15-10/12	PEN-44-18-10/12
PEN-44-21-10/12	PEN-44-24-10/12	PEN-44-22-10/12
PEN-44-23-10/12	PEN-44-25-10/12	

Overview

The sample set for NAS Pensacola, CTO 0079, SDG 1210154, consists of eleven (11) aqueous environmental samples. One (1) field duplicate pair (PEN-44-18-10/12 / FD10151201) was included within this SDG.

Samples FD10151201, PEN-3221-04-10/12, PEN-3221-06-10/12, PEN-3221-08-10/12, PEN-44-15-10/12, PEN-44-18-10/12, PEN-44-21-10/12 and PEN-44-24-10/12 were analyzed for target analyte list (TAL) metals. Samples FD10151201, PEN-44-15-10/12, PEN-44-18-10/12, PEN-44-21-10/12, PEN-44-22-10/12, PEN-44-23-10/12, PEN-44-24-10/12 and PEN-44-25-10/12 were analyzed for dissolved iron and manganese and alkalinity, biochemical oxygen demand, chemical oxygen demand, chloride, nitrate, nitrite and sulfate. The samples were collected by Tetra Tech on October 14 and 15, 2012 and analyzed by Empirical Laboratories, LLC. under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010C. Mercury analyses were conducted using SW-846 method 7470A. Alkalinity analyses were conducted using Standard Method 2320B. Biochemical oxygen demand analyses were conducted using Standard Method 5210B. Chemical oxygen demand analyses were conducted using EPA method 410.4. Chloride, nitrate, nitrite and sulfate analyses were conducted using SW-846 method 9056.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
• Field Duplicate Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Metals

The field duplicate relative percent difference for alkalinity was > 30% quality control limit for sample pair PEN-3221-08-10/12 / FD10151201. The positive and nondetcted results reported for alkalinity were qualified as estimated, "J" and "UJ", respectively.

Notes

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) were qualified as estimated, "J".

The nondetected results were reported to the MDL.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: Positive results reported below the LOQ but above the LOD were qualified as estimated. The field duplicate relative percent difference for alkalinity was > 30% quality control limit for sample pair PEN-3221-08-10/12 / FD10151201.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-3221-04-10/12			PEN-3221-06-10/12			PEN-3221-08-10/12		
SDG: 1210154	LAB_ID	1210154-14			1210154-08			1210154-06			1210154-07		
FRACTION: M	SAMP_DATE	10/15/2012			10/14/2012			10/14/2012			10/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		50	U		88.5	J	P	118	J	P	129	J	P
ANTIMONY		5	U		5	U		5	U		5	U	
ARSENIC		3	U		3	U		3	U		3	U	
BARIUM		14.2	J	P	7.2	J	P	5	U		5.56	J	P
BERYLLIUM		1	U		1	U		1	U		1	U	
CADMIUM		1	U		1	U		1	U		1	U	
CALCIUM		24600			42100			36200			31200		
CHROMIUM		2	U		2.19	J	P	2	U		2	U	
COBALT		5	U		5	U		5	U		5	U	
COPPER		4	U		4	U		4	U		4	U	
IRON		1630			37.1	J	P	41.6	J	P	105		
LEAD		1.5	U		1.5	U		1.5	U		1.5	U	
MAGNESIUM		2880	J	P	1550	J	P	1170	J	P	1030	J	P
MANGANESE		23.4			3	U		3	U		3	U	
MERCURY		0.08	U		0.08	U		0.08	U		0.08	U	
NICKEL		3	U		3	U		3	U		3	U	
POTASSIUM		1000	U		1000	U		1000	U		1000	U	
SELENIUM		3	U		3	U		3	U		3	U	
SILVER		1	U		1	U		1	U		1	U	
SODIUM		8360			5070			3790	J	P	5610		
THALLIUM		3	U		3	U		3	U		3	U	
VANADIUM		5	U		5	U		5	U		5	U	
ZINC		5	U		5	U		5	U		5	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12			PEN-44-24-10/12		
SDG: 1210154	LAB_ID	1210154-20			1210154-12			1210154-16			1210154-18		
FRACTION: M	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		195	J	P	50	U		82.9	J	P	67.4	J	P
ANTIMONY		5	U		5	U		5	U		5	U	
ARSENIC		3	U		3	U		3	U		3	U	
BARIUM		5	U		14.3	J	P	5	U		5	U	
BERYLLIUM		1	U		1	U		1	U		1	U	
CADMIUM		1	U		1	U		1	U		1	U	
CALCIUM		28500			24900			40200			37900		
CHROMIUM		2	U		2	U		4.14	J	P	2	U	
COBALT		5	U		5	U		5	U		5	U	
COPPER		4	U		4	U		4	U		4	U	
IRON		38.7	J	P	1610			30	U		30	U	
LEAD		1.5	U		1.5	U		1.5	U		1.5	U	
MAGNESIUM		1320	J	P	2880	J	P	1720	J	P	1000	U	
MANGANESE		3	U		24.1			3	U		3	U	
MERCURY		0.08	U		0.08	U		0.08	U		0.08	U	
NICKEL		3	U		3	U		3	U		3	U	
POTASSIUM		1000	U		1000	U		1080	J	P	1000	U	
SELENIUM		3	U		3	U		3	U		3	U	
SILVER		1	U		1	U		1	U		1	U	
SODIUM		11500			8300			32200			6310		
THALLIUM		3	U		3	U		3	U		3	U	
VANADIUM		5	U		5	U		5	U		5	U	
ZINC		5	U		5	U		5	U		5	U	

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12		
SDG: 1210154	LAB_ID	1210154-14			1210154-20			1210154-12			1210154-16		
FRACTION: MISC	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		108	J	G	80.3	J	G	67.8	J	G	143	J	G
BIOCHEMICAL OXYGEN DEMAND		2	U		2	U		2	U		2	U	
CHEMICAL OXYGEN DEMAND		20	U		20	U		20	U		20	U	
CHLORIDE		10.9			6.21			10.9			6.53		
NITRATE-N		0.033	U		1.46			0.033	U		2.71		
NITRITE-N		0.033	U		0.033	U		0.033	U		0.033	U	
SULFATE		4.72			5.15			4.74			9.78		

PROJ_NO: 00784	NSAMPLE	PEN-44-22-10/12			PEN-44-23-10/12			PEN-44-24-10/12			PEN-44-25-10/12		
SDG: 1210154	LAB_ID	1210154-23			1210154-10			1210154-18			1210154-22		
FRACTION: MISC	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		71.4	J	G	21	J	G	88.8	J	G	79.1	J	G
BIOCHEMICAL OXYGEN DEMAND		2	U		2	U		2	U		2	U	
CHEMICAL OXYGEN DEMAND		20	U		20	U		20	U		20	U	
CHLORIDE		7.27			12.5			5.2			5.34		
NITRATE-N		1.32			0.269			1.28			1.25		
NITRITE-N		0.033	U		0.033	U		0.033	U		0.033	U	
SULFATE		7.76			5.42			5.61			8.45		

PROJ_NO: 00784	NSAMPLE	FD10151201			PEN-44-15-10/12			PEN-44-18-10/12			PEN-44-21-10/12		
SDG: 1210154	LAB_ID	1210154-15			1210154-21			1210154-13			1210154-17		
FRACTION: MF	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-44-18-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		1390	J	P	69.3	J	P	1400			30	U	
MANGANESE		20.1	J	P	3	U		20.6			3	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-22-10/12			PEN-44-23-10/12			PEN-44-24-10/12			PEN-44-25-10/12		
SDG: 1210154	LAB_ID	1210154-23			1210154-11			1210154-19			1210154-22		
FRACTION: MF	SAMP_DATE	10/15/2012			10/15/2012			10/15/2012			10/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		30	U		76.8	J	P	30	U		30	U	
MANGANESE		3	U		4.81	J	P	3	U		3	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 00:00
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-14
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:24
7429-90-5	Aluminum		50.0	100	200	1	U	SW6010C	2J27917	10/29/12 19:42
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:42
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 19:42
7440-39-3	Barium	14.2	5.00	10.0	40.0	1	I	SW6010C	2J27917	10/29/12 19:42
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:42
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:42
7440-70-2	Calcium	24600	1000	2000	5000	1		SW6010C	2J27917	10/29/12 19:42
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:42
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:42
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:42
7439-89-6	Iron	1630	30.0	60.0	100	1		SW6010C	2J27917	10/29/12 19:42
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:42
7439-95-4	Magnesium	2880	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:42
7439-96-5	Manganese	23.4	3.00	6.00	15.0	1		SW6010C	2J27917	10/29/12 19:42
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:42
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 19:42
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:42
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:42
7440-23-5	Sodium	8360	1000	3000	5000	1		SW6010C	2J27917	10/29/12 19:42
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 19:42
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:42
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 19:42

ANALYSIS DATA SHEET

PEN-3221-04-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/14/12 15:45
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-08
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:33
7429-90-5	Aluminum	88.5	50.0	100	200	1	I	SW6010C	2J27917	10/29/12 19:33
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:33
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 19:33
7440-39-3	Barium	7.20	5.00	10.0	40.0	1	I	SW6010C	2J27917	10/29/12 19:33
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:33
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:33
7440-70-2	Calcium	42100	1000	2000	5000	1		SW6010C	2J27917	10/29/12 19:33
7440-47-3	Chromium	2.19	2.00	4.00	10.0	1	I	SW6010C	2J27917	10/29/12 19:33
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:33
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:33
7439-89-6	Iron	37.1	30.0	60.0	100	1	I	SW6010C	2J27917	10/29/12 19:33
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:33
7439-95-4	Magnesium	1550	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:33
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:33
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:33
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 19:33
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:33
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:33
7440-23-5	Sodium	5070	1000	3000	5000	1		SW6010C	2J27917	10/29/12 19:33
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 19:33
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:33
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 19:33

ANALYSIS DATA SHEET

PEN-3221-06-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/14/12 16:26
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-06
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:29
7429-90-5	Aluminum	118	50.0	100	200	1	I	SW6010C	2J27917	10/29/12 19:06
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:06
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 19:06
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J27917	10/29/12 19:06
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:06
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:06
7440-70-2	Calcium	36200	1000	2000	5000	1		SW6010C	2J27917	10/29/12 19:06
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:06
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:06
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:06
7439-89-6	Iron	41.6	30.0	60.0	100	1	I	SW6010C	2J27917	10/29/12 19:06
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:06
7439-95-4	Magnesium	1170	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:06
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:06
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:06
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 19:06
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:06
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:06
7440-23-5	Sodium	3790	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:06
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 19:06
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:06
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 19:06

ANALYSIS DATA SHEET

PEN-3221-08-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/14/12 13:20
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-07
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J27920	10/29/12 15:30
7429-90-5	Aluminum	129	50.0	100	200	1	I	SW6010C	2J27917	10/29/12 19:10
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:10
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 19:10
7440-39-3	Barium	5.56	5.00	10.0	40.0	1	I	SW6010C	2J27917	10/29/12 19:10
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:10
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:10
7440-70-2	Calcium	31200	1000	2000	5000	1		SW6010C	2J27917	10/29/12 19:10
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:10
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:10
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:10
7439-89-6	Iron	105	30.0	60.0	100	1		SW6010C	2J27917	10/29/12 19:10
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:10
7439-95-4	Magnesium	1030	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:10
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:10
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:10
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 19:10
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:10
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:10
7440-23-5	Sodium	5610	1000	3000	5000	1		SW6010C	2J27917	10/29/12 19:10
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 19:10
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:10
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 19:10

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 12:18
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-20
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:27
7429-90-5	Aluminum	195	50.0	100	200	1	I	SW6010C	2J27917	10/29/12 20:09
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:09
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 20:09
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J27917	10/29/12 20:09
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:09
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:09
7440-70-2	Calcium	28500	1000	2000	5000	1		SW6010C	2J27917	10/29/12 20:09
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:09
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:09
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:09
7439-89-6	Iron	38.7	30.0	60.0	100	1	1	SW6010C	2J27917	10/29/12 20:09
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:09
7439-95-4	Magnesium	1320	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 20:09
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:09
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:09
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:09
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:09
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:09
7440-23-5	Sodium	11500	1000	3000	5000	1		SW6010C	2J27917	10/29/12 20:09
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 20:09
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:09
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 20:09

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 09:51
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-12
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:23
7429-90-5	Aluminum		50.0	100	200	1	U	SW6010C	2J27917	10/29/12 19:38
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:38
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 19:38
7440-39-3	Barium	14.3	5.00	10.0	40.0	1	I	SW6010C	2J27917	10/29/12 19:38
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:38
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:38
7440-70-2	Calcium	24900	1000	2000	5000	1		SW6010C	2J27917	10/29/12 19:38
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:38
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:38
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:38
7439-89-6	Iron	1610	30.0	60.0	100	1		SW6010C	2J27917	10/29/12 19:38
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:38
7439-95-4	Magnesium	2880	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:38
7439-96-5	Manganese	24.1	3.00	6.00	15.0	1		SW6010C	2J27917	10/29/12 19:38
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:38
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 19:38
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:38
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:38
7440-23-5	Sodium	8300	1000	3000	5000	1		SW6010C	2J27917	10/29/12 19:38
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 19:38
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:38
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 19:38

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 10:27
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-16
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:25
7429-90-5	Aluminum	82.9	50.0	100	200	1	I	SW6010C	2J27917	10/29/12 19:47
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:47
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 19:47
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J27917	10/29/12 19:47
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:47
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:47
7440-70-2	Calcium	40200	1000	2000	5000	1		SW6010C	2J27917	10/29/12 19:47
7440-47-3	Chromium	4.14	2.00	4.00	10.0	1	I	SW6010C	2J27917	10/29/12 19:47
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:47
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:47
7439-89-6	Iron		30.0	60.0	100	1	U	SW6010C	2J27917	10/29/12 19:47
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:47
7439-95-4	Magnesium	1720	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:47
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 19:47
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 19:47
7440-09-7	Potassium	1080	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 19:47
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 19:47
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 19:47
7440-23-5	Sodium	32200	1000	3000	5000	1		SW6010C	2J27917	10/29/12 19:47
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 19:47
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 19:47
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 19:47

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 12:15
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-18
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:26
7429-90-5	Aluminum	67.4	50.0	100	200	1	1	SW6010C	2J27917	10/29/12 20:04
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:04
7440-38-2	Arsenic		3.00	6.00	10.0	1	X UN	SW6010C	2J27917	10/29/12 20:04
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J27917	10/29/12 20:04
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:04
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:04
7440-70-2	Calcium	37900	1000	2000	5000	1		SW6010C	2J27917	10/29/12 20:04
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:04
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:04
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:04
7439-89-6	Iron		30.0	60.0	100	1	U	SW6010C	2J27917	10/29/12 20:04
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:04
7439-95-4	Magnesium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:04
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:04
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:04
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:04
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:04
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:04
7440-23-5	Sodium	6310	1000	3000	5000	1		SW6010C	2J27917	10/29/12 20:04
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 20:04
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:04
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 20:04

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 00:00
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-15
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	1390	30.0	60.0	100	1		SW6010C	2J17017	10/17/12 15:26
7439-96-5	Manganese (dissolved)	20.1	3.00	6.00	15.0	1		SW6010C	2J17017	10/17/12 15:26

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 12:18
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-21
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	69.3	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 15:40
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 15:40

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 09:51
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-13
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	1400	30.0	60.0	100	1		SW6010C	2J17017	10/17/12 15:22
7439-96-5	Manganese (dissolved)	20.6	3.00	6.00	15.0	1		SW6010C	2J17017	10/17/12 15:22

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 10:27
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-17
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	60.0	100	1	U	SW6010C	2J17017	10/17/12 15:31
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 15:31

ANALYSIS DATA SHEET

PEN-44-22-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 14:15
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-23
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	60.0	100	1	U	SW6010C	2J17017	10/17/12 15:49
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 15:49

ANALYSIS DATA SHEET

PEN-44-23-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 08:52
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-11
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	76.8	30.0	60.0	100	1	I	SW6010C	2J17017	10/17/12 15:17
7439-96-5	Manganese (dissolved)	4.81	3.00	6.00	15.0	1	I	SW6010C	2J17017	10/17/12 15:17

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 12:15
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-19
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	60.0	100	1	U	SW6010C	2J17017	10/17/12 15:35
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 15:35

ANALYSIS DATA SHEET

PEN-44-25-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 14:00
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-22
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	60.0	100	1	U	SW6010C	2J17017	10/17/12 15:44
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J17017	10/17/12 15:44

ANALYSIS DATA SHEET

FD10151201

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 00:00
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-14
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J30322	10/30/12 10:54
16887-00-6	Chloride	10.9	0.170	0.330	0.500	1		SW9056	2J16017	10/17/12 01:16
14797-55-8	Nitrate as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/17/12 01:16
471-34-1	Alkalinity, Total (as CACO3)	108	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 07:06
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/17/12 01:16
14808-79-8	Sulfate as SO4	4.72	0.330	1.00	2.50	1		SW9056	2J16017	10/17/12 01:16

ANALYSIS DATA SHEET

PEN-44-15-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 12:18
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-20
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:11
16887-00-6	Chloride	6.21	0.170	0.330	0.500	1		SW9056	2J16017	10/17/12 02:09
14797-55-8	Nitrate as N	1.46	0.0330	0.100	0.250	1		SW9056	2J16017	10/17/12 02:09
471-34-1	Alkalinity, Total (as CACO3)	80.3	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 07:32
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/17/12 02:09
14808-79-8	Sulfate as SO4	5.15	0.330	1.00	2.50	1		SW9056	2J16017	10/17/12 02:09

ANALYSIS DATA SHEET

PEN-44-18-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 09:51
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-12
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J30322	10/30/12 10:54
16887-00-6	Chloride	10.9	0.170	0.330	0.500	1		SW9056	2J16017	10/16/12 23:14
14797-55-8	Nitrate as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/16/12 23:14
471-34-1	Alkalinity, Total (as CACO3)	67.8	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 06:57
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/16/12 23:14
14808-79-8	Sulfate as SO4	4.74	0.330	1.00	2.50	1		SW9056	2J16017	10/16/12 23:14

ANALYSIS DATA SHEET

PEN-44-21-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 10:27
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-16
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J30322	10/30/12 10:55
16887-00-6	Chloride	6.53	0.170	0.330	0.500	1		SW9056	2J16017	10/17/12 01:34
14797-55-8	Nitrate as N	2.71	0.0330	0.100	0.250	1		SW9056	2J16017	10/17/12 01:34
471-34-1	Alkalinity, Total (as CACO3)	143	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 07:12
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/17/12 01:34
14808-79-8	Sulfate as SO4	9.78	0.330	1.00	2.50	1		SW9056	2J16017	10/17/12 01:34

ANALYSIS DATA SHEET

PEN-44-22-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 14:15
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-23
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:12
16887-00-6	Chloride	7.27	0.170	0.330	0.500	1		SW9056	2J16017	10/17/12 02:43
14797-55-8	Nitrate as N	1.32	0.0330	0.100	0.250	1		SW9056	2J16017	10/17/12 02:43
471-34-1	Alkalinity, Total (as CACO3)	71.4	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 07:49
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/17/12 02:43
14808-79-8	Sulfate as SO4	7.76	0.330	1.00	2.50	1		SW9056	2J16017	10/17/12 02:43

ANALYSIS DATA SHEET

PEN-44-23-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 08:52
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-10
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J30322	10/30/12 10:53
16887-00-6	Chloride	12.5	0.170	0.330	0.500	1		SW9056	2J16017	10/16/12 22:57
14797-55-8	Nitrate as N	0.269	0.0330	0.100	0.250	1		SW9056	2J16017	10/16/12 22:57
471-34-1	Alkalinity, Total (as CACO3)	21.0	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 06:52
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/16/12 22:57
14808-79-8	Sulfate as SO4	5.42	0.330	1.00	2.50	1		SW9056	2J16017	10/16/12 22:57

ANALYSIS DATA SHEET

PEN-44-24-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 12:15
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-18
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J30322	10/30/12 10:55
16887-00-6	Chloride	5.20	0.170	0.330	0.500	1		SW9056	2J16017	10/17/12 01:51
14797-55-8	Nitrate as N	1.28	0.0330	0.100	0.250	1		SW9056	2J16017	10/17/12 01:51
471-34-1	Alkalinity, Total (as CACO3)	88.8	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 07:21
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/17/12 01:51
14808-79-8	Sulfate as SO4	5.61	0.330	1.00	2.50	1		SW9056	2J16017	10/17/12 01:51

ANALYSIS DATA SHEET

PEN-44-25-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/15/12 14:00
% Solids: 0.00

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210154-22
Received: 10/16/12 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J17002	10/23/12 13:35
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J29919	10/29/12 11:11
16887-00-6	Chloride	5.34	0.170	0.330	0.500	1		SW9056	2J16017	10/17/12 02:26
14797-55-8	Nitrate as N	1.25	0.0330	0.100	0.250	1		SW9056	2J16017	10/17/12 02:26
471-34-1	Alkalinity, Total (as CACO3)	79.1	1.00	1.00	1.00	1		SM2320B	2J27909	10/27/12 07:40
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J16017	10/17/12 02:26
14808-79-8	Sulfate as SO4	8.45	0.330	1.00	2.50	1		SW9056	2J16017	10/17/12 02:26

APPENDIX C
SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Sample PEN-3221-06-10/12 had a sample collection time on the container of 1426 and on the COC of 1626. As per the client, the correct sample time is 1626. It was also missing a metals container which was poured in log-in per the client's request. Sample PEN-3221-04-10/12 did not have any analyses marked on the COC and as per the client requires the same analyses as sample PEN-3221-08-10/12. The COC was marked for MS/MSD on sample PEN-3221-06-10/12 but no sample volume was received for an MS/MSD. Extra sample was received for sample PEN-3221-08-10/12 and as per the client, the MS/MSD should be on this sample.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
Note – Sample 1210154-16 was analyzed at a 2x only due to the sample foaming during screening. No lower analyses were able to be performed.

The following surrogates exceeded criteria:
Dibromofluoromethane in 1210154-05 with a positive bias

The following was analyzed after the 12-hour tune criteria:
2J24005-MSD2 was analyzed 12 hours 5 minutes after the associated tune standard

The following continuing calibration verifications exceeded criteria:
2J29805-CCV1 with a negative bias for Acetone and with a positive bias for Carbon Disulfide, Dichlorodifluoromethane, and Vinyl Chloride
2J29903-CCV1 with a positive bias for Carbon Disulfide, Chloromethane, Dichlorodifluoromethane, 1,2,3-Trichlorobenzene, 1,1,2-Trichloro-1,2,2-trifluoroethane, and Vinyl Chloride

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA:
The following surrogates exceeded criteria:
2-Fluorophenol with a negative bias in 1210154-06, -07, -08, -16, -20, and 2J19004-BLK1
2,4,6-Tribromophenol with a negative bias in 1210154-06 and -08

The following matrix spikes exceeded criteria:
2J19004-MS1/MSD1 (1210154-07) with a negative bias for 2,4-Dichlorophenol, 4,6-Dinitro-2-methylphenol, 2-Nitrophenol, Pentachlorophenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol and exceeded relative percent difference criteria for 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, 4-Nitrophenol, 2-Nitrophenol, Pentachlorophenol, 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol

The following continuing calibration verifications exceeded criteria:
2J29718-CCV1 with a positive bias for Hexachlorocyclopentadiene, N-nitrosodimethylamine, and Terphenyl-d14

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA LOW:
Note - There was a mismatch between the bid and the SAP, and the 1,4-Dioxane was

missed when the project was set up in the LIMS, which drives the spiking and reporting. When this was discovered, the samples were already outside of 1x holding time. As per the client's okay, samples are being reported with 1,4-Dioxane CCVs only and no batch, matrix spike, or matrix spike duplicates.

The following batch spikes exceeded criteria:
2J19004-BS2/BSD2 with a positive bias for Benzo(a)anthracene and exceeded relative percent difference criteria for Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, 2-Methylnaphthalene, Naphthanele, Phenanthrene, and Pyrene

The following matrix spikes exceeded criteria:
2J19004-MS2/MSD2 (1210154-07) exceeded relative percent difference criteria for Benzo(b)fluoranthene

The following continuing calibration verifications exceeded criteria:
2J29915-CCV1 with a negative bias for 1,4-Dioxane and a positive bias for 2,4,6-Tribromophenol

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8081A:
The following matrix spikes exceeded criteria:
2J17029-MS1/MSD1 (1210154-07) with a negative bias on both columns for Alpha-BHC, Alpha-chlordane, Beta-BHC, Dieldrin, Endosulfan I, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Endrin Ketone, Gamma-chlordane, Heptachlor Epoxide, and Methoxychlor and on column 2 for Delta-BHC

The following blanks have reported results:
2J17029-BLK1 for Gamma-chlordane; note – no positive results were detected in the associated samples

The following initial calibration verifications exceeded criteria:
2J28406-ICV2 with a negative bias on column 2 for Toxaphene

The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 2 for Tetrachloro-m-xylene
2J29706-CCVG with a positive bias on column 1 for 4,4'-DDD and Delta-BHC
2J29706-CCVL with a positive bias on column 1 for 4,4'-DDD

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8082A:
The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 2 for Tetrachloro-m-xylene

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C/SW7470A:
The following continuing calibration verifications exceeded criteria:
2J30316-CCV6 with a positive bias for Arsenic
2J30316-CCV7 with a positive bias for Arsenic

The following matrix spikes exceeded criteria:
2J27917-MSD1 (1210154-07) with a positive bias for Arsenic

The following post spikes exceeded criteria:
2J27917-PS1 (1210154-07) with a positive bias for Copper

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:
No anomalies or deviations are noted.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

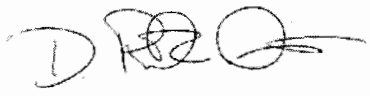
BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

1210154

TETRA TECH NUS, INC. | **CHAIN OF CUSTODY** | **NUMBER** | **PAGE ___ OF ___**

PROJECT NO: 112G-00 784	SITE NAME: NAS Pensacola Site 44	PROJECT MANAGER AND PHONE NUMBER: Greg Walke 850-385-9899	LABORATORY NAME AND CONTACT: Empirical Laboratory c/o Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Amber Igue 850-322-8033	ADDRESS: 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER: 8003 2540 7400	CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: PCE, TCE, cis-1,2, DCE, VC	TCL VOCs	TCL Pesticides, PCBs	TCL SVOCs w/ LL PAHs	TAL metals w/ Hg	Dissolved Fe, Mn	BOD	TOC	Alkalinity	COMMENTS
						G	HCl										
						G	HCl										
						G	Ice										
						G	Ice										
						P	HNO_3										
						P	HNO_3										
						P	Ice, Buffer										
						P	H_2SO_4										
						P	Ice										
10/14/12	1310	PEN-44-16-10/12	GW	G	3	3								01			
	1354	PEN-44-20-10/12	GW	G	3	3								02			
	1440	PEN-44-26-10/12	GW	G	9	9								03			MS/MSD
	0000	FD 101412 01	GW	G	3	3								04			
	1530	PEN-44-17-10/12	GW	G	3	3								05			
	1626	PEN-3221-06-10/12	GW	G	7		3	1	2	(1)				06			MS/MSD
	1320	PEN-3221-08-10/12	GW	G	21		9	3	6	(3)				07			
	1545	PEN-3221-04-10/12								( )				08			
		TB	GW		3	~~3~~ 1	3							09			
10/15/12	0852	PEN-44-23-10/12	GW		7	3					(1)	(1)	(1)	(1)			10/11
	0951	PEN-44-18-10/12	GW		11		3	1	2	(1)	(1)	(1)	(1)	(1)			12/13
	0000	FD 101512 01	GW		11		3	1	2	(1)	(1)	(1)	(1)	(1)			14/15
	1027	PEN-44-21-10/12	GW		11		3	1	2	(1)	(1)	(1)	(1)	(1)			16/17

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/15/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	10/16/12	0845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

1210154 Sump Package 12

Tetra Tech, Inc. 1210154

CHAIN OF CUSTODY | NUMBER No. 0041 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112600784	Site 44 NAS Peola	Gerry Walker	850-385-9899	Empirical Lab Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Amber Igue	850-322-8033	621 Mainstream Dr. Suite 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8003 2540 7400		Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)										
									G	G	G	G	P	P	P	P			
									PRESERVATIVE USED		HCl	HCl	ice	ice	HNO_3	ice	HNO_3	H_2SO_4	ice
									TYPE OF ANALYSIS	PAH, TCL, cis dce, VC	TCL VOCs	TCL Pest / PCBs	TCL SVOCs w/ LL PAHs	TAL metals w/ Hg	BOD + Alk	Dissolved Fe, Mn	COD	Anions	COMMENTS
10/15/12	1215	PEN-44-24-10/12						11		3	1	2	1	1	1	1	1		18/19
↓	1210	PEN-44-15-10/12						11		3	1	2	1	1	1	1	1		20/21
↓	~~1400~~ 1415	PEN-44-25-10/12						7	3				A1 1	1	1	1	1		no TAL metals 22
↓	1415	PEN-44-22-10/12						7	3					1	1	1	1		23

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/15/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	10/16/12	0845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

1210154

Cooler Received/Opened On: 10/16/12 @ 0845 Workorder# 1210154

1. Tracking # 8927 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.3 °C + *correction factor (+ 0.2)* = 3.5 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

   If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13. a. Were VOA vials received? YES...NO...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) _____

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) _____

I certify that I attached a label with the unique LIMS number to each container (initial) _____

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES NO Was a NCR generated? YES NO...# _____

Additional Details: "PEN-3221-06-10/12" SAMPLE TIME DOES NOT MATCH THE TIME ON THE CONTAINERS (COC-16260, CONTAINERS-16426); MISSING METALS CONTAINER "NO ANALYSIS MARKED FOR SAMPLE "PEN-3221-04-10/12." MS/MSD IS MARKED FOR "PEN-3221-06-10/12" BUT DID NOT SEND IN THE "TRIPLE" AMOUNT BUT "PEN-3221-08-10/12," HAS "TRIPLE THE AMOUNT OF CONTAINERS BUT IS NOT MARKED FOR MS/MSD

~~"PEN-3221-01-10/12" ONLY HAS 2 AMBER LITERS INSTEAD OF 3 AS MARKED ON THE COC~~

HOLDTIME

SDG 1210154

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/30/2012	10/31/2012	15	1	16
HG	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
HG	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
HG	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
M	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
M	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/27/2012	10/29/2012	13	2	15
M	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
M	UG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/27/2012	10/29/2012	12	2	14
MF	UG/L	PEN-44-23-10/12	1210154-11	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-24-10/12	1210154-19	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-15-10/12	1210154-21	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-21-10/12	1210154-17	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-18-10/12	1210154-13	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	FD10151201	1210154-15	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
MF	UG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/17/2012	10/17/2012	2	0	2
ALK	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
ALK	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/27/2012	10/27/2012	12	0	12
BOD	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
BOD	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
BOD	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/17/2012	10/23/2012	2	6	8
CL	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
CL	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
CL	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
COD	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/29/2012	10/29/2012	14	0	14
COD	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
COD	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
COD	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/29/2012	10/29/2012	14	0	14
COD	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
COD	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/29/2012	10/29/2012	14	0	14
COD	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
COD	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/30/2012	10/30/2012	15	0	15
NTA	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTA	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTA	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTA	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTI	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTI	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
NTI	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
NTI	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-25-10/12	1210154-22	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-24-10/12	1210154-18	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	FD10151201	1210154-14	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
SO4	MG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-22-10/12	1210154-23	NM	10/15/2012	10/16/2012	10/17/2012	1	1	2
SO4	MG/L	PEN-44-23-10/12	1210154-10	NM	10/15/2012	10/16/2012	10/16/2012	1	0	1
OS	UG/L	PEN-44-18-10/12	1210154-12	NM	10/15/2012	10/19/2012	10/22/2012	4	3	7
OS	UG/L	PEN-44-21-10/12	1210154-16	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
OS	UG/L	PEN-44-15-10/12	1210154-20	NM	10/15/2012	10/19/2012	10/23/2012	4	4	8
OS	UG/L	PEN-3221-08-10/12	1210154-07	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
OS	UG/L	PEN-3221-06-10/12	1210154-06	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
OS	UG/L	PEN-3221-04-10/12	1210154-08	NM	10/14/2012	10/19/2012	10/22/2012	5	3	8
OS	UG/L	FD10151201	1210154-14	NM	10/15/2012	10/19/2012	10/22/2012	4	3	7

NAS PENSACOLA
WATER DATA
1210154

FRACTION	CHEMICAL	PEN-3221-08-10/12	UNITS	FD10151201	RPD	D
M	ALUMINUM	129 J	UG/L	ND	200.00	OK 129.00
M	BARIUM	5.56 J	UG/L	14.2 J	87.45	OK 8.64
M	CALCIUM	31200	UG/L	24600	23.66	6600.00
M	IRON	105	UG/L	1630	175.79	1525.00
M	MAGNESIUM	1030 J	UG/L	2880 J	94.63	OK 1850.00
M	MANGANESE	ND	UG/L	23.4	200.00	OK 23.40
M	SODIUM	5610	UG/L	8360	39.37	OK 2750.00

Current RPD Quality Control Limit: 30 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291004
Sequence: 2J29110

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29110-ICV1	Iron (dissolved)	10000	10140	101	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1020	102	ug/L	+/- 10.00%
2J29110-CCV1	Iron (dissolved)	10000	10420	104	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1066	107	ug/L	+/- 10.00%
2J29110-CCV3	Iron (dissolved)	10000	10120	101	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1034	103	ug/L	+/- 10.00%
2J29110-CCV4	Iron (dissolved)	10000	10540	105	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1035	104	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-ICV1	Aluminum	10000	10060	101	ug/L	+/- 10.00%
	Antimony	1000	1000	100	ug/L	+/- 10.00%
	Arsenic	1000	1019	102	ug/L	+/- 10.00%
	Barium	1000	979.9	98.0	ug/L	+/- 10.00%
	Beryllium	1000	1010	101	ug/L	+/- 10.00%
	Cadmium	1000	1063	106	ug/L	+/- 10.00%
	Calcium	50000	51340	103	ug/L	+/- 10.00%
	Chromium	1000	977.9	97.8	ug/L	+/- 10.00%
	Cobalt	1000	992.4	99.2	ug/L	+/- 10.00%
	Copper	1000	965.8	96.6	ug/L	+/- 10.00%
	Iron	10000	10600	106	ug/L	+/- 10.00%
	Lead	1000	972.1	97.2	ug/L	+/- 10.00%
	Magnesium	50000	51200	102	ug/L	+/- 10.00%
	Manganese	1000	1040	104	ug/L	+/- 10.00%
	Nickel	1000	978.6	97.9	ug/L	+/- 10.00%
	Potassium	10000	10110	101	ug/L	+/- 10.00%
	Selenium	1000	1010	101	ug/L	+/- 10.00%
	Silver	500.0	499.1	99.8	ug/L	+/- 10.00%
	Sodium	50000	51220	102	ug/L	+/- 10.00%
	Thallium	1000	978.4	97.8	ug/L	+/- 10.00%
	Vanadium	1000	1018	102	ug/L	+/- 10.00%
	Zinc	1000	1033	103	ug/L	+/- 10.00%
2J30316-CCV1	Aluminum	10000	10120	101	ug/L	+/- 10.00%
	Antimony	1000	999.8	100	ug/L	+/- 10.00%
	Arsenic	1000	997.1	99.7	ug/L	+/- 10.00%
	Barium	1000	986.4	98.6	ug/L	+/- 10.00%
	Beryllium	1000	1031	103	ug/L	+/- 10.00%
	Cadmium	1000	1040	104	ug/L	+/- 10.00%
	Calcium	50000	51460	103	ug/L	+/- 10.00%
	Chromium	1000	1005	100	ug/L	+/- 10.00%
	Cobalt	1000	983.0	98.3	ug/L	+/- 10.00%
	Copper	1000	980.3	98.0	ug/L	+/- 10.00%
	Iron	10000	10630	106	ug/L	+/- 10.00%
	Lead	1000	969.0	96.9	ug/L	+/- 10.00%
	Magnesium	50000	51190	102	ug/L	+/- 10.00%
	Manganese	1000	1036	104	ug/L	+/- 10.00%
	Nickel	1000	986.4	98.6	ug/L	+/- 10.00%
	Potassium	10000	10140	101	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-CCV1	Selenium	1000	1010	101	ug/L	+/- 10.00%
	Silver	500.0	492.1	98.4	ug/L	+/- 10.00%
	Sodium	50000	51500	103	ug/L	+/- 10.00%
	Thallium	1000	985.2	98.5	ug/L	+/- 10.00%
	Vanadium	1000	1013	101	ug/L	+/- 10.00%
	Zinc	1000	1016	102	ug/L	+/- 10.00%
2J30316-CCV6	Aluminum	10000	9891	98.9	ug/L	+/- 10.00%
	Antimony	1000	1070	107	ug/L	+/- 10.00%
	Arsenic	**1000**	**1106**	**111** OK	**ug/L**	+/- 10.00%
	Barium	1000	1049	105	ug/L	+/- 10.00%
	Beryllium	1000	1017	102	ug/L	+/- 10.00%
	Cadmium	1000	1028	103	ug/L	+/- 10.00%
	Calcium	50000	48700	97.4	ug/L	+/- 10.00%
	Chromium	1000	1007	101	ug/L	+/- 10.00%
	Cobalt	1000	998.6	99.9	ug/L	+/- 10.00%
	Copper	1000	1073	107	ug/L	+/- 10.00%
	Iron	10000	10090	101	ug/L	+/- 10.00%
	Lead	1000	985.4	98.5	ug/L	+/- 10.00%
	Magnesium	50000	47150	94.3	ug/L	+/- 10.00%
	Manganese	1000	1008	101	ug/L	+/- 10.00%
	Nickel	1000	1033	103	ug/L	+/- 10.00%
	Potassium	10000	9846	98.5	ug/L	+/- 10.00%
	Selenium	1000	1051	105	ug/L	+/- 10.00%
	Silver	500.0	485.4	97.1	ug/L	+/- 10.00%
	Sodium	50000	49030	98.1	ug/L	+/- 10.00%
	Thallium	1000	976.5	97.7	ug/L	+/- 10.00%
	Vanadium	1000	1011	101	ug/L	+/- 10.00%
	Zinc	1000	1004	100	ug/L	+/- 10.00%
2J30316-CCV7	Aluminum	10000	9884	98.8	ug/L	+/- 10.00%
	Antimony	1000	1064	106	ug/L	+/- 10.00%
	Arsenic	**1000**	**1108**	**111** OK	**ug/L**	+/- 10.00%
	Barium	1000	1044	104	ug/L	+/- 10.00%
	Beryllium	1000	1025	103	ug/L	+/- 10.00%
	Cadmium	1000	1028	103	ug/L	+/- 10.00%
	Calcium	50000	48470	96.9	ug/L	+/- 10.00%
	Chromium	1000	1009	101	ug/L	+/- 10.00%
	Cobalt	1000	994.9	99.5	ug/L	+/- 10.00%
	Copper	1000	1069	107	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-CCV7	Iron	10000	10090	101	ug/L	+/- 10.00%
	Lead	1000	979.9	98.0	ug/L	+/- 10.00%
	Magnesium	50000	46960	93.9	ug/L	+/- 10.00%
	Manganese	1000	1009	101	ug/L	+/- 10.00%
	Nickel	1000	1032	103	ug/L	+/- 10.00%
	Potassium	10000	9763	97.6	ug/L	+/- 10.00%
	Selenium	1000	1037	104	ug/L	+/- 10.00%
	Silver	500.0	482.3	96.5	ug/L	+/- 10.00%
	Sodium	50000	48740	97.5	ug/L	+/- 10.00%
	Thallium	1000	970.6	97.1	ug/L	+/- 10.00%
	Vanadium	1000	1012	101	ug/L	+/- 10.00%
	Zinc	1000	999.4	99.9	ug/L	+/- 10.00%
2J30316-CCV8	Aluminum	10000	9782	97.8	ug/L	+/- 10.00%
	Antimony	1000	1058	106	ug/L	+/- 10.00%
	Arsenic	1000	1103	110	ug/L	+/- 10.00%
	Barium	1000	1040	104	ug/L	+/- 10.00%
	Beryllium	1000	1006	101	ug/L	+/- 10.00%
	Cadmium	1000	1018	102	ug/L	+/- 10.00%
	Calcium	50000	48200	96.4	ug/L	+/- 10.00%
	Chromium	1000	994.0	99.4	ug/L	+/- 10.00%
	Cobalt	1000	987.7	98.8	ug/L	+/- 10.00%
	Copper	1000	1075	108	ug/L	+/- 10.00%
	Iron	10000	9938	99.4	ug/L	+/- 10.00%
	Lead	1000	974.4	97.4	ug/L	+/- 10.00%
	Magnesium	50000	46440	92.9	ug/L	+/- 10.00%
	Manganese	1000	1009	101	ug/L	+/- 10.00%
	Nickel	1000	1027	103	ug/L	+/- 10.00%
	Potassium	10000	9607	96.1	ug/L	+/- 10.00%
	Selenium	1000	1029	103	ug/L	+/- 10.00%
	Silver	500.0	476.5	95.3	ug/L	+/- 10.00%
	Sodium	50000	48410	96.8	ug/L	+/- 10.00%
	Thallium	1000	962.1	96.2	ug/L	+/- 10.00%
	Vanadium	1000	992.1	99.2	ug/L	+/- 10.00%
	Zinc	1000	991.7	99.2	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2304001
Sequence: 2J30413

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30413-ICV1	Mercury	4.000	4.356	109	ug/L	+/- 20.00%
2J30413-CCV1	Mercury	2.000	2.189	109	ug/L	+/- 20.00%
2J30413-CCV2	Mercury	2.000	2.061	103	ug/L	+/- 20.00%
2J30413-CCV3	Mercury	4.000	4.260	107	ug/L	+/- 20.00%
2J30413-CCV4	Mercury	4.000	4.400	110	ug/L	+/- 20.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2305002
Sequence: 2J30513

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30513-ICV1	Mercury	4.000	4.051	101	ug/L	+/- 20.00%
2J30513-CCV1	Mercury	2.000	1.945	97.2	ug/L	+/- 20.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2291004

Sequence: 2J29110

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J29110-CRL1	Iron (dissolved)	60.00	64.82	108	ug/L	80 - 120
	Manganese (dissolved)	6.000	6.475	108	ug/L	80 - 120

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2303002

Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J30316-CRL1	Aluminum	100.0	97.46	97.5	ug/L	80 - 120
	Antimony	8.000	8.744	109	ug/L	80 - 120
	Barium	10.00	10.19	102	ug/L	80 - 120
	Beryllium	2.000	2.032	102	ug/L	80 - 120
	Cadmium	2.000	2.010	100	ug/L	80 - 120
	Calcium	2000	2035	102	ug/L	80 - 120
	Chromium	4.000	4.099	102	ug/L	80 - 120
	Cobalt	10.00	9.501	95.0	ug/L	80 - 120
	Copper	8.000	8.463	106	ug/L	80 - 120
	Iron	60.00	64.98	108	ug/L	80 - 120
	Lead	3.000	3.001	100	ug/L	80 - 120
	Magnesium	3000	3040	101	ug/L	80 - 120
	Manganese	6.000	6.319	105	ug/L	80 - 120
	Nickel	6.000	5.710	95.2	ug/L	80 - 120
	Potassium	3000	2978	99.2	ug/L	80 - 120
	Silver	2.000	1.788	89.4	ug/L	80 - 120
	Sodium	3000	2964	98.8	ug/L	80 - 120
	Thallium	4.000	3.922	98.1	ug/L	80 - 120
	Vanadium	10.00	10.09	101	ug/L	80 - 120
	Zinc	10.00	9.836	98.4	ug/L	80 - 120
2J30316-CRL2	Arsenic	5.000	4.397	87.9	ug/L	80 - 120
	Selenium	5.000	5.176	104	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29110
Calibration: 2291004

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29110-ICB1	Iron (dissolved)	1.866	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	-0.03475	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB1	Iron (dissolved)	1.48	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0143	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB3	Iron (dissolved)	8.29	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.132	3.00	15.0	ug/L	U	SW6010C
2J17017-BLK1	Iron (dissolved)	9.80	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.128	3.00	15.0	ug/L	U	SW6010C
2J29110-CCB4	Iron (dissolved)	2.21	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0918	3.00	15.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-ICB1	Aluminum	-7.920	50.0	200	ug/L	U	SW6010C
	Antimony	0.01102	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.3140	3.00	10.0	ug/L	U	SW6010C
	Barium	0.01948	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.06545	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.03210	1.00	5.00	ug/L	U	SW6010C
	Calcium	2.540	1000	5000	ug/L	U	SW6010C
	Chromium	-0.008500	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.05513	5.00	12.5	ug/L	U	SW6010C
	Copper	0.8476	4.00	10.0	ug/L	U	SW6010C
	Iron	5.984	30.0	100	ug/L	U	SW6010C
	Lead	-0.07753	1.50	3.00	ug/L	U	SW6010C
	Magnesium	0.7400	1000	5000	ug/L	U	SW6010C
	Manganese	-0.05246	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.1583	3.00	10.0	ug/L	U	SW6010C
	Potassium	-16.73	1000	5000	ug/L	U	SW6010C
	Selenium	0.4348	3.00	5.00	ug/L	U	SW6010C
	Silver	0.08098	1.00	3.00	ug/L	U	SW6010C
	Sodium	-4.590	1000	5000	ug/L	U	SW6010C
	Thallium	0.4652	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.1075	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.02533	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB1	Aluminum	-7.73	50.0	200	ug/L	U	SW6010C
	Antimony	0.271	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.143	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0618	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.00370	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0348	1.00	5.00	ug/L	U	SW6010C
	Calcium	-0.770	1000	5000	ug/L	U	SW6010C
	Chromium	0.250	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.150	5.00	12.5	ug/L	U	SW6010C
	Copper	1.18	4.00	10.0	ug/L	U	SW6010C
	Iron	0.758	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-CCB1	Lead	-0.127	1.50	3.00	ug/L	U	SW6010C
	Magnesium	6.76	1000	5000	ug/L	U	SW6010C
	Manganese	-0.00744	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.322	3.00	10.0	ug/L	U	SW6010C
	Potassium	-13.5	1000	5000	ug/L	U	SW6010C
	Selenium	-0.0372	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.0259	1.00	3.00	ug/L	U	SW6010C
	Sodium	-1.17	1000	5000	ug/L	U	SW6010C
	Thallium	0.334	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.299	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.0530	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB6	Aluminum	-9.67	50.0	200	ug/L	U	SW6010C
	Antimony	-0.668	5.00	15.0	ug/L	U	SW6010C
	Arsenic	1.10	3.00	10.0	ug/L	U	SW6010C
	Barium	0.151	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.103	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.136	1.00	5.00	ug/L	U	SW6010C
	Calcium	52.2	1000	5000	ug/L	U	SW6010C
	Chromium	0.143	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.238	5.00	12.5	ug/L	U	SW6010C
	Copper	0.110	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.14	30.0	100	ug/L	U	SW6010C
	Lead	-0.692	1.50	3.00	ug/L	U	SW6010C
	Magnesium	16.2	1000	5000	ug/L	U	SW6010C
	Manganese	0.150	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.00734	3.00	10.0	ug/L	U	SW6010C
	Potassium	58.1	1000	5000	ug/L	U	SW6010C
	Selenium	0.926	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.292	1.00	3.00	ug/L	U	SW6010C
	Sodium	291	1000	5000	ug/L	U	SW6010C
	Thallium	0.457	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.182	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.138	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J27917-BLK1	Aluminum	-2.77	50.0	200	ug/L	U	SW6010C
	Antimony	-1.80	5.00	15.0	ug/L	U	SW6010C
	Arsenic	1.31	3.00	10.0	ug/L	U	SW6010C
	Barium	-0.00356	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0570	1.00	5.00	ug/L	U	SW6010C
	Cadmium	-0.00956	1.00	5.00	ug/L	U	SW6010C
	Calcium	48.6	1000	5000	ug/L	U	SW6010C
	Chromium	0.139	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0166	5.00	12.5	ug/L	U	SW6010C
	Copper	0.112	4.00	10.0	ug/L	U	SW6010C
	Iron	1.09	30.0	100	ug/L	U	SW6010C
	Lead	0.187	1.50	3.00	ug/L	U	SW6010C
	Magnesium	15.8	1000	5000	ug/L	U	SW6010C
	Manganese	0.130	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.424	3.00	10.0	ug/L	U	SW6010C
	Potassium	57.4	1000	5000	ug/L	U	SW6010C
	Selenium	-0.276	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.311	1.00	3.00	ug/L	U	SW6010C
	Sodium	212	1000	5000	ug/L	U	SW6010C
	Thallium	-0.0686	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.0680	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.207	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB7	Aluminum	-12.5	50.0	200	ug/L	U	SW6010C
	Antimony	-1.03	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.791	3.00	10.0	ug/L	U	SW6010C
	Barium	0.145	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.00683	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.193	1.00	5.00	ug/L	U	SW6010C
	Calcium	0.0100	1000	5000	ug/L	U	SW6010C
	Chromium	0.139	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.175	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.0471	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.20	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-CCB7	Lead	-0.0329	1.50	3.00	ug/L	U	SW6010C
	Magnesium	-1.25	1000	5000	ug/L	U	SW6010C
	Manganese	0.0429	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.146	3.00	10.0	ug/L	U	SW6010C
	Potassium	-15.1	1000	5000	ug/L	U	SW6010C
	Selenium	1.11	3.00	5.00	ug/L	U	SW6010C
	Silver	0.141	1.00	3.00	ug/L	U	SW6010C
	Sodium	14.7	1000	5000	ug/L	U	SW6010C
	Thallium	0.623	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.00748	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.188	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB8	Aluminum	-11.9	50.0	200	ug/L	U	SW6010C
	Antimony	-0.335	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.304	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0334	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0202	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.110	1.00	5.00	ug/L	U	SW6010C
	Calcium	6.06	1000	5000	ug/L	U	SW6010C
	Chromium	0.116	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.00993	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.199	4.00	10.0	ug/L	U	SW6010C
	Iron	0.470	30.0	100	ug/L	U	SW6010C
	Lead	-0.0471	1.50	3.00	ug/L	U	SW6010C
	Magnesium	5.28	1000	5000	ug/L	U	SW6010C
	Manganese	0.0231	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.0644	3.00	10.0	ug/L	U	SW6010C
	Potassium	13.1	1000	5000	ug/L	U	SW6010C
	Selenium	1.37	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.347	1.00	3.00	ug/L	U	SW6010C
	Sodium	12.7	1000	5000	ug/L	U	SW6010C
	Thallium	0.100	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.100	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.0145	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30413
Calibration: 2304001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30413-ICB1	Mercury	0.02571	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB1	Mercury	0.0177	0.0800	0.200	ug/L	U	SW7470A
2J27920-BLK1	Mercury	0.0356	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB2	Mercury	0.0267	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB3	Mercury	0.0256	0.0800	0.200	ug/L	U	SW7470A
2J30413-CCB4	Mercury	0.0308	0.0800	0.200	ug/L	U	SW7470A

BLANKS
SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30513
Calibration: 2305002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30513-ICB1	Mercury	-0.004992	0.0800	0.200	ug/L	U	SW7470A
2J30422-BLK1	Mercury	-0.0131	0.0800	0.200	ug/L	U	SW7470A
2J30513-CCB1	Mercury	-0.00924	0.0800	0.200	ug/L	U	SW7470A

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17017 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-23-10/12	1210154-11	10/17/12 10:58	50.00	50.00
PEN-44-18-10/12	1210154-13	10/17/12 10:58	50.00	50.00
FD10151201	1210154-15	10/17/12 10:58	50.00	50.00
PEN-44-21-10/12	1210154-17	10/17/12 10:58	50.00	50.00
PEN-44-24-10/12	1210154-19	10/17/12 10:58	50.00	50.00
PEN-44-15-10/12	1210154-21	10/17/12 10:58	50.00	50.00
PEN-44-25-10/12	1210154-22	10/17/12 10:58	50.00	50.00
PEN-44-22-10/12	1210154-23	10/17/12 10:58	50.00	50.00
Blank	2J17017-BLK1	10/17/12 10:58	50.00	50.00
LCS	2J17017-BS1	10/17/12 10:58	50.00	50.00
PEN-44-22-10/12	2J17017-DUP1	10/17/12 10:58	50.00	50.00
PEN-44-22-10/12	2J17017-MS1	10/17/12 10:58	50.00	50.00
PEN-44-22-10/12	2J17017-MSD1	10/17/12 10:58	50.00	50.00

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J27917 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-06-10/12	1210154-06	10/27/12 10:41	50.00	50.00
PEN-3221-08-10/12	1210154-07	10/27/12 10:41	50.00	50.00
PEN-3221-04-10/12	1210154-08	10/27/12 10:41	50.00	50.00
PEN-44-18-10/12	1210154-12	10/27/12 10:41	50.00	50.00
FD10151201	1210154-14	10/27/12 10:41	50.00	50.00
PEN-44-21-10/12	1210154-16	10/27/12 10:41	50.00	50.00
PEN-44-24-10/12	1210154-18	10/27/12 10:41	50.00	50.00
PEN-44-15-10/12	1210154-20	10/27/12 10:41	50.00	50.00
Blank	2J27917-BLK1	10/27/12 10:41	50.00	50.00
LCS	2J27917-BS1	10/27/12 10:41	50.00	50.00
PEN-3221-08-10/12	2J27917-DUP1	10/27/12 10:41	50.00	50.00
PEN-3221-08-10/12	2J27917-MS1	10/27/12 10:41	50.00	50.00
PEN-3221-08-10/12	2J27917-MSD1	10/27/12 10:41	50.00	50.00
PEN-3221-08-10/12	2J27917-PS1	10/27/12 10:41	20.00	20.00

PREPARATION BATCH SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J27920 Batch Matrix: Water Preparation: pMercury-W SW 7470A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-06-10/12	1210154-06	10/27/12 00:00	30.00	30.00
PEN-3221-08-10/12	1210154-07	10/27/12 00:00	30.00	30.00
PEN-3221-04-10/12	1210154-08	10/27/12 00:00	30.00	30.00
Blank	2J27920-BLK1	10/27/12 00:00	30.00	30.00
LCS	2J27920-BS1	10/27/12 00:00	30.00	30.00
PEN-3221-08-10/12	2J27920-MS1	10/27/12 00:00	30.00	30.00
PEN-3221-08-10/12	2J27920-MSD1	10/27/12 00:00	30.00	30.00

PREPARATION BATCH SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J30422 Batch Matrix: Water Preparation: pMercury-W SW 7470A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-18-10/12	1210154-12	10/30/12 11:12	30.00	30.00
FD10151201	1210154-14	10/30/12 11:12	30.00	30.00
PEN-44-21-10/12	1210154-16	10/30/12 11:12	30.00	30.00
PEN-44-24-10/12	1210154-18	10/30/12 11:12	30.00	30.00
PEN-44-15-10/12	1210154-20	10/30/12 11:12	30.00	30.00
Blank	2J30422-BLK1	10/30/12 11:12	30.00	30.00
LCS	2J30422-BS1	10/30/12 11:12	30.00	30.00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29110	Instrument:	ME-ICP
Calibration:	2291004		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29110-CAL1	10-17-12A-001	10/17/12 09:32
Cal Standard	2J29110-CAL2	10-17-12A-002	10/17/12 09:36
Cal Standard	2J29110-CAL3	10-17-12A-003	10/17/12 09:41
Cal Standard	2J29110-CAL4	10-17-12A-004	10/17/12 09:45
Cal Standard	2J29110-CAL5	10-17-12A-005	10/17/12 09:50
Cal Standard	2J29110-CAL6	10-17-12A-006	10/17/12 09:55
Initial Cal Check	2J29110-ICV1	10-17-12B-001	10/17/12 10:38
Initial Cal Blank	2J29110-ICB1	10-17-12B-002	10/17/12 10:45
Instrument RL Check	2J29110-CRL1	10-17-12B-004	10/17/12 10:56
Interference Check A	2J29110-IFA1	10-17-12B-007	10/17/12 11:11
Interference Check B	2J29110-IFB1	10-17-12B-008	10/17/12 11:16
Calibration Check	2J29110-CCV1	10-17-12B-010	10/17/12 11:27
Calibration Blank	2J29110-CCB1	10-17-12B-011	10/17/12 11:34
Calibration Check	2J29110-CCV3	10-17-12E-029	10/17/12 13:54
Calibration Blank	2J29110-CCB3	10-17-12E-030	10/17/12 14:02
Blank	2J17017-BLK1	101712C-001	10/17/12 14:09
LCS	2J17017-BS1	101712C-002	10/17/12 14:13
PEN-44-23-10/12	1210154-11	101712C-015	10/17/12 15:17
PEN-44-18-10/12	1210154-13	101712C-016	10/17/12 15:22
FD10151201	1210154-15	101712C-017	10/17/12 15:26
PEN-44-21-10/12	1210154-17	101712C-018	10/17/12 15:31
PEN-44-24-10/12	1210154-19	101712C-019	10/17/12 15:35
PEN-44-15-10/12	1210154-21	101712C-020	10/17/12 15:40
PEN-44-25-10/12	1210154-22	101712C-021	10/17/12 15:44
PEN-44-22-10/12	1210154-23	101712C-022	10/17/12 15:49
PEN-44-22-10/12	2J17017-MS1	101712C-023	10/17/12 15:53
PEN-44-22-10/12	2J17017-MSD1	101712C-024	10/17/12 15:58
PEN-44-22-10/12	2J17017-DUP1	101712C-025	10/17/12 16:03
Calibration Check	2J29110-CCV4	101712C-043	10/17/12 17:31
Calibration Blank	2J29110-CCB4	101712C-044	10/17/12 17:38

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Instrument: ME-ICP
Calibration: 2303002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30316-CAL1	10-29-12A-002	10/29/12 09:53
Cal Standard	2J30316-CAL2	10-29-12A-003	10/29/12 09:57
Cal Standard	2J30316-CAL3	10-29-12A-004	10/29/12 10:02
Cal Standard	2J30316-CAL4	10-29-12A-005	10/29/12 10:06
Cal Standard	2J30316-CAL5	10-29-12A-006	10/29/12 10:11
Cal Standard	2J30316-CAL6	10-29-12A-007	10/29/12 10:16
Cal Standard	2J30316-CAL7	10-29-12A-008	10/29/12 10:21
Cal Standard	2J30316-CAL8	10-29-12A-009	10/29/12 10:26
Initial Cal Check	2J30316-ICV1	10-29-12B-001	10/29/12 11:01
Initial Cal Blank	2J30316-ICB1	10-29-12B-002	10/29/12 11:18
Instrument RL Check	2J30316-CRL1	10-29-12B-003	10/29/12 11:23
Instrument RL Check	2J30316-CRL2	10-29-12B-005	10/29/12 11:32
Interference Check A	2J30316-IFA1	10-29-12B-006	10/29/12 11:37
Interference Check B	2J30316-IFB1	10-29-12B-007	10/29/12 11:42
Calibration Check	2J30316-CCV1	10-29-12B-009	10/29/12 11:52
Calibration Blank	2J30316-CCB1	10-29-12B-010	10/29/12 11:59
Calibration Check	2J30316-CCV6	102912D-015	10/29/12 18:25
Calibration Blank	2J30316-CCB6	102912D-016	10/29/12 18:33
Blank	2J27917-BLK1	102912D-017	10/29/12 18:37
LCS	2J27917-BS1	102912D-018	10/29/12 18:42
PEN-3221-06-10/12	1210154-06	102912D-023	10/29/12 19:06
PEN-3221-08-10/12	1210154-07	102912D-024	10/29/12 19:10
PEN-3221-08-10/12	2J27917-MS1	102912D-025	10/29/12 19:15
PEN-3221-08-10/12	2J27917-MSD1	102912D-026	10/29/12 19:19
PEN-3221-08-10/12	2J27917-PS1	102912D-027	10/29/12 19:24
PEN-3221-08-10/12	2J27917-DUP1	102912D-028	10/29/12 19:29
PEN-3221-04-10/12	1210154-08	102912D-029	10/29/12 19:33
PEN-44-18-10/12	1210154-12	102912D-030	10/29/12 19:38
FD10151201	1210154-14	102912D-031	10/29/12 19:42
PEN-44-21-10/12	1210154-16	102912D-032	10/29/12 19:47
Calibration Check	2J30316-CCV7	102912D-033	10/29/12 19:52
Calibration Blank	2J30316-CCB7	102912D-034	10/29/12 20:00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30316	Instrument:	ME-ICP
Calibration:	2303002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PEN-44-24-10/12	1210154-18	102912D-035	10/29/12 20:04
PEN-44-15-10/12	1210154-20	102912D-036	10/29/12 20:09
Calibration Check	2J30316-CCV8	102912D-045	10/29/12 20:50
Calibration Blank	2J30316-CCB8	102912D-046	10/29/12 20:58

ANALYSIS SEQUENCE SUMMARY

SW7470A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30413	Instrument:	ME-FIMS
Calibration:	2304001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30413-CAL1	COPY103012W-001	10/29/12 14:21
Cal Standard	2J30413-CAL2	COPY103012W-002	10/29/12 14:22
Cal Standard	2J30413-CAL3	COPY103012W-003	10/29/12 14:23
Cal Standard	2J30413-CAL4	COPY103012W-004	10/29/12 14:24
Cal Standard	2J30413-CAL5	COPY103012W-005	10/29/12 14:26
Cal Standard	2J30413-CAL6	COPY103012W-006	10/29/12 14:27
Cal Standard	2J30413-CAL7	COPY103012W-007	10/29/12 14:28
Cal Standard	2J30413-CAL8	COPY103012W-008	10/29/12 14:29
Initial Cal Check	2J30413-ICV1	COPY103012W-009	10/29/12 14:31
Initial Cal Blank	2J30413-ICB1	COPY103012W-010	10/29/12 14:32
Calibration Check	2J30413-CCV1	COPY103012W-027	10/29/12 14:52
Calibration Blank	2J30413-CCB1	COPY103012W-028	10/29/12 14:54
LCS	2J27920-BS1	COPY103012W-033	10/29/12 15:01
Blank	2J27920-BLK1	COPY103012W-034	10/29/12 15:02
Calibration Check	2J30413-CCV2	COPY103012W-042	10/29/12 15:12
Calibration Blank	2J30413-CCB2	COPY103012W-043	10/29/12 15:13
Calibration Check	2J30413-CCV3	COPY103012W-054	10/29/12 15:26
Calibration Blank	2J30413-CCB3	COPY103012W-055	10/29/12 15:27
PEN-3221-06-10/12	1210154-06	COPY103012W-056	10/29/12 15:29
PEN-3221-08-10/12	1210154-07	COPY103012W-057	10/29/12 15:30
PEN-3221-08-10/12	2J27920-MS1	COPY103012W-058	10/29/12 15:31
PEN-3221-08-10/12	2J27920-MSD1	COPY103012W-059	10/29/12 15:32
PEN-3221-04-10/12	1210154-08	COPY103012W-060	10/29/12 15:33
Calibration Check	2J30413-CCV4	COPY103012W-071	10/29/12 15:47
Calibration Blank	2J30413-CCB4	COPY103012W-072	10/29/12 15:48

ANALYSIS SEQUENCE SUMMARY

SW7470A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30513	Instrument:	ME-FIMS
Calibration:	2305002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30513-CAL1	103112W-001	10/31/12 12:08
Cal Standard	2J30513-CAL2	103112W-002	10/31/12 12:09
Cal Standard	2J30513-CAL3	103112W-003	10/31/12 12:10
Cal Standard	2J30513-CAL4	103112W-004	10/31/12 12:11
Cal Standard	2J30513-CAL5	103112W-005	10/31/12 12:12
Cal Standard	2J30513-CAL6	103112W-006	10/31/12 12:14
Cal Standard	2J30513-CAL7	103112W-007	10/31/12 12:15
Cal Standard	2J30513-CAL8	103112W-008	10/31/12 12:16
Initial Cal Check	2J30513-ICV1	103112W-009	10/31/12 12:19
Initial Cal Blank	2J30513-ICB1	103112W-010	10/31/12 12:20
LCS	2J30422-BS1	103112W-011	10/31/12 12:21
Blank	2J30422-BLK1	103112W-012	10/31/12 12:22
PEN-44-18-10/12	1210154-12	103112W-013	10/31/12 12:23
FD10151201	1210154-14	103112W-014	10/31/12 12:24
PEN-44-21-10/12	1210154-16	103112W-015	10/31/12 12:25
PEN-44-24-10/12	1210154-18	103112W-016	10/31/12 12:26
PEN-44-15-10/12	1210154-20	103112W-017	10/31/12 12:27
Calibration Check	2J30513-CCV1	103112W-023	10/31/12 12:34
Calibration Blank	2J30513-CCB1	103112W-024	10/31/12 12:35

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2E13609

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2E13609-ICV1	Chloride	4.800	4.613	96.1	mg/L	+/- 10.00%
	Nitrate as N	3.616	3.464	95.8	mg/L	+/- 10.00%
	Nitrite as N	4.864	4.659	95.8	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.62	98.4	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2J29612

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29612-CCV1	Chloride	25.00	25.58	102	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.530	101	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.415	96.6	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.32	105	mg/L	+/- 10.00%
2J29612-CCV2	Chloride	25.00	25.71	103	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.547	102	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.661	106	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.62	106	mg/L	+/- 10.00%
2J29612-CCV3	Chloride	25.00	25.79	103	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.562	102	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.612	104	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.56	106	mg/L	+/- 10.00%
2J29612-CCV4	Chloride	25.00	25.87	103	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.568	103	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.581	103	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.60	106	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2138003
Sequence: 2J30308

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30308-CCV1	Chemical Oxygen Demand	100.0	102.2	102	mg/L	+/- 10.00%
2J30308-CCV2	Chemical Oxygen Demand	400.0	398.9	99.7	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: 1210154
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2138003
Sequence: 2J30417

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30417-CCV1	Chemical Oxygen Demand	100.0	100.1	100	mg/L	+/- 10.00%
2J30417-CCV2	Chemical Oxygen Demand	400.0	401.1	100	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: WC-IC

Calibration: 2136002

Sequence: 2J29612

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J29612-CRL1	Chloride	0.5000	0.6190	124	mg/L	75 - 125
2J29612-CRL2	Nitrate as N	0.1000	0.1240	124	mg/L	75 - 125
2J29612-CRL3	Nitrite as N	0.2500	0.2020	80.8	mg/L	75 - 125
	Sulfate as SO4	2.500	2.299	92.0	mg/L	75 - 125

METHOD BLANKS

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J16017

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J16017-BLK1	Chloride	0.00	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

METHOD BLANKS
SM5210B

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J17002-BLK1	Biochemical Oxygen Demand	-0.470	2.00	2.00	mg/L	U	SM5210B

METHOD BLANKS
SM2320B

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J27909

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J27909-BLK1	Alkalinity, Total (as CACO3)	0.00	1.00	1.00	mg/L	U	SM2320B

METHOD BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079-Site 44

Batch: 2J29919

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29919-BLK1	Chemical Oxygen Demand	-5.29	20.0	60.0	mg/L	U	E410.4

METHOD BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J30322

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30322-BLK1	Chemical Oxygen Demand	-5.29	20.0	60.0	mg/L	U	E410.4

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2E13609
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2E13609-ICB1	Chloride	0.000	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.000	0.330	2.50	mg/L	U	SW9056

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29612
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29612-CCB1	Chloride	0.00	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056
2J29612-CCB2	Chloride	0.00	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056
2J29612-CCB3	Chloride	0.0220	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056
2J29612-CCB4	Chloride	0.0360	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30308
Calibration: 2138003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30308-CCB1	Chemical Oxygen Demand	-7.40	20.0	60.0	mg/L	U	E410.4
2J30308-CCB2	Chemical Oxygen Demand	-7.40	20.0	60.0	mg/L	U	E410.4

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30417
Calibration: 2138003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30417-CCB1	Chemical Oxygen Demand	-3.10	20.0	60.0	mg/L	U	E410.4
2J30417-CCB2	Chemical Oxygen Demand	-5.30	20.0	60.0	mg/L	U	E410.4

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J16017 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-23-10/12	1210154-10	10/16/12 13:01	5.00	5.00
PEN-44-18-10/12	1210154-12	10/16/12 13:01	5.00	5.00
FD10151201	1210154-14	10/16/12 13:01	5.00	5.00
PEN-44-21-10/12	1210154-16	10/16/12 13:01	5.00	5.00
PEN-44-24-10/12	1210154-18	10/16/12 13:01	5.00	5.00
PEN-44-15-10/12	1210154-20	10/16/12 13:01	5.00	5.00
PEN-44-25-10/12	1210154-22	10/16/12 13:01	5.00	5.00
PEN-44-22-10/12	1210154-23	10/16/12 13:01	5.00	5.00
Blank	2J16017-BLK1	10/16/12 13:01	5.00	5.00
LCS	2J16017-BS1	10/16/12 13:01	5.00	5.00

PREPARATION BATCH SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17002 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-23-10/12	1210154-10	10/17/12 05:46	250.00	250.00
PEN-44-18-10/12	1210154-12	10/17/12 05:46	250.00	250.00
FD10151201	1210154-14	10/17/12 05:46	250.00	250.00
PEN-44-21-10/12	1210154-16	10/17/12 05:46	250.00	250.00
PEN-44-24-10/12	1210154-18	10/17/12 05:46	250.00	250.00
PEN-44-15-10/12	1210154-20	10/17/12 05:46	250.00	250.00
PEN-44-25-10/12	1210154-22	10/17/12 05:46	250.00	250.00
PEN-44-22-10/12	1210154-23	10/17/12 05:46	250.00	250.00
Blank	2J17002-BLK1	10/17/12 05:46	250.00	250.00
LCS	2J17002-BS1	10/17/12 05:46	5.00	250.00

PREPARATION BATCH SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J27909 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-23-10/12	1210154-10	10/27/12 05:51	25.00	25.00
PEN-44-18-10/12	1210154-12	10/27/12 05:51	25.00	25.00
FD10151201	1210154-14	10/27/12 05:51	25.00	25.00
PEN-44-21-10/12	1210154-16	10/27/12 05:51	25.00	25.00
PEN-44-24-10/12	1210154-18	10/27/12 05:51	25.00	25.00
PEN-44-15-10/12	1210154-20	10/27/12 05:51	25.00	25.00
PEN-44-25-10/12	1210154-22	10/27/12 05:51	25.00	25.00
PEN-44-22-10/12	1210154-23	10/27/12 05:51	25.00	25.00
Blank	2J27909-BLK1	10/27/12 05:51	25.00	25.00
LCS	2J27909-BS1	10/27/12 05:51	5.00	25.00
PEN-44-23-10/12	2J27909-MS1	10/27/12 05:51	22.50	25.00
PEN-44-23-10/12	2J27909-MSD1	10/27/12 05:51	22.50	25.00

PREPARATION BATCH SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J29919 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-15-10/12	1210154-20	10/29/12 05:49	2.00	2.00
PEN-44-25-10/12	1210154-22	10/29/12 05:49	2.00	2.00
PEN-44-22-10/12	1210154-23	10/29/12 05:49	2.00	2.00
Blank	2J29919-BLK1	10/29/12 05:49	2.00	2.00
LCS	2J29919-BS1	10/29/12 05:49	2.00	2.00
PEN-44-15-10/12	2J29919-MS1	10/29/12 05:49	1.40	2.00
PEN-44-15-10/12	2J29919-MSD1	10/29/12 05:49	1.40	2.00

PREPARATION BATCH SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J30322 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-23-10/12	1210154-10	10/30/12 05:59	2.00	2.00
PEN-44-18-10/12	1210154-12	10/30/12 05:59	2.00	2.00
FD10151201	1210154-14	10/30/12 05:59	2.00	2.00
PEN-44-21-10/12	1210154-16	10/30/12 05:59	2.00	2.00
PEN-44-24-10/12	1210154-18	10/30/12 05:59	2.00	2.00
Blank	2J30322-BLK1	10/30/12 05:59	2.00	2.00
LCS	2J30322-BS1	10/30/12 05:59	2.00	2.00
PEN-44-23-10/12	2J30322-MS1	10/30/12 05:59	1.60	2.00
PEN-44-23-10/12	2J30322-MSD1	10/30/12 05:59	1.60	2.00

ANALYSIS SEQUENCE SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J27909-BS1	102712-002	10/27/12 06:35
Blank	2J27909-BLK1	102712-003	10/27/12 06:38
PEN-44-23-10/12	2J27909-MS1	102712-004	10/27/12 06:41
PEN-44-23-10/12	2J27909-MSD1	102712-005	10/27/12 06:46

ANALYSIS SEQUENCE SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: 1210154

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J17002-BS1		10/23/12 13:35
Blank	2J17002-BLK1		10/23/12 13:35

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2E13609	Instrument:	WC-IC
Calibration:	2136002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13609-CAL1	051412-010	05/14/12 18:29
Cal Standard	2E13609-CAL2	051412-011	05/14/12 18:46
Cal Standard	2E13609-CAL3	051412-012	05/14/12 19:04
Cal Standard	2E13609-CAL4	051412-013	05/14/12 19:21
Cal Standard	2E13609-CAL5	051412-014	05/14/12 19:38
Cal Standard	2E13609-CAL6	051412-015	05/14/12 19:56
Cal Standard	2E13609-CAL7	051412-016	05/14/12 20:13
Cal Standard	2E13609-CAL8	051412-017	05/14/12 20:31
Initial Cal Check	2E13609-ICV1	051412-018	05/14/12 20:48
Initial Cal Blank	2E13609-ICB1	051412-019	05/14/12 21:06

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2E13809	Instrument:	WC-Gensys
Calibration:	2138003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13809-CAL2	051412-003	05/14/12 11:44
Cal Standard	2E13809-CAL1	051412-002	05/14/12 11:44
Cal Standard	2E13809-CAL4	051412-005	05/14/12 11:45
Cal Standard	2E13809-CAL3	051412-004	05/14/12 11:45
Cal Standard	2E13809-CAL6	051412-007	05/14/12 11:46
Cal Standard	2E13809-CAL5	051412-006	05/14/12 11:46
Cal Standard	2E13809-CAL7	051412-008	05/14/12 11:47

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29612
Instrument: WC-IC
Calibration: 2136002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29612-CCV1	101612-003	10/16/12 16:16
Calibration Blank	2J29612-CCB1	101612-004	10/16/12 16:33
Instrument RL Check	2J29612-CRL1	101612-005	10/16/12 16:50
Instrument RL Check	2J29612-CRL2	101612-006	10/16/12 17:08
Instrument RL Check	2J29612-CRL3	101612-007	10/16/12 17:25
LCS	2J16017-BS1	101612-008	10/16/12 17:43
Blank	2J16017-BLK1	101612-009	10/16/12 18:00
Calibration Check	2J29612-CCV2	101612-020	10/16/12 21:12
Calibration Blank	2J29612-CCB2	101612-021	10/16/12 21:29
PEN-44-23-10/12	1210154-10	101612-026	10/16/12 22:57
PEN-44-18-10/12	1210154-12	101612-027	10/16/12 23:14
Calibration Check	2J29612-CCV3	101612-032	10/17/12 00:41
Calibration Blank	2J29612-CCB3	101612-033	10/17/12 00:59
FD10151201	1210154-14	101612-034	10/17/12 01:16
PEN-44-21-10/12	1210154-16	101612-035	10/17/12 01:34
PEN-44-24-10/12	1210154-18	101612-036	10/17/12 01:51
PEN-44-15-10/12	1210154-20	101612-037	10/17/12 02:09
PEN-44-25-10/12	1210154-22	101612-038	10/17/12 02:26
PEN-44-22-10/12	1210154-23	101612-039	10/17/12 02:43
Calibration Check	2J29612-CCV4	101612-040	10/17/12 03:01
Calibration Blank	2J29612-CCB4	101612-041	10/17/12 03:18

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210154
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30308
Instrument: WC-Gensys
Calibration: 2138003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J30308-CCV1		10/29/12 11:05
Calibration Blank	2J30308-CCB1		10/29/12 11:06
LCS	2J29919-BS1	102912-004	10/29/12 11:06
PEN-44-15-10/12	2J29919-MS1	102912-006	10/29/12 11:07
Blank	2J29919-BLK1	102912-005	10/29/12 11:07
PEN-44-15-10/12	2J29919-MSD1	102912-007	10/29/12 11:08
PEN-44-25-10/12	1210154-22	102912-015	10/29/12 11:11
PEN-44-15-10/12	1210154-20	102912-014	10/29/12 11:11
Calibration Check	2J30308-CCV2		10/29/12 11:12
PEN-44-22-10/12	1210154-23	102912-016	10/29/12 11:12
Calibration Blank	2J30308-CCB2		10/29/12 11:13

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	1210154
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30417	Instrument:	WC-Gensys
Calibration:	2138003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J30417-CCV1		10/30/12 10:49
Calibration Blank	2J30417-CCB1		10/30/12 10:50
LCS	2J30322-BS1	103012-004	10/30/12 10:51
Blank	2J30322-BLK1	103012-005	10/30/12 10:52
PEN-44-23-10/12	1210154-10	103012-008	10/30/12 10:53
PEN-44-23-10/12	2J30322-MSD1	103012-007	10/30/12 10:53
PEN-44-23-10/12	2J30322-MS1	103012-006	10/30/12 10:53
PEN-44-18-10/12	1210154-12	103012-009	10/30/12 10:54
FD10151201	1210154-14	103012-010	10/30/12 10:54
PEN-44-24-10/12	1210154-18	103012-012	10/30/12 10:55
PEN-44-21-10/12	1210154-16	103012-011	10/30/12 10:55
Calibration Check	2J30417-CCV2		10/30/12 10:59
Calibration Blank	2J30417-CCB2		10/30/12 11:00

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 16, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC/SVOC/PAH/PCB/ PEST/METALS/MISC**
CTO 0079, NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 1210161

SAMPLES: 6/Aqueous/VOC

PEN-3221-02-10/12	PEN-3221-03-10/12	PEN-3221-05-10/12*
PEN-3221-10-10/12	FB10161201	FB10161202

5/Aqueous/SVOC/PAH/PCB/PEST/Metals

PEN-3221-02-10/12	PEN-3221-03-10/12	PEN-3221-10-10/12
FB10161201	FB10161202	

2/Aqueous/MISC

PEN-3221-03-10/12	PEN-3221-10-10/12

OVERVIEW

The sample set for CTO 0079 NAS PENSACOLA, SDG 1210161 consists of four (4) aqueous environmental samples and two (2) field blanks analyzed for Volatile Organic Compounds (VOCs). Sample PEN-3221-05-10/12 was analyzed for the select VOCs, cis 1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride. Three (3) aqueous environmental samples and the two (2) field blanks were also analyzed for semivolatile organic compounds (SVOCs), Polycyclic Aromatic Hydrocarbons (PAH), pesticides (PEST), polychlorinated biphenyls (PCB) and metals. Samples PEN-3221-03-10/12 and PEN-3221-10-10/12 were analyzed for miscellaneous parameters: biochemical oxygen demand, chemical oxygen demand, chloride, nitrate, nitrite, alkalinity and sulfate. There is no field duplicate pair contained within this SDG.

The samples were collected by Tetra Tech on October 16, 2012 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using EPA Method 410.4, Standard Methods 5210B and 2320B and SW-846 Methods 8260B, 8270D, 8082A, 8081A, 6010C, 7470A and 9056 analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
• Initial/Continuing Calibrations
• Laboratory Method Blank Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Issues affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The continuing calibration percent differences (%Ds) for acetone, carbon disulfide, chloromethane and dichlorodifluoromethane were greater than the 20% quality control limit on October 25, 2012 @ 19:59 on instrument MS-VOA5. The positive and nondetected acetone, carbon disulfide, chloromethane and dichlorodifluoromethane results were qualified as estimated (J) and (UJ), respectively in the affected samples.

SVOC

The continuing calibration %Ds for 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, caprolactam and 3,3'-dichlorobenzidine exceeded the 20% quality control limit on November 3, 2012 @ 15:45 and 16:13 on instrument MS-BNA3. The nondetected 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, caprolactam and 3,3'-dichlorobenzidine results were qualified as estimated (UJ) in the affected samples.

Samples PEN-3221-10-10/12 and FB10161201 had recoveries of acid surrogate 2-fluorophenol less than 10%. The samples were not re-extracted. The nondetected acid results in samples PEN-3221-10-10/12 and FB10161201 were qualified as rejected (UR).

PAH & 1,4-DIOXANE

Contamination was detected in the laboratory method blank associated with batch 2J23002 analyzed on November 3, 2012.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
Phenanthrene	0.0630	0.315

An action level of 5X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot and dilution factors were taken into account when applying the action level. Positive results less than the action level were qualified as (U).

The continuing calibration %D for 1,4-dioxane exceeded the 20% quality control limit on November 6, 2012 @ 14:11 on instrument MS-BNA4. The nondetected 1,4-dioxane result was qualified as estimated (UJ) in the affected sample PEN-3221-10-10/12.

Several positive detections were reported in sample FB10161201. According to the case narrative, the sample could have been contaminated or inadvertently mis-spiked at the laboratory. No action was taken for this occurrence because the contamination was limited to the field blank.

PEST

The continuing calibration verification %Ds for 4,4'-DDD were greater than the 20% quality control limit on both columns on October 27, 2012 @ 23:36. The nondetected 4,4'-DDD results were qualified as estimated (UJ) in the affected samples.

ADDITIONAL COMMENTS

Acetone was detected in both field blanks in the VOC fraction. No action was taken on the nondetected acetone results in the affected samples.

The continuing calibration %D for arsenic was greater than the 110% quality control limit on October 29, 2012 @ 18:25 and 19:52. No action was taken on the nondetected arsenic results in the affected samples.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Continuing calibration %D noncompliances were found in the VOC, SVOC and PEST fractions. Samples PEN-3221-10-10/12 and FB10161201 had recoveries of acid surrogate 2-fluorophenol less than 10%. Phenanthrene was detected in the laboratory method blank. Several positive detections were reported in sample FB10161201 for PAHs. According to the case narrative, the sample could have been contaminated or mis-spiked at the laboratory.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), EPA Functional Guidelines for Inorganic Data Validation (October 2004) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: M	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		50	U		50	U		261			400		
ANTIMONY		5	U		5	U		5	U		5	U	
ARSENIC		3	U		3	U		3	U		3	U	
BARIUM		5	U		5	U		6.87	J	P	6.95	J	P
BERYLLIUM		1	U		1	U		1	U		1	U	
CADMIUM		1	U		1	U		1	U		1	U	
CALCIUM		1000	U		1000	U		40900			36100		
CHROMIUM		2	U		2	U		2	U		2.35	J	P
COBALT		5	U		5	U		5	U		5	U	
COPPER		4	U		4	U		4	U		4	U	
IRON		30	U		30	U		261			232		
LEAD		1.5	U		1.5	U		1.5	U		1.5	U	
MAGNESIUM		1000	U		1000	U		1360	J	P	1610	J	P
MANGANESE		3	U		3	U		3	U		4.72	J	P
MERCURY		0.08	U		0.08	U		0.08	U		0.08	U	
NICKEL		3	U		3	U		3	U		3	U	
POTASSIUM		1000	U		1000	U		1000	U		1000	U	
SELENIUM		3	U		3	U		3	U		3	U	
SILVER		1	U		1	U		1	U		1	U	
SODIUM		1000	U		1000	U		7040			5440		
THALLIUM		3	U		3	U		3	U		3	U	
VANADIUM		5	U		5	U		5	U		5	U	
ZINC		5	U		5	U		5	U		5	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-02		
FRACTION: M	SAMP_DATE	10/16/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALUMINUM		2290		
ANTIMONY		5	U	
ARSENIC		3	U	
BARIUM		5.23	J	P
BERYLLIUM		1	U	
CADMIUM		1	U	
CALCIUM		33000		
CHROMIUM		3.97	J	P
COBALT		5	U	
COPPER		4	U	
IRON		1020		
LEAD		1.5	U	
MAGNESIUM		1360	J	P
MANGANESE		3	U	
MERCURY		0.08	U	
NICKEL		3	U	
POTASSIUM		1000	U	
SELENIUM		3	U	
SILVER		1	U	
SODIUM		4930	J	P
THALLIUM		3	U	
VANADIUM		5	U	
ZINC		5	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-03-10/12			PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-06			1210161-03		
FRACTION: MF	SAMP_DATE	10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		34.8	J	P	60.4	J	P
MANGANESE		3	U		3	U	

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: OS	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1-BIPHENYL		1.16	U		1.16	U		1.16	U		1.16	U	
1,2,4,5-TETRACHLOROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		1.16	U		1.16	U		1.16	U		1.16	U	
2,3,4,6-TETRACHLOROPHENOL		2.31	UR	R	2.31	U		2.31	U		2.31	U	
2,4,5-TRICHLOROPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
2,4,6-TRICHLOROPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
2,4-DICHLOROPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
2,4-DIMETHYLPHENOL		4.63	UR	R	4.63	U		4.63	U		4.63	U	
2,4-DINITROPHENOL		7.71	UR	R	7.71	UJ	C	7.71	UJ	C	7.71	UJ	C
2,4-DINITROTOLUENE		1.16	U		1.16	U		1.16	U		1.16	U	
2,6-DINITROTOLUENE		1.16	U		1.16	U		1.16	U		1.16	U	
2-CHLORONAPHTHALENE		1.16	U		1.16	U		1.16	U		1.16	U	
2-CHLOROPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
2-METHYLPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
2-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
2-NITROPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
3,3'-DICHLOROBENZIDINE		1.16	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
3-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
4,6-DINITRO-2-METHYLPHENOL		4.63	UR	R	4.63	UJ	C	4.63	UJ	C	4.63	UJ	C
4-BROMOPHENYL PHENYL ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLORO-3-METHYLPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
4-CHLOROANILINE		1.16	U		1.16	U		1.16	U		1.16	U	
4-CHLOROPHENYL PHENYL ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
4-METHYLPHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	
4-NITROANILINE		4.63	U		4.63	U		4.63	U		4.63	U	
4-NITROPHENOL		4.63	UR	R	4.63	U		4.63	U		4.63	U	
ATRAZINE		1.16	U		1.16	U		1.16	U		1.16	U	
BENZALDEHYDE		1.79	J	P	1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHOXY)METHANE		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-CHLOROETHYL)ETHER		1.16	U		1.16	U		1.16	U		1.16	U	
BIS(2-ETHYLHEXYL)PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
BUTYL BENZYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
CAPROLACTAM		1.16	UJ	C	1.16	UJ	C	1.16	UJ	C	1.16	UJ	C
CARBAZOLE		1.16	U		1.16	U		1.16	U		1.16	U	
DIBENZOFURAN		1.16	U		1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-02		
FRACTION: OS	SAMP_DATE	10/16/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1-BIPHENYL		1.16	U	
1,2,4,5-TETRACHLOROBENZENE		1.16	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		1.16	U	
2,3,4,6-TETRACHLOROPHENOL		2.31	UR	R
2,4,5-TRICHLOROPHENOL		1.16	UR	R
2,4,6-TRICHLOROPHENOL		1.16	UR	R
2,4-DICHLOROPHENOL		1.16	UR	R
2,4-DIMETHYLPHENOL		4.63	UR	R
2,4-DINITROPHENOL		7.71	UR	R
2,4-DINITROTOLUENE		1.16	U	
2,6-DINITROTOLUENE		1.16	U	
2-CHLORONAPHTHALENE		1.16	U	
2-CHLOROPHENOL		1.16	UR	R
2-METHYLPHENOL		1.16	UR	R
2-NITROANILINE		4.63	U	
2-NITROPHENOL		1.16	UR	R
3,3'-DICHLOROBENZIDINE		1.16	UJ	C
3-NITROANILINE		4.63	U	
4,6-DINITRO-2-METHYLPHENOL		4.63	UR	R
4-BROMOPHENYL PHENYL ETHER		1.16	U	
4-CHLORO-3-METHYLPHENOL		1.16	UR	R
4-CHLOROANILINE		1.16	U	
4-CHLOROPHENYL PHENYL ETHER		1.16	U	
4-METHYLPHENOL		1.16	UR	R
4-NITROANILINE		4.63	U	
4-NITROPHENOL		4.63	UR	R
ATRAZINE		1.16	U	
BENZALDEHYDE		1.16	U	
BIS(2-CHLOROETHOXY)METHANE		1.16	U	
BIS(2-CHLOROETHYL)ETHER		1.16	U	
BIS(2-ETHYLHEXYL)PHTHALATE		1.16	U	
BUTYL BENZYL PHTHALATE		1.16	U	
CAPROLACTAM		1.16	UJ	C
CARBAZOLE		1.16	U	
DIBENZOFURAN		1.16	U	

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: OS	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DIETHYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
DIMETHYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
DI-N-BUTYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
DI-N-OCTYL PHTHALATE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROBUTADIENE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROCYCLOPENTADIENE		1.16	U		1.16	U		1.16	U		1.16	U	
HEXACHLOROETHANE		1.16	U		1.16	U		1.16	U		1.16	U	
ISOPHORONE		1.16	U		1.16	U		1.16	U		1.16	U	
NITROBENZENE		1.16	U		1.16	U		1.16	U		1.16	U	
N-NITROSODIMETHYLAMINE		1.16	U		1.16	U		1.16	U		1.16	U	
N-NITROSO-DI-N-PROPYLAMINE		1.16	U		1.16	U		1.16	U		1.16	U	
PENTACHLOROPHENOL		4.63	UR	R	4.63	U		4.63	U		4.63	U	
PHENOL		1.16	UR	R	1.16	U		1.16	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-02		
FRACTION: OS	SAMP_DATE	10/16/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DIETHYL PHTHALATE		1.16	U	
DIMETHYL PHTHALATE		1.16	U	
DI-N-BUTYL PHTHALATE		1.16	U	
DI-N-OCTYL PHTHALATE		1.16	U	
HEXACHLOROBENZENE		1.16	U	
HEXACHLOROBUTADIENE		1.16	U	
HEXACHLOROCYCLOPENTADIENE		1.16	U	
HEXACHLOROETHANE		1.16	U	
ISOPHORONE		1.16	U	
NITROBENZENE		1.16	U	
N-NITROSODIMETHYLAMINE		1.16	U	
N-NITROSO-DI-N-PROPYLAMINE		1.16	U	
PENTACHLOROPHENOL		4.63	UR	R
PHENOL		1.16	UR	R

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: OV	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,1,2,2-TETRACHLOROETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,1-DICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2,3-TRICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2,4-TRICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROPROPANE		0.25	U		0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
1,4-DICHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		1.25	U		1.25	U		1.25	U		1.25	U	
4-METHYL-2-PENTANONE		1.25	U		1.25	U		1.25	U		1.25	U	
ACETONE		14.6	J	C	15.6	J	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
BROMOCHLOROMETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
BROMODICHLOROMETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
BROMOFORM		0.25	U		0.25	U		0.25	U		0.25	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CARBON TETRACHLORIDE		0.25	U		0.25	U		0.25	U		0.25	U	
CHLOROBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.25	U		0.25	U		0.25	U		0.25	U	
CHLOROMETHANE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
CIS-1,2-DICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
CIS-1,3-DICHLOROPROPENE		0.25	U		0.25	U		0.25	U		0.25	U	
CYCLOHEXANE		0.25	U		0.25	U		0.25	U		0.25	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C

PROJ_NO: 00784	NSAMPLE	PEN-3221-05-10/12			PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-01			1210161-02		
FRACTION: OV	SAMP_DATE	10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.25	U	
1,1,2,2-TETRACHLOROETHANE					0.25	U	
1,1,2-TRICHLOROETHANE					0.25	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U	
1,1-DICHLOROETHANE					0.25	U	
1,1-DICHLOROETHENE					0.25	U	
1,2,3-TRICHLOROBENZENE					0.25	U	
1,2,4-TRICHLOROBENZENE					0.25	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U	
1,2-DIBROMOETHANE					0.25	U	
1,2-DICHLOROBENZENE					0.25	U	
1,2-DICHLOROETHANE					0.25	U	
1,2-DICHLOROPROPANE					0.25	U	
1,3-DICHLOROBENZENE					0.25	U	
1,4-DICHLOROBENZENE					0.25	U	
2-BUTANONE					2.5	U	
2-HEXANONE					1.25	U	
4-METHYL-2-PENTANONE					1.25	U	
ACETONE					2.5	UJ	C
BENZENE					0.25	U	
BROMOCHLOROMETHANE					0.25	U	
BROMODICHLOROMETHANE					0.25	U	
BROMOFORM					0.25	U	
BROMOMETHANE					0.5	U	
CARBON DISULFIDE					0.25	UJ	C
CARBON TETRACHLORIDE					0.25	U	
CHLOROBENZENE					0.25	U	
CHLORODIBROMOMETHANE					0.25	U	
CHLOROETHANE					0.5	U	
CHLOROFORM					0.25	U	
CHLOROMETHANE					0.25	UJ	C
CIS-1,2-DICHLOROETHENE		0.25	U		0.25	U	
CIS-1,3-DICHLOROPROPENE					0.25	U	
CYCLOHEXANE					0.25	U	
DICHLORODIFLUOROMETHANE					0.5	UJ	C

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: OV	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.25	U		0.25	U		0.25	U		0.25	U	
METHYL TERT-BUTYL ETHER		0.25	U		0.25	U		0.25	U		0.25	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
M-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.25	U		0.25	U		0.25	U		0.25	U	
STYRENE		0.25	U		0.25	U		0.25	U		0.25	U	
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOLUENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOTAL XYLENES		0.75	U		0.75	U		0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TRANS-1,3-DICHLOROPROPENE		0.25	U		0.25	U		0.25	U		0.25	U	
TRICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.25	U		0.25	U		0.25	U		0.25	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-05-10/12			PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-01			1210161-02		
FRACTION: OV	SAMP_DATE	10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE					0.25	U	
ISOPROPYLBENZENE					0.25	U	
METHYL ACETATE					0.5	U	
METHYL CYCLOHEXANE					0.25	U	
METHYL TERT-BUTYL ETHER					0.25	U	
METHYLENE CHLORIDE					0.5	U	
M-XYLENE					0.5	U	
O-XYLENE					0.25	U	
STYRENE					0.25	U	
TETRACHLOROETHENE		0.25	U		0.25	U	
TOLUENE					0.25	U	
TOTAL XYLENES					0.75	U	
TRANS-1,2-DICHLOROETHENE					0.25	U	
TRANS-1,3-DICHLOROPROPENE					0.25	U	
TRICHLOROETHENE		0.25	U		0.3	J	P
TRICHLOROFLUOROMETHANE					0.5	U	
VINYL CHLORIDE		0.25	U		0.25	U	

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: PAH	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.463	U		0.463	U		0.463	U		0.463	U	
2-METHYLNAPHTHALENE		0.0729	J	PQ	0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHENE		0.0705	J	PQ	0.0463	U		0.0463	U		0.0463	U	
ACENAPHTHYLENE		0.0646	J	PQ	0.0463	U		0.0463	U		0.0463	U	
ANTHRACENE		0.0989	J	PQ	0.0463	U		0.0463	U		0.0463	U	
BENZO(A)ANTHRACENE		0.0748	J	PQ	0.0463	U		0.0463	U		0.0463	U	
BENZO(A)PYRENE		0.0609	J	PQ	0.0463	U		0.0463	U		0.0463	U	
BENZO(B)FLUORANTHENE		0.0611	J	PQ	0.0463	U		0.0463	U		0.0463	U	
BENZO(G,H,I)PERYLENE		0.0511	J	PQ	0.0463	U		0.0463	U		0.0463	U	
BENZO(K)FLUORANTHENE		0.065	J	PQ	0.0463	U		0.0463	U		0.0463	U	
CHRYSENE		0.0746	J	PQ	0.0463	U		0.0463	U		0.0463	U	
DIBENZO(A,H)ANTHRACENE		0.0558	J	PQ	0.0463	U		0.0463	U		0.0463	U	
FLUORANTHENE		0.108	J	PQ	0.0463	U		0.0463	U		0.0463	U	
FLUORENE		0.0962	J	PQ	0.0463	U		0.0463	U		0.0463	U	
INDENO(1,2,3-CD)PYRENE		0.0618	J	PQ	0.0463	U		0.0463	U		0.0463	U	
NAPHTHALENE		0.119	J	PQ	0.0463	U		0.0463	U		0.0463	U	
PHENANTHRENE		0.146	J	PQ	0.0502	J	P	0.0463	U		0.0463	U	
PYRENE		0.0978	J	PQ	0.0463	U		0.0463	U		0.0463	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-10-10/12
SDG: 1210161	LAB_ID	1210161-02
FRACTION: PAH	SAMP_DATE	10/16/2012
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,4-DIOXANE	0.463	UJ	C
2-METHYLNAPHTHALENE	0.0463	U	
ACENAPHTHENE	0.0463	U	
ACENAPHTHYLENE	0.0463	U	
ANTHRACENE	0.0463	U	
BENZO(A)ANTHRACENE	0.0463	U	
BENZO(A)PYRENE	0.0463	U	
BENZO(B)FLUORANTHENE	0.0463	U	
BENZO(G,H,I)PERYLENE	0.0463	U	
BENZO(K)FLUORANTHENE	0.0463	U	
CHRYSENE	0.0463	U	
DIBENZO(A,H)ANTHRACENE	0.0463	U	
FLUORANTHENE	0.0463	U	
FLUORENE	0.0463	U	
INDENO(1,2,3-CD)PYRENE	0.0463	U	
NAPHTHALENE	0.0463	U	
PHENANTHRENE	0.0541	U	A
PYRENE	0.0463	U	

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: PCB	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.111	U		0.111	U		0.111	U		0.111	U	
AROCLOR-1221		0.111	U		0.111	U		0.111	U		0.111	U	
AROCLOR-1232		0.111	U		0.111	U		0.111	U		0.111	U	
AROCLOR-1242		0.111	U		0.111	U		0.111	U		0.111	U	
AROCLOR-1248		0.111	U		0.111	U		0.111	U		0.111	U	
AROCLOR-1254		0.111	U		0.111	U		0.111	U		0.111	U	
AROCLOR-1260		0.111	U		0.111	U		0.111	U		0.111	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-02		
FRACTION: PCB	SAMP_DATE	10/16/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.111	U	
AROCLOR-1221		0.111	U	
AROCLOR-1232		0.111	U	
AROCLOR-1242		0.111	U	
AROCLOR-1248		0.111	U	
AROCLOR-1254		0.111	U	
AROCLOR-1260		0.111	U	

PROJ_NO: 00784	NSAMPLE	FB10161201			FB10161202			PEN-3221-02-10/12			PEN-3221-03-10/12		
SDG: 1210161	LAB_ID	1210161-07			1210161-08			1210161-04			1210161-05		
FRACTION: PEST	SAMP_DATE	10/16/2012			10/16/2012			10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
4,4'-DDD		0.00463	UJ	C	0.00463	UJ	C	0.00463	UJ	C	0.00463	UJ	C
4,4'-DDE		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
4,4'-DDT		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
ALDRIN		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
ALPHA-BHC		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
ALPHA-CHLORDANE		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
BETA-BHC		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
DELTA-BHC		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
DIELDRIN		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
ENDOSULFAN I		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
ENDOSULFAN II		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
ENDOSULFAN SULFATE		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
ENDRIN		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
ENDRIN ALDEHYDE		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
ENDRIN KETONE		0.00463	U		0.00463	U		0.00463	U		0.00463	U	
GAMMA-BHC (LINDANE)		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
GAMMA-CHLORDANE		0.00306	U		0.00306	U		0.00474	J	P	0.00306	U	
HEPTACHLOR		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
HEPTACHLOR EPOXIDE		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
METHOXYCHLOR		0.00306	U		0.00306	U		0.00306	U		0.00306	U	
TOXAPHENE		0.306	U		0.306	U		0.306	U		0.306	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-02		
FRACTION: PEST	SAMP_DATE	10/16/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
4,4'-DDD		0.00463	UJ	C
4,4'-DDE		0.00463	U	
4,4'-DDT		0.00463	U	
ALDRIN		0.00306	U	
ALPHA-BHC		0.00306	U	
ALPHA-CHLORDANE		0.00306	U	
BETA-BHC		0.00306	U	
DELTA-BHC		0.00306	U	
DIELDRIN		0.00463	U	
ENDOSULFAN I		0.00306	U	
ENDOSULFAN II		0.00463	U	
ENDOSULFAN SULFATE		0.00463	U	
ENDRIN		0.00463	U	
ENDRIN ALDEHYDE		0.00463	U	
ENDRIN KETONE		0.00463	U	
GAMMA-BHC (LINDANE)		0.00306	U	
GAMMA-CHLORDANE		0.00306	U	
HEPTACHLOR		0.00306	U	
HEPTACHLOR EPOXIDE		0.00306	U	
METHOXYCHLOR		0.00306	U	
TOXAPHENE		0.306	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-03-10/12			PEN-3221-10-10/12		
SDG: 1210161	LAB_ID	1210161-05			1210161-02		
FRACTION: MISC	SAMP_DATE	10/16/2012			10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		86			85.2		
BIOCHEMICAL OXYGEN DEMAND		2	U		2	U	
CHEMICAL OXYGEN DEMAND		20	U		20	U	
CHLORIDE		7.8			3.25		
NITRATE-N		1.86			0.502		
NITRITE-N		0.033	U		0.033	U	
SULFATE		10.5			2.28	J	P

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

FB10161201

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-07 File ID: 1016107.D

Sampled: 10/16/12 14:30 Prepared: 10/26/12 00:08 Analyzed: 10/26/12 00:08

Solids: Preparation: 5030B Dilution: 1

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone	14.6	2.50	5.00	10.0	Y
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

FB10161201

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-07 File ID: 1016107.D

Sampled: 10/16/12 14:30 Prepared: 10/26/12 00:08 Analyzed: 10/26/12 00:08

Solids: Preparation: 5030B Dilution: 1

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.29	91.0	75 - 120	I
Dibromofluoromethane	30.00	30.07	100	85 - 115	
1,2-Dichloroethane-d4	30.00	29.90	99.7	70 - 120	I
Toluene-d8	30.00	29.26	97.5	85 - 120	I

ANALYSIS DATA SHEET

FB10161202

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-08 File ID: 1016108.D

Sampled: 10/16/12 14:50 Prepared: 10/26/12 00:36 Analyzed: 10/26/12 00:36

Solids: Preparation: 5030B Dilution: 1

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone	15.6	2.50	5.00	10.0	Y
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

FB10161202

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-08	File ID:	1016108.D
Sampled:	10/16/12 14:50	Prepared:	10/26/12 00:36	Analyzed:	10/26/12 00:36
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J25004	Sequence:	2J30303	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.94	93.1	75 - 120	I
Dibromofluoromethane	30.00	29.58	98.6	85 - 115	I
1,2-Dichloroethane-d4	30.00	30.58	102	70 - 120	
Toluene-d8	30.00	28.87	96.2	85 - 120	I

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-04	File ID:	1016104.D
Sampled:	10/16/12 10:55	Prepared:	10/26/12 04:45	Analyzed:	10/26/12 04:45
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J25004	Sequence:	2J30303	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-04 File ID: 1016104.D

Sampled: 10/16/12 10:55 Prepared: 10/26/12 04:45 Analyzed: 10/26/12 04:45

Solids: Preparation: 5030B Dilution: 1

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	26.66	88.9	75 - 120	I
Dibromofluoromethane	30.00	29.79	99.3	85 - 115	I
1.2-Dichloroethane-d4	30.00	30.12	100	70 - 120	
Toluene-d8	30.00	28.96	96.5	85 - 120	I

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-05	File ID:	1016105.D
Sampled:	10/16/12 12:55	Prepared:	10/26/12 05:12	Analyzed:	10/26/12 05:12
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J25004	Sequence:	2J30303	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-05 File ID: 1016105.D

Sampled: 10/16/12 12:55 Prepared: 10/26/12 05:12 Analyzed: 10/26/12 05:12

Solids: Preparation: 5030B Dilution: 1

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.60	92.0	75 - 120	I
Dibromofluoromethane	30.00	30.38	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.29	101	70 - 120	
Toluene-d8	30.00	29.17	97.2	85 - 120	I

ANALYSIS DATA SHEET

PEN-3221-05-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-01 File ID: 1016101.D

Sampled: 10/16/12 08:24 Prepared: 10/26/12 03:49 Analyzed: 10/26/12 03:49

Solids: Preparation: 5030B Dilution: 1

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.13	93.8	75 - 120	I
Dibromofluoromethane	30.00	29.60	98.7	85 - 115	I
1,2-Dichloroethane-d4	30.00	30.95	103	70 - 120	
Toluene-d8	30.00	29.79	99.3	85 - 120	I

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-02	File ID:	1016102.D
Sampled:	10/16/12 10:10	Prepared:	10/26/12 04:17	Analyzed:	10/26/12 04:17
Solids:		Preparation:	5030B	Dilution:	1
Batch:	2J25004	Sequence:	2J30303	Calibration:	2291001
Instrument:	MS-VOA5				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-02 File ID: 1016102.D

Sampled: 10/16/12 10:10 Prepared: 10/26/12 04:17 Analyzed: 10/26/12 04:17

Solids: Preparation: 5030B Dilution: 1

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	0.300	0.250	0.500	1.00	I
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.18	90.6	75 - 120	I
Dibromofluoromethane	30.00	29.73	99.1	85 - 115	I
1.2-Dichloroethane-d4	30.00	31.37	105	70 - 120	
Toluene-d8	30.00	29.21	97.4	85 - 120	I

ANALYSIS DATA SHEET

FB10161201

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-07 File ID: 1016107.D

Sampled: 10/16/12 14:30 Prepared: 10/23/12 09:20 Analyzed: 11/03/12 20:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31106 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde	1.79	1.16	2.31	4.63	I
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	X, U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	X, U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

FB10161201

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-07 File ID: 1016107.D

Sampled: 10/16/12 14:30 Prepared: 10/23/12 09:20 Analyzed: 11/03/12 20:49

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31106 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	35.94	77.6	50 - 110	
2-Fluorophenol	92.59	4.729	5.11	20 - 110	* I
Nitrobenzene-d5	46.30	35.34	76.3	40 - 110	
Phenol-d6	92.59	5.342	5.77	0 - 110	I
Terphenyl-d14	46.30	43.63	94.2	50 - 135	
2,4,6-Tribromophenol	92.59	34.43	37.2	40 - 125	*

ANALYSIS DATA SHEET

FB10161202

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-08 File ID: 1016108.D

Sampled: 10/16/12 14:50 Prepared: 10/23/12 09:20 Analyzed: 11/03/12 21:17

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31106 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	X, U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	X, U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

FB10161202

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210161-08
File ID: 1016108.D
Sampled: 10/16/12 14:50
Prepared: 10/23/12 09:20
Analyzed: 11/03/12 21:17
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J23002
Sequence: 2K31106
Calibration: 2261001
Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	26.02	56.2	50 - 110	
2-Fluorophenol	92.59	24.97	27.0	20 - 110	
Nitrobenzene-d5	46.30	25.95	56.1	40 - 110	
Phenol-d6	92.59	14.14	15.3	0 - 110	
Terphenyl-d14	46.30	33.61	72.6	50 - 135	
2,4,6-Tribromophenol	92.59	55.73	60.2	40 - 125	

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-04	File ID:	1016104.D
Sampled:	10/16/12 10:55	Prepared:	10/23/12 09:20	Analyzed:	11/03/12 19:54
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J23002	Sequence:	2K31106	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	X, U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	X, U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210161-04
File ID: 1016104.D
Sampled: 10/16/12 10:55
Prepared: 10/23/12 09:20
Analyzed: 11/03/12 19:54
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J23002
Sequence: 2K31106
Calibration: 2261001
Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	37.24	80.4	50 - 110	
2-Fluorophenol	92.59	12.08	13.0	20 - 110	*
Nitrobenzene-d5	46.30	37.06	80.0	40 - 110	
Phenol-d6	92.59	11.37	12.3	0 - 110	
Terphenyl-d14	46.30	45.46	98.2	50 - 135	
2,4,6-Tribromophenol	92.59	36.39	39.3	40 - 125	*

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-05	File ID:	1016105.D
Sampled:	10/16/12 12:55	Prepared:	10/23/12 09:20	Analyzed:	11/03/12 20:22
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J23002	Sequence:	2K31106	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	X, U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	X, U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-05 File ID: 1016105.D

Sampled: 10/16/12 12:55 Prepared: 10/23/12 09:20 Analyzed: 11/03/12 20:22

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31106 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	31.10	67.2	50 - 110	
2-Fluorophenol	92.59	12.56	13.6	20 - 110	*
Nitrobenzene-d5	46.30	31.18	67.4	40 - 110	
Phenol-d6	92.59	12.65	13.7	0 - 110	
Terphenyl-d14	46.30	36.06	77.9	50 - 135	
2,4,6-Tribromophenol	92.59	32.78	35.4	40 - 125	*

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210161-02
File ID: 1016102.D
Sampled: 10/16/12 10:10
Prepared: 10/23/12 09:20
Analyzed: 11/03/12 19:26
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J23002
Sequence: 2K31106
Calibration: 2261001
Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	X, U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	X, U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-02 File ID: 1016102.D

Sampled: 10/16/12 10:10 Prepared: 10/23/12 09:20 Analyzed: 11/03/12 19:26

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31106 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	34.57	74.7	50 - 110	
2-Fluorophenol	92.59	7.954	8.59	20 - 110	* I
Nitrobenzene-d5	46.30	34.68	74.9	40 - 110	
Phenol-d6	92.59	9.337	10.1	0 - 110	
Terphenyl-d14	46.30	43.56	94.1	50 - 135	
2,4,6-Tribromophenol	92.59	24.17	26.1	40 - 125	*

ANALYSIS DATA SHEET

FB10161201

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210161-07
File ID: 1016107.D
Sampled: 10/16/12 14:30
Prepared: 10/23/12 09:20
Analyzed: 11/03/12 20:19
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J23002
Sequence: 2K31103
Calibration: 2263001
Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.0705	0.0463	0.0926	0.185	Z-01, I
208-96-8	Acenaphthylene	0.0646	0.0463	0.0926	0.185	Z-01, I
120-12-7	Anthracene	0.0989	0.0463	0.0926	0.185	Z-01, I
56-55-3	Benzo(a)anthracene	0.0748	0.0463	0.0926	0.185	Z-01, I
50-32-8	Benzo(a)pyrene	0.0609	0.0463	0.0926	0.185	Z-01, I
205-99-2	Benzo(b)fluoranthene	0.0611	0.0463	0.0926	0.185	Z-01, I
191-24-2	Benzo(g,h,i)perylene	0.0511	0.0463	0.0926	0.185	Z-01, I
207-08-9	Benzo(k)fluoranthene	0.0650	0.0463	0.0926	0.185	Z-01, I
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene	0.0746	0.0463	0.0926	0.185	Z-01, I
53-70-3	Dibenz(a,h)anthracene	0.0558	0.0463	0.0926	0.185	Z-01, I
206-44-0	Fluoranthene	0.108	0.0463	0.0926	0.185	Z-01, I
86-73-7	Fluorene	0.0962	0.0463	0.0926	0.185	Z-01, I
193-39-5	Indeno(1,2,3-cd)pyrene	0.0618	0.0463	0.0926	0.185	Z-01, I
91-57-6	2-Methylnaphthalene	0.0729	0.0463	0.0926	0.185	Z-01, I
91-20-3	Naphthalene	0.119	0.0463	0.0926	0.185	Z-01, I
85-01-8	Phenanthrene	0.146	0.0463	0.185	0.370	Z-01, IV
129-00-0	Pyrene	0.0978	0.0463	0.0926	0.185	Z-01, I

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	30.91	66.8	34 - 167	Z-01
Terphenyl-d14	46.30	33.66	72.7	34 - 167	
2,4,6-Tribromophenol	92.59	30.10	32.5	34 - 167	*

ANALYSIS DATA SHEET

FB10161202

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-08	File ID:	1016108.D
Sampled:	10/16/12 14:50	Prepared:	10/23/12 09:20	Analyzed:	11/03/12 20:47
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J23002	Sequence:	2K31103	Calibration:	2263001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene	0.0502	0.0463	0.185	0.370	IV
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	23.81	51.4	34 - 167	
Terphenyl-d14	46.30	28.19	60.9	34 - 167	
2,4,6-Tribromophenol	92.59	52.06	56.2	34 - 167	

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-04 File ID: 1016104.D

Sampled: 10/16/12 10:55 Prepared: 10/23/12 09:20 Analyzed: 11/03/12 19:23

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31103 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	34.11	73.7	34 - 167	
Terphenyl-d14	46.30	38.77	83.7	34 - 167	
2,4,6-Tribromophenol	92.59	33.02	35.7	34 - 167	

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-05 File ID: 1016105.D

Sampled: 10/16/12 12:55 Prepared: 10/23/12 09:20 Analyzed: 11/03/12 19:51

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31103 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	28.63	61.8	34 - 167	
Terphenyl-d14	46.30	30.15	65.1	34 - 167	
2,4,6-Tribromophenol	92.59	31.92	34.5	34 - 167	

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-02 File ID: 1016102R.D

Sampled: 10/16/12 10:10 Prepared: 10/23/12 09:20 Analyzed: 11/06/12 22:55

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J23002 Sequence: 2K31210 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, Y, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene	0.0541	0.0463	0.185	0.370	IV
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	32.48	70.2	34 - 167	
Terphenyl-d14	46.30	38.57	83.3	34 - 167	
2,4,6-Tribromophenol	92.59	25.01	27.0	34 - 167	*X

ANALYSIS DATA SHEET

FB10161201

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-07 File ID: 023F2301.D

Sampled: 10/16/12 14:30 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 22:57

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane [2C]		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC [2C]		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC [2C]		0.00306	0.00926	0.0185	U
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane [2C]		0.00306	0.00926	0.0185	U
76-44-8	Heptachlor		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	UY

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3869	83.6	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3974	85.8	25 - 140	
Decachlorobiphenyl	0.4630	0.4335	93.6	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.4727	102	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

FB10161202

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-08 File ID: 024F2401.D

Sampled: 10/16/12 14:50 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 23:17

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC [2C]		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC [2C]		0.00306	0.00926	0.0185	U
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane [2C]		0.00306	0.00926	0.0185	U
76-44-8	Heptachlor [2C]		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	UY

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4324	93.4	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4357	94.1	25 - 140	
Decachlorobiphenyl	0.4630	0.2722	58.8	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.3091	66.8	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-04 File ID: 021F210I.D

Sampled: 10/16/12 10:55 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 22:19

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC [2C]		0.00306	0.00926	0.0185	U
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane [2C]	0.00474	0.00306	0.00926	0.0185	J
76-44-8	Heptachlor		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	UY

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4534	97.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4694	101	25 - 140	
Decachlorobiphenyl	0.4630	0.4130	89.2	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.4481	96.8	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-05 File ID: 022F2201.D

Sampled: 10/16/12 12:55 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 22:38

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC [2C]		0.00306	0.00926	0.0185	U
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane [2C]		0.00306	0.00926	0.0185	U
76-44-8	Heptachlor		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	UY

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4192	90.5	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4371	94.4	25 - 140	
Decachlorobiphenyl	0.4630	0.4015	86.7	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.4336	93.7	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-02	File ID:	020F2001.D
Sampled:	10/16/12 10:10	Prepared:	10/22/12 08:28	Analyzed:	10/27/12 22:00
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J22004	Sequence:	2K31022	Calibration:	2299003
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC [2C]		0.00306	0.00926	0.0185	U
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane		0.00306	0.00926	0.0185	U
76-44-8	Heptachlor		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	UY

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4194	90.6	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4369	94.4	25 - 140	
Decachlorobiphenyl	0.4630	0.3289	71.0	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.3563	77.0	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

FB10161201

Laboratory:	Empirical Laboratories, LLC			SDG:	1210161
Client:	Tetra Tech, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210161-07	File ID:	023F2301.D
Sampled:	10/16/12 14:30	Prepared:	10/22/12 08:28	Analyzed:	10/27/12 22:57
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J22004	Sequence:	2K31022	Calibration:	2299003
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3869	83.6	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3974	85.8	25 - 140	
Decachlorobiphenyl	0.4630	0.4335	93.6	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.4727	102	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

FB10161202

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-08 File ID: 024F2401.D

Sampled: 10/16/12 14:50 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 23:17

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4324	93.4	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4357	94.1	25 - 140	
Decachlorobiphenyl	0.4630	0.2722	58.8	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.3091	66.8	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-04 File ID: 021F2101.D

Sampled: 10/16/12 10:55 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 22:19

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4534	97.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4694	101	25 - 140	
Decachlorobiphenyl	0.4630	0.4130	89.2	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.4481	96.8	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-05 File ID: 022F2201.D

Sampled: 10/16/12 12:55 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 22:38

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4192	90.5	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4371	94.4	25 - 140	
Decachlorobiphenyl	0.4630	0.4015	86.7	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.4336	93.7	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210161-02 File ID: 020F2001.D

Sampled: 10/16/12 10:10 Prepared: 10/22/12 08:28 Analyzed: 10/27/12 22:00

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.4194	90.6	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.4369	94.4	25 - 140	
Decachlorobiphenyl	0.4630	0.3289	71.0	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.3563	77.0	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

FB10161201

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 14:30
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-07
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:32
7429-90-5	Aluminum		50.0	100	200	1	U	SW6010C	2J27917	10/29/12 20:27
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:27
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J27917	10/29/12 20:27
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J27917	10/29/12 20:27
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:27
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:27
7440-70-2	Calcium		1000	2000	5000	1	U	SW6010C	2J27917	10/29/12 20:27
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:27
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:27
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:27
7439-89-6	Iron		30.0	60.0	100	1	U	SW6010C	2J27917	10/29/12 20:27
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:27
7439-95-4	Magnesium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:27
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:27
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:27
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:27
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:27
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:27
7440-23-5	Sodium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:27
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 20:27
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:27
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 20:27

ANALYSIS DATA SHEET

FB10161202

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 14:50
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-08
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:33
7429-90-5	Aluminum		50.0	100	200	1	U	SW6010C	2J27917	10/29/12 20:31
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:31
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J27917	10/29/12 20:31
7440-39-3	Barium		5.00	10.0	40.0	1	U	SW6010C	2J27917	10/29/12 20:31
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:31
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:31
7440-70-2	Calcium		1000	2000	5000	1	U	SW6010C	2J27917	10/29/12 20:31
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:31
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:31
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:31
7439-89-6	Iron		30.0	60.0	100	1	U	SW6010C	2J27917	10/29/12 20:31
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:31
7439-95-4	Magnesium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:31
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:31
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:31
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:31
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:31
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:31
7440-23-5	Sodium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:31
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 20:31
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:31
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 20:31

ANALYSIS DATA SHEET

PEN-3221-02-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 10:55
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-04
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0 0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:29
7429-90-5	Aluminum	261	50.0	100	200	1		SW6010C	2J27917	10/29/12 20:18
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:18
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J27917	10/29/12 20:18
7440-39-3	Barium	6.87	5.00	10.0	40.0	1	I	SW6010C	2J27917	10/29/12 20:18
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:18
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:18
7440-70-2	Calcium	40900	1000	2000	5000	1		SW6010C	2J27917	10/29/12 20:18
7440-47-3	Chromium		2.00	4.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:18
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:18
7440-50-8	Copper		4.00	8.00	10 0	1	U	SW6010C	2J27917	10/29/12 20:18
7439-89-6	Iron	261	30.0	60.0	100	1		SW6010C	2J27917	10/29/12 20:18
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:18
7439-95-4	Magnesium	1360	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 20:18
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:18
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:18
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:18
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:18
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:18
7440-23-5	Sodium	7040	1000	3000	5000	1		SW6010C	2J27917	10/29/12 20:18
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 20:18
7440-62-2	Vanadium		5.00	10 0	12.5	1	U	SW6010C	2J27917	10/29/12 20:18
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 20:18

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 12:55
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-05
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:31
7429-90-5	Aluminum	400	50.0	100	200	1		SW6010C	2J27917	10/29/12 20:22
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:22
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J27917	10/29/12 20:22
7440-39-3	Barium	6.95	5.00	10.0	40.0	1	1	SW6010C	2J27917	10/29/12 20:22
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:22
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:22
7440-70-2	Calcium	36100	1000	2000	5000	1		SW6010C	2J27917	10/29/12 20:22
7440-47-3	Chromium	2.35	2.00	4.00	10.0	1	1	SW6010C	2J27917	10/29/12 20:22
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:22
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:22
7439-89-6	Iron	232	30.0	60.0	100	1		SW6010C	2J27917	10/29/12 20:22
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:22
7439-95-4	Magnesium	1610	1000	3000	5000	1	1	SW6010C	2J27917	10/29/12 20:22
7439-96-5	Manganese	4.72	3.00	6.00	15.0	1	1	SW6010C	2J27917	10/29/12 20:22
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:22
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:22
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:22
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:22
7440-23-5	Sodium	5440	1000	3000	5000	1		SW6010C	2J27917	10/29/12 20:22
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 20:22
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:22
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 20:22

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 10:10
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-02
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-97-6	Mercury		0.0800	0.160	0.200	1	U	SW7470A	2J30422	10/31/12 12:28
7429-90-5	Aluminum	2290	50.0	100	200	1		SW6010C	2J27917	10/29/12 20:13
7440-36-0	Antimony		5.00	8.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:13
7440-38-2	Arsenic		3.00	6.00	10.0	1	X U	SW6010C	2J27917	10/29/12 20:13
7440-39-3	Barium	5.23	5.00	10.0	40.0	1	I	SW6010C	2J27917	10/29/12 20:13
7440-41-7	Beryllium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:13
7440-43-9	Cadmium		1.00	2.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:13
7440-70-2	Calcium	33000	1000	2000	5000	1		SW6010C	2J27917	10/29/12 20:13
7440-47-3	Chromium	3.97	2.00	4.00	10.0	1	I	SW6010C	2J27917	10/29/12 20:13
7440-48-4	Cobalt		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:13
7440-50-8	Copper		4.00	8.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:13
7439-89-6	Iron	1020	30.0	60.0	100	1		SW6010C	2J27917	10/29/12 20:13
7439-92-1	Lead		1.50	3.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:13
7439-95-4	Magnesium	1360	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 20:13
7439-96-5	Manganese		3.00	6.00	15.0	1	U	SW6010C	2J27917	10/29/12 20:13
7440-02-0	Nickel		3.00	6.00	10.0	1	U	SW6010C	2J27917	10/29/12 20:13
7440-09-7	Potassium		1000	3000	5000	1	U	SW6010C	2J27917	10/29/12 20:13
7782-49-2	Selenium		3.00	5.00	5.00	1	U	SW6010C	2J27917	10/29/12 20:13
7440-22-4	Silver		1.00	2.00	3.00	1	U	SW6010C	2J27917	10/29/12 20:13
7440-23-5	Sodium	4930	1000	3000	5000	1	I	SW6010C	2J27917	10/29/12 20:13
7440-28-0	Thallium		3.00	4.00	8.00	1	U	SW6010C	2J27917	10/29/12 20:13
7440-62-2	Vanadium		5.00	10.0	12.5	1	U	SW6010C	2J27917	10/29/12 20:13
7440-66-6	Zinc		5.00	10.0	20.0	1	U	SW6010C	2J27917	10/29/12 20:13

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 12:55
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-06
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	34.8	30.0	60.0	100	1	I	SW6010C	2J24015	10/24/12 16:08
7439-96-5	Manganese (dissolved)		3.00	6.00	I5.0	1	U	SW6010C	2J24015	10/24/12 16:08

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 10:10
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-03
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)	60.4	30.0	60.0	100	1	I	SW6010C	2J24015	10/24/12 16:03
7439-96-5	Manganese (dissolved)		3.00	6.00	15.0	1	U	SW6010C	2J24015	10/24/12 16:03

ANALYSIS DATA SHEET

PEN-3221-03-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 12:55
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-05
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J18002	10/23/12 06:15
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J30322	10/30/12 10:56
16887-00-6	Chloride	7.80	0.170	0.330	0.500	1		SW9056	2J17025	10/17/12 23:11
14797-55-8	Nitrate as N	1.86	0.0330	0.100	0.250	1		SW9056	2J17025	10/17/12 23:11
471-34-1	Alkalinity, Total (as CACO3)	86.0	1.00	1.00	1.00	1		SM2320B	2J28919	10/28/12 09:54
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J17025	10/17/12 23:11
14808-79-8	Sulfate as SO4	10.5	0.330	1.00	2.50	1		SW9056	2J17025	10/17/12 23:11

ANALYSIS DATA SHEET

PEN-3221-10-10/12

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 10/16/12 10:10
% Solids: 0.00

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Laboratory ID: 1210161-02
Received: 10/17/12 08:10

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	2.00	1	U	SM5210B	2J18002	10/23/12 06:15
NA	Chemical Oxygen Demand		20.0	40.0	60.0	1	U	E410.4	2J30322	10/30/12 10:56
16887-00-6	Chloride	3.25	0.170	0.330	0.500	1		SW9056	2J17025	10/17/12 21:09
14797-55-8	Nitrate as N	0.502	0.0330	0.100	0.250	1		SW9056	2J17025	10/17/12 21:09
471-34-1	Alkalinity, Total (as CACO3)	85.2	1.00	1.00	1.00	1		SM2320B	2J28919	10/28/12 09:47
14797-65-0	Nitrite as N		0.0330	0.100	0.250	1	U	SW9056	2J17025	10/17/12 21:09
14808-79-8	Sulfate as SO4	2.28	0.330	1.00	2.50	1	I	SW9056	2J17025	10/17/12 21:09

Appendix C

Support Documentation

Sample Delivery Group Case Narrative

Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Two samples named FB10161201 were received but had different sample collection times. As per the client, the FB1061201 collected at 1450 should be FB10161202.

Changes to the Revision

This is an original submittal of the final report package.

Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following continuing calibration verifications exceeded criteria:
2J30303-CCV1 with a negative bias for Acetone and with a positive bias for Carbon Disulfide, Chloromethane, and Dichlorodifluoromethane

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA:
The following surrogates exceeded criteria:
2-Fluorophenol with a negative bias in 1210161-02, -04, -05, and -07
2,4,6-Tribromophenol with a negative bias in 1210161-02, -04, -05, and -07

The following continuing calibration verifications exceeded criteria:
2K31106-CCV1 with a positive bias for 4,6-Dinitro-2-methylphenol and 2,4-Dinitrophenol
2K31106-CCV2 with a positive bias for Caprolactam and 3,3'-Dichlorobenzidine

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA LOW:
Note –Sample 1210161-07 (FB10161201) reports concentrations for all analytes. These results are not repeated in the associated samples and are believed to be due to a mis-spike or cross contamination during extraction/concentration. Results are qualified with a "Z-01".

The following surrogates exceeded criteria:
2,4,6-Tribromophenol with a negative bias in 1210161-02 and -07

The following batch spikes exceeded criteria:
2J23002-BS2/BSD2 exceeded relative percent difference criteria for 1,4-Dioxane

The following blanks have reported results:
2J23002-BLK2 for Phenanthrene

The following continuing calibration verifications exceeded criteria:
2K31210-CCV1 with a negative bias for 1,4-Dioxane and a positive bias for 2,4,6-Tribromophenol

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8081A:
The following initial calibration verifications exceeded criteria:
2J28406-ICV2 with a negative bias on column 2 for Toxaphene

The following continuing calibration verifications exceeded criteria:
2K31022-CCV6 with a positive bias on both columns for 4,4'-DDD

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8082A:
No anomalies or deviations are noted.

SW6010C/SW7470A:
The following continuing calibration verifications exceeded criteria:
2J30316-CCV6 with a positive bias for Arsenic
2J30316-CCV7 with a positive bias for Arsenic

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:
No anomalies or deviations are noted.

Tetra Tech, Inc. 121061 CHAIN OF CUSTODY | NUMBER No. 0042 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G00784	Site 44 NAS Pensacola	Gary Walker	850-385-9899	Empirical Labs % Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Igoe	PHONE NUMBER: 850-322-8033	ADDRESS: 621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER: 8003 2540 7547		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2012)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: PCE, TCE, cis DCE, VC	TCL VOCs	TCL Pest / PCBs	TCL SVOCs w/LL PAHs	TAL metals w/Hg	300 + ALK	Dissolved Fe, Mn	COD	Alkalinity	COMMENTS
									G	HCl										
									G	HCl										
									G	Ice										
									G	Ice										
									P	HNO3										
									P	Ice										
									P	H2SO4										
									P	HNO3										
									P	Ice										
10/16/12	0824	PEN-3221-05-10/12				GW	G	3	3											-01
	1010	PEN-322-1-10-10/12						11		3	1	2	1	1	1	1/1				-02/03
	1055	PEN-3221-02-10/12						14		3	1	2	1	+	+	+/+				no 04 Parameters -04
	1155	PEN-3221-03-10/12						11		3	1	2	1	1	1	1/1				-05/06
	1430	FB101612O1				DI	G	7		3	1	2	1							-07
	1450	FB101612O1						10	3	3	1	2	1							-08

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/16/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	10/17/12	0827 0810 10/18/12

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/17/12 @ 0810 Workorder# 1210161

1. Tracking # 0832 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 2.6 °C + *correction factor (+ 0.2)* = 2.8 °C

3. If item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES (NO)...NA

4. Were custody seals on outside of cooler? (YES)...NO...NA

   If yes, how many and where: 1-FRONT

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) BW

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? (YES)...NO...NA

    b. Was there any observable headspace present in any VOA vial? YES...(NO)...NA

14. Was there a Trip Blank in this cooler? YES...(NO)...NA If multiple coolers, sequence # 1

I certify that I unloaded the cooler and answered questions 7-14 (initial) BW

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES (NO)...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) BW

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) BW

I certify that I attached a label with the unique LIMS number to each container (initial) BW

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES (NO) Was a NCR generated? YES (NO)...#_____

Additional Details:

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/17/12 @ 0810 Workorder# 1210161

1. Tracking # 7547 (last 4 digits, FedEx)

   Courier: FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.2 °C + *correction factor (+ 0.2)* = 3.4 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

   If yes, how many and where: —

5. Were the seals intact, signed, and dated correctly? YES NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) _____

7. Were custody seals on containers: YES NO and Intact YES NO NA

   Were these signed and dated correctly? YES NO NA

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13. a. Were VOA vials received? YES NO NA

    b. Was there any observable headspace present in any VOA vial? YES NO NA

14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # 2

I certify that I unloaded the cooler and answered questions 7-14 (initial) _____

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA

    b. Did the bottle labels indicate that the correct preservatives were used YES NO NA

16. Was residual chlorine present? YES NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) _____

I certify that I attached a label with the unique LIMS number to each container (initial) _____

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES NO Was a NCR generated? YES NO ...#_____

Additional Details:

Brian Richard

From: Igoe, Amber [Amber.Igoe@tetratech.com]
Sent: Friday, October 19, 2012 10:01 AM
To: brichard@empirlabs.com
Subject: RE: SRC for NAS Pensacola Site 44 rec'd 10/17

Hi Brian,
The blank collected at 1450 should be FB10161202 and a seperate blank from FB10161201.

Thanks,
Amber

Amber Igoe | **Environmental Scientist II**
Direct: 850.385.9866 ext 1352| Fax: 850.385.9860
Amber.igoe@tetratech.com

Tetra Tech
1558 Village Square Boulevard | Tallahassee, FL 32309 | www.tetratech.com

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From: Brian Richard [brichard@empirlabs.com]
Sent: Friday, October 19, 2012 9:47 AM
To: Walker, Gerry; Good, Vanessa
Cc: Igoe, Amber
Subject: SRC for NAS Pensacola Site 44 rec'd 10/17

Hey Amber,
This chain has two Field Blanks(FB10161201) that are named the exact same way...should they be different?
Thanks,
Brian

Brian Richard
Project Manager
Empirical Laboratories, LLC
"Your National Small Business Partner"
621 Mainstream Drive, Suite 270 I Nashville, TN 37228 I Website I Map & Directions
Main: 615.345.1115 ext. 249 I Toll free: 877.345.1113 I Fax: 866.417.0548

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HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-05-10/12	10/16/12 08:24	10/17/12 08:10	10/26/12 03:49	N/A	14.00	10/26/12 03:49	9.81	14.00	
PEN-3221-10-10/12	10/16/12 10:10	10/17/12 08:10	10/26/12 04:17	N/A	14.00	10/26/12 04:17	9.75	14.00	
PEN-3221-02-10/12	10/16/12 10:55	10/17/12 08:10	10/26/12 04:45	N/A	14.00	10/26/12 04:45	9.74	14.00	
PEN-3221-03-10/12	10/16/12 12:55	10/17/12 08:10	10/26/12 05:12	N/A	14.00	10/26/12 05:12	9.68	14.00	
FB10161201	10/16/12 14:30	10/17/12 08:10	10/26/12 00:08	N/A	14.00	10/26/12 00:08	9.40	14.00	
FB10161202	10/16/12 14:50	10/17/12 08:10	10/26/12 00:36	N/A	14.00	10/26/12 00:36	9.41	14.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-10-10/12	10/16/12 10:10	10/17/12 08:10	10/23/12 09:20	6.97	7.00	11/03/12 19:26	11.42	40.00	
PEN-3221-02-10/12	10/16/12 10:55	10/17/12 08:10	10/23/12 09:20	6.93	7.00	11/03/12 19:54	11.44	40.00	
PEN-3221-03-10/12	10/16/12 12:55	10/17/12 08:10	10/23/12 09:20	6.85	7.00	11/03/12 20:22	11.46	40.00	
FB10161201	10/16/12 14:30	10/17/12 08:10	10/23/12 09:20	6.78	7.00	11/03/12 20:49	11.48	40.00	
FB10161202	10/16/12 14:50	10/17/12 08:10	10/23/12 09:20	6.77	7.00	11/03/12 21:17	11.50	40.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-10-10/12	10/16/12 10:10	10/17/12 08:10	10/23/12 09:20	6.97	7.00	11/06/12 22:55	14.57	40.00	
PEN-3221-02-10/12	10/16/12 10:55	10/17/12 08:10	10/23/12 09:20	6.93	7.00	11/03/12 19:23	11.42	40.00	
PEN-3221-03-10/12	10/16/12 12:55	10/17/12 08:10	10/23/12 09:20	6.85	7.00	11/03/12 19:51	11.44	40.00	
FB10161201	10/16/12 14:30	10/17/12 08:10	10/23/12 09:20	6.78	7.00	11/03/12 20:19	11.46	40.00	
FB10161202	10/16/12 14:50	10/17/12 08:10	10/23/12 09:20	6.77	7.00	11/03/12 20:47	11.48	40.00	

HOLDING TIME SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-10-10/12	10/16/12 10:10	10/17/12 08:10	10/22/12 08:28	5.93	7.00	10/27/12 22:00	5.56	40.00	
PEN-3221-02-10/12	10/16/12 10:55	10/17/12 08:10	10/22/12 08:28	5.90	7.00	10/27/12 22:19	5.58	40.00	
PEN-3221-03-10/12	10/16/12 12:55	10/17/12 08:10	10/22/12 08:28	5.81	7.00	10/27/12 22:38	5.59	40.00	
FB10161201	10/16/12 14:30	10/17/12 08:10	10/22/12 08:28	5.75	7.00	10/27/12 22:57	5.60	40.00	
FB10161202	10/16/12 14:50	10/17/12 08:10	10/22/12 08:28	5.73	7.00	10/27/12 23:17	5.62	40.00	

HOLDING TIME SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-3221-10-10/12	10/16/12 10:10	10/17/12 08:10	10/22/12 08:28	5.93	7.00	10/27/12 22:00	5.56	40.00	
PEN-3221-02-10/12	10/16/12 10:55	10/17/12 08:10	10/22/12 08:28	5.90	7.00	10/27/12 22:19	5.58	40.00	
PEN-3221-03-10/12	10/16/12 12:55	10/17/12 08:10	10/22/12 08:28	5.81	7.00	10/27/12 22:38	5.59	40.00	
FB10161201	10/16/12 14:30	10/17/12 08:10	10/22/12 08:28	5.75	7.00	10/27/12 22:57	5.60	40.00	
FB10161202	10/16/12 14:50	10/17/12 08:10	10/22/12 08:28	5.73	7.00	10/27/12 23:17	5.62	40.00	

HOLDTIME

SDG 1210161

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/30/2012	10/31/2012	14	1	15
HG	UG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/30/2012	10/31/2012	14	1	15
HG	UG/L	PEN-3221-02-10/12	1210161-04	NM	10/16/2012	10/30/2012	10/31/2012	14	1	15
HG	UG/L	FB10161202	1210161-08	NM	10/16/2012	10/30/2012	10/31/2012	14	1	15
HG	UG/L	FB10161201	1210161-07	NM	10/16/2012	10/30/2012	10/31/2012	14	1	15
M	UG/L	FB10161202	1210161-08	NM	10/16/2012	10/27/2012	10/29/2012	11	2	13
M	UG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/27/2012	10/29/2012	11	2	13
M	UG/L	FB10161201	1210161-07	NM	10/16/2012	10/27/2012	10/29/2012	11	2	13
M	UG/L	PEN-3221-02-10/12	1210161-04	NM	10/16/2012	10/27/2012	10/29/2012	11	2	13
M	UG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/27/2012	10/29/2012	11	2	13
MF	UG/L	PEN-3221-03-10/12	1210161-06	NM	10/16/2012	10/24/2012	10/24/2012	8	0	8
MF	UG/L	PEN-3221-10-10/12	1210161-03	NM	10/16/2012	10/24/2012	10/24/2012	8	0	8
ALK	MG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/28/2012	10/28/2012	12	0	12
ALK	MG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/28/2012	10/28/2012	12	0	12
BOD	MG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/18/2012	10/23/2012	2	5	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
BOD	MG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/18/2012	10/23/2012	2	5	7
CL	MG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
CL	MG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
COD	MG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/30/2012	10/30/2012	14	0	14
COD	MG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/30/2012	10/30/2012	14	0	14
NTA	MG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
NTA	MG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
NTI	MG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
NTI	MG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
SO4	MG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
SO4	MG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
OS	UG/L	PEN-3221-02-10/12	1210161-04	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
OS	UG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
OS	UG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
OS	UG/L	FB10161201	1210161-07	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
OS	UG/L	FB10161202	1210161-08	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
OV	UG/L	FB10161201	1210161-07	NM	10/16/2012	10/26/2012	10/26/2012	10	0	10
OV	UG/L	FB10161202	1210161-08	NM	10/16/2012	10/26/2012	10/26/2012	10	0	10

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	PEN-3221-02-10/12	1210161-04	NM	10/16/2012	10/26/2012	10/26/2012	10	0	10
OV	UG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/26/2012	10/26/2012	10	0	10
OV	UG/L	PEN-3221-05-10/12	1210161-01	NM	10/16/2012	10/26/2012	10/26/2012	10	0	10
OV	UG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/26/2012	10/26/2012	10	0	10
PAH	UG/L	PEN-3221-02-10/12	1210161-04	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
PAH	UG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
PAH	UG/L	FB10161202	1210161-08	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
PAH	UG/L	FB10161201	1210161-07	NM	10/16/2012	10/23/2012	11/3/2012	7	11	18
PAH	UG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/23/2012	11/6/2012	7	14	21
PCB	UG/L	FB10161201	1210161-07	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PCB	UG/L	FB10161202	1210161-08	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PCB	UG/L	PEN-3221-02-10/12	1210161-04	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PCB	UG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PCB	UG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PEST	UG/L	FB10161201	1210161-07	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PEST	UG/L	FB10161202	1210161-08	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PEST	UG/L	PEN-3221-02-10/12	1210161-04	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11
PEST	UG/L	PEN-3221-03-10/12	1210161-05	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PEST	UG/L	PEN-3221-10-10/12	1210161-02	NM	10/16/2012	10/22/2012	10/27/2012	6	5	11

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29101	Instrument:	MS-VOA5
Calibration:	2291001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29101-TUN1	1012TUN2.D	10/12/12 14:29
Cal Standard	2J29101-CAL1	1012CAL1.D	10/12/12 15:24
Cal Standard	2J29101-CAL2	1012CAL2.D	10/12/12 15:52
Cal Standard	2J29101-CAL3	1012CAL3.D	10/12/12 16:20
Cal Standard	2J29101-CAL4	1012CAL4.D	10/12/12 16:48
Cal Standard	2J29101-CAL5	1012CAL5.D	10/12/12 17:15
Cal Standard	2J29101-CAL6	1012CAL6.D	10/12/12 17:43
Cal Standard	2J29101-CAL7	1012CAL7.D	10/12/12 18:11
Cal Standard	2J29101-CAL8	1012CAL8.D	10/12/12 18:38
Cal Standard	2J29101-CAL9	1012CAL9.D	10/12/12 19:06
Initial Cal Check	2J29101-ICV2	1012ICV2.D	10/12/12 20:29
MS Tune	2J29101-TUN2	1012TUN3.D	10/16/12 13:45
Initial Cal Check	2J29101-ICV3	1012ICV3.D	10/16/12 14:13

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1012TUN2.D	Injection Date:	10/12/12
Instrument ID:	MS-VOA5	Injection Time:	14:29
Sequence:	2J29101	Lab Sample ID:	2J29101-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.6	PASS
75	30 - 60% of 95	50.8	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.98	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	75.5	PASS
175	5 - 9% of 174	7.42	PASS
176	95 - 101% of 174	95.6	PASS
177	5 - 9% of 176	6.6	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1012TUN3.D	Injection Date:	10/16/12
Instrument ID:	MS-VOA5	Injection Time:	13:45
Sequence:	2J29101	Lab Sample ID:	2J29101-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.7	PASS
75	30 - 60% of 95	49.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.69	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.7	PASS
175	5 - 9% of 174	7.11	PASS
176	95 - 101% of 174	97.4	PASS
177	5 - 9% of 176	6.57	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.1308263	7.169947	3.421429	0.1107739			15	
Acrolein	3.293869E-02	13.03005	3.321111	0.1019839			15	
Acrylonitrile	0.1050587	2.955386	4.224444	0.1237894			15	
Benzene	0.9492909	8.620587	7.344444	7.245944E-02			15	
Bromobenzene	0.9753776	12.01047	12.10889	0.0144915			15	
Bromochloromethane	0.1703055	4.507879	6.424444	8.158399E-02			15	
Tert-Amyl Methyl Ether	0.6946744	6.768849	7.543333	6.727492E-02			15	
Bromodichloromethane	0.3668169	6.534773	8.341111	4.022106E-02			15	
Bromoform	0.505661	17.59172	11.51143	2.797771E-02		0.9999593 ✓	SPCC (0.1)	
Bromomethane	0.2263207	11.54685	2.575555	0.2053272			15	
Bromofluorobenzene	0.9353573	4.777822	11.95	2.025372E-02			15	
n-Butylbenzene	1.316239	12.26201	13.54556	4.202676E-02			15	
2-Butanone	0.1900461	6.781548	5.87	1.747658E-02			15	
sec-Butylbenzene	2.066344	7.876697	13.00556	3.835336E-02			15	
tert-Butylbenzene	1.705204	6.245025	12.77111	2.030234E-02			15	
Carbon disulfide	0.6412047	4.171366	4.406667	0.1140858			15	
Carbon tetrachloride	0.3465177	8.348462	7.311111	8.229499E-02			15	
Chlorobenzene	1.561071	6.428212	10.79111	3.598659E-02			SPCC (0.3)	
Chloroethane	0.1885512	6.604544	2.696667	0.1857631			15	
Chloroform	0.524999	12.60127	6.401111	5.547756E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1771786	8.444776	8.712222	4.758714E-02			15	
Chloromethane	0.3854947	13.93974	2.037778	0.2150863			SPCC (0.1)	
1-Chlorohexane	0.8007468	8.500716	10.7675	4.454654E-02			15	
2-Chlorotoluene	2.094181	14.4823	12.33444	4.387552E-02			15	
4-Chlorotoluene	2.218103	10.33822	12.39444	4.712388E-02			15	
Cyclohexane	0.4069526	6.67736	7.241111	4.219525E-02			15	
Dibromochloromethane	0.7653683	9.53649	10.02	1.919963E-02			15	
1,2-Dibromo-3-chloropropane	0.1457781	10.28602	14.13889	1.933973E-02			15	
1,2-Dibromoethane (EDB)	0.6953223	7.645976	10.23444	5.380092E-02			15	
Dibromomethane	0.2156063	6.867565	8.275556	6.274539E-02			15	
1,2-Dichlorobenzene	1.322429	9.319326	13.49556	3.668195E-02			15	
1,3-Dichlorobenzene	1.422392	9.765556	13.08889	4.337518E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.504713	8.327264	13.18111	4.258517E-02			15	
Dichlorodifluoromethane	0.2651001	9.859331	1.845556	0.2856368			15	
1,1-Dichloroethane	0.5476241	4.780995	5.418889	5.933679E-02			SPCC (0.1)	
1,2-Dichloroethane	0.4528864	7.432713	7.172222	6.209681E-02			15	
1,1-Dichloroethene	0.219995	5.502211	3.871111	0.1550187			CCC (20)	
cis-1,2-Dichloroethene	0.299601	7.424506	6.144444	8.827927E-02			15	
trans-1,2-Dichloroethene	0.2718737	8.657721	5.04	9.962629E-02			15	
1,2-Dichloroethene (total)	0.2857373	7.486324	6.144444	8.827927E-02			15	
1,2-Dichloropropane	0.3128379	7.734725	8.164444	6.216083E-02			CCC (20)	
1,3-Dichloropropane	1.028184	5.028358	9.767778	6.969679E-02			15	
2,2-Dichloropropane	0.3982799	8.171856	6.252222	7.058938E-02			15	
1,1-Dichloropropene	0.3717116	5.417463	7.192222	6.275141E-02			15	
cis-1,3-Dichloropropene	0.4546126	6.453357	8.923333	5.284769E-02			15	
trans-1,3-Dichloropropene	0.9878761	7.795565	9.402222	4.663104E-02			15	
Diisopropyl Ether	1.371923	11.15829	5.802222	7.784852E-02			15	
Ethylbenzene	2.62125	10.36353	10.94444	4.993597E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.9841015	7.438849	6.275556	8.592307E-02			15	
Ethyl Methacrylate	0.8331089	7.325389	9.6	4.887049E-02			15	
Hexachlorobutadiene	0.2519403	14.9377	15.49778	2.865142E-02			15	
2-Hexanone	0.64531	14.68557	9.708889	6.396247E-02			15	
Iodomethane	0.4141218	9.941711	4.062222	0.1064841			15	
Isopropylbenzene	2.060659	6.880268	11.84444	4.914158E-02			15	
p-Isopropyltoluene	1.585513	6.678641	13.14444	0.0373946			15	
Methylene chloride	0.3058374	7.270345	4.355556	0.121083			15	
Methyl Acetate	0.2709814	5.229151	4.21	0.1259766			15	
Methylcyclohexane	0.2757224	4.97078	8.495555	6.049599E-02			15	
Naphthalene	0.8628979	13.76505	15.36	1.759729E-02			15	
Methyl Methacrylate	0.3369681	10.31889	8.306667	5.808503E-02			15	
4-Methyl-2-pentanone	0.3461514	10.63507	8.851111	0.0427818			15	
Methyl t-Butyl Ether	0.6443611	5.590097	5.03	1.761348E-02			15	
n-Propylbenzene	2.867866	13.93909	12.25333	3.966289E-02			15	
Styrene	1.57265	7.853373	11.41889	2.195589E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.891879	12.88279	11.76778	5.755305E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.6412186	6.505399	10.83444	4.503166E-02			15	
tert-Butyl alcohol	2.145603E-02	9.323035	3.998889	8.342015E-02			15	
Tetrachloroethene	0.7104583	4.599011	10.13333	5.271432E-02			15	
Toluene	1.442954	5.337669	9.4	4.407662E-03			CCC (20)	
1,2,3-Trichlorobenzene	0.4083448	11.43467	15.64778	2.504416E-02			15	
1,2,4-Trichlorobenzene	0.4983989	11.29925	15.21222	2.863628E-02			15	
1,1,2-Trichloroethane	0.5170842	7.469048	9.554445	5.725395E-02			15	
1,1,1-Trichloroethane	0.4192187	4.558507	6.966667	7.320109E-02			15	
Tetrahydrofuran	0.0249648	16.34235	6.61	0.0180108	0.9995332 ✓		0.995	
Trichloroethene	0.2944908	6.692227	8.115555	6.266205E-02			15	
Trichlorofluoromethane	0.4689858	5.793276	3.15	0.1588719			15	
1,2,3-Trichloropropane	0.1991037	7.060199	11.89111	0.0147569			15	
1,3,5-Trimethylbenzene	2.039265	8.795024	12.43333	4.248275E-02			15	
1,2,4-Trimethylbenzene	1.766581	7.92246	12.80222	4.014229E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2264658	3.944156	3.947778	0.2110514			15	
Vinyl chloride	0.2359945	23.03148	2.175714	0.2462423	0.9988621 ✓		CCC (20)	*
m,p-Xylene	1.813543	13.97709	11.05778	5.889907E-02			15	
o-Xylene	1.905321	7.777756	11.44778	3.791632E-02			15	
Vinyl acetate	0.8911488	11.32924	5.49875	6.399563E-02			15	
Xylenes (total)	1.844136	11.38244	11.44778	3.791632E-02			15	
Dibromofluoromethane	0.3431068	1.223972	6.572222	6.593489E-02			15	
1,2-Dichloroethane-d4	6.230074E-02	1.652363	7.081111	4.893599E-02			15	
Toluene-d8	2.274744	4.528986	9.322222	4.878895E-02			15	
tert-Amyl alcohol	1.753356E-02	4.883647	6.7775	6.889731E-02			15	
tert-Amyl ethyl ether	0.790677	7.256792	8.443333	5.558737E-02			15	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30303	Instrument:	MS-VOA5
Calibration:	2291001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J30303-TUN1	1025TUNE.D	10/25/12 19:32
Calibration Check	2J30303-CCV1	1025CCVE.D	10/25/12 19:59
LCS	2J25004-BS1	1025LCSE.D	10/25/12 20:27
Blank	2J25004-BLK1	1025BLKE.D	10/25/12 21:50
FB10161201	1210161-07	1016107.D	10/26/12 00:08
FB10161202	1210161-08	1016108.D	10/26/12 00:36
PEN-3221-05-10/12	1210161-01	1016101.D	10/26/12 03:49
PEN-3221-10-10/12	1210161-02	1016102.D	10/26/12 04:17
PEN-3221-02-10/12	1210161-04	1016104.D	10/26/12 04:45
PEN-3221-03-10/12	1210161-05	1016105.D	10/26/12 05:12
LCS Dup	2J25004-BSD1	1025LCDE.D	10/26/12 06:35

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1025TUNE.D	Injection Date:	10/25/12
Instrument ID:	MS-VOA5	Injection Time:	19:32
Sequence:	2J30303	Lab Sample ID:	2J30303-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.6	PASS
75	30 - 60% of 95	49	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.99	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	81.6	PASS
175	5 - 9% of 174	7.58	PASS
176	95 - 101% of 174	97.8	PASS
177	5 - 9% of 176	6.71	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA5	Calibration:	2291001
Lab File ID:	1025CCVE.D	Calibration Date:	10/12/12 03:24
Sequence:	2J30303	Injection Date:	10/25/12
Lab Sample ID:	2J30303-CCV1	Injection Time:	19:59

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100.0	70.92	0.1308263	9.278077E-02		-29.1	20	*
Benzene	A	50.00	50.66	0.9492909	0.9617995		1.3	20	
Bromochloromethane	A	50.00	51.18	0.1703055	0.1743259		2.4	20	
Bromodichloromethane	A	50.00	54.12	0.3668169	0.3970421		8.2	20	
Bromoform	Q	50.00	46.36	0.505661	0.545853	0.1	-7.3	20	
Bromomethane	A	50.00	47.64	0.2263207	0.215644		-4.7	20	
2-Butanone	A	100.0	88.41	0.1900461	0.1680119		-11.6	20	
Carbon disulfide	A	50.00	64.05	0.6412047	0.8214269		28.1	20	*
Carbon tetrachloride	A	50.00	43.48	0.3465177	0.3013059		-13.0	20	
Chlorobenzene	A	50.00	52.78	1.561071	1.647905	0.3	5.6	20	
Chloroethane	A	50.00	53.18	0.1885512	0.2005456		6.4	20	
Chloroform	A	50.00	48.67	0.524999	0.5110252		-2.7	20	
Chloromethane	A	50.00	61.02	0.3854947	0.4704779	0.1	22.0	20	*
Cyclohexane	A	50.00	51.09	0.4069526	0.4158517		2.2	20	
Dibromochloromethane	A	50.00	53.82	0.7653683	0.8238353		7.6	20	
1,2-Dibromo-3-chloropropane	A	50.00	51.38	0.1457781	0.1497879		2.8	20	
1,2-Dibromoethane (EDB)	A	50.00	49.90	0.6953223	0.6938875		-0.2	20	
1,2-Dichlorobenzene	A	50.00	50.17	1.322429	1.326879		0.3	20	
1,3-Dichlorobenzene	A	50.00	49.90	1.422392	1.419654		-0.2	20	
1,4-Dichlorobenzene	A	50.00	47.17	1.504713	1.419427		-5.7	20	
Dichlorodifluoromethane	A	50.00	64.24	0.2651001	0.340602		28.5	20	*
1,1-Dichloroethane	A	50.00	50.16	0.5476241	0.5493838	0.1	0.3	20	
1,2-Dichloroethane	A	50.00	49.12	0.4528864	0.4449483		-1.8	20	
1,1-Dichloroethene	A	50.00	54.89	0.219995	0.2415316		9.8	20	
cis-1,2-Dichloroethene	A	50.00	49.58	0.299601	0.2970684		-0.8	20	
trans-1,2-Dichloroethene	A	50.00	50.29	0.2718737	0.273449		0.6	20	
1,2-Dichloropropane	A	50.00	49.60	0.3128379	0.3103215		-0.8	20	
cis-1,3-Dichloropropene	A	50.00	46.28	0.4546126	0.4208197		-7.4	20	
trans-1,3-Dichloropropene	A	50.00	53.24	0.9878761	1.051874		6.5	20	

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA5	Calibration:	2291001
Lab File ID:	1025CCVE.D	Calibration Date:	10/12/12 03:24
Sequence:	2J30303	Injection Date:	10/25/12
Lab Sample ID:	2J30303-CCV1	Injection Time:	19:59

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Ethylbenzene	A	50.00	50.55	2.62125	2.650185		1.1	20
2-Hexanone	A	100.0	88.07	0.64531	0.5683044		-11.9	20
Isopropylbenzene	A	50.00	50.87	2.060659	2.096689		1.7	20
Methylene chloride	A	50.00	49.32	0.3058374	0.301707		-1.4	20
Methyl Acetate	A	50.00	52.26	0.2709814	0.2832368		4.5	20
Methylcyclohexane	A	50.00	49.28	0.2757224	0.2717485		-1.4	20
4-Methyl-2-pentanone	A	100.0	94.27	0.3461514	0.3263232		-5.7	20
Methyl t-Butyl Ether	A	50.00	51.64	0.6443611	0.6654925		3.3	20
Styrene	A	50.00	53.69	1.57265	1.688688		7.4	20
1,1,2,2-Tetrachloroethane	A	50.00	48.48	0.891879	0.8646867	0.3	-3.0	20
Tetrachloroethene	A	50.00	45.70	0.7104583	0.6493657		-8.6	20
Toluene	A	50.00	50.53	1.442954	1.458194		1.1	20
1,2,3-Trichlorobenzene	A	50.00	52.32	0.4083448	0.4272663		4.6	20
1,2,4-Trichlorobenzene	A	50.00	51.91	0.4983989	0.5174653		3.8	20
1,1,2-Trichloroethane	A	50.00	50.68	0.5170842	0.524065		1.4	20
1,1,1-Trichloroethane	A	50.00	46.07	0.4192187	0.3862544		-7.9	20
Trichloroethene	A	50.00	46.62	0.2944908	0.2745619		-6.8	20
Trichlorofluoromethane	A	50.00	46.53	0.4689858	0.4364645		-6.9	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	50.00	53.28	0.2264658	0.2413231		6.6	20
Vinyl chloride	L	50.00	56.80	0.2359945	0.2231424		13.6	20
m,p-Xylene	A	100.0	107.8	1.813543	1.95535		7.8	20
o-Xylene	A	50.00	57.28	1.905321	2.182697		14.6	20
Xylenes (total)	A	150.0	165.1	1.844136	2.031132		10.1	20
Bromofluorobenzene	A	30.00	29.88	0.9353573	0.9316774		-0.4	20
Dibromofluoromethane	A	30.00	30.26	0.3431068	0.3461265		0.9	20
1,2-Dichloroethane-d4	A	30.00	30.05	6.230074E-02	6.239908E-02		0.2	20
Toluene-d8	A	30.00	29.44	2.274744	2.23257		-1.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J25004 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-05-10/12	1210161-01	10/26/12 03:49	5.00	5.00
PEN-3221-10-10/12	1210161-02	10/26/12 04:17	5.00	5.00
PEN-3221-02-10/12	1210161-04	10/26/12 04:45	5.00	5.00
PEN-3221-03-10/12	1210161-05	10/26/12 05:12	5.00	5.00
FB10161201	1210161-07	10/26/12 00:08	5.00	5.00
FB10161202	1210161-08	10/26/12 00:36	5.00	5.00
Blank	2J25004-BLK1	10/25/12 21:50	5.00	5.00
LCS	2J25004-BS1	10/25/12 20:27	5.00	5.00
LCS Dup	2J25004-BSD1	10/26/12 06:35	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J25004-BLK1 File ID: 1025BLKE.D

Sampled: Prepared: Analyzed: 10/25/12 21:50

Solids: Preparation: 5030B Dilution:

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J25004-BLK1 File ID: 1025BLKE.D

Sampled: Prepared: Analyzed: 10/25/12 21:50

Solids: Preparation: 5030B Dilution:

Batch: 2J25004 Sequence: 2J30303 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.01	93.4	75 - 120	I
Dibromofluoromethane	30.00	30.74	102	85 - 115	
1,2-Dichloroethane-d4	30.00	30.85	103	70 - 120	
Toluene-d8	30.00	29.02	96.7	85 - 120	I

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I25803	Instrument:	MS-BNA3
Calibration:	2261001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I25803-TUN1	SEQ-TUN1.D	09/11/12 10:14
Cal Standard	2I25803-CAL1	SEQ-CAL1.D	09/11/12 10:38
Cal Standard	2I25803-CAL2	SEQ-CAL2.D	09/11/12 11:06
Cal Standard	2I25803-CAL3	SEQ-CAL3.D	09/11/12 11:34
Cal Standard	2I25803-CAL4	SEQ-CAL4.D	09/11/12 12:03
Cal Standard	2I25803-CAL5	SEQ-CAL5.D	09/11/12 12:31
Cal Standard	2I25803-CAL6	SEQ-CAL6.D	09/11/12 12:59
Cal Standard	2I25803-CAL7	SEQ-CAL7.D	09/11/12 13:27
Cal Standard	2I25803-CAL8	SEQ-CAL8.D	09/11/12 13:55
Cal Standard	2I25803-CAL9	SEQ-CAL9.D	09/11/12 14:23
Cal Standard	2I25803-CALA	SEQ-CALA.D	09/11/12 14:51
Cal Standard	2I25803-CALB	SEQ-CALB.D	09/11/12 15:20
Cal Standard	2I25803-CALC	SEQ-CALC.D	09/11/12 15:48
Cal Standard	2I25803-CALD	SEQ-CALD.D	09/11/12 16:16
Cal Standard	2I25803-CALE	SEQ-CALE.D	09/11/12 16:44
Cal Standard	2I25803-CALF	SEQ-CALF.D	09/11/12 17:11
Cal Standard	2I25803-CALG	SEQ-CALG.D	09/11/12 17:40
Initial Cal Check	2I25803-ICV1	SEQ-ICV1.D	09/11/12 18:08
Initial Cal Check	2I25803-ICV2	SEQ-ICV2.D	09/11/12 18:36
MS Tune	2I25803-TUN2	SEQ-TUN2.D	09/12/12 15:25
Initial Cal Check	2I25803-ICV3	SEQ-ICV3.D	09/12/12 15:49

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/11/12
Instrument ID:	MS-BNA3	Injection Time:	10:14
Sequence:	2I25803	Lab Sample ID:	2I25803-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	39.9	PASS
68	Less than 2% of 69	0.427	PASS
69	Less than 200% of 198	45	PASS
70	Less than 2% of 69	0.427	PASS
127	40 - 60% of 198	48.7	PASS
197	Less than 1% of 198	0.112	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.32	PASS
275	10 - 30% of 198	23.4	PASS
365	1 - 200% of 198	2.18	PASS
441	0.001 - 100% of 443	80	PASS
442	40 - 200% of 198	79.1	PASS
443	17 - 23% of 442	18.8	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/12/12
Instrument ID:	MS-BNA3	Injection Time:	15:25
Sequence:	2I25803	Lab Sample ID:	2I25803-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	38.9	PASS
68	Less than 2% of 69	1.04	PASS
69	Less than 200% of 198	42.9	PASS
70	Less than 2% of 69	0.427	PASS
127	40 - 60% of 198	48.8	PASS
197	Less than 1% of 198	0.0543	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.99	PASS
275	10 - 30% of 198	22.3	PASS
365	1 - 200% of 198	2.57	PASS
441	0.001 - 100% of 443	68.9	PASS
442	40 - 200% of 198	78.2	PASS
443	17 - 23% of 442	20.5	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2261001	Instrument:	MS-BNA3
Matrix:	Water	Calibration Dates:	9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.10566	8.941982	9.541375	5.759679E-02			CCC (20)	
Acenaphthylene	1.65984	11.47408	9.309875	5.149462E-02			CCC (20)	
Acetophenone	1.761778	4.548734	6.15075	0.029436			CCC (20)	
Aniline	1.975584	6.156998	5.21875	8.840861E-03			CCC (20)	
Anthracene	1.081887	12.14042	11.38375	4.965419E-02			CCC (20)	
Atrazine	0.2286444	3.743847	11.014	2.800227E-02			CCC (20)	
Benzaldehyde	0.9974323	8.489099	5.032875	0.0350803			CCC (20)	
Benzidine	0.650866	4.862256	12.96125	7.03444E-03			CCC (20)	
Benzo(a)anthracene	1.096178	5.859442	14.68275	0.0361667			CCC (20)	
Benzo(a)pyrene	1.020199	5.91785	16.89375	4.367248E-02			CCC (20)	
Benzo(b)fluoranthene	1.062636	8.32804	16.3765	4.687998E-02			CCC (20)	
Benzo(g,h,i)perylene	0.9945587	5.662765	19.13462	6.322926E-02			CCC (20)	
Benzoic acid	0.2585828	19.18735	7.002875	0.5416775	0.9968332		CCC (20)	
Benzo(k)fluoranthene	1.300594	10.47456	16.41512	4.428847E-02			CCC (20)	
Benzyl alcohol	0.8350847	3.232369	5.801	8.006347E-02			CCC (20)	
1,1-Biphenyl	1.358172	8.14203	8.777	3.752441E-02			CCC (20)	
4-Bromophenyl-phenylether	0.2362641	2.694889	10.759	4.506461E-02			CCC (20)	
Butylbenzylphthalate	0.5337897	6.795952	13.95313	1.982893E-02			CCC (20)	
Caprolactam	0.1054972	6.369373	7.769375	0.1428007			CCC (20)	
Carbazole	1.029924	10.35465	11.592	4.012654E-02			CCC (20)	
4-Chloro-3-methylphenol	0.3241539	4.484259	8.02375	2.422232E-02			CCC (20)	
4-Chloroaniline	0.4387603	4.499309	7.395	6.407021E-02			CCC (20)	
Bis(2-chloroethoxy)methane	0.4361706	4.861304	6.99	5.257221E-02			CCC (20)	
Bis(2-chloroethyl)ether	1.284228	4.005468	5.29525	0.1014556			CCC (20)	
2,2'-Oxybis-1-chloropropane	1.662963	5.286827	6.008	7.846643E-02			CCC (20)	
2-Chloronaphthalene	1.10867	7.247886	8.782	5.276285E-02			CCC (20)	
2-Chlorophenol	1.266695	3.235977	5.356	8.851782E-02			CCC (20)	
4-Chlorophenyl phenyl ether	0.6443488	6.230529	10.16638	5.729773E-03			CCC (20)	
Chrysene	1.072128	8.541599	14.74763	3.641467E-02			CCC (20)	
Dibenz(a,h)anthracene	0.968097	8.317117	18.71425	4.210554E-02			CCC (20)	
Dibenzofuran	1.531191	11.0083	9.734	4.736714E-02			CCC (20)	
Di-n-butylphthalate	1.117323	11.87776	12.081	2.243919E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2261001
Instrument: MS-BNA3
Matrix: Water
Calibration Dates: 9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.454535	5.818776	5.61225	0.013037			CCC (20)	
1,3-Dichlorobenzene	1.438718	4.610703	5.53975	1.248566E-02			CCC (20)	
1,2-Dichlorobenzene	1.382609	5.210718	5.860625	0.0201332			CCC (20)	
3,3'-Dichlorobenzidine	0.3990372	6.177841	14.68175	2.892872E-02			CCC (20)	
2,6-Dichlorophenol	0.3076612	2.595722	7.40325	2.436204E-02			15	
2,4-Dichlorophenol	0.3172443	5.18606	7.101375	4.761375E-02			CCC (20)	
Diethylphthalate	1.246346	6.574405	10.103	6.670748E-02			CCC (20)	
2,4-Dimethylphenol	0.3802932	3.960326	6.8645	1.752451E-02			CCC (20)	
Dimethyl phthalate	1.25703	8.5773	9.232125	5.107294E-02			CCC (20)	
4,6-Dinitro-2-methylphenol	0.1376067	22.31038	10.28925	8.292123E-02	0.9995831 ✓		CCC (20)	*
2,4-Dinitrophenol	0.1586589	30.52087	9.602375	5.674957E-02	0.9965146 ✓		CCC (20)	*
2,4-Dinitrotoluene	0.4130027	6.633871	9.796125	4.871438E-02			CCC (20)	
2,6-Dinitrotoluene	0.3035821	5.167856	9.315	4.886391E-02			CCC (20)	
Di-n-octylphthalate	1.122715	10.64814	15.776	1.209158E-02			CCC (20)	
1,4-Dioxane	0.5337955	4.869741	2.414375	7.061711E-02			15	
1,2-Diphenylhydrazine	0.7871146	8.877235	10.355	4.530772E-02			CCC (20)	
Bis(2-ethylhexyl)phthalate	0.6994262	7.777001	14.8135	7.521677E-03			CCC (20)	
Fluoranthene	1.164281	11.37119	12.78475	7.212182E-03			CCC (20)	
Fluorene	1.322497	9.629889	10.15838	0.047539			CCC (20)	
2-Fluorobiphenyl	1.269863	8.146411	8.668	5.397084E-02			CCC (20)	
2-Fluorophenol	1.119802	5.107841	4.039	1.607769E-02			CCC (20)	
Hexachlorobenzene	0.2557988	3.811211	10.93875	0.0483882			CCC (20)	
Hexachlorobutadiene	0.2021383	2.894676	7.537375	1.656083E-02			CCC (20)	
Hexachlorocyclopentadiene	0.3471121	8.069592	8.46875	1.743379E-02			CCC (20)	
Hexachloroethane	0.606057	2.830271	6.25375	5.98945E-03			CCC (20)	
Indeno(1,2,3-cd)pyrene	1.18309	7.999515	18.68575	3.410259E-02			CCC (20)	
Isophorone	0.694789	5.463283	6.678375	9.487201E-03			CCC (20)	
1-Methylnaphthalene	0.5852855	7.165809	8.311	5.573635E-02			CCC (20)	
2-Methylnaphthalene	0.6105231	7.071532	8.168625	0.0152489			CCC (20)	
2-Methylphenol	1.15948	3.037164	5.977	7.574059E-02			CCC (20)	
3-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	
4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2261001	Instrument:	MS-BNA3
Matrix:	Water	Calibration Dates:	9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
3-Methylphenol/4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			15	
Naphthalene	0.9922437	12.28808	7.288875	1.449498E-02			CCC (20)	
4-Nitroaniline	0.3237232	5.187175	10.24375	9.360202E-02			CCC (20)	
3-Nitroaniline	0.3275855	3.191586	9.4845	6.968371E-02			CCC (20)	
2-Nitroaniline	0.3368371	4.692985	8.965625	2.313171E-02			CCC (20)	
Nitrobenzene	0.4042427	3.277603	6.37825	1.726574E-02			CCC (20)	
Nitrobenzene-d5	0.3989519	3.300556	6.357375	2.012303E-02			CCC (20)	
4-Nitrophenol	0.263969	9.91531	9.692875	0.0512375			CCC (20)	
2-Nitrophenol	0.1877485	8.18829	6.8025	0.0109992			CCC (20)	
N-Nitrosodimethylamine	0.6512354	3.595621	2.705	0.1357375			CCC (20)	
N-Nitrosodiphenylamine	0.6783385	6.967624	10.324	4.608146E-02			CCC (20)	
N-Nitroso-di-n-propylamine	0.977041	4.270567	6.194375	7.506511E-02			CCC (20)	
Pentachlorophenol	0.1662584	12.1407	11.15975	0.0122687			CCC (20)	
Phenanthrene	1.082295	13.7748	11.32925	4.510804E-02			CCC (20)	
Phenol	1.701202	4.253285	5.197	0.128711			CCC (20)	
Phenol-d6	1.476584	6.577862	5.18125	0.1022497			CCC (20)	
Pyrene	1.182005	12.0001	13.058	3.821264E-02			CCC (20)	
Pyridine	1.443915	2.816602	2.7155	0.1280989			CCC (20)	
Terphenyl-d14	0.755263	6.374122	13.26762	4.197651E-02			CCC (20)	
1,2,4,5-Tetrachlorobenzene	0.3539919	4.108493	8.43825	1.427966E-02			CCC (20)	
2,3,4,6-Tetrachlorophenol	0.3406087	4.554587	9.94875	1.854361E-02			CCC (20)	
2,4,6-Tribromophenol	0.1129158	6.053375	10.48725	7.380264E-03			CCC (20)	
1,2,4-Trichlorobenzene	0.3379206	3.985092	7.2165	8.724103E-03			CCC (20)	
2,4,6-Trichlorophenol	0.3893444	3.105104	8.572375	2.137935E-02			CCC (20)	
2,4,5-Trichlorophenol	0.3894227	5.904797	8.613625	1.934255E-02			CCC (20)	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2K31106	Instrument:	MS-BNA3
Calibration:	2261001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2K31106-TUN1	SEQ-TUN1.D	11/03/12 15:21
Calibration Check	2K31106-CCV1	SEQ-CCV1.D	11/03/12 15:45
Calibration Check	2K31106-CCV2	SEQ-CCV2.D	11/03/12 16:13
Blank	2J23002-BLK1	J23002B1.D	11/03/12 16:41
LCS	2J23002-BS1	J23002L1.D	11/03/12 17:08
PEN-3221-10-10/12	1210161-02	1016102.D	11/03/12 19:26
PEN-3221-02-10/12	1210161-04	1016104.D	11/03/12 19:54
PEN-3221-03-10/12	1210161-05	1016105.D	11/03/12 20:22
FB10161201	1210161-07	1016107.D	11/03/12 20:49
FB10161202	1210161-08	1016108.D	11/03/12 21:17

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	11/03/12
Instrument ID:	MS-BNA3	Injection Time:	15:21
Sequence:	2K31106	Lab Sample ID:	2K31106-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	31.7	PASS
68	Less than 2% of 69	1.36	PASS
69	Less than 200% of 198	35.1	PASS
70	Less than 2% of 69	0.682	PASS
127	40 - 60% of 198	43.9	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.7	PASS
275	10 - 30% of 198	23	PASS
365	1 - 200% of 198	2.11	PASS
441	0.001 - 100% of 443	76.8	PASS
442	40 - 200% of 198	56.6	PASS
443	17 - 23% of 442	18.2	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2K31106	Injection Date:	11/03/12
Lab Sample ID:	2K31106-CCV1	Injection Time:	15:45

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Bromophenyl-phenylether	A	50.00	52.32	0.2362641	0.2472352	0.1	4.6	20	
Butylbenzylphthalate	A	50.00	55.76	0.5337897	0.5953015	0.01	11.5	20	
Carbazole	A	50.00	53.24	1.029924	1.09671	0.01	6.5	20	
4-Chloro-3-methylphenol	A	50.00	52.09	0.3241539	0.3377008	0.2	4.2	20	
4-Chloroaniline	A	50.00	52.42	0.4387603	0.4600141	0.01	4.8	20	
Bis(2-chloroethoxy)methane	A	50.00	50.21	0.4361706	0.4380307	0.3	0.4	20	
Bis(2-chloroethyl)ether	A	50.00	53.64	1.284228	1.377825	0.7	7.3	20	
2,2'-Oxybis-1-chloropropane	A	50.00	52.09	1.662963	1.732427	0.01	4.2	20	
2-Chloronaphthalene	A	50.00	48.40	1.10867	1.073251	0.8	-3.2	20	
2-Chlorophenol	A	50.00	56.34	1.266695	1.427259	0.8	12.7	20	
4-Chlorophenyl phenyl ether	A	50.00	48.61	0.6443488	0.6263875	0.4	-2.8	20	
Dibenzofuran	A	50.00	47.92	1.531191	1.46763	0.8	-4.2	20	
Di-n-butylphthalate	A	50.00	53.60	1.117323	1.197723	0.01	7.2	20	
2,4-Dichlorophenol	A	50.00	52.72	0.3172443	0.3345322	0.2	5.4	20	
Diethylphthalate	A	50.00	47.18	1.246346	1.176201	0.01	-5.6	20	
2,4-Dimethylphenol	A	50.00	48.98	0.3802932	0.3725075	0.2	-2.0	20	
Dimethyl phthalate	A	50.00	49.31	1.25703	1.239806	0.01	-1.4	20	
4,6-Dinitro-2-methylphenol	L	50.00	61.06	0.1376067	0.193026	0.01	22.1	20	*
2,4-Dinitrophenol	L	50.00	61.13	0.1586589	0.2382785	0.05	22.3	20	*
2,4-Dinitrotoluene	A	50.00	53.67	0.4130027	0.4432847	0.2	7.3	20	
2,6-Dinitrotoluene	A	50.00	53.58	0.3035821	0.3253295	0.2	7.2	20	
Di-n-octylphthalate	A	50.00	54.60	1.122715	1.226032	0.01	9.2	20	
Bis(2-ethylhexyl)phthalate	A	50.00	56.27	0.6994262	0.7871948	0.01	12.5	20	
Hexachlorobenzene	A	50.00	52.15	0.2557988	0.2668019	0.1	4.3	20	
Hexachlorobutadiene	A	50.00	47.94	0.2021383	0.1937915	0.01	-4.1	20	
Hexachlorocyclopentadiene	A	50.00	53.26	0.3471121	0.369724	0.05	6.5	20	
Hexachloroethane	A	50.00	49.16	0.606057	0.5958747	0.3	-1.7	20	
Isophorone	A	50.00	50.14	0.694789	0.6966766	0.4	0.3	20	
2-Methylphenol	A	50.00	55.62	1.15948	1.289707	0.7	11.2	20	

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2K31106	Injection Date:	11/03/12
Lab Sample ID:	2K31106-CCV1	Injection Time:	15:45

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4-Methylphenol	A	50.00	56.68	1.219104	1.382089	0.6	13.4	20
4-Nitroaniline	A	50.00	56.66	0.3237232	0.3668483	0.01	13.3	20
3-Nitroaniline	A	50.00	54.36	0.3275855	0.3561294	0.01	8.7	20
2-Nitroaniline	A	50.00	49.27	0.3368371	0.3319477	0.01	-1.5	20
Nitrobenzene	A	50.00	48.82	0.4042427	0.3947328	0.2	-2.4	20
4-Nitrophenol	A	50.00	52.39	0.263969	0.276581	0.05	4.8	20
2-Nitrophenol	A	50.00	58.59	0.1877485	0.2200095	0.1	17.2	20
N-Nitrosodimethylamine	A	50.00	46.21	0.6512354	0.6019096	0.01	-7.6	20
N-Nitroso-di-n-propylamine	A	50.00	50.49	0.977041	0.9865822	0.5	1.0	20
Pentachlorophenol	A	50.00	55.83	0.1662584	0.185653	0.05	11.7	20
Phenol	A	50.00	53.52	1.701202	1.821021	0.8	7.0	20
2,3,4,6-Tetrachlorophenol	A	50.00	52.41	0.3406087	0.357059	0.01	4.8	20
2,4,6-Trichlorophenol	A	50.00	51.38	0.3893444	0.4000555	0.2	2.8	20
2,4,5-Trichlorophenol	A	50.00	54.05	0.3894227	0.4209942	0.2	8.1	20
2-Fluorobiphenyl	A	50.00	48.86	1.269863	1.241055	0.01	-2.3	20
2-Fluorophenol	A	100.0	106.3	1.119802	1.190451	0.01	6.3	20
Nitrobenzene-d5	A	50.00	49.70	0.3989519	0.3965548	0.01	-0.6	20
Phenol-d6	A	100.0	106.5	1.476584	1.573137	0.01	6.5	20
Terphenyl-d14	A	50.00	58.81	0.755263	0.8883708	0.01	17.6	20
2,4,6-Tribromophenol	A	100.0	109.7	0.1129158	0.1238609	0.01	9.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV2.D	Calibration Date:	09/11/12 10:38
Sequence:	2K31106	Injection Date:	11/03/12
Lab Sample ID:	2K31106-CCV2	Injection Time:	16:13

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Atrazine	A	50.00	53.43	0.2286444	0.2443401	0.01	6.9	20	
Benzaldehyde	A	50.00	58.50	0.9974323	1.167054	0.01	17.0	20	
1,1-Biphenyl	A	50.00	47.84	1.358172	1.299425	0.01	-4.3	20	
Caprolactam	A	50.00	63.10	0.1054972	0.1331347	0.01	26.2	20	*
3,3'-Dichlorobenzidine	A	50.00	62.16	0.3990372	0.4960577	0.01	24.3	20	*
1,2,4,5-Tetrachlorobenzene	A	50.00	48.96	0.3539919	0.3466179	0.01	-2.1	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J23002 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/23/12 09 20	1,080.00	1.00
PEN-3221-02-10/12	1210161-04	10/23/12 09.20	1,080.00	1.00
PEN-3221-03-10/12	1210161-05	10/23/12 09:20	1,080.00	1.00
FB10161201	1210161-07	10/23/12 09:20	1,080.00	1.00
FB10161202	1210161-08	10/23/12 09:20	1,080.00	1.00
Blank	2J23002-BLK1	10/23/12 09:20	1,000.00	1.00
LCS	2J23002-BS1	10/23/12 09:20	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23002-BLK1 File ID: J23002B1.D

Sampled: Prepared: Analyzed: 11/03/12 16:41

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J23002 Sequence: 2K31106 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.25	2.50	5.00	U
100-52-7	Benzaldehyde		1.25	2.50	5.00	U
92-52-4	1,1-Biphenyl		1.25	2.50	5.00	U
101-55-3	4-Bromophenyl-phenylether		1.25	2.50	5.00	U
85-68-7	Butylbenzylphthalate		1.25	2.50	5.00	U
105-60-2	Caprolactam		1.25	2.50	5.00	X, U
86-74-8	Carbazole		1.25	2.50	5.00	U
59-50-7	4-Chloro-3-methylphenol		1.25	2.50	5.00	U
106-47-8	4-Chloroaniline		1.25	2.50	5.00	U
111-91-1	Bis(2-chloroethoxy)methane		1.25	2.50	5.00	U
111-44-4	Bis(2-chloroethyl)ether		1.25	2.50	5.00	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.25	2.50	5.00	U
91-58-7	2-Chloronaphthalene		1.25	2.50	5.00	U
95-57-8	2-Chlorophenol		1.25	2.50	5.00	U
7005-72-3	4-Chlorophenyl phenyl ether		1.25	2.50	5.00	U
132-64-9	Dibenzofuran		1.25	2.50	5.00	U
84-74-2	Di-n-butylphthalate		1.25	2.50	5.00	U
91-94-1	3,3'-Dichlorobenzidine		1.25	2.50	5.00	X, U
120-83-2	2,4-Dichlorophenol		1.25	2.50	5.00	U
84-66-2	Diethylphthalate		1.25	2.50	5.00	U
105-67-9	2,4-Dimethylphenol		5.00	10.0	20.0	U
131-11-3	Dimethyl phthalate		1.25	2.50	5.00	U
534-52-1	4,6-Dinitro-2-methylphenol		5.00	10.0	20.0	X, U
51-28-5	2,4-Dinitrophenol		8.33	25.0	50.0	X, U
121-14-2	2,4-Dinitrotoluene		1.25	2.50	5.00	U
606-20-2	2,6-Dinitrotoluene		1.25	2.50	5.00	U
117-84-0	Di-n-octylphthalate		1.25	2.50	5.00	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.25	2.50	5.00	U
118-74-1	Hexachlorobenzene		1.25	2.50	5.00	U
87-68-3	Hexachlorobutadiene		1.25	2.50	5.00	U
77-47-4	Hexachlorocyclopentadiene		1.25	5.00	10.0	U
67-72-1	Hexachloroethane		1.25	2.50	5.00	U
78-59-1	Isophorone		1.25	2.50	5.00	U
95-48-7	2-Methylphenol		1.25	2.50	5.00	U
106-44-5	4-Methylphenol		1.25	2.50	5.00	U
100-01-6	4-Nitroaniline		5.00	10.0	20.0	U
99-09-2	3-Nitroaniline		5.00	10.0	20.0	U
88-74-4	2-Nitroaniline		5.00	10.0	20.0	U
98-95-3	Nitrobenzene		1.25	2.50	5.00	U
100-02-7	4-Nitrophenol		5.00	10.0	20.0	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23002-BLK1 File ID: J23002B1.D

Sampled: Prepared: Analyzed: 11/03/12 16:41

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J23002 Sequence: 2K31106 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
88-75-5	2-Nitrophenol		1.25	2.50	5.00	U
62-75-9	N-Nitrosodimethylamine		1.25	2.50	5.00	U
621-64-7	N-Nitroso-di-n-propylamine		1.25	2.50	5.00	U
87-86-5	Pentachlorophenol		5.00	10.0	20.0	U
108-95-2	Phenol		1.25	2.50	5.00	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.25	2.50	5.00	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.50	5.00	10.0	U
88-06-2	2,4,6-Trichlorophenol		1.25	2.50	5.00	U
95-95-4	2,4,5-Trichlorophenol		1.25	2.50	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	46.00	92.0	50 - 110	
2-Fluorophenol	100.0	42.50	42.5	20 - 110	
Nitrobenzene-d5	50.00	44.92	89.8	40 - 110	
Phenol-d6	100.0	24.36	24.4	0 - 110	
Terphenyl-d14	50.00	51.57	103	50 - 135	
2,4,6-Tribromophenol	100.0	100.0	100	40 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2K31106
Instrument: MS-BNA3
Calibration: 2261001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2K31106-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 11/03/12 15:45		
2-Fluorobiphenyl	50.00	97.7	80 - 120	8.615	8.615	0.0000	+/-0.500	
2-Fluorophenol	100.0	106	80 - 120	3.989	3.989	0.0000	+/-0.500	
Nitrobenzene-d5	50.00	99.4	80 - 120	6.297	6.297	0.0000	+/-0.500	
Phenol-d6	100.0	106	80 - 120	5.138	5.138	0.0000	+/-0.500	
Terphenyl-d14	50.00	118	80 - 120	13.211	13.211	0.0000	+/-0.500	
2,4,6-Tribromophenol	100.0	110	80 - 120	10.437	10.437	0.0000	+/-0.500	
Blank (2J23002-BLK1) ug/L				Lab File ID: J23002B1.D		Analyzed: 11/03/12 16:41		
2-Fluorobiphenyl	50.00	92.0	50 - 110	8.616	8.615	0.0010	+/-0.500	
2-Fluorophenol	100.0	42.5	20 - 110	3.99	3.989	0.0010	+/-0.500	
Nitrobenzene-d5	50.00	89.8	40 - 110	6.298	6.297	0.0010	+/-0.500	
Phenol-d6	100.0	24.4	0 - 110	5.129	5.138	-0.0090	+/-0.500	
Terphenyl-d14	50.00	103	50 - 135	13.212	13.211	0.0010	+/-0.500	
2,4,6-Tribromophenol	100.0	100	40 - 125	10.428	10.437	-0.0090	+/-0.500	
LCS (2J23002-BS1) ug/L				Lab File ID: J23002L1.D		Analyzed: 11/03/12 17:08		
2-Fluorobiphenyl	50.00	78.0	50 - 110	8.616	8.615	0.0010	+/-0.500	
2-Fluorophenol	100.0	39.6	20 - 110	3.989	3.989	0.0000	+/-0.500	
Nitrobenzene-d5	50.00	75.6	40 - 110	6.298	6.297	0.0010	+/-0.500	
Phenol-d6	100.0	23.2	0 - 110	5.138	5.138	0.0000	+/-0.500	
Terphenyl-d14	50.00	94.1	50 - 135	13.211	13.211	0.0000	+/-0.500	
2,4,6-Tribromophenol	100.0	91.3	40 - 125	10.438	10.437	0.0010	+/-0.500	
PEN-3221-10-10/12 (1210161-02) ug/L				Lab File ID: 1016102.D		Analyzed: 11/03/12 19:26		
2-Fluorobiphenyl	46.30	74.7	50 - 110	8.613	8.615	-0.0020	+/-0.500	
2-Fluorophenol	92.59	8.59	20 - 110	3.986	3.989	-0.0030	+/-0.500	*
Nitrobenzene-d5	46.30	74.9	40 - 110	6.294	6.297	-0.0030	+/-0.500	
Phenol-d6	92.59	10.1	0 - 110	5.135	5.138	-0.0030	+/-0.500	
Terphenyl-d14	46.30	94.1	50 - 135	13.208	13.211	-0.0030	+/-0.500	
2,4,6-Tribromophenol	92.59	26.1	40 - 125	10.424	10.437	-0.0130	+/-0.500	*
PEN-3221-02-10/12 (1210161-04) ug/L				Lab File ID: 1016104.D		Analyzed: 11/03/12 19:54		
2-Fluorobiphenyl	46.30	80.4	50 - 110	8.614	8.615	-0.0010	+/-0.500	
2-Fluorophenol	92.59	13.0	20 - 110	3.988	3.989	-0.0010	+/-0.500	*
Nitrobenzene-d5	46.30	80.0	40 - 110	6.296	6.297	-0.0010	+/-0.500	
Phenol-d6	92.59	12.3	0 - 110	5.137	5.138	-0.0010	+/-0.500	
Terphenyl-d14	46.30	98.2	50 - 135	13.21	13.211	-0.0010	+/-0.500	
2,4,6-Tribromophenol	92.59	39.3	40 - 125	10.426	10.437	-0.0110	+/-0.500	*

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2K31106
Instrument: MS-BNA3
Calibration: 2261001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
PEN-3221-03-10/12 (1210161-05) ug/L				Lab File ID: 1016105.D		Analyzed: 11/03/12 20:22		
2-Fluorobiphenyl	46.30	67.2	50 - 110	8.614	8.615	-0.0010	+/-0.500	
2-Fluorophenol	92.59	13.6	20 - 110	3.988	3.989	-0.0010	+/-0.500	*
Nitrobenzene-d5	46.30	67.4	40 - 110	6.296	6.297	-0.0010	+/-0.500	
Phenol-d6	92.59	13.7	0 - 110	5.126	5.138	-0.0120	+/-0.500	
Terphenyl-d14	46.30	77.9	50 - 135	13.21	13.211	-0.0010	+/-0.500	
2,4,6-Tribromophenol	92.59	35.4	40 - 125	10.426	10.437	-0.0110	+/-0.500	*
FB10161201 (1210161-07) ug/L				Lab File ID: 1016107.D		Analyzed: 11/03/12 20:49		
2-Fluorobiphenyl	46.30	77.6	50 - 110	8.615	8.615	0.0000	+/-0.500	
2-Fluorophenol	92.59	5.11	20 - 110	3.988	3.989	-0.0010	+/-0.500	*
Nitrobenzene-d5	46.30	76.3	40 - 110	6.297	6.297	0.0000	+/-0.500	
Phenol-d6	92.59	5.77	0 - 110	5.137	5.138	-0.0010	+/-0.500	
Terphenyl-d14	46.30	94.2	50 - 135	13.21	13.211	-0.0010	+/-0.500	
2,4,6-Tribromophenol	92.59	37.2	40 - 125	10.426	10.437	-0.0110	+/-0.500	*
FB10161202 (1210161-08) ug/L				Lab File ID: 1016108.D		Analyzed: 11/03/12 21:17		
2-Fluorobiphenyl	46.30	56.2	50 - 110	8.615	8.615	0.0000	+/-0.500	
2-Fluorophenol	92.59	27.0	20 - 110	3.989	3.989	0.0000	+/-0.500	
Nitrobenzene-d5	46.30	56.1	40 - 110	6.297	6.297	0.0000	+/-0.500	
Phenol-d6	92.59	15.3	0 - 110	5.127	5.138	-0.0110	+/-0.500	
Terphenyl-d14	46.30	72.6	50 - 135	13.211	13.211	0.0000	+/-0.500	
2,4,6-Tribromophenol	92.59	60.2	40 - 125	10.427	10.437	-0.0100	+/-0.500	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I26212	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I26212-TUN1	SEQ-TUN1.D	09/17/12 16:19
Cal Standard	2I26212-CAL1	SEQCAL1.D	09/17/12 16:37
Cal Standard	2I26212-CAL2	SEQCAL2.D	09/17/12 17:04
Cal Standard	2I26212-CAL3	SEQCAL3.D	09/17/12 17:32
Cal Standard	2I26212-CAL4	SEQCAL4.D	09/17/12 18:00
Cal Standard	2I26212-CAL5	SEQCAL5.D	09/17/12 18:27
Cal Standard	2I26212-CAL7	SEQCAL7.D	09/17/12 19:22
Cal Standard	2I26212-CAL8	SEQCAL8.D	09/17/12 19:50
Initial Cal Check	2I26212-ICV1	SEQICV1.D	09/17/12 20:45
MS Tune	2I26212-TUN2	SEQ-TUN2.D	09/18/12 09:45
Initial Cal Check	2I26212-ICV3	SEQICV6.D	09/18/12 10:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/17/12
Instrument ID:	MS-BNA4	Injection Time:	16:19
Sequence:	2I26212	Lab Sample ID:	2I26212-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	55.7	PASS
68	Less than 2% of 69	1.62	PASS
69	Less than 200% of 198	45.5	PASS
70	Less than 2% of 69	0.47	PASS
127	40 - 60% of 198	50.3	PASS
197	Less than 1% of 198	0.97	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.1	PASS
275	10 - 30% of 198	23.8	PASS
365	1 - 200% of 198	2.46	PASS
441	0.001 - 100% of 443	82	PASS
442	40 - 200% of 198	81	PASS
443	17 - 23% of 442	19.9	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/18/12
Instrument ID:	MS-BNA4	Injection Time:	09:45
Sequence:	2I26212	Lab Sample ID:	2I26212-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	56	PASS
68	Less than 2% of 69	1.57	PASS
69	Less than 200% of 198	46.5	PASS
70	Less than 2% of 69	0.546	PASS
127	40 - 60% of 198	51.2	PASS
197	Less than 1% of 198	0.947	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	22.8	PASS
365	1 - 200% of 198	2.51	PASS
441	0.001 - 100% of 443	86	PASS
442	40 - 200% of 198	75.1	PASS
443	17 - 23% of 442	18.7	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2263001
Instrument: MS-BNA4
Matrix: Water
Calibration Dates: 9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.6437384	4.43344	9.826428	2.985676E-02			15	
Acenaphthylene	0.9742916	4.035626	9.595428	1.918522E-02			15	
Anthracene	1.099743	2.563612	11.661	2.252376E-02			15	
Benzo(a)anthracene	1.229242	6.441806	15.02286	1.745497E-02			15	
Benzo(a)pyrene	1.07648	6.419449	17.30657	3.859793E-02			15	
Benzo(b)fluoranthene	1.13689	8.675422	16.776	4.277508E-02			15	
Benzo(g,h,i)perylene	1.047311	4.920087	19.51071	5.631089E-02			15	
Benzo(k)fluoranthene	1.24554	3.34658	16.81471	4.942397E-02			15	
1,4-Dioxane	0.1353576	8.293508	2.807714	0.3439013			15	
Carbazole	0.9802225	2.241632	11.86814	2.504839E-02			15	
Chrysene	1.208255	4.137079	15.088	3.491361E-02			15	
Dibenz(a,h)anthracene	0.9978242	7.835988	19.12857	4.851823E-02			15	
Dibenzofuran	0.8884622	2.303766	10.01886	1.864152E-02			15	
Di-n-octylphthalate	1.086216	29.06585	16.1744	2.245235E-02	0.999354		0.995	
Bis(2-ethylhexyl)phthalate	0.6840102	19.96093	15.176	1.107344E-02	0.9997681		0.995	
Fluoranthene	1.285226	3.369817	13.06243	2.192161E-02			15	
Fluorene	0.7105484	2.132605	10.44243	2.405673E-02			15	
2-Fluorobiphenyl	0.711319	4.922771	8.959429	2.274919E-02			15	
Hexachlorobenzene	0.2596715	3.133576	11.21714	1.535378E-02			15	
Hexachlorobutadiene	0.2192212	7.351404	7.841	1.360725E-02			15	
Hexachlorocyclopentadiene	0.1679048	12.80219	8.7625	1.864214E-02			15	
Hexachloroethane	0.1525449	2.904575	6.596143	4.437949E-02			15	
Indeno(1,2,3-cd)pyrene	1.186493	8.935141	19.09971	5.454845E-02			15	
Isophorone	0.5537188	9.391578	7.004428	3.986617E-02			15	
1-Methylnaphthalene	0.5918516	7.284457	8.607715	3.795704E-03			15	
2-Methylnaphthalene	0.6355094	7.594757	8.469143	2.944197E-02			15	
Naphthalene	0.9715298	9.419315	7.597143	3.351781E-02			15	
N-Nitrosodiphenylamine	0.5730382	5.63645	10.60214	3.741727E-02			15	
N-Nitroso-di-n-propylamine	0.2204215	14.9536	6.530286	4.997956E-02			15	
Pentachloroethane	0.1495348	7.718331	5.587714	3.061233E-02			CCC (20)	
Pentachlorophenol	0.1281745	27.63764	11.435	2.819468E-02	0.9982283		0.995	
Phenanthrene	1.114392	5.345567	11.60814	1.843103E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2263001
Instrument: MS-BNA4
Matrix: Water
Calibration Dates: 9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Phenol	0.423713	8.39034	5.563429	9.658823E-02			CCC (30)	
Pyrene	1.313745	3.59993	13.33786	2.306796E-02			15	
Terphenyl-d14	0.8895742	7.28489	13.55414	2.079779E-02			15	
2,4,6-Tribromophenol	0.104865	17.39735	10.766	2.069718E-02	0.9993091		0.995	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2K31103	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2K31103-TUN1	SEQ-TUN1.D	11/03/12 15:47
Calibration Check	2K31103-CCV1	SEQ-CCV1.D	11/03/12 16:04
Blank	2J23002-BLK2	J23002B1.D	11/03/12 16:33
LCS	2J23002-BS2	J23002L1.D	11/03/12 17:01
LCS Dup	2J23002-BSD2	J23002L2.D	11/03/12 17:29
PEN-3221-02-10/12	1210161-04	1016104.D	11/03/12 19:23
PEN-3221-03-10/12	1210161-05	1016105.D	11/03/12 19:51
FB10161201	1210161-07	1016107.D	11/03/12 20:19
FB10161202	1210161-08	1016108.D	11/03/12 20:47

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	11/03/12
Instrument ID:	MS-BNA4	Injection Time:	15:47
Sequence:	2K31103	Lab Sample ID:	2K31103-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	50.2	PASS
68	Less than 2% of 69	1.71	PASS
69	Less than 200% of 198	45.5	PASS
70	Less than 2% of 69	0.551	PASS
127	40 - 60% of 198	50	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.06	PASS
275	10 - 30% of 198	23.4	PASS
365	1 - 200% of 198	2.5	PASS
441	0.001 - 100% of 443	78.9	PASS
442	40 - 200% of 198	82.5	PASS
443	17 - 23% of 442	19.7	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2K31103	Injection Date:	11/03/12
Lab Sample ID:	2K31103-CCV1	Injection Time:	16:04

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.356	0.6437384	0.5608549		-12.9	20
Acenaphthylene	A	5.000	4.763	0.9742916	0.9281146		-4.7	20
Anthracene	A	5.000	5.020	1.099743	1.104175		0.4	20
Benzo(a)anthracene	A	5.000	5.111	1.229242	1.256567		2.2	20
Benzo(a)pyrene	A	5.000	5.014	1.07648	1.079428		0.3	20
Benzo(b)fluoranthene	A	5.000	4.824	1.13689	1.096891		-3.5	20
Benzo(g,h,i)perylene	A	5.000	5.230	1.047311	1.095438		4.6	20
Benzo(k)fluoranthene	A	5.000	4.895	1.24554	1.219373		-2.1	20
1,4-Dioxane	A	5.000	4.422	0.1353576	0.1197227		-11.6	20
Chrysene	A	5.000	4.751	1.208255	1.148162		-5.0	20
Dibenz(a,h)anthracene	A	5.000	5.527	0.9978242	1.102945		10.5	20
Fluoranthene	A	5.000	4.705	1.285226	1.209322		-5.9	20
Fluorene	A	5.000	4.400	0.7105484	0.6253669		-12.0	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.526	1.186493	1.311325		10.5	20
2-Methylnaphthalene	A	5.000	4.800	0.6355094	0.6100543		-4.0	20
Naphthalene	A	5.000	5.042	0.9715298	0.979775		0.8	20
Phenanthrene	A	5.000	4.681	1.114392	1.043398		-6.4	20
Pyrene	A	5.000	5.031	1.313745	1.322019		0.6	20
2-Fluorobiphenyl	A	5.000	4.866	0.711319	0.6922709		-2.7	20
Terphenyl-d14	A	5.000	4.377	0.8895742	0.7787175		-12.5	20
2,4,6-Tribromophenol	L	10.00	10.69	0.104865	0.1218696		6.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J23002 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/23/12 09:20	1,080.00	1.00
PEN-3221-02-10/12	1210161-04	10/23/12 09:20	1,080.00	1.00
PEN-3221-03-10/12	1210161-05	10/23/12 09:20	1,080.00	1.00
FB10161201	1210161-07	10/23/12 09:20	1,080.00	1.00
FB10161202	1210161-08	10/23/12 09:20	1,080.00	1.00
Blank	2J23002-BLK2	10/23/12 09:20	1,000.00	1.00
LCS	2J23002-BS2	10/23/12 09:20	1,000.00	1.00
LCS Dup	2J23002-BSD2	10/23/12 09:20	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23002-BLK2 File ID: J23002B1.D

Sampled: Prepared: Analyzed: 11/03/12 16:33

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J23002 Sequence: 2K31103 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	U
120-12-7	Anthracene		0.0500	0.100	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
191-24-2	Benzo(g,h,i)perylene		0.0500	0.100	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	U
123-91-1	1,4-Dioxane		0.500	1.00	2.00	Q, U
218-01-9	Chrysene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	U
206-44-0	Fluoranthene		0.0500	0.100	0.200	U
86-73-7	Fluorene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.100	0.200	U
91-20-3	Naphthalene		0.0500	0.100	0.200	U
85-01-8	Phenanthrene	0.0630	0.0500	0.200	0.400	I
129-00-0	Pyrene		0.0500	0.100	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	42.57	85.1	34 - 167	
Terphenyl-d14	50.00	43.27	86.5	34 - 167	
2,4,6-Tribromophenol	100.0	96.05	96.0	34 - 167	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2K31210	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2K31210-TUN1	SEQ-TUN1.D	11/06/12 13:55
Calibration Check	2K31210-CCV1	SEQ-CCV1.D	11/06/12 14:11
PEN-3221-10-10/12	1210161-02	1016102R.D	11/06/12 22:55

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	11/06/12
Instrument ID:	MS-BNA4	Injection Time:	13:55
Sequence:	2K31210	Lab Sample ID:	2K31210-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	45	PASS
68	Less than 2% of 69	1.84	PASS
69	Less than 200% of 198	42.4	PASS
70	Less than 2% of 69	0.532	PASS
127	40 - 60% of 198	47.2	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.91	PASS
275	10 - 30% of 198	24.5	PASS
365	1 - 200% of 198	2.68	PASS
441	0.001 - 100% of 443	82.8	PASS
442	40 - 200% of 198	88.9	PASS
443	17 - 23% of 442	19.4	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2K31210	Injection Date:	11/06/12
Lab Sample ID:	2K31210-CCV1	Injection Time:	14:11

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.705	0.6437384	0.6057291		-5.9	20
Acenaphthylene	A	5.000	4.778	0.9742916	0.9311443		-4.4	20
Anthracene	A	5.000	5.147	1.099743	1.132038		2.9	20
Benzo(a)anthracene	A	5.000	5.334	1.229242	1.311298		6.7	20
Benzo(a)pyrene	A	5.000	5.033	1.07648	1.083561		0.7	20
Benzo(b)fluoranthene	A	5.000	5.107	1.13689	1.161322		2.1	20
Benzo(g,h,i)perylene	A	5.000	5.123	1.047311	1.073003		2.5	20
Benzo(k)fluoranthene	A	5.000	4.650	1.24554	1.158441		-7.0	20
1,4-Dioxane	A	5.000	3.768	0.1353576	0.1020143		-24.6	20 *
Chrysene	A	5.000	5.101	1.208255	1.232634		2.0	20
Dibenz(a,h)anthracene	A	5.000	5.348	0.9978242	1.067229		7.0	20
Fluoranthene	A	5.000	4.982	1.285226	1.280635		-0.4	20
Fluorene	A	5.000	5.069	0.7105484	0.7203937		1.4	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.406	1.186493	1.282952		8.1	20
2-Methylnaphthalene	A	5.000	4.628	0.6355094	0.5882298		-7.4	20
Naphthalene	A	5.000	4.632	0.9715298	0.9001207		-7.4	20
Phenanthrene	A	5.000	4.808	1.114392	1.071694		-3.8	20
Pyrene	A	5.000	5.047	1.313745	1.326031		0.9	20
2-Fluorobiphenyl	A	5.000	4.661	0.711319	0.6631182		-6.8	20
Terphenyl-d14	A	5.000	4.762	0.8895742	0.8472892		-4.8	20
2,4,6-Tribromophenol	L	10.00	13.21	0.104865	0.1534933		32.1	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION STANDARDS

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29909	Instrument:	GL-ECD3
Calibration:	2299003		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010R1001.D	10/22/12 11:28
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010F1001.D	10/22/12 11:28
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011F1101.D	10/22/12 11:47
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011R1101.D	10/22/12 11:47
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012F1201.D	10/22/12 12:06
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012R1201.D	10/22/12 12:06
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013F1301.D	10/22/12 12:25
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013R1301.D	10/22/12 12:25
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014F1401.D	10/22/12 12:44
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014R1401.D	10/22/12 12:44
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015R1501.D	10/22/12 13:03
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015F1501.D	10/22/12 13:03
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016F1601.D	10/22/12 13:23
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016R1601.D	10/22/12 13:23
12F0458	Toxaphene CAL1 (2000ppb)	2J29909-CAL8	018F1801.D	10/22/12 14:01
12F0458	Toxaphene CAL1 (2000ppb)	2J29909-CAL8	018R1801.D	10/22/12 14:01
12F0459	Toxaphene CAL2 (1000ppb)	2J29909-CAL9	019F1901.D	10/22/12 14:20
12F0459	Toxaphene CAL2 (1000ppb)	2J29909-CAL9	019R1901.D	10/22/12 14:20
12F0460	Toxaphene CAL3 (750ppb)	2J29909-CALA	020R2001.D	10/22/12 14:39
12F0460	Toxaphene CAL3 (750ppb)	2J29909-CALA	020F2001.D	10/22/12 14:39
12F0461	Toxaphene CAL4 (500ppb)	2J29909-CALB	021F2101.D	10/22/12 14:58
12F0461	Toxaphene CAL4 (500ppb)	2J29909-CALB	021R2101.D	10/22/12 14:58
12F0462	Toxaphene CAL5 (250ppb)	2J29909-CALC	022F2201.D	10/22/12 15:17
12F0462	Toxaphene CAL5 (250ppb)	2J29909-CALC	022R2201.D	10/22/12 15:17
12F0463	Toxaphene CAL6 (100ppb)	2J29909-CALD	023F2301.D	10/22/12 15:36
12F0463	Toxaphene CAL6 (100ppb)	2J29909-CALD	023R2301.D	10/22/12 15:36
12D0724	Aro-1660 Cal1@2500/250	2J29909-CALK	032R3201.D	10/22/12 18:28
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J29909-CALL	033R3301.D	10/22/12 18:47
12D0726	Aro-1660 Cal3@750/75	2J29909-CALM	034R3401.D	10/22/12 19:06
12D0727	Aro-1660 Cal4@500/50	2J29909-CALN	035R3501.D	10/22/12 19:25
12D0728	Aro-1660 Cal5@100/10	2J29909-CALO	036R3601.D	10/22/12 19:45
12D0730	Aro-1660 Cal6@50/5	2J29909-CALP	037R3701.D	10/22/12 20:04

12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J29909-CALQ	039R3901.D	10/22/12 20:42
12E0534	Aroclor-1254 Cal 2 1000ppb	2J29909-CALR	040R4001.D	10/22/12 21:01
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J29909-CALS	041R4101.D	10/22/12 21:20
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J29909-CALT	042R4201.D	10/22/12 21:39
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J29909-CALU	043R4301.D	10/22/12 21:58
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J29909-CALV	044R4401.D	10/22/12 22:17

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29909	Instrument:	GL-ECD3
Calibration:	2299003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J29909-PEM1	002F0201.D	10/22/12 08:54
Performance Mix	2J29909-PEM1	002R0201.D	10/22/12 08:54
Cal Standard	2J29909-CAL1	010R1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL1	010F1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL2	011F1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL2	011R1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL3	012R1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL3	012F1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL4	013F1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL4	013R1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL5	014F1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL5	014R1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL6	015F1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL6	015R1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL7	016R1601.D	10/22/12 13:23
Cal Standard	2J29909-CAL7	016F1601.D	10/22/12 13:23
Initial Cal Check	2J29909-ICV1	017F1701.D	10/22/12 13:42
Initial Cal Check	2J29909-ICV1	017R1701.D	10/22/12 13:42
Cal Standard	2J29909-CAL8	018R1801.D	10/22/12 14:01
Cal Standard	2J29909-CAL8	018F1801.D	10/22/12 14:01
Cal Standard	2J29909-CAL9	019R1901.D	10/22/12 14:20
Cal Standard	2J29909-CAL9	019F1901.D	10/22/12 14:20
Cal Standard	2J29909-CALA	020F2001.D	10/22/12 14:39
Cal Standard	2J29909-CALA	020R2001.D	10/22/12 14:39
Cal Standard	2J29909-CALB	021F2101.D	10/22/12 14:58
Cal Standard	2J29909-CALB	021R2101.D	10/22/12 14:58
Cal Standard	2J29909-CALC	022F2201.D	10/22/12 15:17
Cal Standard	2J29909-CALC	022R2201.D	10/22/12 15:17
Cal Standard	2J29909-CALD	023F2301.D	10/22/12 15:36
Cal Standard	2J29909-CALD	023R2301.D	10/22/12 15:36
Initial Cal Check	2J29909-ICV2	024F2401.D	10/22/12 15:56
Initial Cal Check	2J29909-ICV2	024R2401.D	10/22/12 15:56

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2K31022
Instrument: GL-ECD3
Calibration: 2299003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2K31022-PEM1	002F0201.D	10/27/12 16:16
Performance Mix	2K31022-PEM1	002R0201.D	10/27/12 16:16
Calibration Check	2K31022-CCV1	003R0301.D	10/27/12 16:35
Calibration Check	2K31022-CCV1	003F0301.D	10/27/12 16:35
Calibration Check	2K31022-CCV2	004R0401.D	10/27/12 16:54
Calibration Check	2K31022-CCV2	004F0401.D	10/27/12 16:54
Blank	2J22004-BLK1	008R0801.D	10/27/12 18:11
Blank	2J22004-BLK1	008F0801.D	10/27/12 18:11
LCS	2J22004-BS1	009F0901.D	10/27/12 18:30
LCS	2J22004-BS1	009R0901.D	10/27/12 18:30
PEN-3221-10-10/12	1210161-02	020F2001.D	10/27/12 22:00
PEN-3221-10-10/12	1210161-02	020R2001.D	10/27/12 22:00
PEN-3221-02-10/12	1210161-04	021F2101.D	10/27/12 22:19
PEN-3221-02-10/12	1210161-04	021R2101.D	10/27/12 22:19
PEN-3221-03-10/12	1210161-05	022R2201.D	10/27/12 22:38
PEN-3221-03-10/12	1210161-05	022F2201.D	10/27/12 22:38
FB10161201	1210161-07	023R2301.D	10/27/12 22:57
FB10161201	1210161-07	023F2301.D	10/27/12 22:57
FB10161202	1210161-08	024R2401.D	10/27/12 23:17
FB10161202	1210161-08	024F2401.D	10/27/12 23:17
Calibration Check	2K31022-CCV6	025F2501.D	10/27/12 23:36
Calibration Check	2K31022-CCV6	025R2501.D	10/27/12 23:36
Calibration Check	2K31022-CCV7	026F2601.D	10/27/12 23:55
Calibration Check	2K31022-CCV7	026R2601.D	10/27/12 23:55

BREAKDOWN REPORT

Lab Sample ID: 2K31022-PEM1 **Analyzed:** 10/27/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	4.15
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	5.76
Endrin	6.57

BREAKDOWN REPORT

Lab Sample ID: 2J29909-PEM1 **Analyzed:** 10/22/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	3.33
Endrin	6.01

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299003
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/22/12 11:28 10/22/12 17:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
4,4'-DDE	50456.48	11.45176	8.642286	1.919744E-02			20	
4,4'-DDE [2C]	40256.05	7.266198	7.747429	0.0242545			20	
4,4'-DDD	41312.58	14.50185	9.283143	0.022035			20	
4,4'-DDD [2C]	36108.37	7.843011	8.419143	6.303865E-03			20	
4,4'-DDT	44465.68	10.82573	9.676286	2.711061E-02			20	
4,4'-DDT [2C]	36018.1	6.52793	8.733429	2.083517E-02			20	
Aldrin	61759.15	8.696004	7.552143	1.962824E-02			20	
Aldrin [2C]	46614.19	12.79016	6.640857	1.425249E-02			20	
alpha-BHC	69569.94	11.51672	6.172	2.459251E-02			20	
alpha-BHC [2C]	56093.27	9.266278	5.631143	1.701138E-02			20	
alpha-Chlordane	56017.16	2.510435	8.440571	1.030399E-02			20	
alpha-Chlordane [2C]	44337.74	15.53471	7.549286	1.442982E-02			20	
beta-BHC	24624.75	5.830733	6.719	1.724608E-02			20	
beta-BHC [2C]	23906.8	9.980012	6.256429	3.710673E-03			20	
delta-BHC	55058.59	11.63285	6.996429	2.870538E-02			20	
delta-BHC [2C]	48101.72	8.407713	6.517	9.246901E-03			20	
Dieldrin	57227.59	9.519606	8.839286	1.670298E-02			20	
Dieldrin [2C]	46523.38	10.13599	7.938857	9.698118E-03			20	
Endosulfan I	53823.05	5.102184	8.506143	1.557002E-02			20	
Endosulfan I [2C]	42053.07	10.70344	7.627428	1.891112E-02			20	
Endosulfan II	49816.28	7.787051	9.395714	0.024562			20	
Endosulfan II [2C]	39085.89	10.44234	8.629714	2.851753E-03			20	
Endosulfan sulfate	42311.38	5.824695	9.854714	1.341369E-02			20	
Endosulfan sulfate [2C]	33356.07	8.427926	9.126572	1.081605E-02			20	
Endrin	45068.01	7.724023	9.124286	7.881339E-03			20	
Endrin [2C]	37171.95	9.789625	8.277143	2.004171E-02			20	
Endrin aldehyde	42211.46	2.602744	9.559428	0.0117056			20	
Endrin aldehyde [2C]	34823.56	9.288629	8.850714	1.137347E-02			20	
Endrin ketone	54639.44	5.439363	10.47586	9.833696E-03			20	
Endrin ketone [2C]	47133.68	11.54939	9.786	1.170692E-02			20	
gamma-BHC (Lindane)	61058.46	7.990573	6.52	0.0188397			20	
gamma-BHC (Lindane) [2C]	51469.37	9.195163	5.969428	9.81418E-03			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299003
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/22/12 11:28 10/22/12 17:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
gamma-Chlordane	58537.46	2.924263	8.346	5.793478E-03			20	
gamma-Chlordane [2C]	45600.43	14.66834	7.474143	2.32823E-04			20	
Heptachlor	57764.29	6.301845	7.162571	2.829725E-02			20	
Heptachlor [2C]	45029.56	10.65233	6.331714	1.839598E-02			20	
Heptachlor epoxide	56762.85	6.000368	8.042429	1.160931E-02			20	
Heptachlor epoxide [2C]	44380.7	12.61305	7.191571	1.085085E-02			20	
Methoxychlor	23126.34	3.275902	10.27986	2.475987E-02			20	
Methoxychlor [2C]	18651.37	11.89257	9.448	1.607851E-02			20	
Chlordane (tech)	5213.023	6.945077	9.493834	1.643624E-02			20	
Chlordane (1)	10093.54	6.205913	8.442167	1.799726E-02			20	
Chlordane (2)	2121.478	3.72961	6.924167	1.495177E-02			20	
Chlordane (3)	3426.878	12.3863	7.160833	1.502208E-02			20	
Chlordane (4)	8714.666	9.585749	8.345167	1.094751E-02			20	
Chlordane (5)	1708.548	4.515809	9.493834	1.643624E-02			20	
Chlordane (tech) [2C]	2881.585	9.6759	8.641167	2.973201E-03			20	
Chlordane (1) [2C]	5800.193	12.24173	7.5485	0.0122311			20	
Chlordane (2) [2C]	2010.126	9.144563	6.147	1.461363E-02			20	
Chlordane (3) [2C]	2662.477	10.18159	6.331167	9.439628E-03			20	
Chlordane (4) [2C]	2029.668	9.750059	6.757167	8.867439E-03			20	
Chlordane (5) [2C]	1905.46	10.47139	8.641167	2.973201E-03			20	
Toxaphene	1494.854	10.65984	10.847	1.059879E-02			20	
Toxaphene (1)	2796.327	7.877845	10.3785	1.110669E-03			20	
Toxaphene (2)	967.348	12.6772	9.0515	3.100109E-03			20	
Toxaphene (3)	1320.97	11.17715	9.474333	1.806879E-02			20	
Toxaphene (4)	1170.645	14.19916	9.962833	7.255309E-03			20	
Toxaphene (5)	1218.979	11.74457	10.847	1.059879E-02			20	
Toxaphene [2C]	1631.136	2.272472	10.205	1.279475E-02			20	
Toxaphene (1) [2C]	3443.187	4.074187	9.645	1.271282E-02			20	
Toxaphene (2) [2C]	499.6382	2.484696	7.881	6.184723E-03			20	
Toxaphene (3) [2C]	1159.89	2.620831	8.628167	5.452377E-03			20	
Toxaphene (4) [2C]	2100.622	2.209609	9.474667	1.803671E-02			20	
Toxaphene (5) [2C]	952.3446	2.504376	10.205	1.279475E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2299003	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	10/22/12 11:28 10/22/12 17:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Tetrachloro-m-xylene	45628.87	3.636376	5.705571	1.944434E-02			20	
Tetrachloro-m-xylene [2C]	41703.98	13.96605	5.120428	2.381203E-02			20	
Decachlorobiphenyl	44279.28	2.016261	12.16586	1.524311E-02			20	
Decachlorobiphenyl [2C]	29662.28	9.461277	11.15186	1.443424E-02			20	

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	003F0301.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV1	Injection Time:	16:35

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	116.2	50456.48	58629.51		16.2	20
4,4'-DDE [2C]	A	100.0	110.7	40256.05	44563.43		10.7	20
4,4'-DDD	A	100.0	119.8	41312.58	49508.37		19.8	20
4,4'-DDD [2C]	A	100.0	112.4	36108.37	40601.17		12.4	20
4,4'-DDT	A	100.0	105.9	44465.68	47085.6		5.9	20
4,4'-DDT [2C]	A	100.0	98.34	36018.1	35422.25		-1.7	20
Aldrin	A	100.0	112.2	61759.15	69288.94		12.2	20
Aldrin [2C]	A	100.0	98.93	46614.19	46115.53		-1.1	20
alpha-BHC	A	100.0	113.0	69569.94	78654.33		13.1	20
alpha-BHC [2C]	A	100.0	105.6	56093.27	59242.87		5.6	20
alpha-Chlordane	A	100.0	107.5	56017.16	60221.16		7.5	20
alpha-Chlordane [2C]	A	100.0	98.79	44337.74	43802.29		-1.2	20
beta-BHC	A	100.0	108.6	24624.75	26741.3		8.6	20
beta-BHC [2C]	A	100.0	105.2	23906.8	25150.6		5.2	20
delta-BHC	A	100.0	116.8	55058.59	64283.15		16.8	20
delta-BHC [2C]	A	100.0	104.8	48101.72	50403.42		4.8	20
Dieldrin	A	100.0	113.4	57227.59	64883		13.4	20
Dieldrin [2C]	A	100.0	105.6	46523.38	49149.78		5.6	20
Endosulfan I	A	100.0	106.7	53823.05	57407.97		6.7	20
Endosulfan I [2C]	A	100.0	105.0	42053.07	44161.5		5.0	20
Endosulfan II	A	100.0	110.5	49816.28	55030.07		10.5	20
Endosulfan II [2C]	A	100.0	104.4	39085.89	40814.46		4.4	20
Endosulfan sulfate	A	100.0	112.1	42311.38	47437.85		12.1	20
Endosulfan sulfate [2C]	A	100.0	109.0	33356.07	36375.65		9.1	20
Endrin	A	100.0	109.7	45068.01	49453.13		9.7	20
Endrin [2C]	A	100.0	108.3	37171.95	40254.1		8.3	20
Endrin aldehyde	A	100.0	108.3	42211.46	45716.34		8.3	20
Endrin aldehyde [2C]	A	100.0	106.6	34823.56	37134.7		6.6	20
Endrin ketone	A	100.0	110.5	54639.44	60393.18		10.5	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	003R0301.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV1	Injection Time:	16:35

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	103.0	47133.68	48563.49		3.0	20
gamma-BHC (Lindane)	A	100.0	105.8	61058.46	64606.02		5.8	20
gamma-BHC (Lindane) [2C]	A	100.0	104.7	51469.37	53895.7		4.7	20
gamma-Chlordane	A	100.0	104.4	58537.46	61111.57		4.4	20
gamma-Chlordane [2C]	A	100.0	101.5	45600.43	46292.88		1.5	20
Heptachlor	A	100.0	96.62	57764.29	55810.27		-3.4	20
Heptachlor [2C]	A	100.0	94.93	45029.56	42745.44		-5.1	20
Heptachlor epoxide	A	100.0	110.6	56762.85	62801.22		10.6	20
Heptachlor epoxide [2C]	A	100.0	103.0	44380.7	45696.24		3.0	20
Methoxychlor	A	100.0	103.6	23126.34	23949.48		3.6	20
Methoxychlor [2C]	A	100.0	99.54	18651.37	18565.45		-0.5	20
Tetrachloro-m-xylene	A	100.0	107.1	45628.87	48877.26		7.1	20
Tetrachloro-m-xylene [2C]	A	100.0	100.8	41703.98	42047.49		0.8	20
Decachlorobiphenyl	A	100.0	102.3	44279.28	45317.49		2.3	20
Decachlorobiphenyl [2C]	A	100.0	105.0	29662.28	31135.43		5.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	004F0401.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV2	Injection Time:	16:54

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	954.2	2796.327	2668.249		-4.6	20
Toxaphene (2)	A	1000	1040	967.348	1006.519		4.0	20
Toxaphene (3)	A	1000	1004	1320.97	1326.415		0.4	20
Toxaphene (4)	A	1000	1038	1170.645	1215.746		3.9	20
Toxaphene (5)	A	1000	1003	1218.979	1222.899		0.3	20
Toxaphene (1) [2C]	A	1000	976.7	3443.187	3363.113		-2.3	20
Toxaphene (2) [2C]	A	1000	1176	499.6382	587.384		17.6	20
Toxaphene (3) [2C]	A	1000	992.7	1159.89	1151.414		-0.7	20
Toxaphene (4) [2C]	A	1000	989.6	2100.622	2078.752		-1.0	20
Toxaphene (5) [2C]	A	1000	924.5	952.3446	880.414		-7.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	025F2501.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV6	Injection Time:	23:36

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4,4'-DDE	A	100.0	119.9	50456.48	60506.77		19.9	20	
4,4'-DDE [2C]	A	100.0	118.6	40256.05	47730.48		18.6	20	
4,4'-DDD	A	100.0	134.2	41312.58	55458.65		34.2	20	*
4,4'-DDD [2C]	A	100.0	128.8	36108.37	46502.56		28.8	20	*
4,4'-DDT	A	100.0	87.48	44465.68	38900.34		-12.5	20	
4,4'-DDT [2C]	A	100.0	88.61	36018.1	31916		-11.4	20	
Aldrin	A	100.0	115.2	61759.15	71159.79		15.2	20	
Aldrin [2C]	A	100.0	110.3	46614.19	51420.73		10.3	20	
alpha-BHC	A	100.0	117.4	69569.94	81680.38		17.4	20	
alpha-BHC [2C]	A	100.0	115.0	56093.27	64512.03		15.0	20	
alpha-Chlordane	A	100.0	112.3	56017.16	62898.17		12.3	20	
alpha-Chlordane [2C]	A	100.0	109.2	44337.74	48396.22		9.2	20	
beta-BHC	A	100.0	111.3	24624.75	27404.14		11.3	20	
beta-BHC [2C]	A	100.0	114.8	23906.8	27455.08		14.8	20	
delta-BHC	A	100.0	118.5	55058.59	65267.6		18.5	20	
delta-BHC [2C]	A	100.0	116.9	48101.72	56248.03		16.9	20	
Dieldrin	A	100.0	116.6	57227.59	66717.36		16.6	20	
Dieldrin [2C]	A	100.0	112.9	46523.38	52515.72		12.9	20	
Endosulfan I	A	100.0	112.2	53823.05	60418.94		12.3	20	
Endosulfan I [2C]	A	100.0	114.1	42053.07	47973.94		14.1	20	
Endosulfan II	A	100.0	115.8	49816.28	57686.83		15.8	20	
Endosulfan II [2C]	A	100.0	113.8	39085.89	44469.2		13.8	20	
Endosulfan sulfate	A	100.0	115.4	42311.38	48824.85		15.4	20	
Endosulfan sulfate [2C]	A	100.0	116.5	33356.07	38847.1		16.5	20	
Endrin	A	100.0	101.4	45068.01	45677.66		1.4	20	
Endrin [2C]	A	100.0	104.2	37171.95	38738.73		4.2	20	
Endrin aldehyde	A	100.0	117.5	42211.46	49591.7		17.5	20	
Endrin aldehyde [2C]	A	100.0	117.5	34823.56	40925.45		17.5	20	
Endrin ketone	A	100.0	118.9	54639.44	64977.75		18.9	20	

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	025R2501.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV6	Injection Time:	23:36

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	117.7	47133.68	55477.25		17.7	20
gamma-BHC (Lindane)	A	100.0	113.2	61058.46	69138.06		13.2	20
gamma-BHC (Lindane) [2C]	A	100.0	114.1	51469.37	58747.83		14.1	20
gamma-Chlordane	A	100.0	110.2	58537.46	64510.47		10.2	20
gamma-Chlordane [2C]	A	100.0	109.8	45600.43	50063.83		9.8	20
Heptachlor	A	100.0	106.3	57764.29	61389.58		6.3	20
Heptachlor [2C]	A	100.0	106.3	45029.56	47885.4		6.3	20
Heptachlor epoxide	A	100.0	113.5	56762.85	64444.73		13.5	20
Heptachlor epoxide [2C]	A	100.0	112.5	44380.7	49936.14		12.5	20
Methoxychlor	A	100.0	88.63	23126.34	20496.37		-11.4	20
Methoxychlor [2C]	A	100.0	94.14	18651.37	17558.66		-5.9	20
Tetrachloro-m-xylene	A	100.0	110.0	45628.87	50177.53		10.0	20
Tetrachloro-m-xylene [2C]	A	100.0	109.5	41703.98	45669.77		9.5	20
Decachlorobiphenyl	A	100.0	108.0	44279.28	47807.51		8.0	20
Decachlorobiphenyl [2C]	A	100.0	114.6	29662.28	34004.31		14.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	026F2601.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV7	Injection Time:	23:55

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Toxaphene (1)	A	1000	943.3	2796.327	2637.841		-5.7	20	
Toxaphene (2)	A	1000	1178	967.348	1139.808		17.8	20	
Toxaphene (3)	A	1000	1162	1320.97	1535.031		16.2	20	
Toxaphene (4)	A	1000	1080	1170.645	1264.6		8.0	20	
Toxaphene (5)	A	1000	1008	1218.979	1229.392		0.9	20	
Toxaphene (1) [2C]	A	1000	978.9	3443.187	3370.636		-2.1	20	
Toxaphene (2) [2C]	A	1000	1459	499.6382	728.917		45.9	20	*
Toxaphene (3) [2C]	A	1000	1107	1159.89	1284.272		10.7	20	
Toxaphene (4) [2C]	A	1000	991.8	2100.622	2083.34		-0.8	20	
Toxaphene (5) [2C]	A	1000	813.8	952.3446	774.975		-18.6	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J22004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/22/12 08:28	1,080.00	10.00
PEN-3221-02-10/12	1210161-04	10/22/12 08:28	1,080.00	10.00
PEN-3221-03-10/12	1210161-05	10/22/12 08:28	1,080.00	10.00
FB10161201	1210161-07	10/22/12 08:28	1,080.00	10.00
FB10161202	1210161-08	10/22/12 08:28	1,080.00	10.00
Blank	2J22004-BLK1	10/22/12 08:28	1,000.00	10.00
LCS	2J22004-BS1	10/22/12 08:28	1,000.00	10.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J22004-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/22/12 08:28 Analyzed: 10/27/12 18:11

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00500	0.0100	0.0200	U
72-54-8	4,4'-DDD		0.00500	0.0100	0.0200	UX
50-29-3	4,4'-DDT		0.00500	0.0100	0.0200	U
309-00-2	Aldrin		0.00330	0.0100	0.0200	U
319-84-6	alpha-BHC		0.00330	0.0100	0.0200	U
5103-71-9	alpha-Chlordane		0.00330	0.0100	0.0200	U
319-85-7	beta-BHC		0.00330	0.0100	0.0200	U
319-86-8	delta-BHC		0.00330	0.0100	0.0200	U
60-57-1	Dieldrin		0.00500	0.0100	0.0200	U
959-98-8	Endosulfan I		0.00330	0.0100	0.0200	U
33213-65-9	Endosulfan II		0.00500	0.0100	0.0200	U
1031-07-8	Endosulfan sulfate		0.00500	0.0100	0.0200	U
72-20-8	Endrin		0.00500	0.0100	0.0200	U
7421-93-4	Endrin aldehyde		0.00500	0.0100	0.0200	U
53494-70-5	Endrin ketone		0.00500	0.0100	0.0200	U
58-89-9	gamma-BHC (Lindane)		0.00330	0.0100	0.0200	U
5103-74-2	gamma-Chlordane		0.00330	0.0100	0.0200	U
76-44-8	Heptachlor		0.00330	0.0100	0.0200	U
1024-57-3	Heptachlor epoxide		0.00330	0.0100	0.0200	U
72-43-5	Methoxychlor		0.00330	0.0100	0.0200	U
8001-35-2	Toxaphene		0.330	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.4059	81.2	25 - 140	
Tetrachloro-m-xylene [2C]	0.5000	0.4269	85.4	25 - 140	
Decachlorobiphenyl	0.5000	0.4264	85.3	30 - 135	
Decachlorobiphenyl [2C]	0.5000	0.4732	94.6	30 - 135	

* Values outside of QC limits

FORM X
IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

PEN-3221-02-10/12

Lab Name: Empirical Laboratories, LLC

Lab Sample ID: 1210161-04 Date(s) Analyzed: 10/27/2012 10/27/2012

Instrument ID (1): GL-ECD3 Instrument ID (2): GL-ECD3

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
gamma-Chlordane	1	8.12	8.08	8.14	0.00354	
	2	7.25	7.23	7.28	0.00474	29

INITIAL CALIBRATION STANDARDS

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29909	Instrument:	GL-ECD3
Calibration:	2299003		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010R1001.D	10/22/12 11:28
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010F1001.D	10/22/12 11:28
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011F1101.D	10/22/12 11:47
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011R1101.D	10/22/12 11:47
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012F1201.D	10/22/12 12:06
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012R1201.D	10/22/12 12:06
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013F1301.D	10/22/12 12:25
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013R1301.D	10/22/12 12:25
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014F1401.D	10/22/12 12:44
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014R1401.D	10/22/12 12:44
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015R1501.D	10/22/12 13:03
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015F1501.D	10/22/12 13:03
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016F1601.D	10/22/12 13:23
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016R1601.D	10/22/12 13:23
12D0724	Aro-1660 Cal1@2500/250	2J29909-CALK	032F3201.D	10/22/12 18:28
12D0724	Aro-1660 Cal1@2500/250	2J29909-CALK	032R3201.D	10/22/12 18:28
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J29909-CALL	033F3301.D	10/22/12 18:47
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J29909-CALL	033R3301.D	10/22/12 18:47
12D0726	Aro-1660 Cal3@750/75	2J29909-CALM	034R3401.D	10/22/12 19:06
12D0726	Aro-1660 Cal3@750/75	2J29909-CALM	034F3401.D	10/22/12 19:06
12D0727	Aro-1660 Cal4@500/50	2J29909-CALN	035F3501.D	10/22/12 19:25
12D0727	Aro-1660 Cal4@500/50	2J29909-CALN	035R3501.D	10/22/12 19:25
12D0728	Aro-1660 Cal5@100/10	2J29909-CALO	036F3601.D	10/22/12 19:45
12D0728	Aro-1660 Cal5@100/10	2J29909-CALO	036R3601.D	10/22/12 19:45
12D0730	Aro-1660 Cal6@50/5	2J29909-CALP	037F3701.D	10/22/12 20:04
12D0730	Aro-1660 Cal6@50/5	2J29909-CALP	037R3701.D	10/22/12 20:04
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J29909-CALQ	039R3901.D	10/22/12 20:42
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J29909-CALQ	039F3901.D	10/22/12 20:42
12E0534	Aroclor-1254 Cal 2 1000ppb	2J29909-CALR	040F4001.D	10/22/12 21:01
12E0534	Aroclor-1254 Cal 2 1000ppb	2J29909-CALR	040R4001.D	10/22/12 21:01
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J29909-CALS	041F4101.D	10/22/12 21:20
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J29909-CALS	041R4101.D	10/22/12 21:20

12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J29909-CALT	042F4201.D	10/22/12 21:39
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J29909-CALT	042R4201.D	10/22/12 21:39
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J29909-CALU	043F4301.D	10/22/12 21:58
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J29909-CALU	043R4301.D	10/22/12 21:58
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J29909-CALV	044R4401.D	10/22/12 22:17
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J29909-CALV	044F4401.D	10/22/12 22:17

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29909
Instrument: GL-ECD3
Calibration: 2299003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29909-CAL1	010R1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL1	010F1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL2	011F1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL2	011R1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL3	012F1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL3	012R1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL4	013F1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL4	013R1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL5	014R1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL5	014F1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL6	015F1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL6	015R1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL7	016F1601.D	10/22/12 13:23
Cal Standard	2J29909-CAL7	016R1601.D	10/22/12 13:23
Cal Standard	2J29909-CALK	032F3201.D	10/22/12 18:28
Cal Standard	2J29909-CALK	032R3201.D	10/22/12 18:28
Cal Standard	2J29909-CALL	033F3301.D	10/22/12 18:47
Cal Standard	2J29909-CALL	033R3301.D	10/22/12 18:47
Cal Standard	2J29909-CALM	034F3401.D	10/22/12 19:06
Cal Standard	2J29909-CALM	034R3401.D	10/22/12 19:06
Cal Standard	2J29909-CALN	035R3501.D	10/22/12 19:25
Cal Standard	2J29909-CALN	035F3501.D	10/22/12 19:25
Cal Standard	2J29909-CALO	036F3601.D	10/22/12 19:45
Cal Standard	2J29909-CALO	036R3601.D	10/22/12 19:45
Cal Standard	2J29909-CALP	037F3701.D	10/22/12 20:04
Cal Standard	2J29909-CALP	037R3701.D	10/22/12 20:04
Initial Cal Check	2J29909-ICV4	038R3801.D	10/22/12 20:23
Initial Cal Check	2J29909-ICV4	038F3801.D	10/22/12 20:23
Cal Standard	2J29909-CALQ	039F3901.D	10/22/12 20:42
Cal Standard	2J29909-CALQ	039R3901.D	10/22/12 20:42
Cal Standard	2J29909-CALR	040F4001.D	10/22/12 21:01
Cal Standard	2J29909-CALR	040R4001.D	10/22/12 21:01

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29909	Instrument:	GL-ECD3
Calibration:	2299003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29909-CALS	041F4101.D	10/22/12 21:20
Cal Standard	2J29909-CALS	041R4101.D	10/22/12 21:20
Cal Standard	2J29909-CALT	042R4201.D	10/22/12 21:39
Cal Standard	2J29909-CALT	042F4201.D	10/22/12 21:39
Cal Standard	2J29909-CALU	043F4301.D	10/22/12 21:58
Cal Standard	2J29909-CALU	043R4301.D	10/22/12 21:58
Cal Standard	2J29909-CALV	044F4401.D	10/22/12 22:17
Cal Standard	2J29909-CALV	044R4401.D	10/22/12 22:17
Initial Cal Check	2J29909-ICV5	045R4501.D	10/22/12 22:37
Initial Cal Check	2J29909-ICV5	045F4501.D	10/22/12 22:37

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech, Inc. (T010)

Sequence: 2K31022

Calibration: 2299003

SDG: 1210161

Project: NAS Pensacola CTO 0079 Site 44

Instrument: GL-ECD3

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2K31022-CCV1	003R0301.D	10/27/12 16:35
Calibration Check	2K31022-CCV1	003F0301.D	10/27/12 16:35
Calibration Check	2K31022-CCV4	006R0601.D	10/27/12 17:33
Calibration Check	2K31022-CCV4	006F0601.D	10/27/12 17:33
Calibration Check	2K31022-CCV5	007R0701.D	10/27/12 17:52
Calibration Check	2K31022-CCV5	007F0701.D	10/27/12 17:52
Blank	2J22004-BLK1	008R0801.D	10/27/12 18:11
Blank	2J22004-BLK1	008F0801.D	10/27/12 18:11
LCS	2J22004-BS2	010F1001.D	10/27/12 18:49
LCS	2J22004-BS2	010R1001.D	10/27/12 18:49
PEN-3221-10-10/12	1210161-02	020R2001.D	10/27/12 22:00
PEN-3221-10-10/12	1210161-02	020F2001.D	10/27/12 22:00
PEN-3221-02-10/12	1210161-04	021R2101.D	10/27/12 22:19
PEN-3221-02-10/12	1210161-04	021F2101.D	10/27/12 22:19
PEN-3221-03-10/12	1210161-05	022F2201.D	10/27/12 22:38
PEN-3221-03-10/12	1210161-05	022R2201.D	10/27/12 22:38
FB10161201	1210161-07	023R2301.D	10/27/12 22:57
FB10161201	1210161-07	023F2301.D	10/27/12 22:57
FB10161202	1210161-08	024R2401.D	10/27/12 23:17
FB10161202	1210161-08	024F2401.D	10/27/12 23:17
Calibration Check	2K31022-CCV6	025F2501.D	10/27/12 23:36
Calibration Check	2K31022-CCV6	025R2501.D	10/27/12 23:36
Calibration Check	2K31022-CCV9	028F2801.D	10/28/12 00:33
Calibration Check	2K31022-CCV9	028R2801.D	10/28/12 00:33
Calibration Check	2K31022-CCVA	029R2901.D	10/28/12 00:52
Calibration Check	2K31022-CCVA	029F2901.D	10/28/12 00:52

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299003
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/22/12 11:28 10/22/12 22:17

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1016	1174.516	2.311246	7.333667	2.171858E-02			20	
Aroclor-1016 (1)	1964.494	3.581075	7.034167	7.244369E-03			20	
Aroclor-1016 (2)	709.6265	6.281095	6.112667	9.425495E-03			20	
Aroclor-1016 (3)	1073.222	6.718095	6.485167	1.307988E-02			20	
Aroclor-1016 (4)	1300.088	3.756672	7.0095	9.226517E-03			20	
Aroclor-1016 (5)	825.148	3.220945	7.333667	2.171858E-02			20	
Aroclor-1016 [2C]	1228.556	12.85368	6.6295	1.323378E-02			20	
Aroclor-1016 (1) [2C]	1955.791	12.05326	6.331	8.701677E-03			20	
Aroclor-1016 (2) [2C]	1130.285	13.6631	6.061333	1.898219E-02			20	
Aroclor-1016 (3) [2C]	1024.428	11.21134	6.529167	1.555927E-02			20	
Aroclor-1016 (4) [2C]	967.0585	15.24816	6.583333	7.416931E-03			20	
Aroclor-1016 (5) [2C]	1065.218	13.29546	6.6295	1.323378E-02			20	
Aroclor-1254	2132.619	3.940259	9.643	1.619697E-02			20	
Aroclor-1254 (1)	2914.766	8.123141	8.748333	2.802871E-02			20	
Aroclor-1254 (2)	944.7771	1.301137	7.3335	1.735395E-02			20	
Aroclor-1254 (3)	2813.096	3.589606	8.298833	3.195678E-02			20	
Aroclor-1254 (4)	1309.796	10.14071	9.2915	1.908829E-02			20	
Aroclor-1254 (5)	2680.662	5.509629	9.643	1.619697E-02			20	
Aroclor-1254 [2C]	2097.869	8.227751	8.5955	2.176966E-02			20	
Aroclor-1254 (1) [2C]	3120.727	9.2133	7.915833	2.658287E-02			20	
Aroclor-1254 (2) [2C]	2397.279	10.15893	7.244167	0.0161338			20	
Aroclor-1254 (3) [2C]	2118.341	8.903629	7.426333	1.211855E-02			20	
Aroclor-1254 (4) [2C]	1579.379	5.911214	8.080833	9.889376E-03			20	
Aroclor-1254 (5) [2C]	1273.619	4.303819	8.5955	2.176966E-02			20	
Aroclor-1260	3202.663	1.761731	11.5435	0.0203816			20	
Aroclor-1260 (1)	5841.086	1.520848	10.4315	9.117338E-03			20	
Aroclor-1260 (2)	3061.653	1.745347	9.2915	1.369735E-02			20	
Aroclor-1260 (3)	3570.469	3.337977	9.640333	1.268409E-02			20	
Aroclor-1260 (4)	2337.498	4.280156	9.745	0.0163278			20	
Aroclor-1260 (5)	1202.608	1.27378	11.5435	0.0203816			20	
Aroclor-1260 [2C]	2770.633	12.22155	9.423833	1.967665E-02			20	
Aroclor-1260 (1) [2C]	4381.511	10.90292	9.423833	1.967665E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299003
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/22/12 11:28 10/22/12 22:17

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1260 (2) [2C]	2274.812	13.91767	8.077833	6.967508E-03			20	
Aroclor-1260 (3) [2C]	2775.875	11.4597	8.321333	1.422968E-02			20	
Aroclor-1260 (4) [2C]	2572.017	13.64883	8.505167	1.364563E-02			20	
Aroclor-1260 (5) [2C]	1848.952	12.64522	9.104333	0.015783			20	
Tetrachloro-m-xylene	45628.87	3.636376	5.705571	1.944434E-02			20	
Tetrachloro-m-xylene [2C]	41703.98	13.96605	5.120428	2.381203E-02			20	
Decachlorobiphenyl	44279.28	2.016261	12.16586	1.524311E-02			20	
Decachlorobiphenyl [2C]	29662.28	9.461277	11.15186	1.443424E-02			20	

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	038F3801.D	Calibration Date:	10/22/12 00:00
Sequence:	2J29909	Injection Date:	10/22/12
Lab Sample ID:	2J29909-ICV4	Injection Time:	20:23

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1016 (1)	A	1003	1150	1964.494	2253.254		14.7	20
Aroclor-1016 (2)	A	1003	1044	709.6265	738.8265		4.1	20
Aroclor-1016 (3)	A	1003	1099	1073.222	1176.351		9.6	20
Aroclor-1016 (4)	A	1003	1122	1300.088	1453.785		11.8	20
Aroclor-1016 (5)	A	1003	1153	825.148	948.7687		15.0	20
Aroclor-1016 (1) [2C]	A	1003	1046	1955.791	2040.403		4.3	20
Aroclor-1016 (2) [2C]	A	1003	1035	1130.285	1166.338		3.2	20
Aroclor-1016 (3) [2C]	A	1003	1068	1024.428	1090.938		6.5	20
Aroclor-1016 (4) [2C]	A	1003	1056	967.0585	1018.144		5.3	20
Aroclor-1016 (5) [2C]	A	1003	1081	1065.218	1148.048		7.8	20
Aroclor-1260 (1)	A	1002	1114	5841.086	6492.627		11.2	20
Aroclor-1260 (2)	A	1002	1099	3061.653	3356.851		9.6	20
Aroclor-1260 (3)	A	1002	1092	3570.469	3890.242		9.0	20
Aroclor-1260 (4)	A	1002	1082	2337.498	2525.05		8.0	20
Aroclor-1260 (5)	A	1002	1097	1202.608	1316.425		9.5	20
Aroclor-1260 (1) [2C]	A	1002	1037	4381.511	4532.893		3.5	20
Aroclor-1260 (2) [2C]	A	1002	1031	2274.812	2340.379		2.9	20
Aroclor-1260 (3) [2C]	A	1002	1050	2775.875	2908.25		4.8	20
Aroclor-1260 (4) [2C]	A	1002	1027	2572.017	2636.237		2.5	20
Aroclor-1260 (5) [2C]	A	1002	1026	1848.952	1893.276		2.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	045F4501.D	Calibration Date:	10/22/12 00:00
Sequence:	2J29909	Injection Date:	10/22/12
Lab Sample ID:	2J29909-ICV5	Injection Time:	22:37

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1254 (1)	A	1000	1091	2914.766	3180.951		9.1	20
Aroclor-1254 (2)	A	1000	1010	944.7771	953.784		1.0	20
Aroclor-1254 (3)	A	1000	1055	2813.096	2968.685		5.5	20
Aroclor-1254 (4)	A	1000	1143	1309.796	1496.76		14.3	20
Aroclor-1254 (5)	A	1000	990.0	2680.662	2653.827		-1.0	20
Aroclor-1254 (1) [2C]	A	1000	978.4	3120.727	3053.339		-2.2	20
Aroclor-1254 (2) [2C]	A	1000	964.9	2397.279	2313.201		-3.5	20
Aroclor-1254 (3) [2C]	A	1000	976.0	2118.341	2067.599		-2.4	20
Aroclor-1254 (4) [2C]	A	1000	1005	1579.379	1586.844		0.5	20
Aroclor-1254 (5) [2C]	A	1000	1004	1273.619	1279.435		0.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	003F0301.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV1	Injection Time:	16:35

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	107.1	45628.87	48877.26		7.1	20
Tetrachloro-m-xylene [2C]	A	100.0	100.8	41703.98	42047.49		0.8	20
Decachlorobiphenyl	A	100.0	102.3	44279.28	45317.49		2.3	20
Decachlorobiphenyl [2C]	A	100.0	105.0	29662.28	31135.43		5.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	006F0601.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV4	Injection Time:	17:33

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1063	1964.494	2089.068		6.3	20
Aroclor-1016 (2)	A	1000	1090	709.6265	773.331		9.0	20
Aroclor-1016 (3)	A	1000	1054	1073.222	1131.096		5.4	20
Aroclor-1016 (4)	A	1000	1146	1300.088	1489.46		14.6	20
Aroclor-1016 (5)	A	1000	1099	825.148	906.643		9.9	20
Aroclor-1016 (1) [2C]	A	1000	1185	1955.791	2318.247		18.5	20
Aroclor-1016 (2) [2C]	A	1000	1078	1130.285	1219.067		7.9	20
Aroclor-1016 (3) [2C]	A	1000	1090	1024.428	1116.782		9.0	20
Aroclor-1016 (4) [2C]	A	1000	1097	967.0585	1061.285		9.7	20
Aroclor-1016 (5) [2C]	A	1000	1019	1065.218	1085.234		1.9	20
Aroclor-1260 (1)	A	1000	1070	5841.086	6247.06		7.0	20
Aroclor-1260 (2)	A	1000	1084	3061.653	3317.828		8.4	20
Aroclor-1260 (3)	A	1000	1082	3570.469	3865.04		8.3	20
Aroclor-1260 (4)	A	1000	1022	2337.498	2388.095		2.2	20
Aroclor-1260 (5)	A	1000	1106	1202.608	1330.262		10.6	20
Aroclor-1260 (1) [2C]	A	1000	1104	4381.511	4836.441		10.4	20
Aroclor-1260 (2) [2C]	A	1000	1063	2274.812	2418.83		6.3	20
Aroclor-1260 (3) [2C]	A	1000	1084	2775.875	3009.607		8.4	20
Aroclor-1260 (4) [2C]	A	1000	1079	2572.017	2774.308		7.9	20
Aroclor-1260 (5) [2C]	A	1000	1078	1848.952	1993.401		7.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	007F0701.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV5	Injection Time:	17:52

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	1098	2914.766	3199.958		9.8	20
Aroclor-1254 (2)	A	1000	997.2	944.7771	942.162		-0.3	20
Aroclor-1254 (3)	A	1000	1056	2813.096	2969.864		5.6	20
Aroclor-1254 (4)	A	1000	1077	1309.796	1410.883		7.7	20
Aroclor-1254 (5)	A	1000	998.1	2680.662	2675.7		-0.2	20
Aroclor-1254 (1) [2C]	A	1000	1038	3120.727	3240.106		3.8	20
Aroclor-1254 (2) [2C]	A	1000	1048	2397.279	2513.182		4.8	20
Aroclor-1254 (3) [2C]	A	1000	1044	2118.341	2211.07		4.4	20
Aroclor-1254 (4) [2C]	A	1000	1040	1579.379	1643.393		4.1	20
Aroclor-1254 (5) [2C]	A	1000	1090	1273.619	1387.849		9.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	025F2501.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/27/12
Lab Sample ID:	2K31022-CCV6	Injection Time:	23:36

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	110.0	45628.87	50177.53		10.0	20
Tetrachloro-m-xylene [2C]	A	100.0	109.5	41703.98	45669.77		9.5	20
Decachlorobiphenyl	A	100.0	108.0	44279.28	47807.51		8.0	20
Decachlorobiphenyl [2C]	A	100.0	114.6	29662.28	34004.31		14.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	028F2801.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/28/12
Lab Sample ID:	2K31022-CCV9	Injection Time:	00:33

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1103	1964.494	2166.484		10.3	20
Aroclor-1016 (2)	A	1000	1091	709.6265	774.151		9.1	20
Aroclor-1016 (3)	A	1000	1071	1073.222	1149.073		7.1	20
Aroclor-1016 (4)	A	1000	1136	1300.088	1477.298		13.6	20
Aroclor-1016 (5)	A	1000	1115	825.148	920.326		11.5	20
Aroclor-1016 (1) [2C]	A	1000	1154	1955.791	2257.341		15.4	20
Aroclor-1016 (2) [2C]	A	1000	1112	1130.285	1257.545		11.3	20
Aroclor-1016 (3) [2C]	A	1000	1153	1024.428	1181.296		15.3	20
Aroclor-1016 (4) [2C]	A	1000	1150	967.0585	1112.332		15.0	20
Aroclor-1016 (5) [2C]	A	1000	1121	1065.218	1193.922		12.1	20
Aroclor-1260 (1)	A	1000	1099	5841.086	6420.063		9.9	20
Aroclor-1260 (2)	A	1000	1114	3061.653	3409.909		11.4	20
Aroclor-1260 (3)	A	1000	1113	3570.469	3973.382		11.3	20
Aroclor-1260 (4)	A	1000	1052	2337.498	2459.837		5.2	20
Aroclor-1260 (5)	A	1000	1110	1202.608	1334.579		11.0	20
Aroclor-1260 (1) [2C]	A	1000	1154	4381.511	5057.443		15.4	20
Aroclor-1260 (2) [2C]	A	1000	1123	2274.812	2555.476		12.3	20
Aroclor-1260 (3) [2C]	A	1000	1174	2775.875	3258.602		17.4	20
Aroclor-1260 (4) [2C]	A	1000	1145	2572.017	2944.812		14.5	20
Aroclor-1260 (5) [2C]	A	1000	1137	1848.952	2101.929		13.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	029F2901.D	Calibration Date:	10/22/12 00:00
Sequence:	2K31022	Injection Date:	10/28/12
Lab Sample ID:	2K31022-CCVA	Injection Time:	00:52

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	1149	2914.766	3350.166		14.9	20
Aroclor-1254 (2)	A	1000	1035	944.7771	977.584		3.5	20
Aroclor-1254 (3)	A	1000	1095	2813.096	3080.337		9.5	20
Aroclor-1254 (4)	A	1000	1134	1309.796	1485.78		13.4	20
Aroclor-1254 (5)	A	1000	1042	2680.662	2792.172		4.2	20
Aroclor-1254 (1) [2C]	A	1000	1101	3120.727	3435.132		10.1	20
Aroclor-1254 (2) [2C]	A	1000	1102	2397.279	2641.169		10.2	20
Aroclor-1254 (3) [2C]	A	1000	1115	2118.341	2361.542		11.5	20
Aroclor-1254 (4) [2C]	A	1000	1127	1579.379	1780.596		12.7	20
Aroclor-1254 (5) [2C]	A	1000	1172	1273.619	1492.31		17.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J22004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/22/12 08:28	1,080.00	10.00
PEN-3221-02-10/12	1210161-04	10/22/12 08:28	1,080.00	10.00
PEN-3221-03-10/12	1210161-05	10/22/12 08:28	1,080.00	10.00
FB10161201	1210161-07	10/22/12 08:28	1,080.00	10.00
FB10161202	1210161-08	10/22/12 08:28	1,080.00	10.00
Blank	2J22004-BLK1	10/22/12 08.28	1,000.00	10.00
LCS	2J22004-BS2	10/22/12 08.28	1,000.00	10.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J22004-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/22/12 08:28 Analyzed: 10/27/12 18:11

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J22004 Sequence: 2K31022 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.120	0.250	0.500	U
11104-28-2	Aroclor-1221		0.120	0.250	0.500	U
11141-16-5	Aroclor-1232		0.120	0.250	0.500	U
53469-21-9	Aroclor-1242		0.120	0.250	0.500	U
12672-29-6	Aroclor-1248		0.120	0.250	0.500	U
11097-69-1	Aroclor-1254		0.120	0.250	0.500	U
11096-82-5	Aroclor-1260		0.120	0.250	0.500	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.4059	81.2	25 - 140	
Tetrachloro-m-xylene [2Cl]	0.5000	0.4269	85.4	25 - 140	
Decachlorobiphenyl	0.5000	0.4264	85.3	40 - 135	
Decachlorobiphenyl [2Cl]	0.5000	0.4732	94.6	40 - 135	

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29813
Instrument: ME-ICP
Calibration: 2298003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29813-CAL1	10-24-12A-001	10/24/12 09:00
Cal Standard	2J29813-CAL2	10-24-12A-002	10/24/12 09:04
Cal Standard	2J29813-CAL3	10-24-12A-003	10/24/12 09:08
Cal Standard	2J29813-CAL4	10-24-12A-004	10/24/12 09:13
Cal Standard	2J29813-CAL5	10-24-12A-005	10/24/12 09:17
Cal Standard	2J29813-CAL6	10-24-12A-006	10/24/12 09:22
Initial Cal Check	2J29813-ICV1	10-24-12B-001	10/24/12 10:04
Initial Cal Blank	2J29813-ICB1	10-24-12B-002	10/24/12 10:11
Instrument RL Check	2J29813-CRL1	10-24-12B-003	10/24/12 10:16
Interference Check A	2J29813-IFA1	10-24-12B-005	10/24/12 10:26
Interference Check B	2J29813-IFB1	10-24-12C-001	10/24/12 10:40
Calibration Check	2J29813-CCV1	10-24-12C-005	10/24/12 11:02
Calibration Blank	2J29813-CCB1	10-24-12C-006	10/24/12 11:09
Calibration Check	2J29813-CCV5	102412D-022	10/24/12 15:37
Calibration Blank	2J29813-CCB5	102412D-023	10/24/12 15:45
Blank	2J24015-BLK1	102412E-001	10/24/12 15:52
LCS	2J24015-BS1	102412E-002	10/24/12 15:57
PEN-3221-10-10/12	1210161-03	102412E-003	10/24/12 16:03
PEN-3221-03-10/12	1210161-06	102412E-004	10/24/12 16:08
Calibration Check	2J29813-CCV6 OK	102412E-012	10/24/12 16:45
Calibration Blank	2J29813-CCB6	102412E-013	10/24/12 16:52

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Instrument: ME-ICP
Calibration: 2303002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30316-CAL1	10-29-12A-002	10/29/12 09:53
Cal Standard	2J30316-CAL2	10-29-12A-003	10/29/12 09:57
Cal Standard	2J30316-CAL3	10-29-12A-004	10/29/12 10:02
Cal Standard	2J30316-CAL4	10-29-12A-005	10/29/12 10:06
Cal Standard	2J30316-CAL5	10-29-12A-006	10/29/12 10:11
Cal Standard	2J30316-CAL6	10-29-12A-007	10/29/12 10:16
Cal Standard	2J30316-CAL7	10-29-12A-008	10/29/12 10:21
Cal Standard	2J30316-CAL8	10-29-12A-009	10/29/12 10:26
Initial Cal Check	2J30316-ICV1	10-29-12B-001	10/29/12 11:01
Initial Cal Blank	2J30316-ICB1	10-29-12B-002	10/29/12 11:18
Instrument RL Check	2J30316-CRL1	10-29-12B-003	10/29/12 11:23
Instrument RL Check	2J30316-CRL2	10-29-12B-005	10/29/12 11:32
Interference Check A	2J30316-IFA1	10-29-12B-006	10/29/12 11:37
Interference Check B	2J30316-IFB1	10-29-12B-007	10/29/12 11:42
Calibration Check	2J30316-CCV1	10-29-12B-009	10/29/12 11:52
Calibration Blank	2J30316-CCB1	10-29-12B-010	10/29/12 11:59
Calibration Check	2J30316-CCV6 √	102912D-015	10/29/12 18:25
Calibration Blank	2J30316-CCB6	102912D-016	10/29/12 18:33
Blank	2J27917-BLK1	102912D-017	10/29/12 18:37
LCS	2J27917-BS1	102912D-018	10/29/12 18:42
Calibration Check	2J30316-CCV7 √	102912D-033	10/29/12 19:52
Calibration Blank	2J30316-CCB7 √	102912D-034	10/29/12 20:00
PEN-3221-10-10/12	1210161-02	102912D-037	10/29/12 20:13
PEN-3221-02-10/12	1210161-04	102912D-038	10/29/12 20:18
PEN-3221-03-10/12	1210161-05	102912D-039	10/29/12 20:22
FB10161201	1210161-07	102912D-040	10/29/12 20:27
FB10161202	1210161-08	102912D-041	10/29/12 20:31
Calibration Check	2J30316-CCV8	102912D-045	10/29/12 20:50
Calibration Blank	2J30316-CCB8	102912D-046	10/29/12 20:58

ANALYSIS SEQUENCE SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30513
Instrument: ME-FIMS
Calibration: 2305002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J30513-CAL1	103112W-001	10/31/12 12:08
Cal Standard	2J30513-CAL2	103112W-002	10/31/12 12:09
Cal Standard	2J30513-CAL3	103112W-003	10/31/12 12:10
Cal Standard	2J30513-CAL4	103112W-004	10/31/12 12:11
Cal Standard	2J30513-CAL5	103112W-005	10/31/12 12:12
Cal Standard	2J30513-CAL6	103112W-006	10/31/12 12:14
Cal Standard	2J30513-CAL7	103112W-007	10/31/12 12:15
Cal Standard	2J30513-CAL8	103112W-008	10/31/12 12:16
Initial Cal Check	2J30513-ICV1	103112W-009	10/31/12 12:19
Initial Cal Blank	2J30513-ICB1	103112W-010	10/31/12 12:20
LCS	2J30422-BS1	103112W-011	10/31/12 12:21
Blank	2J30422-BLK1	103112W-012	10/31/12 12:22
PEN-3221-10-10/12	1210161-02	103112W-018	10/31/12 12:28
PEN-3221-02-10/12	1210161-04	103112W-019	10/31/12 12:29
PEN-3221-03-10/12	1210161-05	103112W-020	10/31/12 12:31
FB10161201	1210161-07	103112W-021	10/31/12 12:32
FB10161202	1210161-08	103112W-022	10/31/12 12:33
Calibration Check	2J30513-CCV1	103112W-023	10/31/12 12:34
Calibration Blank	2J30513-CCB1	103112W-024	10/31/12 12:35

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2298003
Sequence: 2J29813

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29813-ICV1	Iron (dissolved)	10000	9896	99.0	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	992.2	99.2	ug/L	+/- 10.00%
2J29813-CCV1	Iron (dissolved)	10000	9767	97.7	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	991.2	99.1	ug/L	+/- 10.00%
2J29813-CCV5	Iron (dissolved)	10000	10060	101	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	1021	102	ug/L	+/- 10.00%
2J29813-CCV6	Iron (dissolved)	10000	9670	96.7	ug/L	+/- 10.00%
	Manganese (dissolved)	1000	990.6	99.1	ug/L	+/- 10.00%

INITIAL CALIBRATION DATA (Continued)

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2298003
Instrument: ME-ICP
Matrix: Water
Calibration Dates: 10/24/12 9:00 10/24/12 9:32

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aluminum	1.957625E-05	66.67417	5.338515	179.9806	1		0.998	
Antimony	5.1297E-04	66.70175	3.894312	160.884	1		0.998	
Arsenic	2.81535E-04	66.78063	11.02519	185.456	0.9999973		0.998	
Barium	9.07365E-03	66.77548	2.032922	162.8557	0.9999489		0.998	
Beryllium	0.0018089	66.68225	35.37302	195.1682	0.9999962		0.998	
Boron	1.31695E-05	66.80403	5.001998	168.9521	0.999972		0.998	
Cadmium	0.0140245	66.73423	1.20581	129.8399	0.9999823		0.998	
Calcium	5.003659E-05	66.84094	2.371625	150.3717	0.9999867		0.998	
Chromium	3.8617E-05	66.71125	4.872575	171.5523	0.999999		0.998	
Cobalt	3.95855E-03	66.68968	1.121075	115.8615	0.9999938		0.998	
Copper	5.94665E-05	66.94351	0.55486	39.45753	0.9999985		0.998	
Iron	1.599868E-05	66.7732	12.73487	194.1576	0.9999997		0.998	
Potassium	1.282325E-05	67.04896	3.33909	154.1465	0.9999951		0.998	
Lead	1.01265E-03	66.73984	3.176202	171.226	0.999986		0.998	
Magnesium	1.643425E-06	66.73648	437.387	199.9165	0.9998871		0.998	
Manganese	2.16555E-04	66.78901	3.902098	166.569	0.9999922		0.998	
Molybdenum	0.0030463	66.68054	5.091403	178.5053	0.9999999		0.998	
Sodium	4.017867E-05	86.61084	4.519067	160.6339	0.9999976		0.998	
Nickel	2.617975E-03	66.68461	43.41436	197.8239	0.9999967		0.998	
Selenium	2.9639E-04	66.6782	1141.719	199.8788	0.9999972		0.998	
Silver	5.053125E-05	66.8741	9.47037	178.1114	0.9997899		0.998	
Strontium	1.23625E-03	66.67191	0.97465	82.30572	0.999998		0.998	
Thallium	6.2704E-04	66.70057	5.76168	176.705	0.9999947		0.998	
Tin	1.04823E-03	66.70211	3.514575	173.7723	0.9999969		0.998	
Titanium	1.36345E-04	66.69881	72.50709	199.0086	0.9999892		0.998	
Vanadium	3.36695E-05	66.67203	7.884053	184.1819	0.9999982		0.998	
Zinc	5.812725E-03	66.66832	2.072205	160.9302	0.9999997		0.998	

INITIAL CALIBRATION DATA (Continued)

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Instrument: ME-ICP
Matrix: Water
Calibration Dates: 10/29/12 9:53 10/29/12 10:26

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aluminum	2.1695E-05	66.67568	9.08072	171.3192	1		0.998	
Antimony	3.155675E-04	66.98609	4.349745	169.4326	0.9999991		0.998	
Arsenic	1.4389E-04	66.99119	4.676215	150.9825	0.9999879		0.998	
Barium	4.985275E-03	66.68836	1.943907	137.816	0.9999662		0.998	
Beryllium	0.0017076	66.67717	7.508597	183.4491	0.999998		0.998	
Boron	1.6053E-05	66.88035	12.11818	184.5919	0.9999959		0.998	
Cadmium	0.012516	66.68273	3.900495	157.318	0.999993		0.998	
Calcium	5.759964E-05	66.6857	3.958685	135.316	0.9999994		0.998	
Chromium	3.659725E-05	66.71537	2.67646	107.9646	0.9999991		0.998	
Cobalt	3.48195E-03	66.68882	4.037138	166.1105	0.9999905		0.998	
Copper	4.549875E-05	67.38989	1.394677	33.32474	0.9999988		0.998	
Iron	1.812577E-05	66.72066	19.60688	192.4102	0.9999997		0.998	
Lead	8.86875E-04	66.70291	14.26331	188.7929	0.9999854		0.998	
Magnesium	1.955025E-06	66.6854	42.32015	198.5656	0.9999771		0.998	
Manganese	2.622725E-04	66.72834	39.39048	194.531	0.9999986		0.998	
Molybdenum	0.0026625	66.72867	6.383177	177.3131	0.9999996		0.998	
Nickel	0.0016477	66.66917	45.25079	197.1686	0.9999989		0.998	
Potassium	1.405275E-05	67.25057	3.269927	131.1533	0.9999918		0.998	
Selenium	2.58295E-04	66.68392	99.40649	197.8504	0.9999977		0.998	
Silver	5.890125E-05	66.78293	5.250205	159.9698	0.9997121		0.998	
Sodium	5.20505E-05	66.67817	8.623792	176.3946	0.9999957		0.998	
Strontium	1.34325E-03	66.69005	2.4531	143.9884	0.9999984		0.998	
Thallium	5.588325E-04	66.7125	28.04091	192.7199	0.9999816		0.998	
Tin	9.2173E-04	66.75198	3.89794	164.7256	0.9999992		0.998	
Titanium	1.7341E-04	66.69769	38.44697	193.9455	0.9999936		0.998	
Vanadium	3.4519E-05	66.66937	4.142365	154.6168	0.9999998		0.998	
Zinc	0.0051435	66.67534	6.911475	180.5607	0.9999997		0.998	

INITIAL CALIBRATION DATA (Continued)

SW7470A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2305002	Instrument:	ME-FIMS
Matrix:	Water	Calibration Dates:	10/31/12 12:08 10/31/12 12:16

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Mercury	5.640833E-03	40.53726	0	0	0.9996018		0.995	

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-ICV1	Aluminum	10000	10060	101	ug/L	+/- 10.00%
	Antimony	1000	1000	100	ug/L	+/- 10.00%
	Arsenic	1000	1019	102	ug/L	+/- 10.00%
	Barium	1000	979.9	98.0	ug/L	+/- 10.00%
	Beryllium	1000	1010	101	ug/L	+/- 10.00%
	Cadmium	1000	1063	106	ug/L	+/- 10.00%
	Calcium	50000	51340	103	ug/L	+/- 10.00%
	Chromium	1000	977.9	97.8	ug/L	+/- 10.00%
	Cobalt	1000	992.4	99.2	ug/L	+/- 10.00%
	Copper	1000	965.8	96.6	ug/L	+/- 10.00%
	Iron	10000	10600	106	ug/L	+/- 10.00%
	Lead	1000	972.1	97.2	ug/L	+/- 10.00%
	Magnesium	50000	51200	102	ug/L	+/- 10.00%
	Manganese	1000	1040	104	ug/L	+/- 10.00%
	Nickel	1000	978.6	97.9	ug/L	+/- 10.00%
	Potassium	10000	10110	101	ug/L	+/- 10.00%
	Selenium	1000	1010	101	ug/L	+/- 10.00%
	Silver	500.0	499.1	99.8	ug/L	+/- 10.00%
	Sodium	50000	51220	102	ug/L	+/- 10.00%
	Thallium	1000	978.4	97.8	ug/L	+/- 10.00%
	Vanadium	1000	1018	102	ug/L	+/- 10.00%
	Zinc	1000	1033	103	ug/L	+/- 10.00%
2J30316-CCV1	Aluminum	10000	10120	101	ug/L	+/- 10.00%
	Antimony	1000	999.8	100	ug/L	+/- 10.00%
	Arsenic	1000	997.1	99.7	ug/L	+/- 10.00%
	Barium	1000	986.4	98.6	ug/L	+/- 10.00%
	Beryllium	1000	1031	103	ug/L	+/- 10.00%
	Cadmium	1000	1040	104	ug/L	+/- 10.00%
	Calcium	50000	51460	103	ug/L	+/- 10.00%
	Chromium	1000	1005	100	ug/L	+/- 10.00%
	Cobalt	1000	983.0	98.3	ug/L	+/- 10.00%
	Copper	1000	980.3	98.0	ug/L	+/- 10.00%
	Iron	10000	10630	106	ug/L	+/- 10.00%
	Lead	1000	969.0	96.9	ug/L	+/- 10.00%
	Magnesium	50000	51190	102	ug/L	+/- 10.00%
	Manganese	1000	1036	104	ug/L	+/- 10.00%
	Nickel	1000	986.4	98.6	ug/L	+/- 10.00%
	Potassium	10000	10140	101	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-CCV1	Selenium	1000	1010	101	ug/L	+/- 10.00%
	Silver	500.0	492.1	98.4	ug/L	+/- 10.00%
	Sodium	50000	51500	103	ug/L	+/- 10.00%
	Thallium	1000	985.2	98.5	ug/L	+/- 10.00%
	Vanadium	1000	1013	101	ug/L	+/- 10.00%
	Zinc	1000	1016	102	ug/L	+/- 10.00%
2J30316-CCV6	Aluminum	10000	9891	98.9	ug/L	+/- 10.00%
	Antimony	1000	1070	107	ug/L	+/- 10.00%
	Arsenic	**1000**	**1106**	**111**	**ug/L**	+/- 10.00%
	Barium	1000	1049	105	ug/L	+/- 10.00%
	Beryllium	1000	1017	102	ug/L	+/- 10.00%
	Cadmium	1000	1028	103	ug/L	+/- 10.00%
	Calcium	50000	48700	97.4	ug/L	+/- 10.00%
	Chromium	1000	1007	101	ug/L	+/- 10.00%
	Cobalt	1000	998.6	99.9	ug/L	+/- 10.00%
	Copper	1000	1073	107	ug/L	+/- 10.00%
	Iron	10000	10090	101	ug/L	+/- 10.00%
	Lead	1000	985.4	98.5	ug/L	+/- 10.00%
	Magnesium	50000	47150	94.3	ug/L	+/- 10.00%
	Manganese	1000	1008	101	ug/L	+/- 10.00%
	Nickel	1000	1033	103	ug/L	+/- 10.00%
	Potassium	10000	9846	98.5	ug/L	+/- 10.00%
	Selenium	1000	1051	105	ug/L	+/- 10.00%
	Silver	500.0	485.4	97.1	ug/L	+/- 10.00%
	Sodium	50000	49030	98.1	ug/L	+/- 10.00%
	Thallium	1000	976.5	97.7	ug/L	+/- 10.00%
	Vanadium	1000	1011	101	ug/L	+/- 10.00%
	Zinc	1000	1004	100	ug/L	+/- 10.00%
2J30316-CCV7	Aluminum	10000	9884	98.8	ug/L	+/- 10.00%
	Antimony	1000	1064	106	ug/L	+/- 10.00%
	Arsenic	**1000**	**1108**	**111**	**ug/L**	+/- 10.00%
	Barium	1000	1044	104	ug/L	+/- 10.00%
	Beryllium	1000	1025	103	ug/L	+/- 10.00%
	Cadmium	1000	1028	103	ug/L	+/- 10.00%
	Calcium	50000	48470	96.9	ug/L	+/- 10.00%
	Chromium	1000	1009	101	ug/L	+/- 10.00%
	Cobalt	1000	994.9	99.5	ug/L	+/- 10.00%
	Copper	1000	1069	107	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2303002
Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30316-CCV7	Iron	10000	10090	101	ug/L	+/- 10.00%
	Lead	1000	979.9	98.0	ug/L	+/- 10.00%
	Magnesium	50000	46960	93.9	ug/L	+/- 10.00%
	Manganese	1000	1009	101	ug/L	+/- 10.00%
	Nickel	1000	1032	103	ug/L	+/- 10.00%
	Potassium	10000	9763	97.6	ug/L	+/- 10.00%
	Selenium	1000	1037	104	ug/L	+/- 10.00%
	Silver	500.0	482.3	96.5	ug/L	+/- 10.00%
	Sodium	50000	48740	97.5	ug/L	+/- 10.00%
	Thallium	1000	970.6	97.1	ug/L	+/- 10.00%
	Vanadium	1000	1012	101	ug/L	+/- 10.00%
	Zinc	1000	999.4	99.9	ug/L	+/- 10.00%
2J30316-CCV8	Aluminum	10000	9782	97.8	ug/L	+/- 10.00%
	Antimony	1000	1058	106	ug/L	+/- 10.00%
	Arsenic	1000	1103	110	ug/L	+/- 10.00%
	Barium	1000	1040	104	ug/L	+/- 10.00%
	Beryllium	1000	1006	101	ug/L	+/- 10.00%
	Cadmium	1000	1018	102	ug/L	+/- 10.00%
	Calcium	50000	48200	96.4	ug/L	+/- 10.00%
	Chromium	1000	994.0	99.4	ug/L	+/- 10.00%
	Cobalt	1000	987.7	98.8	ug/L	+/- 10.00%
	Copper	1000	1075	108	ug/L	+/- 10.00%
	Iron	10000	9938	99.4	ug/L	+/- 10.00%
	Lead	1000	974.4	97.4	ug/L	+/- 10.00%
	Magnesium	50000	46440	92.9	ug/L	+/- 10.00%
	Manganese	1000	1009	101	ug/L	+/- 10.00%
	Nickel	1000	1027	103	ug/L	+/- 10.00%
	Potassium	10000	9607	96.1	ug/L	+/- 10.00%
	Selenium	1000	1029	103	ug/L	+/- 10.00%
	Silver	500.0	476.5	95.3	ug/L	+/- 10.00%
	Sodium	50000	48410	96.8	ug/L	+/- 10.00%
	Thallium	1000	962.1	96.2	ug/L	+/- 10.00%
	Vanadium	1000	992.1	99.2	ug/L	+/- 10.00%
	Zinc	1000	991.7	99.2	ug/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW7470A

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2305002
Sequence: 2J30513

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30513-ICV1	Mercury	4.000	4.051	101	ug/L	+/- 20.00%
2J30513-CCV1	Mercury	2.000	1.945	97.2	ug/L	+/- 20.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2298003

Sequence: 2J29813

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J29813-CRL1	Iron (dissolved)	60.00	63.28	105	ug/L	80 - 120
	Manganese (dissolved)	6.000	6.388	106	ug/L	80 - 120

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: ME-ICP

Calibration: 2303002

Sequence: 2J30316

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J30316-CRL1	Aluminum	100.0	97.46	97.5	ug/L	80 - 120
	Antimony	8.000	8.744	109	ug/L	80 - 120
	Barium	10.00	10.19	102	ug/L	80 - 120
	Beryllium	2.000	2.032	102	ug/L	80 - 120
	Cadmium	2.000	2.010	100	ug/L	80 - 120
	Calcium	2000	2035	102	ug/L	80 - 120
	Chromium	4.000	4.099	102	ug/L	80 - 120
	Cobalt	10.00	9.501	95.0	ug/L	80 - 120
	Copper	8.000	8.463	106	ug/L	80 - 120
	Iron	60.00	64.98	108	ug/L	80 - 120
	Lead	3.000	3.001	100	ug/L	80 - 120
	Magnesium	3000	3040	101	ug/L	80 - 120
	Manganese	6.000	6.319	105	ug/L	80 - 120
	Nickel	6.000	5.710	95.2	ug/L	80 - 120
	Potassium	3000	2978	99.2	ug/L	80 - 120
	Silver	2.000	1.788	89.4	ug/L	80 - 120
	Sodium	3000	2964	98.8	ug/L	80 - 120
	Thallium	4.000	3.922	98.1	ug/L	80 - 120
	Vanadium	10.00	10.09	101	ug/L	80 - 120
	Zinc	10.00	9.836	98.4	ug/L	80 - 120
2J30316-CRL2	Arsenic	5.000	4.397	87.9	ug/L	80 - 120
	Selenium	5.000	5.176	104	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29813
Calibration: 2298003

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29813-ICB1	Iron (dissolved)	-0.6946	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.02225	3.00	15.0	ug/L	U	SW6010C
2J29813-CCB1	Iron (dissolved)	-1.24	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0149	3.00	15.0	ug/L	U	SW6010C
2J29813-CCB5	Iron (dissolved)	-2.92	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0667	3.00	15.0	ug/L	U	SW6010C
2J24015-BLK1	Iron (dissolved)	-1.57	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	-0.0232	3.00	15.0	ug/L	U	SW6010C
2J29813-CCB6	Iron (dissolved)	-1.52	30.0	100	ug/L	U	SW6010C
	Manganese (dissolved)	0.0537	3.00	15.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-ICB1	Aluminum	-7.920	50.0	200	ug/L	U	SW6010C
	Antimony	0.01102	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.3140	3.00	10.0	ug/L	U	SW6010C
	Barium	0.01948	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.06545	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.03210	1.00	5.00	ug/L	U	SW6010C
	Calcium	2.540	1000	5000	ug/L	U	SW6010C
	Chromium	-0.008500	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.05513	5.00	12.5	ug/L	U	SW6010C
	Copper	0.8476	4.00	10.0	ug/L	U	SW6010C
	Iron	5.984	30.0	100	ug/L	U	SW6010C
	Lead	-0.07753	1.50	3.00	ug/L	U	SW6010C
	Magnesium	0.7400	1000	5000	ug/L	U	SW6010C
	Manganese	-0.05246	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.1583	3.00	10.0	ug/L	U	SW6010C
	Potassium	-16.73	1000	5000	ug/L	U	SW6010C
	Selenium	0.4348	3.00	5.00	ug/L	U	SW6010C
	Silver	0.08098	1.00	3.00	ug/L	U	SW6010C
	Sodium	-4.590	1000	5000	ug/L	U	SW6010C
	Thallium	0.4652	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.1075	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.02533	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB1	Aluminum	-7.73	50.0	200	ug/L	U	SW6010C
	Antimony	0.271	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.143	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0618	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.00370	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.0348	1.00	5.00	ug/L	U	SW6010C
	Calcium	-0.770	1000	5000	ug/L	U	SW6010C
	Chromium	0.250	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.150	5.00	12.5	ug/L	U	SW6010C
	Copper	1.18	4.00	10.0	ug/L	U	SW6010C
	Iron	0.758	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-CCB1	Lead	-0.127	1.50	3.00	ug/L	U	SW6010C
	Magnesium	6.76	1000	5000	ug/L	U	SW6010C
	Manganese	-0.00744	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.322	3.00	10.0	ug/L	U	SW6010C
	Potassium	-13.5	1000	5000	ug/L	U	SW6010C
	Selenium	-0.0372	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.0259	1.00	3.00	ug/L	U	SW6010C
	Sodium	-1.17	1000	5000	ug/L	U	SW6010C
	Thallium	0.334	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.299	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.0530	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB6	Aluminum	-9.67	50.0	200	ug/L	U	SW6010C
	Antimony	-0.668	5.00	15.0	ug/L	U	SW6010C
	Arsenic	1.10	3.00	10.0	ug/L	U	SW6010C
	Barium	0.151	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.103	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.136	1.00	5.00	ug/L	U	SW6010C
	Calcium	52.2	1000	5000	ug/L	U	SW6010C
	Chromium	0.143	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.238	5.00	12.5	ug/L	U	SW6010C
	Copper	0.110	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.14	30.0	100	ug/L	U	SW6010C
	Lead	-0.692	1.50	3.00	ug/L	U	SW6010C
	Magnesium	16.2	1000	5000	ug/L	U	SW6010C
	Manganese	0.150	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.00734	3.00	10.0	ug/L	U	SW6010C
	Potassium	58.1	1000	5000	ug/L	U	SW6010C
	Selenium	0.926	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.292	1.00	3.00	ug/L	U	SW6010C
	Sodium	291	1000	5000	ug/L	U	SW6010C
	Thallium	0.457	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.182	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.138	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J27917-BLK1	Aluminum	-2.77	50.0	200	ug/L	U	SW6010C
	Antimony	-1.80	5.00	15.0	ug/L	U	SW6010C
	Arsenic	1.31	3.00	10.0	ug/L	U	SW6010C
	Barium	-0.00356	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0570	1.00	5.00	ug/L	U	SW6010C
	Cadmium	-0.00956	1.00	5.00	ug/L	U	SW6010C
	Calcium	48.6	1000	5000	ug/L	U	SW6010C
	Chromium	0.139	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.0166	5.00	12.5	ug/L	U	SW6010C
	Copper	0.112	4.00	10.0	ug/L	U	SW6010C
	Iron	1.09	30.0	100	ug/L	U	SW6010C
	Lead	0.187	1.50	3.00	ug/L	U	SW6010C
	Magnesium	15.8	1000	5000	ug/L	U	SW6010C
	Manganese	0.130	3.00	15.0	ug/L	U	SW6010C
	Nickel	-0.424	3.00	10.0	ug/L	U	SW6010C
	Potassium	57.4	1000	5000	ug/L	U	SW6010C
	Selenium	-0.276	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.311	1.00	3.00	ug/L	U	SW6010C
	Sodium	212	1000	5000	ug/L	U	SW6010C
	Thallium	-0.0686	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.0680	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.207	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB7	Aluminum	-12.5	50.0	200	ug/L	U	SW6010C
	Antimony	-1.03	5.00	15.0	ug/L	U	SW6010C
	Arsenic	-0.791	3.00	10.0	ug/L	U	SW6010C
	Barium	0.145	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.00683	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.193	1.00	5.00	ug/L	U	SW6010C
	Calcium	0.0100	1000	5000	ug/L	U	SW6010C
	Chromium	0.139	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.175	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.0471	4.00	10.0	ug/L	U	SW6010C
	Iron	-1.20	30.0	100	ug/L	U	SW6010C

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30316
Calibration: 2303002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30316-CCB7	Lead	-0.0329	1.50	3.00	ug/L	U	SW6010C
	Magnesium	-1.25	1000	5000	ug/L	U	SW6010C
	Manganese	0.0429	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.146	3.00	10.0	ug/L	U	SW6010C
	Potassium	-15.1	1000	5000	ug/L	U	SW6010C
	Selenium	1.11	3.00	5.00	ug/L	U	SW6010C
	Silver	0.141	1.00	3.00	ug/L	U	SW6010C
	Sodium	14.7	1000	5000	ug/L	U	SW6010C
	Thallium	0.623	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.00748	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.188	5.00	20.0	ug/L	U	SW6010C
2J30316-CCB8	Aluminum	-11.9	50.0	200	ug/L	U	SW6010C
	Antimony	-0.335	5.00	15.0	ug/L	U	SW6010C
	Arsenic	0.304	3.00	10.0	ug/L	U	SW6010C
	Barium	0.0334	5.00	40.0	ug/L	U	SW6010C
	Beryllium	0.0202	1.00	5.00	ug/L	U	SW6010C
	Cadmium	0.110	1.00	5.00	ug/L	U	SW6010C
	Calcium	6.06	1000	5000	ug/L	U	SW6010C
	Chromium	0.116	2.00	10.0	ug/L	U	SW6010C
	Cobalt	0.00993	5.00	12.5	ug/L	U	SW6010C
	Copper	-0.199	4.00	10.0	ug/L	U	SW6010C
	Iron	0.470	30.0	100	ug/L	U	SW6010C
	Lead	-0.0471	1.50	3.00	ug/L	U	SW6010C
	Magnesium	5.28	1000	5000	ug/L	U	SW6010C
	Manganese	0.0231	3.00	15.0	ug/L	U	SW6010C
	Nickel	0.0644	3.00	10.0	ug/L	U	SW6010C
	Potassium	13.1	1000	5000	ug/L	U	SW6010C
	Selenium	1.37	3.00	5.00	ug/L	U	SW6010C
	Silver	-0.347	1.00	3.00	ug/L	U	SW6010C
	Sodium	12.7	1000	5000	ug/L	U	SW6010C
	Thallium	0.100	3.00	8.00	ug/L	U	SW6010C
	Vanadium	0.100	5.00	12.5	ug/L	U	SW6010C
	Zinc	0.0145	5.00	20.0	ug/L	U	SW6010C

BLANKS
SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-FIMS
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30513
Calibration: 2305002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30513-ICB1	Mercury	-0.004992	0.0800	0.200	ug/L	U	SW7470A
2J30422-BLK1	Mercury	-0.0131	0.0800	0.200	ug/L	U	SW7470A
2J30513-CCB1	Mercury	-0.00924	0.0800	0.200	ug/L	U	SW7470A

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J24015 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-03	10/24/12 08:26	50.00	50.00
PEN-3221-03-10/12	1210161-06	10/24/12 08:26	50.00	50.00
Blank	2J24015-BLK1	10/24/12 08:26	50.00	50.00
LCS	2J24015-BS1	10/24/12 08:26	50.00	50.00

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J27917 Batch Matrix: Water
Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/27/12 10:41	50.00	50.00
PEN-3221-02-10/12	1210161-04	10/27/12 10:41	50.00	50.00
PEN-3221-03-10/12	1210161-05	10/27/12 10:41	50.00	50.00
FB10161201	1210161-07	10/27/12 10:41	50.00	50.00
FB10161202	1210161-08	10/27/12 10:41	50.00	50.00
Blank	2J27917-BLK1	10/27/12 10:41	50.00	50.00
LCS	2J27917-BS1	10/27/12 10:41	50.00	50.00

PREPARATION BATCH SUMMARY

SW7470A

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J30422 Batch Matrix: Water Preparation: pMercury-W SW 7470A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/30/12 11:12	30.00	30.00
PEN-3221-02-10/12	1210161-04	10/30/12 11:12	30.00	30.00
PEN-3221-03-10/12	1210161-05	10/30/12 11:12	30.00	30.00
FB10161201	1210161-07	10/30/12 11:12	30.00	30.00
FB10161202	1210161-08	10/30/12 11:12	30.00	30.00
Blank	2J30422-BLK1	10/30/12 11:12	30.00	30.00
LCS	2J30422-BS1	10/30/12 11:12	30.00	30.00

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2E13609	Instrument:	WC-IC
Calibration:	2136002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13609-CAL1	051412-010	05/14/12 18:29
Cal Standard	2E13609-CAL2	051412-011	05/14/12 18:46
Cal Standard	2E13609-CAL3	051412-012	05/14/12 19:04
Cal Standard	2E13609-CAL4	051412-013	05/14/12 19:21
Cal Standard	2E13609-CAL5	051412-014	05/14/12 19:38
Cal Standard	2E13609-CAL6	051412-015	05/14/12 19:56
Cal Standard	2E13609-CAL7	051412-016	05/14/12 20:13
Cal Standard	2E13609-CAL8	051412-017	05/14/12 20:31
Initial Cal Check	2E13609-ICV1	051412-018	05/14/12 20:48
Initial Cal Blank	2E13609-ICB1	051412-019	05/14/12 21:06

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Sequence: 2J29603

Calibration: 2136002

SDG: 1210161

Project: NAS Pensacola CTO 0079 Site 44

Instrument: WC-IC

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29603-CCV1	101712-003	10/17/12 17:41
Calibration Blank	2J29603-CCB1	101712-004	10/17/12 17:58
Instrument RL Check	2J29603-CRL1	101712-005	10/17/12 18:15
Instrument RL Check	2J29603-CRL2	101712-006	10/17/12 18:33
Instrument RL Check	2J29603-CRL3	101712-007	10/17/12 18:50
LCS	2J17025-BS1	101712-008	10/17/12 19:08
Blank	2J17025-BLK1	101712-009	10/17/12 19:25
PEN-3221-10-10/12	1210161-02	101712-015	10/17/12 21:09
Calibration Check	2J29603-CCV2	101712-020	10/17/12 22:36
Calibration Blank	2J29603-CCB2	101712-021	10/17/12 22:54
PEN-3221-03-10/12	1210161-05	101712-022	10/17/12 23:11
Calibration Check	2J29603-CCV3	101712-032	10/18/12 02:05
Calibration Blank	2J29603-CCB3	101712-033	10/18/12 02:23

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2E13609

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2E13609-ICV1	Chloride	4.800	4.613	96.1	mg/L	+/- 10.00%
	Nitrate as N	3.616	3.464	95.8	mg/L	+/- 10.00%
	Nitrite as N	4.864	4.659	95.8	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.62	98.4	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2136002
Sequence: 2J29603

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J29603-CCV1	Chloride	25.00	25.27	101	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.502	100	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.411	96.4	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.24	105	mg/L	+/- 10.00%
2J29603-CCV2	Chloride	25.00	25.88	104	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.537	101	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.576	103	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.64	107	mg/L	+/- 10.00%
2J29603-CCV3	Chloride	25.00	25.70	103	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.503	100	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.576	103	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.07	104	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Instrument ID: WC-IC

Calibration: 2136002

Sequence: 2J29603

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
2J29603-CRL1	Chloride	0.5000	0.5710	114	mg/L	75 - 125
2J29603-CRL2	Nitrate as N	0.1000	0.1130	113	mg/L	75 - 125
2J29603-CRL3	Nitrite as N	0.2500	0.2050	82.0	mg/L	75 - 125
	Sulfate as SO4	2.500	2.173	86.9	mg/L	75 - 125

METHOD BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J17025

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J17025-BLK1	Chloride	0.0790	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2E13609
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2E13609-ICB1	Chloride	0.000	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.000	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.000	0.330	2.50	mg/L	U	SW9056

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29603
Calibration: 2136002
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J29603-CCB1	Chloride	0.0740	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056
2J29603-CCB2	Chloride	0.0670	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056
2J29603-CCB3	Chloride	0.0580	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.250	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.50	mg/L	U	SW9056

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17025 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/17/12 13:26	5.00	5.00
PEN-3221-03-10/12	1210161-05	10/17/12 13:26	5.00	5.00
Blank	2J17025-BLK1	10/17/12 13:26	5.00	5.00
LCS	2J17025-BS1	10/17/12 13:26	5.00	5.00

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2E13809	Instrument:	WC-Gensys
Calibration:	2138003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2E13809-CAL2	051412-003	05/14/12 11:44
Cal Standard	2E13809-CAL1	051412-002	05/14/12 11:44
Cal Standard	2E13809-CAL4	051412-005	05/14/12 11:45
Cal Standard	2E13809-CAL3	051412-004	05/14/12 11:45
Cal Standard	2E13809-CAL6	051412-007	05/14/12 11:46
Cal Standard	2E13809-CAL5	051412-006	05/14/12 11:46
Cal Standard	2E13809-CAL7	051412-008	05/14/12 11:47

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	1210161
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30417	Instrument:	WC-Gensys
Calibration:	2138003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J30417-CCV1		10/30/12 10:49
Calibration Blank	2J30417-CCB1		10/30/12 10:50
LCS	2J30322-BS1	103012-004	10/30/12 10:51
Blank	2J30322-BLK1	103012-005	10/30/12 10:52
PEN-3221-10-10/12	1210161-02	103012-013	10/30/12 10:56
PEN-3221-03-10/12	1210161-05	103012-014	10/30/12 10:56
Calibration Check	2J30417-CCV2		10/30/12 10:59
Calibration Blank	2J30417-CCB2		10/30/12 11:00

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: 1210161
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2138003
Sequence: 2J30417

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
2J30417-CCV1	Chemical Oxygen Demand	100.0	100.1	100	mg/L	+/- 10.00%
2J30417-CCV2	Chemical Oxygen Demand	400.0	401.1	100	mg/L	+/- 10.00%

METHOD BLANKS

E410.4

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J30322

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30322-BLK1	Chemical Oxygen Demand	-5.29	20.0	60.0	mg/L	U	E410.4

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J30417
Calibration: 2138003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J30417-CCB1	Chemical Oxygen Demand	-3.10	20.0	60.0	mg/L	U	E410.4
2J30417-CCB2	Chemical Oxygen Demand	-5.30	20.0	60.0	mg/L	U	E410.4

PREPARATION BATCH SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J30322 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/30/12 05:59	2.00	2.00
PEN-3221-03-10/12	1210161-05	10/30/12 05:59	2.00	2.00
Blank	2J30322-BLK1	10/30/12 05:59	2.00	2.00
LCS	2J30322-BS1	10/30/12 05:59	2.00	2.00

ANALYSIS SEQUENCE SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J18002-BS1		10/23/12 06:15
Blank	2J18002-BLK1		10/23/12 06:15

PREPARATION BATCH SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J18002 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/18/12 06:05	250.00	250.00
PEN-3221-03-10/12	1210161-05	10/18/12 06:05	250.00	250.00
Blank	2J18002-BLK1	10/18/12 06:05	250.00	250.00
LCS	2J18002-BS1	10/18/12 06:05	5.00	250.00

METHOD BLANKS

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J18002

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J18002-BLK1	Biochemical Oxygen Demand	-0.498	2.00	2.00	mg/L	U	SM5210B

ANALYSIS SEQUENCE SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: 1210161

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	2J28919-BS1	102812-002	10/28/12 08:52
Blank	2J28919-BLK1	102812-003	10/28/12 08:55

PREPARATION BATCH SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J28919 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-3221-10-10/12	1210161-02	10/28/12 07:34	25.00	25.00
PEN-3221-03-10/12	1210161-05	10/28/12 07:34	25.00	25.00
Blank	2J28919-BLK1	10/28/12 07:34	25.00	25.00
LCS	2J28919-BS1	10/28/12 07:34	5.00	25.00

METHOD BLANKS
SM2320B

Laboratory: Empirical Laboratories, LLC
SDG: 1210161
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J28919

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
2J28919-BLK1	Alkalinity, Total (as CACO3)	0.00	1.00	1.00	mg/L	U	SM2320B

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 14, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION –HEXAVALENT CHROMIUM, OXIDATION REDUCTION POTENTAIL, pH, TOTAL SOLIDS**
CTO 0079 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – R1206946

SAMPLES: 4/Soil/

FD10111201	PEN-44-SS01-0-2-10/12
PEN-44-SS02-0-2-10/12	PEN-44-SS03-0-2-10/12

2/Aqueous/

PEN-3221-09-10/12	PEN-44-09-10/12

Overview

The sample set for NAS Pensacola, CTO 0079, SDG R1206946, consists of four (4) soil environmental samples and two (2) aqueous environmental samples. One (1) field duplicate pair (PEN-44-SS03-0-2-10/12 / FD10111201) was included within this SDG.

All soil samples were analyzed for hexavalent chromium, oxidation reduction potential, pH and total solids. Sample PEN-3221-09-10/12 was analyzed for hexavalent chromium. Sample PEN-44-09-10/12 was analyzed for oxidation reduction potential and pH. The samples were collected by Tetra Tech on October 11, 2012 and analyzed by Columbia Analytical Services, Inc. under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Hexavalent chromium analyses were conducted using EPA methods 7199 and 218.6. Oxidation reduction potential analyses were conducted using ASTM-D1498 and pH analyses were conducted using EPA methods 9045 and 9040C

These data were evaluated based on the following parameters:

* • Data Completeness
• Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
* • Field Duplicate Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Hexavalent Chromium

The hexavalent chromium samples were properly preserved in the field to a pH of 9.3-9.7 using a buffered ammonium sulfate ($(NH_4)_2SO_4$) solution and were filtered by the laboratory after sample receipt. As documented in EPA Method 218.6, a 24 hour hold time from collection to analysis was used for validation as these are groundwater samples. It appears the laboratory used a 28 day hold time for analysis because of preservation with ammonium sulfate which can be used to extend the holding time. However, this holding time extension is generally applied for wastewater sample analysis. The 24 hour hold time was exceeded by 4 days for sample PEN-3221-09-10/12. The positive result reported for hexavalent chromium was qualified as estimated, "J".

Notes

The nondetected results were reported to the MDL.

It was noted in the case narrative that the laboratory analyzed the soil hexavalent chromium samples in duplicate. The original results were used for validation purposes.

Executive Summary

Laboratory Performance: The 24 hour hold time was exceeded by 4 days for sample PEN-3221-09-10/12.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	FD10111201											
SDG: R1206946	LAB_ID	R1206946-004											
FRACTION: MISC	SAMP_DATE	10/11/2012											
MEDIA: SOIL	QC_TYPE	NM											
	UNITS	%			MG/KG			MV			S.U.		
	PCT_SOLIDS	97.7			97.7			97.7			97.7		
	DUP_OF	PEN-44-SS03-0-2-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-0-2-10/12		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM					0.4								
OXIDATION REDUCTION POTENTIAL								450					
PH											8.21		
TOTAL SOLIDS		97.7											

PEN-44-SS01-0-2-10/12												PEN-44-SS02-0-2-10/12		
R1206946-001												R1206946-002		
10/11/2012												10/11/2012		
NM												NM		
%			MG/KG			MV			S.U.			%		
98.3			98.3			98.3			98.3			96.3		
RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
			0.11	U										
						442								
									8.12					
98.3												96.3		

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-0-2-10/12									PEN-44-SS03-0-2-10/12		
SDG: R1206946	LAB_ID	R1206946-002									R1206946-003		
FRACTION: MISC	SAMP_DATE	10/11/2012									10/11/2012		
MEDIA: SOIL	QC_TYPE	NM									NM		
	UNITS	MG/KG			MV			S.U.			%		
	PCT_SOLIDS	96.3			96.3			96.3			96.9		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		3.84											
OXIDATION REDUCTION POTENTIAL					487								
PH								7.99					
TOTAL SOLIDS											96.9		

PROJ_NO: 00784	NSAMPLE	PEN-44-SS03-0-2-10/12								
SDG: R1206946	LAB_ID	R1206946-003								
FRACTION: MISC	SAMP_DATE	10/11/2012								
MEDIA: SOIL	QC_TYPE	NM								
	UNITS	MG/KG			MV			S.U.		
	PCT_SOLIDS	96.9			96.9			96.9		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.11	U							
OXIDATION REDUCTION POTENTIAL					457					
PH								8.2		
TOTAL SOLIDS										

PROJ_NO: 00784	NSAMPLE	PEN-3221-09-10/12			PEN-44-09-10/12					
SDG: R1206946	LAB_ID	R1206946-006			R1206946-005					
FRACTION: MISC	SAMP_DATE	10/11/2012			10/11/2012					
MEDIA: WATER	QC_TYPE	NM			NM					
	UNITS	UG/L			MV			S.U.		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		4.19	J	H						
OXIDATION REDUCTION POTENTIAL					454					
PH								6.79		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/11/12 0000
Sample Matrix:	Soil	**Date Received:**	10/12/12
Sample Name:	FD10111201		
Lab Code:	R1206946-004	**Basis:**	As Received

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Oxidation-Reduction Potential (ORP)	ASTM D1498-00	450		mV			1	NA	10/15/12 12:21	H
pH	9045D	8.21		pH Units			1	NA	10/15/12 16:31	H
Solids, Total	160.3 Modified	97.7		Percent	1.0		1	NA	10/15/12 19:32	

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Sample Matrix: Soil

Service Request: R1206946
Date Collected: 10/11/12 0000
Date Received: 10/12/12

Sample Name: FD10111201
Lab Code: R1206946-004

Basis: Dry
Percent Solids: 97.7

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7199	**0.40**		mg/Kg	0.40	0.20	1	10/22/12	10/25/12 00:49	
Chromium, Hexavalent	7199	**0.41**		mg/Kg	0.40	0.20	1	10/22/12	10/25/12 00:55	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/11/12 0835
Sample Matrix:	Soil	**Date Received:**	10/12/12
Sample Name:	PEN-44-SS01-0-2-10/12		
Lab Code:	R1206946-001	**Basis:**	As Received

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Oxidation-Reduction Potential (ORP)	ASTM D1498-00	442		mV			1	NA	10/15/12 12:21	H
pH	9045D	8.12		pH Units			1	NA	10/15/12 16:31	H
Solids, Total	160.3 Modified	**98.3**		Percent	1.0		1	NA	10/15/12 19:32	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/11/12 0835
Sample Matrix:	Soil	**Date Received:**	10/12/12
Sample Name:	PEN-44-SS01-0-2-10/12		
Lab Code:	R1206946-001	**Basis:**	Dry
		Percent Solids:	98.3

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7199	ND	U	mg/Kg	0.39	0.20	1	10/22/12	10/25/12 00:02	
Chromium, Hexavalent	7199	ND	U	mg/Kg	0.39	0.20	1	10/22/12	10/25/12 00:08	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/11/12 1000
Sample Matrix:	Soil	**Date Received:**	10/12/12
Sample Name:	PEN-44-SS02-0-2-10/12		
Lab Code:	R1206946-002	**Basis:**	As Received

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Oxidation-Reduction Potential (ORP)	ASTM D1498-00	487		mV			1	NA	10/15/12 12:21	H
pH	9045D	7.99		pH Units			1	NA	10/15/12 16:31	H
Solids, Total	160.3 Modified	**96.3**		Percent	1.0		1	NA	10/15/12 19:32	

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Sample Matrix: Soil

Service Request: R1206946
Date Collected: 10/11/12 1000
Date Received: 10/12/12

Sample Name: PEN-44-SS02-0-2-10/12
Lab Code: R1206946-002

Basis: Dry
Percent Solids: 96.3

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7199	**3.84**		mg/Kg	0.40	0.20	1	10/22/12	10/25/12 00:26	
Chromium, Hexavalent	7199	**3.85**		mg/Kg	0.40	0.20	1	10/22/12	10/25/12 00:32	

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Sample Matrix: Soil

Service Request: R1206946
Date Collected: 10/11/12 1035
Date Received: 10/12/12

Sample Name: PEN-44-SS03-0-2-10/12
Lab Code: R1206946-003

Basis: As Received

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Oxidation-Reduction Potential (ORP)	ASTM D1498-00	457		mV			1	NA	10/15/12 12:21	H
pH	9045D	8.20		pH Units			1	NA	10/15/12 16:31	H
Solids, Total	160.3 Modified	96.9		Percent	1.0		1	NA	10/15/12 19:32	

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Sample Matrix: Soil

Service Request: R1206946
Date Collected: 10/11/12 1035
Date Received: 10/12/12

Sample Name: PEN-44-SS03-0-2-10/12
Lab Code: R1206946-003

Basis: Dry
Percent Solids: 96.9

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7199	ND	U	mg/Kg	0.40	0.20	1	10/22/12	10/25/12 00:37	
Chromium, Hexavalent	7199	ND	U	mg/Kg	0.40	0.20	1	10/22/12	10/25/12 00:43	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/11/12 1218
Sample Matrix:	Water	**Date Received:**	10/12/12
Sample Name:	PEN-3221-09-10/12		
Lab Code:	R1206946-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	4.19		µg/L	0.10	0.05	5	NA	10/16/12 15:22	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/11/12 0915
Sample Matrix:	Water	**Date Received:**	10/12/12
Sample Name:	PEN-44-09-10/12		
Lab Code:	R1206946-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
pH	9040C	6.79		pH Units			1	NA	10/12/12 17:26	H
Standard Oxidation-Reduction Potential	ASTM D1498-00	454		mV			1	NA	10/12/12 17:10	H

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Tetra Tech	**Service Request No.:**	R1206946
Project:	Site 44 NAS Pensacola	**Project Number:**	112G 00784
Sample Matrix:	Soil/water	**Date Received:**	10/12/12

CASE NARRATIVE

General Comments

The DOD QSM 4.1 requires detections reported to the Method Detection Limit (MDL). Values greater than the MDL and less than the Limit of Quantitation (LOQ) were flagged as estimates (J). Values less than the MDL and Limit of Detection (LOD) were reported as non-detect (ND). The LOD for each analyte is verified quarterly by the laboratory using procedures defined in Grey Box D-13 of the DOD Quality Systems Manual Version 4.1.

The Limit of Quantitation (LOQ) is verified quarterly for each analyte using procedures defined in Grey Box D-14 of the DOD Quality Systems Manual Version 4.1.

Sample Receipt

Samples were collected on 10/11/12 and received at CAS in good condition at a cooler temperature of 2.8 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis

Four soil samples were analyzed for CR+6 by EPA method 7199. All samples were analyzed in duplicate per the method. One water sample was analyzed for CR+6 by EPA method 218.6. Values detected between the MDL and LOQ have been flagged with a "J" as estimated.

All the initial and continuing calibration criteria of 95 – 105 % were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No analytical or QC problems were encountered.

Inorganic Analysis

Four soil samples and one water sample were analyzed for ORP by ASTM-D1498 and for pH by 9045/9040.

No analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1984 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G-00784	NAS Pensacola Site 44	Gerry Walke	850-385-9899	Columbia Analytical Services c/o Mike Perry
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Fegoe	PHONE NUMBER: 850-322-8033	ADDRESS: 1565 Jefferson Road Building 300 Suite 360
		CARRIER/WAYBILL NUMBER: 8003 2540 7591		CITY, STATE: Rochester NY 14623

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G
PRESERVATIVE USED: * ice ice

TYPE OF ANALYSIS: Hexavalent Chromium; ORP reported as Eh; pH

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	Hexavalent Chromium	ORP reported as Eh	pH					COMMENTS
10/11/12	0835	PEN-44-SS01-0-2-10/12	SS01	0	2	SO	G		1	1	1					
	1000	PEN-44-SS02-0-2-10/12	SS02	0	2	↓	↓		1	1	1					
	1035	PEN-44-SS03-0-2-10/12	SS03	0	2	↓	↓		1	1	1					
	0000	FD 10111201				↓	↓		1	1	1					
	0915	PEN-44-09-10/12				GW	↓			1	1					
	1218	PEN-44-3221-09-10/12				↓	↓		1							

R1206946 5
Tetra Tech, Incorporated
Site 44 NAS Pensacola

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/11/12	1700	1. RECEIVED BY ALS	10-12-12	09:55
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS * Preservative NH4OH (NH4)2SO4 sol'n pH 9.3-9.7 in H2O

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

00005

HOLDTIME

SDG R1206946

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	MG/KG	PEN-44-SS01-0-2-10/12	R1206946-001	NM	10/11/2012	10/22/2012	10/25/2012	11	3	14
CR6	MG/KG	PEN-44-SS02-0-2-10/12	R1206946-002	NM	10/11/2012	10/22/2012	10/25/2012	11	3	14
CR6	MG/KG	PEN-44-SS03-0-2-10/12	R1206946-003	NM	10/11/2012	10/22/2012	10/25/2012	11	3	14
CR6	MG/KG	FD10111201	R1206946-004	NM	10/11/2012	10/22/2012	10/25/2012	11	3	14
CR6	UG/L	PEN-3221-09-10/12	R1206946-006	NM	10/11/2012	10/16/2012	10/16/2012	5	0	5
ORP	MV	PEN-44-SS03-0-2-10/12	R1206946-003	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
ORP	MV	FD10111201	R1206946-004	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
ORP	MV	PEN-44-09-10/12	R1206946-005	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
ORP	MV	PEN-44-SS01-0-2-10/12	R1206946-001	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
ORP	MV	PEN-44-SS02-0-2-10/12	R1206946-002	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
PH	S.U.	PEN-44-09-10/12	R1206946-005	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
PH	S.U.	PEN-44-SS01-0-2-10/12	R1206946-001	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
PH	S.U.	PEN-44-SS02-0-2-10/12	R1206946-002	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
PH	S.U.	PEN-44-SS03-0-2-10/12	R1206946-003	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
PH	S.U.	FD10111201	R1206946-004	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN-44-SS03-0-2-10/12	R1206946-003	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
TS	%	FD10111201	R1206946-004	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
TS	%	PEN-44-SS01-0-2-10/12	R1206946-001	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
TS	%	PEN-44-SS02-0-2-10/12	R1206946-002	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4

NAS PENSACOLA
SOIL DATA
R1206946

FRACTION	CHEMICAL	FD10111201	UNITS	PEN-44-SS03-0-2-10/12	RPD	D
MISC	HEXAVALENT CHROMIUM	0.4	MG/KG	ND	200.00	OL 0.40
MISC	OXIDATION REDUCTION POTENTIAL	450	MV	457	1.54	7.00
MISC	PH	8.21	S.U.	8.2	0.12	0.01
MISC	TOTAL SOLIDS	97.7	%	96.9	0.82	0.80

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1206946-MB1	**Basis:**	As Received

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	ND	U	Percent	1.0		1	NA	10/15/12 19:32	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1206946-MB1	**Basis:**	Dry

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent	7199	ND	U	mg/Kg	0.40	0.20	1	10/22/12	10/24/12 18:42	
Chromium, Hexavalent	7199	ND	U	mg/Kg	0.40	0.20	1	10/22/12	10/24/12 18:48	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1206946
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1206946-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	ND	U	µg/L	0.020	0.01	1	NA	10/16/12 12:08	

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Service Request: R1206946

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6
Units: µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	314117	RQ1212272-07	10/16/12 11:58	0.500	0.485	97	95 - 105
CCV2	314117	RQ1212272-06	10/16/12 14:41	0.500	0.488	98	95 - 105
CCV3	314117	RQ1212272-05	10/16/12 15:55	0.500	0.501	100	95 - 105

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Service Request: R1206946

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6
Units: µg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	314117	RQ1212272-10	10/16/12 12:08	0.020	0.020	U
CCB2	314117	RQ1212272-08	10/16/12 14:49	0.020	0.020	U
CCB3	314117	RQ1212272-09	10/16/12 16:03	0.020	0.020	U

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Service Request: R1206946

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent

Analytical Method: 7199
Units: mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	315387	RQ1212735-08	10/24/12 18:18	0.500	0.484	97	90 - 110
CCV2	315387	RQ1212735-08	10/24/12 18:18	0.500	0.484	97	90 - 110
CCV3	315387	RQ1212735-07	10/24/12 19:29	0.500	0.489	98	90 - 110
CCV4	315387	RQ1212735-07	10/24/12 19:29	0.500	0.489	98	90 - 110
CCV5	315387	RQ1212735-06	10/24/12 20:40	0.500	0.487	97	90 - 110
CCV6	315387	RQ1212735-06	10/24/12 20:40	0.500	0.487	97	90 - 110
CCV7	315387	RQ1212735-05	10/24/12 21:52	0.500	0.489	98	90 - 110
CCV8	315387	RQ1212735-05	10/24/12 21:52	0.500	0.489	98	90 - 110
CCV9	315387	RQ1212735-04	10/24/12 23:03	0.500	0.480	96	90 - 110
CCV10	315387	RQ1212735-04	10/24/12 23:03	0.500	0.480	96	90 - 110
CCV11	315387	RQ1212735-03	10/25/12 00:14	0.500	0.495	99	90 - 110
CCV12	315387	RQ1212735-03	10/25/12 00:14	0.500	0.495	99	90 - 110
CCV13	315387	RQ1212735-02	10/25/12 01:25	0.500	0.482	96	90 - 110
CCV14	315387	RQ1212735-02	10/25/12 01:25	0.500	0.482	96	90 - 110
CCV15	315387	RQ1212735-01	10/25/12 01:49	0.500	0.483	97	90 - 110
CCV16	315387	RQ1212735-01	10/25/12 01:49	0.500	0.483	97	90 - 110

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Service Request: R1206946

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent

Analytical Method: 7199
Units: mg/Kg

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	315387	RQ1212735-16	10/24/12 18:24	0.40	0.40	U
CCB2	315387	RQ1212735-16	10/24/12 18:24	0.40	0.40	U
CCB3	315387	RQ1212735-15	10/24/12 19:35	0.40	0.40	U
CCB4	315387	RQ1212735-15	10/24/12 19:35	0.40	0.40	U
CCB5	315387	RQ1212735-14	10/24/12 20:46	0.40	0.40	U
CCB6	315387	RQ1212735-14	10/24/12 20:46	0.40	0.40	U
CCB7	315387	RQ1212735-13	10/24/12 21:57	0.40	0.40	U
CCB8	315387	RQ1212735-13	10/24/12 21:57	0.40	0.40	U
CCB9	315387	RQ1212735-12	10/24/12 23:09	0.40	0.40	U
CCB10	315387	RQ1212735-12	10/24/12 23:09	0.40	0.40	U
CCB11	315387	RQ1212735-11	10/25/12 00:20	0.40	0.40	U
CCB12	315387	RQ1212735-11	10/25/12 00:20	0.40	0.40	U
CCB13	315387	RQ1212735-10	10/25/12 01:31	0.40	0.40	U
CCB14	315387	RQ1212735-10	10/25/12 01:31	0.40	0.40	U
CCB15	315387	RQ1212735-09	10/25/12 01:55	0.40	0.40	U
CCB16	315387	RQ1212735-09	10/25/12 01:55	0.40	0.40	U

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **NOVEMBER 14, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION –HEXAVALENT CHROMIUM, OXIDATION REDUCTION POTENTIAL, pH**
CTO 0079 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – R1207054

SAMPLES: 5/Aqueous/

FD10161201	FD10161202	PEN-3221-02-10/12
PEN-3221-03-10/12	PEN-3221-05-10/12	

Overview

The sample set for NAS Pensacola, CTO 0079, SDG R1207054, consists of five (5) aqueous environmental samples. Two (2) field duplicate pairs (PEN-3221-05-10/12 / FD10161201 and PEN-3221-02-10/12 / FD10161202) were included within this SDG.

Samples FD10161201 and PEN-3221-05-10/12 were analyzed for hexavalent chromium. Samples FD10161202, PEN-3221-02-10/12 and PEN-3221-03-10/12 were analyzed for oxidation reduction potential and pH. The samples were collected by Tetra Tech on October 16, 2012 and analyzed by Columbia Analytical Services, Inc. under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. Hexavalent chromium analyses were conducted using EPA 218.6. Oxidation reduction potential analyses were conducted using ASTM-D1498 and pH analyses were conducted using EPA method 9040C.

These data were evaluated based on the following parameters:

* • Data Completeness
• Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method / Preparation Blank Analyses
* • Field Duplicate Results
* • Detection Limits

* - All quality control criteria were met for this parameter.

Hexavalent Chromium

The hexavalent chromium samples were properly preserved in the field to a pH of 9.3-9.7 using a buffered ammonium sulfate ($(NH_4)_2SO_4$) solution and were filtered by the laboratory after sample receipt. As documented in EPA Method 218.6, a 24 hour hold time from collection to analysis was used for validation as these are groundwater samples. It appears the laboratory used a 28 day hold time for analysis because of preservation with ammonium sulfate which can be used to extend the holding time. However, this holding time extension is generally applied for wastewater sample analysis. The 24 hour hold time was exceeded by 16 days for sampleS

FD10161201 and PEN-3221-05-10/12. The positive results reported for hexavalent chromium were qualified as estimated, "J".

Notes

None.

Executive Summary

Laboratory Performance: The 24 hour hold time for hexavalent chromium was exceeded by 16 days for samples FD10161201 and PEN-3221-05-10/12.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	FD10161201			FD10161202						PEN-3221-02-10/12		
SDG: R1207054	LAB_ID	R1207054-002			R1207054-004						R1207054-003		
FRACTION: MISC	SAMP_DATE	10/16/2012			10/16/2012						10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM						NM		
	UNITS	UG/L			MV			S.U.			MV		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	PEN-3221-05-10/12			PEN-3221-02-10/12			PEN-3221-02-10/12					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.656	J	H									
OXIDATION REDUCTION POTENTIAL					500						455		
PH								6.89					

PROJ_NO: 00784	NSAMPLE	PEN-3221-02-10/12			PEN-3221-03-10/12						PEN-3221-05-10/12		
SDG: R1207054	LAB_ID	R1207054-003			R1207054-005						R1207054-001		
FRACTION: MISC	SAMP_DATE	10/16/2012			10/16/2012						10/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM						NM		
	UNITS	S.U.			MV			S.U.			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM											0.692	J	H
OXIDATION REDUCTION POTENTIAL					511								
PH		6.89						6.9					

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech, Incorporated	**Service Request:**	R1207054
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/16/12
Sample Matrix:	Water	**Date Received:**	10/17/12
Sample Name:	FD10161201		
Lab Code:	R1207054-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.656**		µg/L	0.020	0.01	1	NA	11/2/12 16:11	

Client:	Tetra Tech, Incorporated	**Service Request:**	R1207054
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/16/12
Sample Matrix:	Water	**Date Received:**	10/17/12
Sample Name:	FD10161202		
Lab Code:	R1207054-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
pH	9040C	6.89		pH Units			1	NA	10/17/12 18:36	H
Standard Oxidation-Reduction Potential	ASTM D1498-00	500		mV			1	NA	10/17/12 16:20	H

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Sample Matrix: Water

Service Request: R1207054
Date Collected: 10/16/12
Date Received: 10/17/12

Sample Name: PEN-3221-02-10/12
Lab Code: R1207054-003

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
pH	9040C	6.89		pH Units			1	NA	10/17/12 18:36	H
Standard Oxidation-Reduction Potential	ASTM D1498-00	455		mV			1	NA	10/17/12 16:20	H

Client:	Tetra Tech, Incorporated	**Service Request:**	R1207054
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/16/12
Sample Matrix:	Water	**Date Received:**	10/17/12
Sample Name:	PEN-3221-03-10/12		
Lab Code:	R1207054-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
pH	9040C	6.90		pH Units			1	NA	10/17/12 18:36	H
Standard Oxidation-Reduction Potential	ASTM D1498-00	511		mV			1	NA	10/17/12 16:20	H

Client:	Tetra Tech, Incorporated	**Service Request:**	R1207054
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	10/16/12
Sample Matrix:	Water	**Date Received:**	10/17/12
Sample Name:	PEN-3221-05-10/12		
Lab Code:	R1207054-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.692**		µg/L	0.020	0.01	1	NA	11/2/12 16:03	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Tetra Tech	**Service Request No.:**	R1207054
Project:	Site 44 NAS Pensacola	**Project Number:**	112G 00784
Sample Matrix:	Water	**Date Received:**	10/17/12

CASE NARRATIVE

General Comments

The DOD QSM 4.1 requires detections reported to the Method Detection Limit (MDL). Values greater than the MDL and less than the Limit of Quantitation (LOQ) were flagged as estimates (J). Values less than the MDL and Limit of Detection (LOD) were reported as non-detect (ND). The LOD for each analyte is verified quarterly by the laboratory using procedures defined in Grey Box D-13 of the DOD Quality Systems Manual Version 4.1.

The Limit of Quantitation (LOQ) is verified quarterly for each analyte using procedures defined in Grey Box D-14 of the DOD Quality Systems Manual Version 4.1.

Sample Receipt

Samples were collected on 10/16/12 and received at CAS in good condition at a cooler temperature of 3.0 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis

Two water samples were analyzed for CR+6 by EPA method 218.6. Values detected between the MDL and LOQ have been flagged with a "J" as estimated.

All the initial and continuing calibration criteria of 95 – 105 % were met.

The Blank Spike (LCS) recovery was within QC limits.

A matrix spike/matrix spike duplicate (MS/MSD) was performed on sample PEN-3221-5-10/12. The MS recovery was outside QC limits and flagged with an "*". The MSD recovery and RPD were within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No analytical or QC problems were encountered.

Inorganic Analysis

Three water samples were analyzed for ORP by ASTM-D1498 and for pH by 9040C.

No analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Tetra Tech, Inc. CHAIN OF CUSTODY | NUMBER No. 0043 | PAGE ___ OF ___

PROJECT NO: 112G 00784	FACILITY: Site 44 NAS Pensacola	PROJECT MANAGER Gerry Wilke	PHONE NUMBER 850-385-9899	LABORATORY NAME AND CONTACT: Columbia Analytical c/o Mike Perry
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Amber Igue	PHONE NUMBER 850-332-4033	ADDRESS 1565 Jefferson Road Building 300 Suite 360
		CARRIER/WAYBILL NUMBER 8003 2540 7550		CITY, STATE Rochester NY 14623

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2012)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: Hexavalent Chromium	TYPE OF ANALYSIS: ORP reported as Eh	TYPE OF ANALYSIS: pH	COMMENTS
									G	*	6010			
10/16/12	0824	PEN-3221-05-1012						3			(3)			MS/MSD
	0000	FD101612012						1			(1)			
	1055	PEN-3221-02-1012						6			(3)	(3)		MS/MSD
	0000	FD101612002						2			(1)	(1)		
	1155	PEN-3221-03-1012						2			(1)	(1)		

R1207054 5
Tetra Tech, Incorporated
Site 44 NAS Pensacola

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/16/12	1700	1. RECEIVED BY	10-17-12	09:40
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS * preservative NH_4OH $(NH_4)_2SO_4$ Solid pH 9.3-9.7 in Water MS/MSD in same bottle

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cooler Receipt and Preservation Check Form

Project/Client Tetra Tech Folder Number R12-7054

Cooler received on 10-17-12 by: KE COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	NO	(N/A)		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	(ALS/ROC)	CLIENT			
7.	Temperature of cooler(s) upon receipt:	3.0°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 10-17-12 @ 09:50

Thermometer ID: IR GUN#3 (IR GUN#4) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition &Client Approval to Run Samples: _____

All Samples held in storage location R-002 by KE on 10-17-12 at _____

5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: MMP 10/17/12

Cooler Breakdown: Date: 10/17/12 Time: 1345 by: AHH

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated	(N/A)	

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Cit-phos buffer - WC1120631 exp. 07/13

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: BDB26122A, 082012-2HH, 082712-2H

Other Comments:

PC Secondary Review: MMP

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

H:\SMODOCS\Cooler Receipt 5.doc

HOLDTIME

SDG R1207054

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	PEN-3221-05-10/12	R1207054-001	NM	10/16/2012	11/2/2012	11/2/2012	17	0	17
CR6	UG/L	FD10161201	R1207054-002	NM	10/16/2012	11/2/2012	11/2/2012	17	0	17
ORP	MV	PEN-3221-03-10/12	R1207054-005	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
ORP	MV	PEN-3221-02-10/12	R1207054-003	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
ORP	MV	FD10161202	R1207054-004	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
PH	S.U.	PEN-3221-03-10/12	R1207054-005	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
PH	S.U.	PEN-3221-02-10/12	R1207054-003	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1
PH	S.U.	FD10161202	R1207054-004	NM	10/16/2012	10/17/2012	10/17/2012	1	0	1

NAS PENSACOLA
WATER DATA
R1207054

FRACTION	CHEMICAL	FD10161201	UNITS	PEN-3221-05-10/12	RPD	D
MISC	HEXAVALENT CHROMIUM	0.656 J	UG/L	0.692 J	5.34	0.04

Current RPD Quality Control Limit: 30 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAS PENSACOLA
WATER DATA
R1207054

FRACTION	CHEMICAL	FD10161202	UNITS	PEN-3221-02-10/12	RPD	D
MISC	OXIDATION REDUCTION POTENTIAL	500	MV	455	9.42	45.00
MISC	PH	6.89	S.U.	6.89	0.00	0.00

Current RPD Quality Control Limit: 30 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

Client:	Tetra Tech, Incorporated	**Service Request:**	R1207054
Project:	Site 44 NAS Pensacola/112G 00784	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1207054-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	LOQ	LOD	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	ND	U	µg/L	0.020	0.01	1	NA	11/2/12 15:12	

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Service Request: R1207054

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6
Units: µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	317001	RQ1213345-03	11/2/12 15:04	0.500	0.489	98	95 - 105
CCV2	317001	RQ1213345-02	11/2/12 17:09	0.500	0.507	101	95 - 105
CCV3	317001	RQ1213345-01	11/2/12 18:04	0.500	0.491	98	95 - 105

Client: Tetra Tech, Incorporated
Project: Site 44 NAS Pensacola/112G 00784
Service Request: R1207054

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6
Units: µg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	317001	RQ1213345-06	11/2/12 15:12	0.020	0.020	U
CCB2	317001	RQ1213345-05	11/2/12 17:17	0.020	0.020	U
CCB3	317001	RQ1213345-04	11/2/12 18:12	0.020	0.020	U

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd., Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Laboratory Results

Total pages in data package: _____

Lab Sample #	Client Sample ID
P1210028-01	PEN-44-09-10/12
P1210028-02	PEN-3221-09-10/12
P1210028-03	PEN-3221-07-10/12
P1210028-04	PEN-44-10-10/12
P1210028-05	PEN-44-19-10/12
P1210028-06	PEN-44-13-10/12
P1210028-07	PEN-44-11-10/12
P1210028-08	PEN-44-14-10/12
P1210028-09	PEN-44-12-10/12

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not.

Approved By: Julianne Rough ***Date:*** 11-8-12

Project Manager: Julianne Sproull

The analytical results reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

As a valued client we would appreciate your comments on our service
Please call customer service at (412)826-5245 or email customerservice@microseeps.com.

Case Narrative:

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd , Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-44-09-10/12	Vapor	P1210028-01	11 Oct 12 9:15	13 Oct 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		11.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	U	< 0.020	0.02	ug/L	AM20GAX	10/24/12	gt
N Ethene	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		5.000	0.600	nM	AM20GAX	10/24/12	gt
N Methane	U	< 0.015	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		4.50	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd., Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-3221-09-10/12	Vapor	P1210028-02	11 Oct 12 12:18	13 Oct 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		15.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	J	0.002	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		1.100	0.600	nM	AM20GAX	10/24/12	gt
N Methane		0.023	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		4.00	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd , Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-3221-07-10/12	Vapor	P1210028-03	11 Oct. 12 14:25	13 Oct. 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		21.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	J	0.002	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		0.970	0.600	nM	AM20GAX	10/24/12	gt
N Methane		0.064	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		4.80	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc
Contact: Gerry Walker
Address: 1558 Village Square Blvd., Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-44-10-10/12	Vapor	P1210028-04	12 Oct 12 8:12	13 Oct 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		11.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		1.700	0.600	nM	AM20GAX	10/24/12	gt
N Methane		0.028	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		6.20	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc
Contact: Gerry Walker
Address: 1558 Village Square Blvd , Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-44-19-10/12	Vapor	P1210028-05	12 Oct 12 9:32	13 Oct 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		21.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane		0.830	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene		0.018	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		2.400	0.600	nM	AM20GAX	10/24/12	gt
N Methane		1100.000	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		3.00	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc
Contact: Gerry Walker
Address: 1558 Village Square Blvd , Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-44-13-10/12	Vapor	P1210028-06	12 Oct 12 12:37	13 Oct 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		23.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		1.300	0.600	nM	AM20GAX	10/24/12	gt
N Methane		0.360	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		4.80	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc
Contact: Gerry Walker
Address: 1558 Village Square Blvd., Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-44-11-10/12	Vapor	P1210028-07	12 Oct 12 13:05	13 Oct 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		25.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	J	0.002	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene	J	0.008	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		10.000	0.600	nM	AM20GAX	10/24/12	gt
N Methane		0.330	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		4.90	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd , Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-44-14-10/12	Vapor	P1210028-08	12 Oct. 12 14:55	13 Oct. 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		24.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	J	0.004	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene		0.033	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		7.400	0.600	nM	AM20GAX	10/24/12	gt
N Methane		0.100	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		18.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		4.00	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd., Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
PEN-44-12-10/12	Vapor	P1210028-09	12 Oct. 12 14:50	13 Oct. 12 11:00

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
RiskAnalysis							
N Carbon dioxide		20.00	5.00	mg/L	AM20GAX	10/24/12	gt
N Ethane	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Ethene	U	< 0.010	0.01	ug/L	AM20GAX	10/24/12	gt
N Hydrogen		0.950	0.600	nM	AM20GAX	10/24/12	gt
N Methane		320.000	0.015	ug/L	AM20GAX	10/24/12	gt
N Nitrogen		19.00	0.40	mg/L	AM20GAX	10/24/12	gt
N Oxygen		1.40	0.15	mg/L	AM20GAX	10/24/12	gt

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd., Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Prep Method: Light Hydrocarbons (C1-C4) by Bubblestrip
Analysis Method: Light Hydrocarbons (C1-C4) by Bubblestrip

M121025001-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Ethane	< 0.010	ug/L		0.01		- NA
Ethene	< 0.010	ug/L		0.01		- NA
Methane	< 0.015	ug/L		0.015		- NA

M121025001-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Ethane	7.200	ug/L	6.60	109.00	80 - 120
Ethene	17.000	ug/L	15.76	108.00	80 - 120
Methane	8.400	ug/L	7.86	107.00	80 - 120

M121025001-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Ethane	7.300	ug/L	6.60	111.00	80 - 120	1.38	0 - 20
Ethene	17.000	ug/L	15.76	108.00	80 - 120	0	0 - 20
Methane	8.500	ug/L	7.86	108.00	80 - 120	1.18	0 - 20

Outlined Results indicate results outside of Control limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Tetra Tech NUS, Inc
Contact: Gerry Walker
Address: 1558 Village Square Blvd , Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Prep Method: Permanent Gases by Bubble Strip

Analysis Method: Permanent Gases by Bubble Strip

M121025002-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Carbon dioxide	< 5.00	mg/L		5.00		- NA
Oxygen	< 0.15	mg/L		0.15		- NA
Nitrogen	< 0.40	mg/L		0.40		- NA

M121025002-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Carbon dioxide	89.000	mg/L	93.88	95.00	80 - 120
Oxygen	1.000	mg/L	1.02	98.00	80 - 120

M121025002-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Carbon dioxide	90.000	mg/L	93.88	96.00	80 - 120	1.12	0 - 20
Oxygen	1.000	mg/L	1.02	98.00	80 - 120	0	0 - 20

Outlined Results indicate results outside of Control limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Tetra Tech NUS, Inc.
Contact: Gerry Walker
Address: 1558 Village Square Blvd., Suite 2
Tallahassee, FL 32309

Lab Proj #: P1210028
Report Date: 11/08/12
Client Proj Name: NAS Pensacola Site 44
Client Proj #: 112G00784

Prep Method: Hydrogen by Bubble Strip

Analysis Method: Hydrogen by Bubble Strip

M121025003-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Hydrogen	< 0.600	nM		0.600		- NA

M121025003-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Hydrogen	25.000	nM	25.34	99.00	80 - 120

M121025003-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Hydrogen	25.000	nM	25.34	99.00	80 - 120	0	0 - 20

Outlined Results indicate results outside of Control limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used. N - NELAC certified analysis

P1210028

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 1980 | PAGE ___ OF ___

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112000784	NAS Pensacola Site 44	Gerry Walker	850-385-9899	Microseeps Robbin Robel
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Amber Igoe	PHONE NUMBER: 850-322-8033	ADDRESS: 220 William Pitt Way
		CARRIER/WAYBILL NUMBER		CITY, STATE: Pittsburgh, PA 15238

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: * ice ice

TYPE OF ANALYSIS

DATE 10/11 YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	Dissolved Gases	Dissolved hydrogen							COMMENTS
10/11/12	0915	PEN-44-09-10/12	1					3	2	1							
↓	1218	PEN-3221-09-10/12	2					3	2	1							
↓	1425	PEN-3221-07-10/12	3					3	2	1							
10/12/12	0812	PEN-44-10-10/12	4					3	2	1							
	0932	PEN-44-14-10/12	5					3	2	1							
		~~PEN-3221-10-10/12~~						~~3~~	~~2~~	~~1~~							
	1237	PEN-44-13-10/12	6					3	2	1							
	1305	PEN-44-11-10/12	7					3	2	1							
1455	1445	PEN-44-14-10-12	8					3	2	1							
	1450	PEN-44-14-10/12	9					3	2	1							
		12															

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	1745		1. RECEIVED BY MS	10-13-12	11:00
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS
* = Benzalkonium Chloride Dissolved Gases = methane, ethane, ethene, nitrogen, + carbon dioxide

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

NON-CONFORMANCE FORM

Microseeps Project Number: P1210028

Date: 10-13-12 Time of Receipt: 11:00 Receiver: HdenYoung

Client: Tetra Tech

REASON FOR NON-CONFORMANCE:

1. PEN-44-11-10/12: The vapor vial was not labeled.

2. PEN-44-14-10/12: COC time 1450

Label time 1455

3. Did not receive PEN-44-14-~~10/12~~ collected at 14:45 on COC. 10-12 JS 10-15-12

Received PEN-44-12-10/12 collected 10/12/12 @ 14:50.

ACTION TAKEN:

Client name: Amber Igoe Date: 10-15-12 Time: Email

Emailed client

10-16-12 Emailed Amber, Geoff Pope, and Sandy

10-19-12 ~~10-18-12~~ - Gerry Walker

10/19/12 - Per conversation with Amber Igoe.

Sample PEN-44-14-10/12 - collected at 14:55 (MS #8)

Last sample ID should be PEN-44-12-10/12

Customer Service Initials: RC Date: 10/19/12

P/210028

Robbin Robl

From: Walker, Gerry <Gerry.Walker@tetratech.com>
Sent: Friday, October 19, 2012 11:42 AM
To: Robbin Robl
Cc: Good, Vanessa; Igoe, Amber
Subject: RE: NAS Pensacola CTO079

Robbin,
Thanks for the email. Amber will call you shortly to work this out.

Gerald Walker P.G. Program Manager
Direct: 850 385 9866 Ext. 1362 | Main: 850 385 9899 | Fax: 850 385 9860
gerry.walker@tetratech.com

Tetra Tech | Complex World, **Clear Solutions™**
Tetra Tech Inc. | Tallahassee Office
1558 Village Square Blvd , Suite 2 | Tallahassee, FL 32309
www.ttnus.com | www.tetratech.com

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From: Robbin Robl [mailto:rrobl@microseeps.com]
Sent: Friday, October 19, 2012 11:36 AM
To: Walker, Gerry
Cc: Good, Vanessa
Subject: NAS Pensacola CTO079
Importance: High

Good Morning Gerry,

We received samples for NAS Pensacola CTO079 this week. I have been trying to work with Amber Igoe and realize she is out beginning today for 4 days. Juli is your project manager, however she is out until Oct. 30.

I think this may be a little difficult to explain, but I'm going to give it a shot and apologize in advance if I make it more confusing than it may already be.

On Saturday, Oct. 13, we received 9 samples (COC is attached). On Monday, Oct. 15 Juli e-mailed Amber Igoe. I have attached the e-mail string that begun with Juli and ended with Amber corresponding with me on Wednesday. Unfortunately, Amber's e-mail did not clear up the first issue that began on Monday. Please help! If I have it figured out correctly, sample number 8 on the COC should have a collection time of 14:55, and sample number 9 should have a sample ID of PEN-44-12-10/12. Can you please verify this information?

Yesterday, we received 9 more samples (COC is attached) and there are more issues.

1.) The first sample ID on the COC is PEN-44-20-10/12, however the vials are labeled PEN-44-23-10/12 with the same sample collection date and time. Which is correct for reporting purposes?
2.) Sample Number 8 on the COC is PEN-3221-10-10/12 with a collection date on the COC of 10/16/12, however the collection date on the vials is 10/12/12. Which collection date is correct for reporting purposes?

P121002&

3.) Only the last two samples noted on the COC were received with BAK backup vials in addition to the hydrogen vial. We have determined that only these samples are to receive the dissolved gas analysis in addition to the Hydrogen analysis. Can you please verify this information?

My main concern is that there is a 14-day hold time from the date of collection for all requested analysis and I don't want to take a chance on the samples being analyzed out of hold while waiting for Amber's return. I know she indicated a cell phone number that she can be reached at, however I'm not confident that she will have the paperwork with her to be able to go over it with me on the phone. I apologize for dumping this in your lap, but I want to make sure someone else is aware of what is going on and make a decision as to how we should handle this from your end.

Please let me know if you have any questions, or need more information.

Thank you!
Robbin

Robbin Robl
Microseeps, Inc.
220 William Pitt Way
Pittsburgh, PA 15238
Direct: 412-826-4483
Office: 412-826-5423

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P1210028

Robbin Robl

From: Igoe, Amber <AmberIgoe@tetratech.com>
Sent: Wednesday, October 17, 2012 5:36 PM
To: Robbin Robl
Subject: RE: NAS Pensacola Site 44 / 112000784

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Robbin,
Okay I think I have it figured out. The hydrogen for sample PEN-44-14-10/12 should have a sample time of 1455—sorry for the confusion. Just to confirm the following IDs should have hydrogen samples associated with them:

PEN-44-09 ✓
PEN-44-10 ✓ → Not Rec'd
PEN-44-11 ✓
PEN-44-12 ✓
PEN-44-13 ✓
PEN-44-14 ✓ H2
PEN-44-15 ?
PEN-44-18 ?
PEN-44-19 ✓
PEN-44-21 ?
PEN-44-22 ?
PEN-44-23
PEN-44-24 ?
PEN-44-25 ?
PEN-3221-03 ?
PEN-3221-07 ✓
PEN-3221-09 ✓
PEN-3221-10 ?

I have finished my 10 day shift and will be starting my 4 days off, but feel free to call my cell (850-322-8033) with questions.

Amber Igoe | Environmental Scientist III
Direct: 850 385 9866 ext 1352| Fax: 850 385 9860
Amber.igoe@tetratech.com

Tetra Tech Inc.
1558 Village Square Boulevard Suite 2 | Tallahassee, FL 32309 | www.tetratech.com

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From: Robbin Robl [mailto:rrobl@microseeps.com]
Sent: Wednesday, October 17, 2012 8:54 AM
To: Igoe, Amber
Subject: RE: NAS Pensacola Site 44 / 112000784
Importance: High

P1210028

Hi Amber,

We did receive samples for both PEN-44-10 and PEN-44-12. Juli's e-mail is incorrect. The sample we did not receive is PEN-44-14-10-12, collected on 10/12 at 14:45. This sample is noted on the attached COC, however the vials we received are labeled PEN-44-12-10/12, collected on 10/12 at 14:50 – they are not noted on the attached COC.

This is where the confusion lies! I would appreciate it if you can please let me know which sample ID is correct for reporting purposes.

Thank you!
Robbin

From: Igoe, Amber [mailto:Amber.Igoe@tetratech.com]
Sent: Tuesday, October 16, 2012 9:13 PM
To: Julianne Rugh
Cc: Robbin Robl
Subject: RE: NAS Pensacola Site 44 / 112000784

Hi Juli ,
Sorry for the delay, I had an internet connectivity issue last night. There should be a sample for both PEN-44-10 and PEN-44-12. Is there not one for both? Please feel free to call my cell at 850-322-8033

Amber Igoe | Environmental Scientist III
Direct: 850 385 9866 ext 1352| Fax: 850 385 9860
Amber.igoe@tetratech.com

Tetra Tech Inc
1558 Village Square Boulevard Suite 2 | Tallahassee, FL 32309 | www.tetratech.com

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From: Julianne Rugh [mailto:jrugh@microseeps.com]
Sent: Tuesday, October 16, 2012 4:55 PM
To: Igoe, Amber; D'Alessandris, Sandy
Cc: Pope, Geoff; Robbin Robl
Subject: RE: NAS Pensacola Site 44 / 112000784

Hi Amber,

I never received a reply from you regarding the email below. Please respond to Robbin (rrobl@microseeps.com) asap so that we can log these samples in for analysis.

Thank you!

Juli Sproull

As an FYI, I will be out of the office for the next two weeks (back Tuesday October 30th). If you need anything please contact Robbin rrobl@microseeps.com or Ryan Rylands rrylands@microseeps.com.
Please note my name change as well. I will be Juli Rugh when I return (emails to jsproull and jrugh will both still be delivered).

Microseeps, Inc
220 William Pitt Way

Pittsburgh PA 15238
412-826-4481 (Direct Dial)
412-826-5245 (Phone)
412-826-3433 (Fax)

P1210028

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From: Julianne Sproull
Sent: Monday, October 15, 2012 2:38 PM
To: Igoe, Amber (Amber.Igoe@tetratech.com)
Subject: NAS Pensacola Site 44 / 112000784

Hi Amber,

We received your samples for the above project and found a few discrepencies.

1. For sample PEN-44-11-10/12 the vapor vial was not labeled.
2. For sample PEN-44-14-10/12 the COC time of collection was 14:50 while the label time of collection was 14:55.
3. We did not receive sample PEN-44-10-12 collected 10-12-2012 at 14:45 (as stated on the COC) but we did receive sample PEN-44-12-10/12 collected 10-12-2012 at 14:50. Are these the same sample? If so what is the correct ID and collection time?

Thank you!

Juli Sproull

Microseeps, Inc.
220 William Pitt Way
Pittsburgh PA 15238
412-826-4481 (Direct Dial)
412-826-5245 (Phone)
412-826-3433 (Fax)

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Exhibit 4

Sample Tracking Record

Client Name: Tetra Tech Pgh

Page _____ **of** _____

Client Project Number: NAS Pensacola Site 44

Bottle Type Circle or Highlight (Sample Receiving Only)							
	Phenol	Sulfide	Nutrient	TIC	VFA	Oxygenates	D - Metals
	G. Chem.	Coliform	Semi-VOA	Soils	LLVFA	HEM	
	TOC/DOC	Cations	VOA	Diss. Gas	Hydrogen	SGT-HEM	
	Cyanide	Anions	TPH	Vapor	AMIBA	T - Metals	

Sample Receiving only to mark above dotted line

Sample Numbers	Removed from Storage			Bottle	Returned or Placed in Storage		
	By	Date	Time	Type	By	Date	Time
P1210028/1-9				see above	HCJ	10-13-12	11:00
P1210029 (1-9)	GMT	10-24-12	11:30 Am	DISG	2-6	10-24-12	18:00 Pm

Enter Bottle Type From List Above In Proper Column

CASE NARRATIVE
Client: TetraTech NUS, Inc.
Project Number: 112G00784
SDG: PEN-3221-07-10/12
Microseeps Project No.: P1210028

Sample Receipt

Microseeps, Inc. received the sample shipment on 10/13/2012. The samples were received properly preserved, within the correct temperature range and in good condition. A summary of the field identifications and Microseeps identifications is presented in the attached table.

There were several discrepancies with the sample shipment. The vapor vial for sample PEN-44-11-10/12 was not labeled. The time of collection for sample PEN-44-14-10/12 was noted as 1450 on the chain of custody, while the vial was marked as 1455. Sample PEN-44-14-10-12 collected at 1445 was not received. Sample PEN-44-12-10/12 collected at 1450 was received but not listed on the chain of custody. The project manager was contacted to address the issues.

A copy of all communications concerning this project has been enclosed.

Sample Analyses

The sample analyses were performed in accordance with Microseeps routine Standard Operating procedures.

There were no unusual circumstances noted during the analysis of these samples.

Field Identification	Lab Identification
PEN-3221-07-10/12	P1210028-03
PEN-3221-09-10/12	P1210028-02
PEN-44-09-10/12	P1210028-01
PEN-44-10-10/12	P1210028-04
PEN-44-11-10/12	P1210028-07
PEN-44-12-10/12	P1210028-09
PEN-44-13-10/12	P1210028-06
PEN-44-14-10/12	P1210028-08
PEN-44-19-10/12	P1210028-05

OTHER ANALYSIS DATA SHEET

EPASampleNo: PEN-44-09-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-01A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	5.00	nM			
124-38-9	Carbon dioxide	11.0	mg/L			
7782-44-7	Oxygen	4.50	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.020	ug/L	U		
74-85-1	Ethene	0.010	ug/L	U		
74-82-8	Methane	0.015	ug/L	U		

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OTHER ANALYSIS DATA SHEET

EPA Sample No: PEN-3221-09-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-02A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	1.10	nM			
124-38-9	Carbon dioxide	15.0	mg/L			
7782-44-7	Oxygen	4.00	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.002	ug/L	J		
74-85-1	Ethene	0.010	ug/L	U		
74-82-8	Methane	0.023	ug/L			

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OTHER ANALYSIS DATA SHEET

EPASampleNo: PEN-3221-07-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-03A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	0.970	nM			
124-38-9	Carbon dioxide	21.0	mg/L			
7782-44-7	Oxygen	4.80	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.002	ug/L	J		
74-85-1	Ethene	0.010	ug/L	U		
74-82-8	Methane	0.064	ug/L			

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OTHER ANALYSIS DATA SHEET

EPASampleNo: PEN-44-10-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-04A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	1.70	nM			
124-38-9	Carbon dioxide	11.0	mg/L			
7782-44-7	Oxygen	6.20	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.010	ug/L	U		
74-85-1	Ethene	0.010	ug/L	U		
74-82-8	Methane	0.028	ug/L			

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OTHER ANALYSIS DATA SHEET

EPA Sample No: PEN-44-19-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-05A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	2.40	nM			
124-38-9	Carbon dioxide	21.0	mg/L			
7782-44-7	Oxygen	3.00	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.830	ug/L			
74-85-1	Ethene	0.018	ug/L			
74-82-8	Methane	1100	ug/L			

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OTHER ANALYSIS DATA SHEET

EPA Sample No: PEN-44-13-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-06A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	1.30	nM			
124-38-9	Carbon dioxide	23.0	mg/L			
7782-44-7	Oxygen	4.80	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.010	ug/L	U		
74-85-1	Ethene	0.010	ug/L	U		
74-82-8	Methane	0.360	ug/L			

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I

OTHER ANALYSIS DATA SHEET

EPASampleNo: PEN-44-11-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-07A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	10.0	nM			
124-38-9	Carbon dioxide	25.0	mg/L			
7782-44-7	Oxygen	4.90	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.002	ug/L	J		
74-85-1	Ethene	0.008	ug/L	J		
74-82-8	Methane	0.330	ug/L			

U.S. EPA - CLP

1

OTHER ANALYSIS DATA SHEET

EPASampleNo: PEN-44-14-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-08A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	7.40	nM			
124-38-9	Carbon dioxide	24.0	mg/L			
7782-44-7	Oxygen	4.00	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-84-0	Ethane	0.004	ug/L	J		
74-85-1	Ethene	0.033	ug/L			
74-82-8	Methane	0.100	ug/L			

OTHER ANALYSIS DATA SHEET

EPASampleNo: PEN-44-12-10/12

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil / water): Vapor Lab Sample ID: P1210028-09A

Level (low/med): Date Received: 10/13/2012

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	0.950	nM			
124-38-9	Carbon dioxide	20.0	mg/L			
7782-44-7	Oxygen	1.40	mg/L			
7727-37-9	Nitrogen	19.0	mg/L			
74-84-0	Ethane	0.010	ug/L	U		
74-85-1	Ethene	0.010	ug/L	U		
74-82-8	Methane	320	ug/L			

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Initial Calibration Source: Matheson

Continuing Calibration Source:

Concentration Units: mg/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R	True	Found	%R	Found	%R	
Methane	5.66	5.76	102						
Ethane	14.42	14.65	102						
Ethene	35.20	35.56	101						
Carbon dioxide	182.6	182.6	100						
Oxygen	2.00	1.91	95.5						
Nitrogen	0.93	0.94	101						
Methane	885.4	891.7	101						

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Initial Calibration Source: Matheson

Continuing Calibration Source:

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R	True	Found	%R	Found	%R	M
Hydrogen	25.74	27.65	107						

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Initial Calibration Source:

Continuing Calibration Source: Scott

Concentration Units: mg/L

Analyte	Initial Calibration True	Found	%R	Continuing Calibration True	Found	%R	Found	%R	M
Methane				2.48	2.80	113			
Ethane				6.71	7.10	106			
Ethene				16.45	17.26	105			
Hydrogem				24.26	25.29	104			
Carbon dioxide				182.6	183.9	101			
Oxygen				2.00	1.94	97.0			
Methane				885.4	912.7	103			

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Initial Calibration Source:

Continuing Calibration Source: Scott

Concentration Units: mg/L

Analyte	Initial Calibration True	Found	%R	Continuing Calibration True	Found	%R	Found	%R	M
Methane				0.99	1.12	113			
Ethane				2.68	2.82	105			
Ethene				6.58	6.84	104			
Hydrogen				9.70	10.32	106			
Carbon dioxide				91.32	86.32	94.5			
Oxygen				1.00	0.93	93.0			

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Preparation blank Matrix (soil/water) Vapor

Preparation Blank Concentration Units ug/L

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Ethane	0.010	U	0.010	U	0.010	U			0.010	U	
Ethene	0.010	U	0.010	U	0.010	U			0.010	U	
Methane	0.015	U	0.015	U	0.015	U			0.015	U	

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Preparation blank Matrix (soil/water) Vapor

Preparation Blank Concentration Units mg/L

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Carbon dioxide	5.00	U	5.00	U	5.00	U			5.00	U	
Oxygen	0.15	U	0.15	U	0.15	U			0.15	U	

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Preparation blank Matrix (soil/water) Vapor

Preparation Blank Concentration Units nM

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Hydrogen	0.600	U	0.600	U	0.600	U			0.600	U	

EPA Sample No.: LCS

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil/water): Vapor Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : ug/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Methane	0-20	8.42		8.49		0.83		
Ethane	0-20	7.21		7.26		0.69		
Ethene	0-20	17.03		17.19		0.94		

EPA Sample No.: LCS

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil/water): Vapor Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : mg/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Carbon dioxide	0-20	89.09		89.54		0.50		
Oxygen	0-20	1.02		0.98		4.00		

DUPLICATES

EPA Sample No.: LCS

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Matrix (soil/water): Vapor Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : nM

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Hydrogen	0-20	24.83		25.23		1.60		

LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Solid LCS Source:

Aqueous LCS Source: Scott

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Ethane	ug/L	6.60	7.21	109						
Ethene	ug/L	15.76	17.03	108						
Methane	ug/L	7.86	8.42	107						

LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Solid LCS Source:

Aqueous LCS Source: Scott

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Carbon dioxide	mg/L	93.88	89.09	94.9						
Oxygen	mg/L	1.02	1.02	100						

LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G00784

Lab Code: P1210028 Case No.: NAS Pensacola SAS No.: SDG No.: PEN-3221-07

Solid LCS Source:

Aqueous LCS Source: Scott

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Hydrogen	nM	25.34	24.83	98.0						

Title: Dissolved Gases AM20GAx
Datasource: BIOREM11_local
Location: BIOREM14\2012 BUBBLE 6 SEQ
Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 10/24/2012 10:23:53 AM by gtarr

Peak Table:

Use Recently Detected Retention Times: Off
Peak Retention Time Determination: Absolute
Dead time:
Delay Time of 2'nd Detector: <None>
Delay Time of 3'rd Detector: <None>

No.	Peak Name	Ret.Time	Ret.Time FID	Ret.Time TCD	Ret.Time RGD	Window	Standard	Int.Type	Cal.Type
1	Methane	0 645 min	0 645 min			0 200 AN	External	Area	Lin
2	Ethane	0 908 min	0 908 min			0 200 AN	External	Area	Lin
3	Ethene	1 180 min	1 180 min			0 200 AN	External	Area	Lin
4	Propane	1.860 min	1.860 min			0.200 AN	External	Area	Lin
5	*Hydrogen*	*3.344 min*			*3.344 min*	*0.200 AN*	*External*	*Area*	*Lin*
6	Propene	3 573 min	3 573 min			0 200 AN	External	Area	Lin
7	Carbon Dioxide	4 310 min		4 310 min		0 500 AN	External	Area	Lin
8	iso-Butane	4 920 min	4 920 min			0 500 AN	External	Area	Lin
9	n-Butane	5 750 min	5 750 min			0 500 AN	External	Area	Lin
10	Oxygen	6 198 min		6 198 min		0 300 AN	External	Area	Lin
11	Nitrogen	6 645 min		6 645 min		0 300 AN	External	Area	Lin
12	Acetylene	7 170 min	7 170 min			0 500 AN	External	Area	Lin
13	Methane	8 002 min		8 002 min		0 600 AG	External	Area	Lin
14	Carbon Monoxide	8 778 min		8 778 min		0 200 AG	External	Area	Lin

Title: Dissolved Gases AM20GAx
Datasource: BIOREM11_local
Location: BIOREM14\2012 BUBBLE 6 SEQ
Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 10/24/2012 10:23:53 AM by gtarr

Peak Table:

Use Recently Detected Retention Times: Off
Peak Retention Time Determination: Absolute
Dead time:
Delay Time of 2'nd Detector: <None>
Delay Time of 3'rd Detector: <None>

No.	Peak Name	Ret.Time	Peak Type	Group	Comment
1	Methane	0 645 min	Auto		
2	Ethane	0 908 min	Auto		
3	Ethene	1 180 min	Auto		
4	Propane	1.860 min	Auto		
5	*Hydrogen*	*3.344 min*	*Auto*		
6	Propene	3 573 min	Auto		
7	Carbon Dioxide	4 310 min	Auto		
8	iso-Butane	4 920 min	Auto		
9	n-Butane	5 750 min	Auto		
10	Oxygen	6 198 min	Auto		
11	Nitrogen	6 645 min	Auto		
12	Acetylene	7 170 min	Auto		
13	Methane	8 002 min	Auto		
14	Carbon Monoxide	8 778 min	Auto		

Title: Dissolved Gases AM20GAx
Datasource: BIOREM11_local
Location: BIOREM14\2012 BUBBLE 6 SEQ
Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 10/24/2012 10:23:53 AM by gtarr

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 21
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Ret.Time FID	Ret.Time TCD	Ret.Time RGD	Amount ICAL FID L8	Amount ICAL FID L7	Amount ICAL FID L6
1	Methane	0.645 min	0.645 min			0.002100	0.010500	0.026200
2	Ethane	0.908 min	0.908 min			0.005400	0.027200	0.068000
3	Ethene	1.180 min	1.180 min			0.013200	0.065800	0.164500
4	Propane	1.860 min	1.860 min			0.006100	0.030300	0.075700
5	*Hydrogen*	*3.344 min*			*3.344 min*			
6	Propene	3.573 min	3.573 min			0.019300	0.096400	0.241000
7	Carbon Dioxide	4.310 min		4.310 min				
8	iso-Butane	4.920 min	4.920 min			0.004800	0.024200	0.060500
9	n-Butane	5.750 min	5.750 min			0.005900	0.029600	0.074000
10	Oxygen	6.198 min		6.198 min				
11	Nitrogen	6.645 min		6.645 min				
12	Acetylene	7.170 min	7.170 min				0.529600	1.324000
13	Methane	8.002 min		8.002 min				
14	Carbon Monoxide	8.778 min		8.778 min				

Title: Dissolved Gases AM20GAx
Datasource: BIOREM11_local
Location: BIOREM14\2012 BUBBLE 6.SEQ
Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 10/24/2012 10:23:53 AM by gtarr

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 21
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Amount ICAL FID L5	Amount ICAL FID L4	Amount ICAL FID L3	Amount ICAL FID L2	Amount ICAL FID L1	Amount ICAL TCD L6
1	Methane	0.645 min	0.104800	0.523900	2.095800	6.549300	26.197400	
2	Ethane	0.908 min	0.271900	1.359600	5.438400	16.994900	67.979600	
3	Ethene	1.180 min	0.658100	3.290700	13.162600	41.133200	164.532900	
4	Propane	1.860 min	0.302800	1.513900	6.055700	18.924100	75.696300	
5	*Hydrogen*	*3.344 min*						
6	Propene	3.573 min	0.964200	4.821000	19.283900	60.262100	241.048200	
7	Carbon Dioxide	4.310 min						2.196000
8	iso-Butane	4.920 min	0.242000	1.210100	4.840500	15.126500	60.506100	
9	n-Butane	5.750 min	0.296000	1.480100	5.920600	18.501900	74.007400	
10	Oxygen	6.198 min						0.015900
11	Nitrogen	6.645 min						0.051400
12	Acetylene	7.170 min	5.296000	26.480000	105.920000	331.000000	1324.000000	
13	Methane	8.002 min						
14	Carbon Monoxide	8.778 min						

Title: Dissolved Gases AM20GAx
Datasource: BIOREM11_local
Location: BIOREM14\2012 BUBBLE 6 SEQ
Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 10/24/2012 10:23:53 AM by gtarr

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 21
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Amount ICAL TCD L5	Amount ICAL TCD L4	Amount ICAL TCD L3	Amount ICAL TCD L2	Amount ICAL TCD L1	Amount ICAL H2 L7
1	Methane	0 645 min						
2	Ethane	0 908 min						
3	Ethene	1 180 min						
4	Propane	1 860 min						
5	*Hydrogen*	*3.344 min*						*0.396000*
6	Propene	3 573 min						
7	Carbon Dioxide	4 310 min	5 490000	10 980000	54 900000	274 500000	549 000000	
8	iso-Butane	4 920 min						
9	n-Butane	5 750 min						
10	Oxygen	6 198 min	0 039900	0 079800	0 399200	1 996000	3 992000	
11	Nitrogen	6 645 min	0 129000	0 257000	1 286000	6 430000	12 860000	
12	Acetylene	7 170 min						
13	Methane	8 002 min	23 580000	47 160000	235 800000	1179 000000	2358 000000	
14	Carbon Monoxide	8 778 min	0 046900	0 093800	0 469000	2 345000	4 690000	

Title: Dissolved Gases AM20GAx
Datasource: BIOREM11_local
Location: BIOREM14\2012 BUBBLE 6 SEQ
Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 10/24/2012 10:23:53 AM by gtarr

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 21
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Amount ICAL H2 L6	Amount ICAL H2 L5	Amount ICAL H2 L4	Amount ICAL H2 L3	Amount ICAL H2 L2	Amount ICAL H2 L1
1	Methane	0 645 min						
2	Ethane	0 908 min						
3	Ethene	1 180 min						
4	Propane	1 860 min						
5	*Hydrogen*	*3.344 min*	*0.990000*	*3.960000*	*9.900000*	*19.800000*	*31.680000*	
6	Propene	3 573 min						
7	Carbon Dioxide	4 310 min						
8	iso-Butane	4 920 min						
9	n-Butane	5 750 min						
10	Oxygen	6 198 min						
11	Nitrogen	6 645 min						
12	Acetylene	7 170 min						
13	Methane	8 002 min						
14	Carbon Monoxide	8 778 min						

Hydrogen

Method AM20GAX

10/19/2012

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square %	Offset	Slope	Curve
1	3.36	Hydrogen	Lin	6	99.790	0.00000	4.80159	0.00000

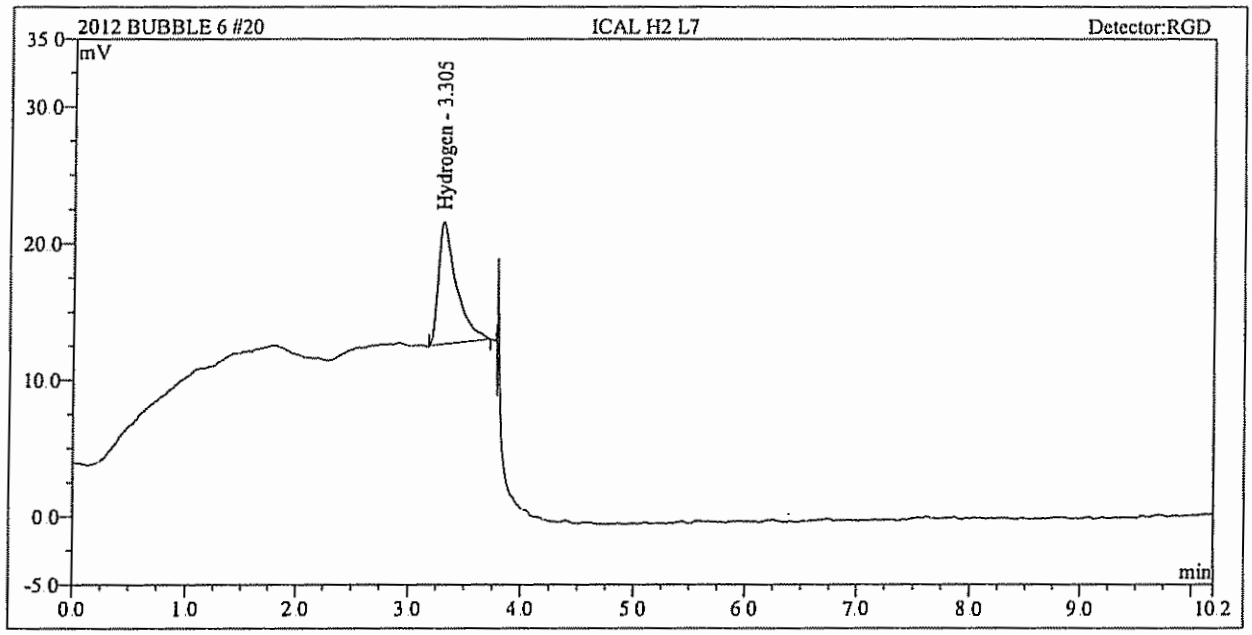
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL H2 L7	**Sequence No:**	20
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/19/2012 9:34	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 7

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.305	1.656	8.976	BMB	0.3448

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



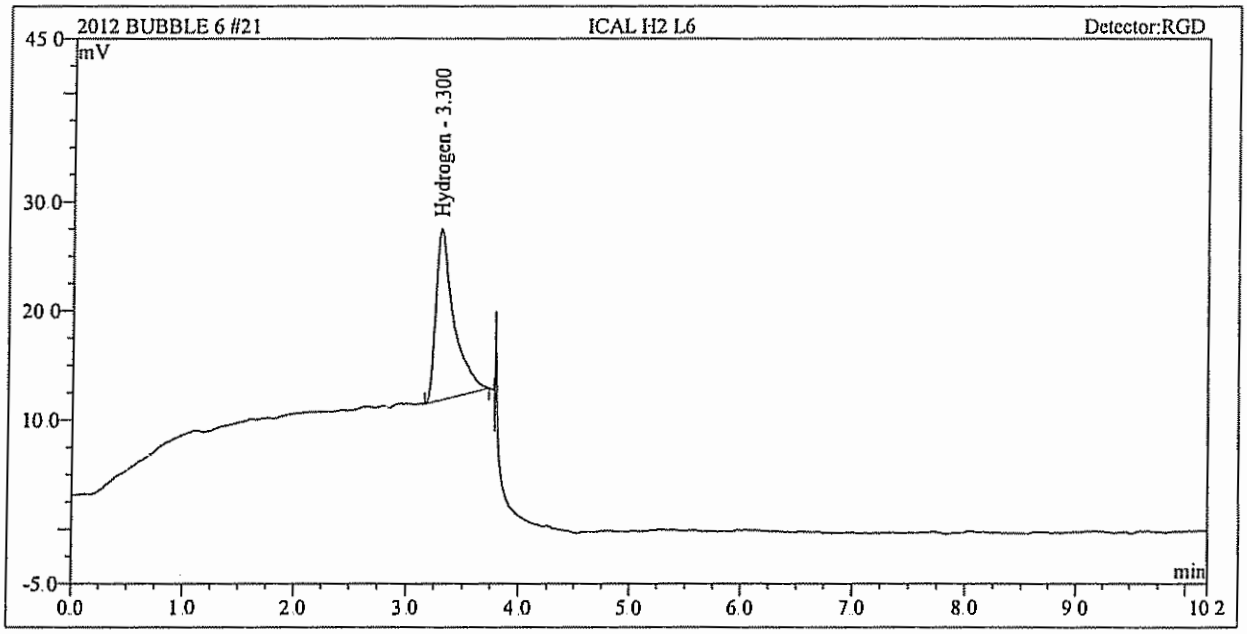
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL H2 L6	**Sequence No:**	21
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/19/2012 9:52	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 6

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.300	2.842	15.730	BMB	0.5919

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

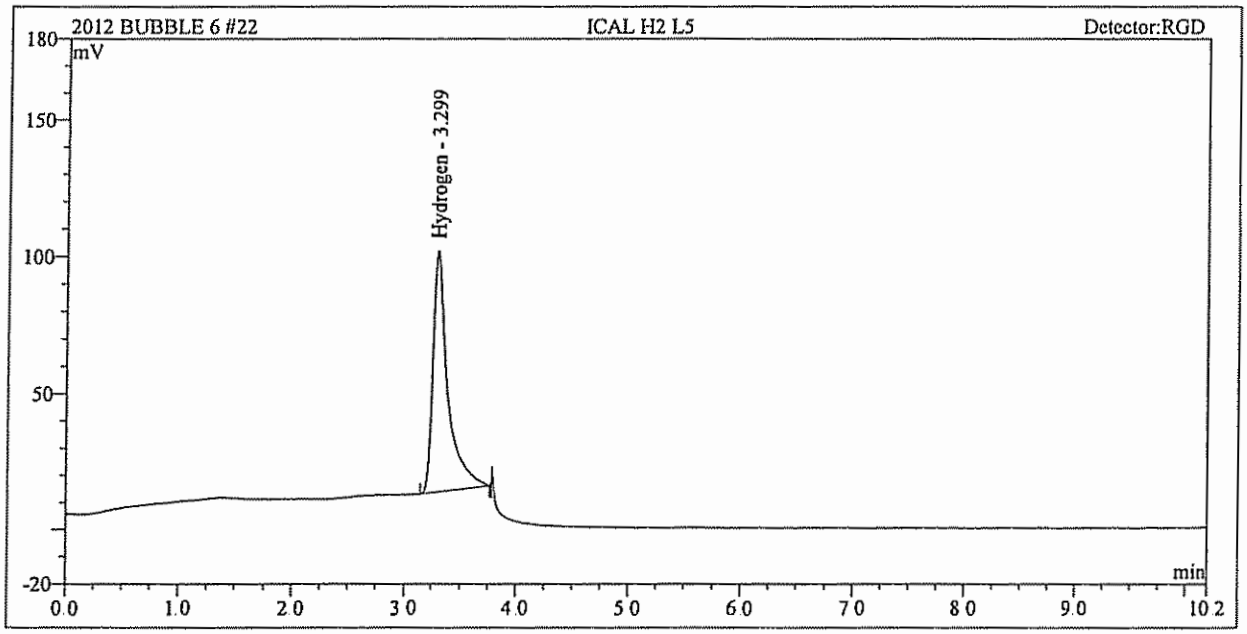


Sample Analysis Report

Sample Name:	ICAL H2 L5	**Sequence No:**	22
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/19/2012 10:05	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 5

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.299	13.524	88.182	BMB	2.8165

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

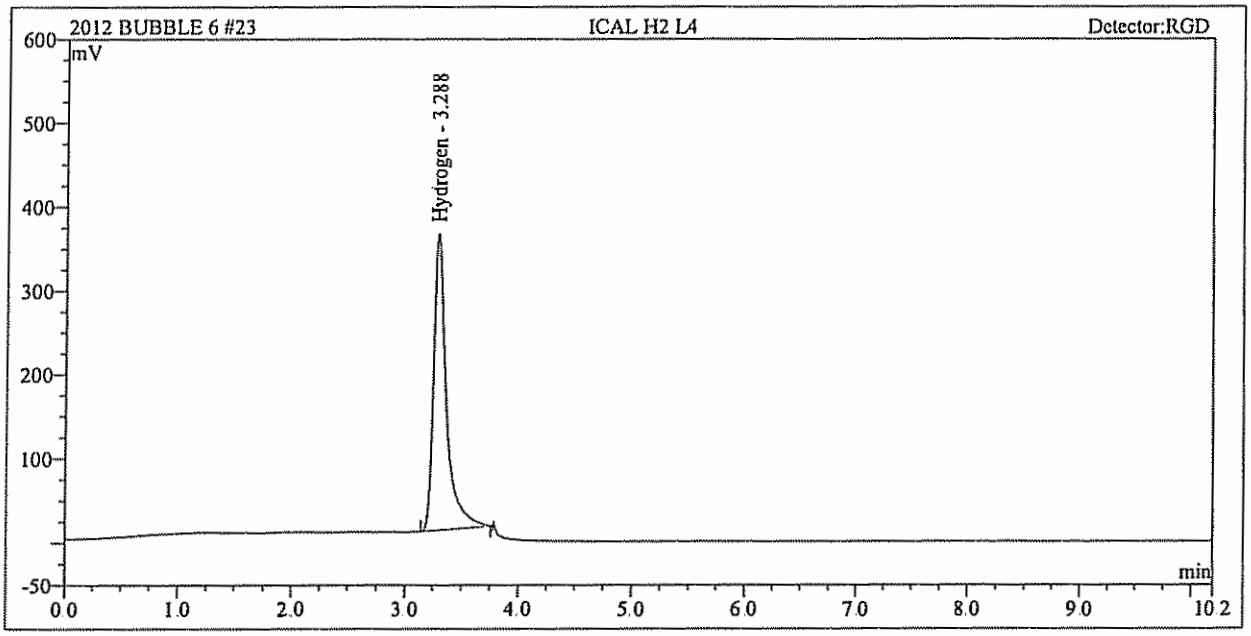


Sample Analysis Report

Sample Name:	ICAL H2 L4	**Sequence No:**	23
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/19/2012 10:18	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 4

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.288	45.569	352.329	BMB	9.4904

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

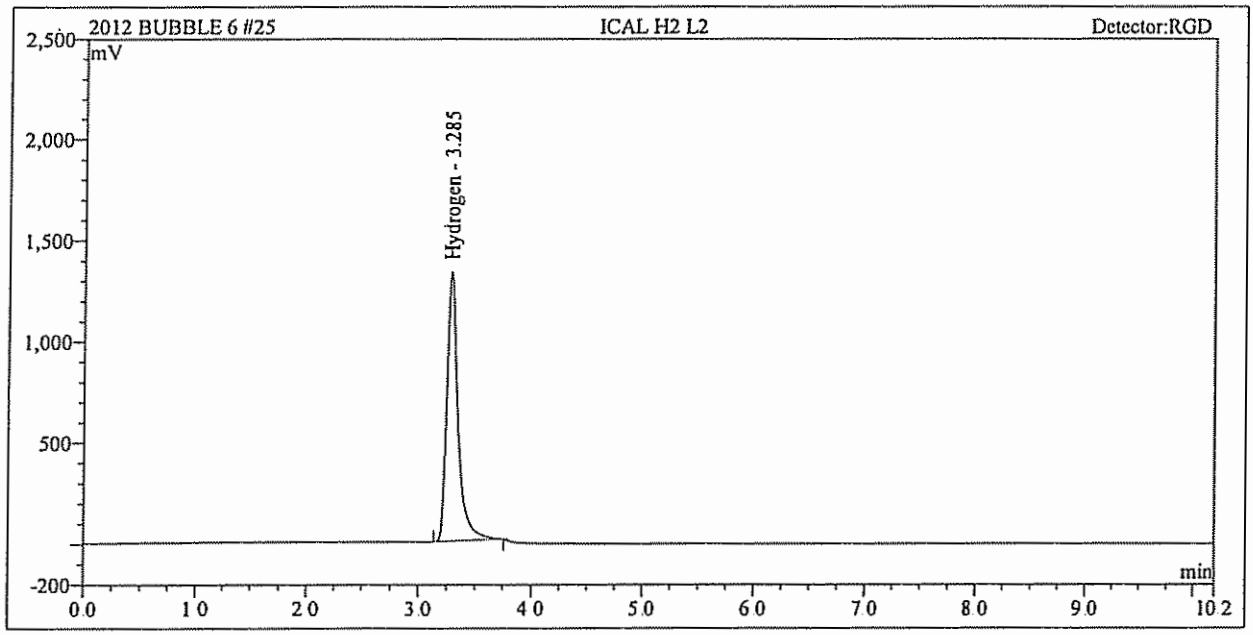


Sample Analysis Report

Sample Name:	ICAL H2 L2	**Sequence No:**	25
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/19/2012 10:48	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 2

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.285	153.197	1330.595	BMB	31.9054

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

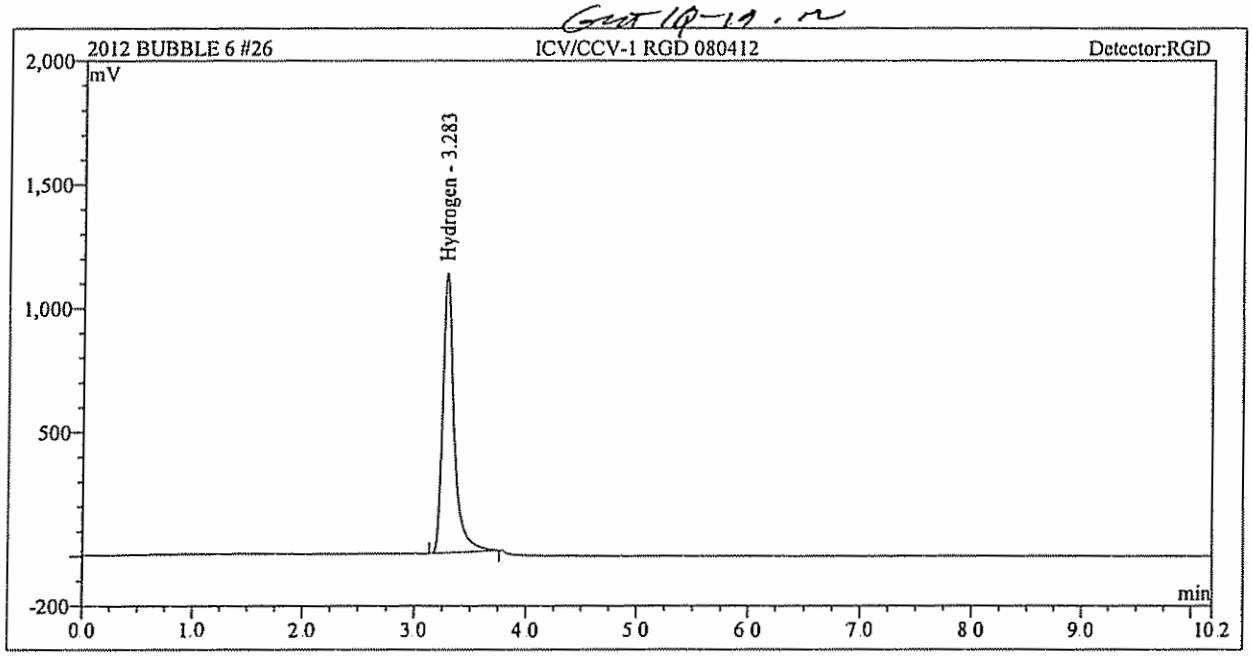


Sample Analysis Report

Sample Name:	ICV/CCV-1 RGD 080412	**Sequence No:**	26
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/19/2012 11:15	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-23

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.283	132.782	1127.584	BMB	25.74 27.6537

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



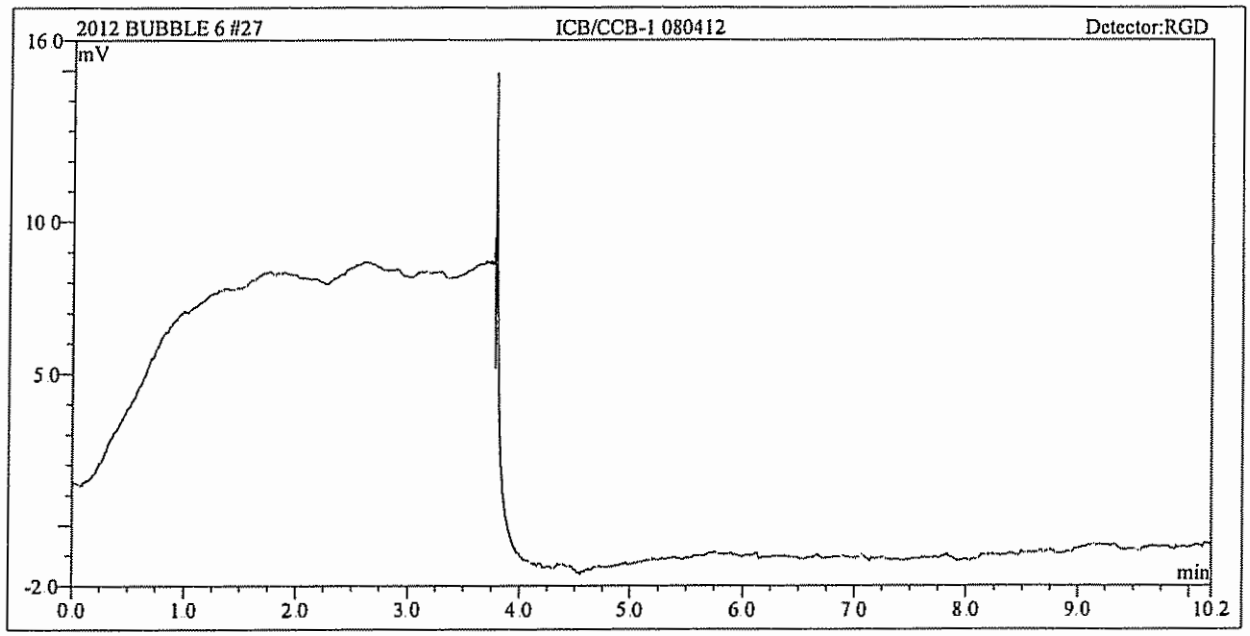
MICROSEEPS

Sample Analysis Report

Sample Name:	ICB/CCB-1 080412 10/19/12	**Sequence No:**	27
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/19/2012 11:34	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	HELIUM

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



Light Hydrocarbons

Method AM20GAX

10/18/2012

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square %	Offset	Slope	Curve
1	0.65	Methane	Lin	8	99.998	0.00000	2.84392	0.00000
2	0.93	Ethane	Lin	8	99.998	0.00000	2.03813	0.00000
3	1.23	Ethene	Lin	8	99.999	0.00000	0.85680	0.00000
4	1.86	Propane	Lin	8	99.998	0.00000	2.75363	0.00000
5	3.80	Propene	Lin	8	99.999	0.00000	0.82332	0.00000
6	4.92	iso-Butane	Lin	8	99.998	0.00000	4.01492	0.00000
7	5.74	n-Butane	Lin	8	99.997	0.00000	3.78109	0.00000
8	7.45	Acetylene	Lin	7	99.994	0.00000	0.12191	0.00000

MICROSEEPS

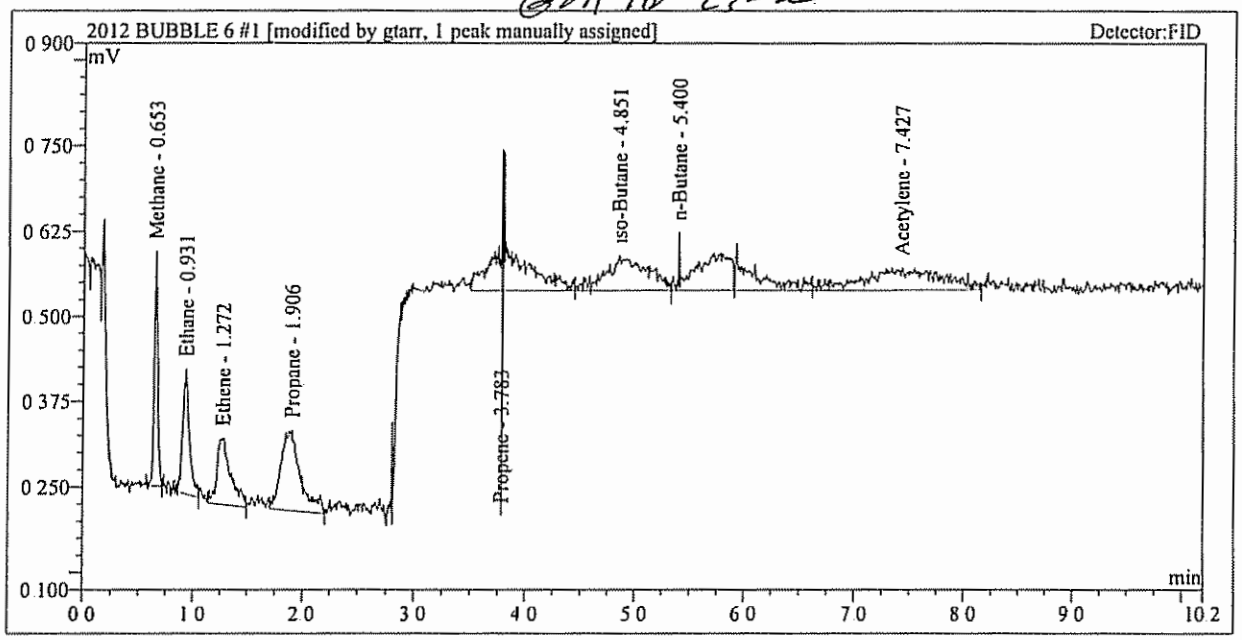
Sample Analysis Report

Sample Name:	ICAL FID L8	**Sequence No:**	1
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/18/2012 9:20	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 8

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.653	0.013	0.344	BMB*	0.0048
2	Ethane	0.931	0.013	0.183	BMB*	0.0069
3	Ethene	1.272	0.014	0.097	BMB*	0.0176
4	Propane	1.906	0.023	0.118	BMB*	0.0092
5	Propene	3.783	0.027	0.329	BM *^	0.0337
6	iso-Butane	4.851	0.022	0.051	M *	0.0055
7	n-Butane	5.400	0.031	0.085	M *	0.0085
8	Acetylene	7.427	0.025	0.033	MB*	0.2062

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GMT 10-23-12



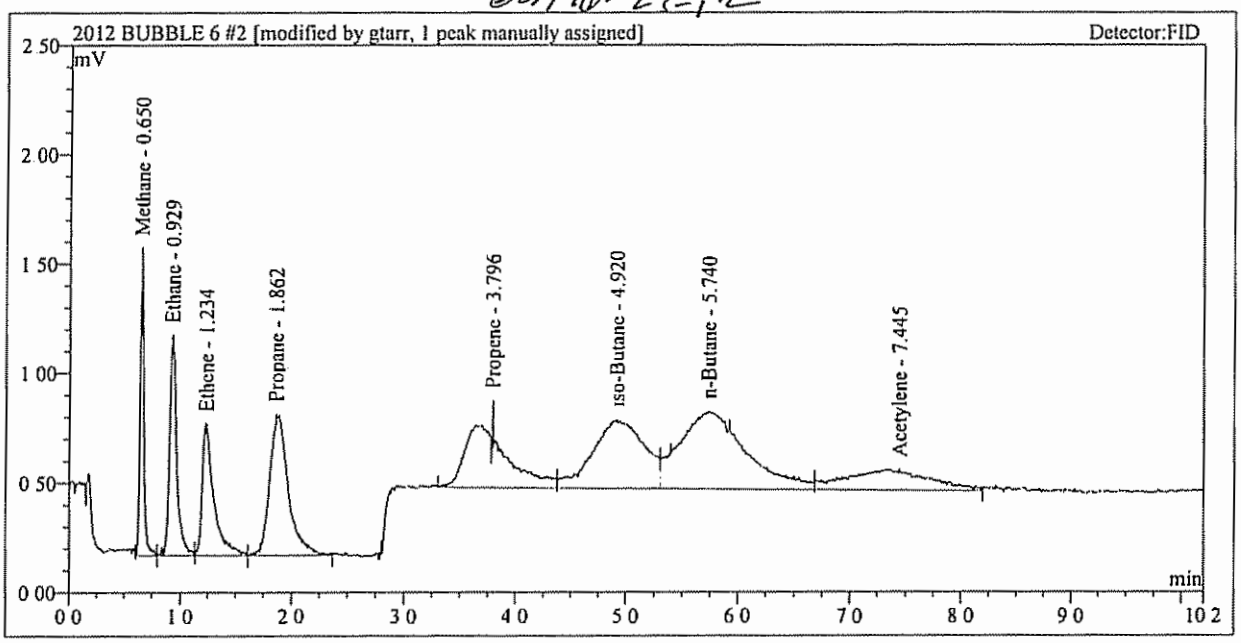
Sample Analysis Report

Sample Name:	ICAL FID L7	**Sequence No:**	2
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/18/2012 9:37	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 7

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.650	0.054	1.407	BM *	0.0206
2	Ethane	0.929	0.075	1.008	M *	0.0398
3	Ethene	1.234	0.072	0.602	M *	0.0890
4	Propane	1.862	0.124	0.646	MB*	0.0494
5	Propene	3.796	0.127	0.398	BM *^	0.1595
6	iso-Butane	4.920	0.168	0.315	M *	0.0427
7	n-Butane	5.740	0.242	0.356	M *	0.0670
8	Acetylene	7.445	0.079	0.095	MB*	0.6462

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GST 10-27-12

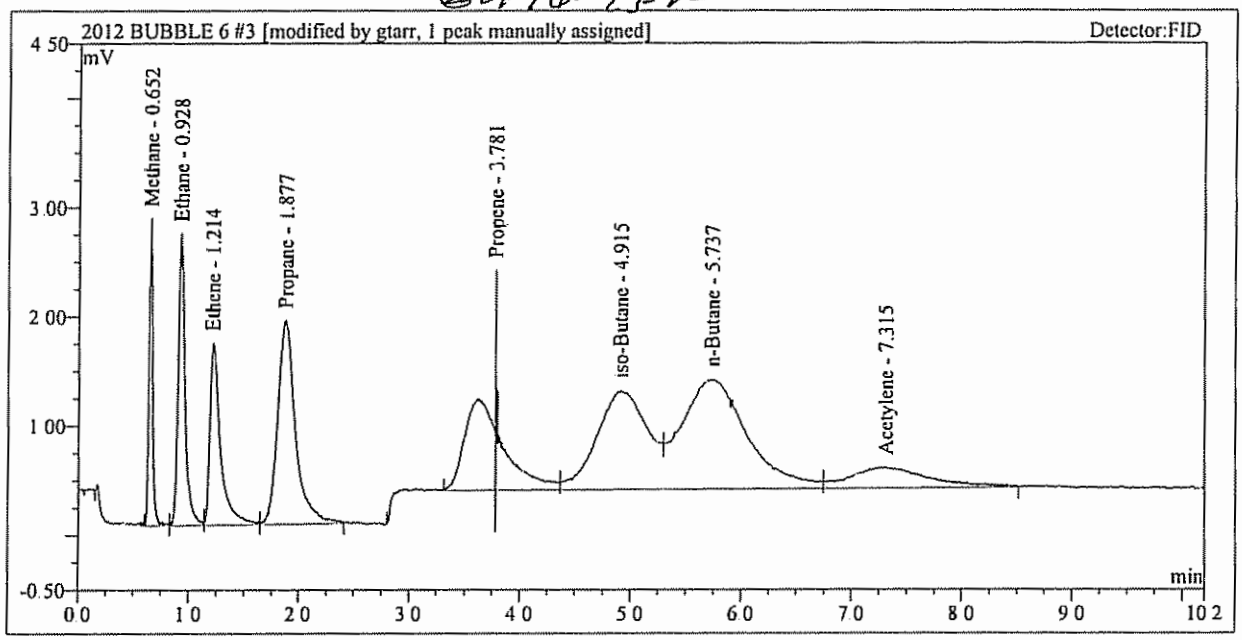


Sample Analysis Report

Sample Name:	ICAL FID L6	**Sequence No:**	3
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/18/2012 9:55	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 6

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.652	0.108	2.813	BM *	0.0412
2	Ethane	0.928	0.191	2.672	M *	0.1016
3	Ethene	1.214	0.187	1.663	M *	0.2296
4	Propane	1.877	0.352	1.866	MB*	0.1402
5	Propene	3.781	0.342	2.017	BM *^	0.4285
6	iso-Butane	4.915	0.477	0.903	M *	0.1216
7	n-Butane	5.737	0.680	1.005	M *	0.1880
8	Acetylene	7.315	0.154	0.190	MB*	1.2643

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

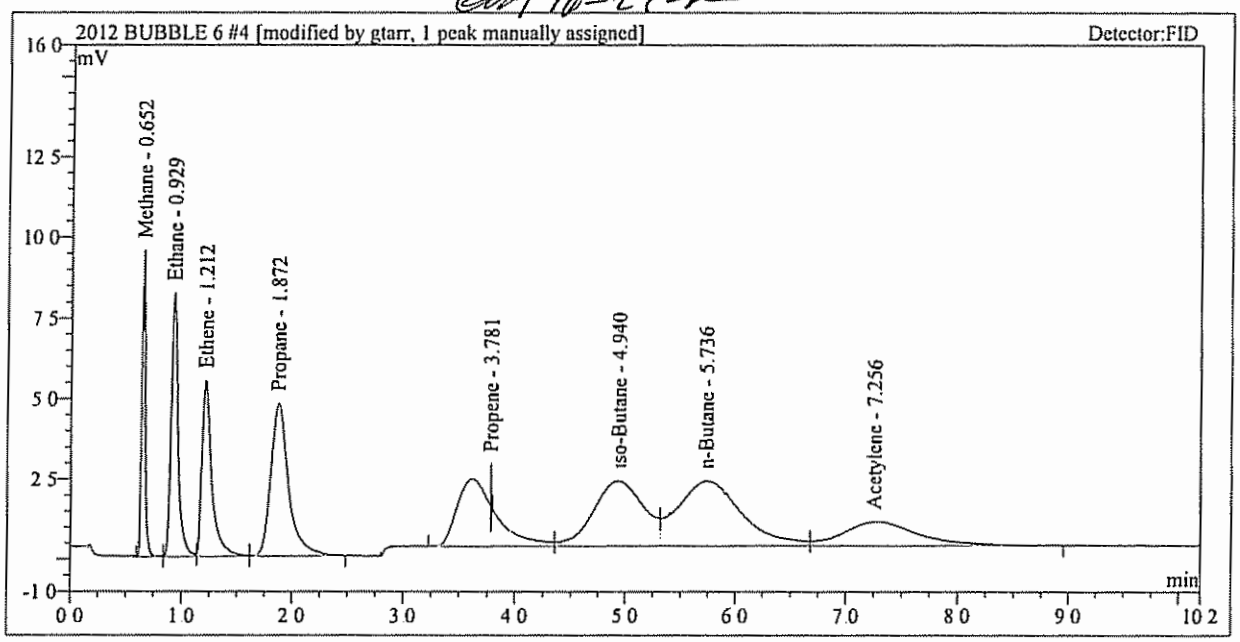
Sample Analysis Report

Sample Name:	ICAL FID L5	**Sequence No:**	4
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 10:07	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 5

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.652	0.361	9.528	BM *	0.1382
2	Ethane	0.929	0.586	8.201	M *	0.3109
3	Ethene	1.212	0.577	5.488	M *	0.7102
4	Propane	1.872	0.897	4.764	MB*	0.3573
5	Propene	3.781	0.851	2.579	BM *^	1.0655
6	iso-Butane	4.940	1.079	2.041	M *	0.2748
7	n-Butane	5.736	1.376	2.035	M *	0.3806
8	Acetylene	7.256	0.606	0.767	MB*	4.9695

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GMT 10-27-12



MICROSEEPS

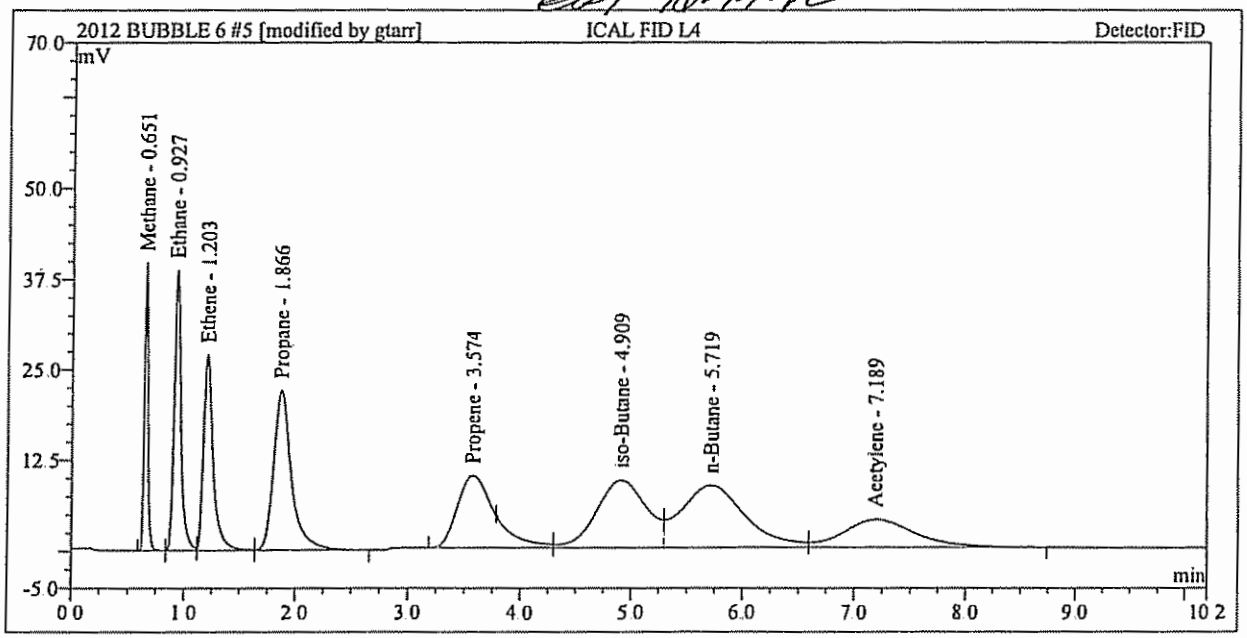
Sample Analysis Report

Sample Name:	ICAL FID L4	**Sequence No:**	5
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 10:28	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.651	1.487	39.681	BM *	0.5688
2	Ethane	0.927	2.735	38.683	M *	1.4510
3	Ethene	1.203	2.746	26.927	M *	3.3778
4	Propane	1.866	4.132	21.979	MB*	1.6464
5	Propene	3.574	3.851	9.915	BM *	4.8220
6	iso-Butane	4.909	4.824	9.237	M *	1.2290
7	n-Butane	5.719	5.682	8.545	M *	1.5717
8	Acetylene	7.189	2.903	3.870	MB*	23.8093

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

CAT 10-19-12



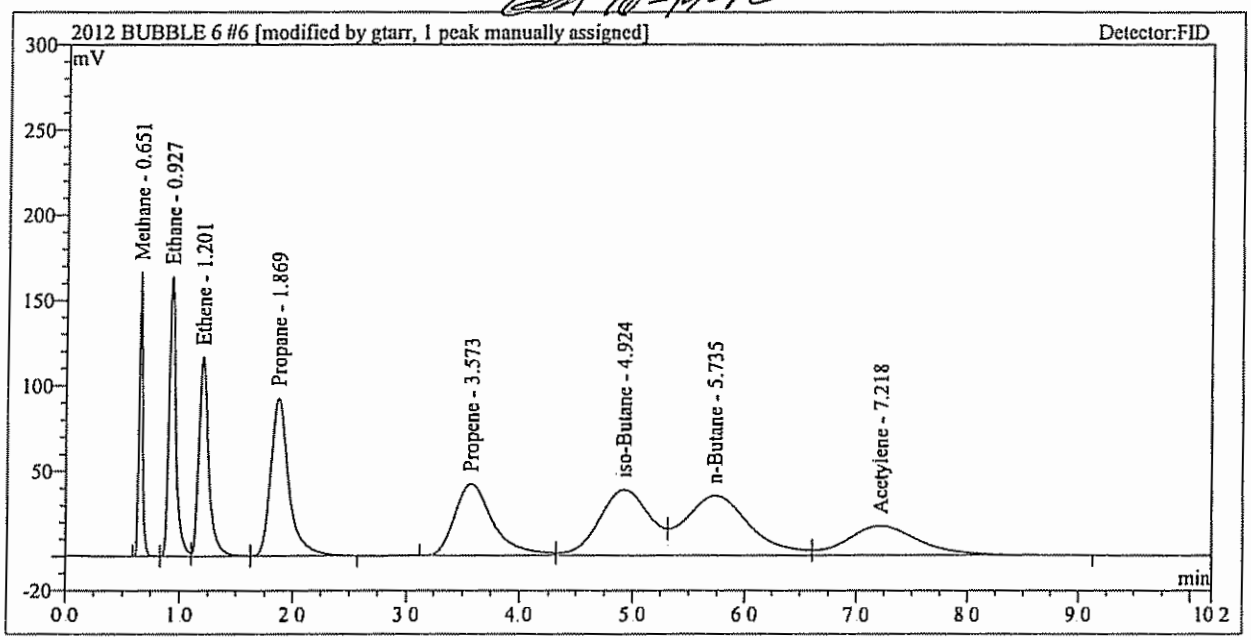
Sample Analysis Report

Sample Name:	ICAL FID L3	**Sequence No:**	6
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 10:42	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 3

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.651	6.231	166.479	BM *	2.3841
2	Ethane	0.927	11.586	163.853	M *	6.1468
3	Ethene	1.201	11.713	116.498	M *	14.4054
4	Propane	1.869	17.366	92.489	MB*	6.9193
5	Propene	3.573	16.375	42.146	BM *	20.5020
6	iso-Butane	4.924	20.268	38.738	M *^	5.1639
7	n-Butane	5.735	23.517	35.207	M *	6.5051
8	Acetylene	7.218	13.158	17.567	MB*	107.9271

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GAT 10-19-12



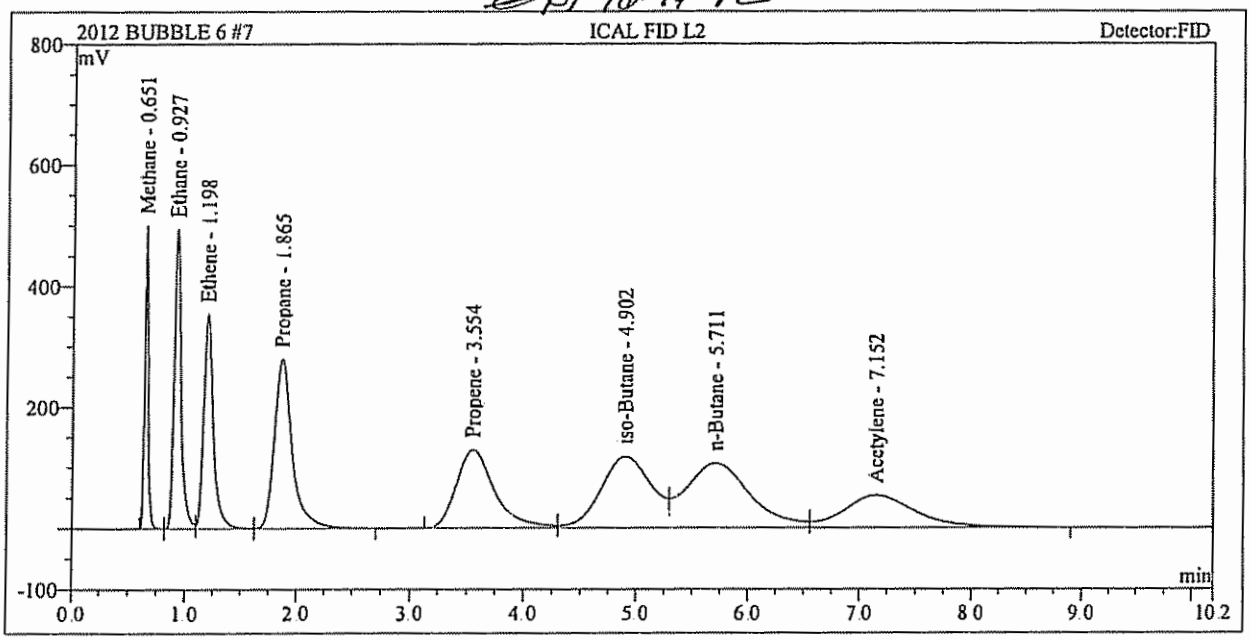
Sample Analysis Report

Sample Name:	ICAL FID L2	**Sequence No:**	7
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 10:59	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 2

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.651	18.707	500.027	BM	7.1574
2	Ethane	0.927	34.852	493.870	M	18.4908
3	Ethene	1.198	35.365	354.368	M	43.4957
4	Propane	1.865	52.424	279.448	MB	20.8875
5	Propene	3.554	49.626	128.841	BM	62.1316
6	iso-Butane	4.902	61.004	117.242	M	15.5421
7	n-Butane	5.711	70.407	106.070	M	19.4753
8	Acetylene	7.152	39.310	53.021	MB	322.4436

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GPS 10-19-12



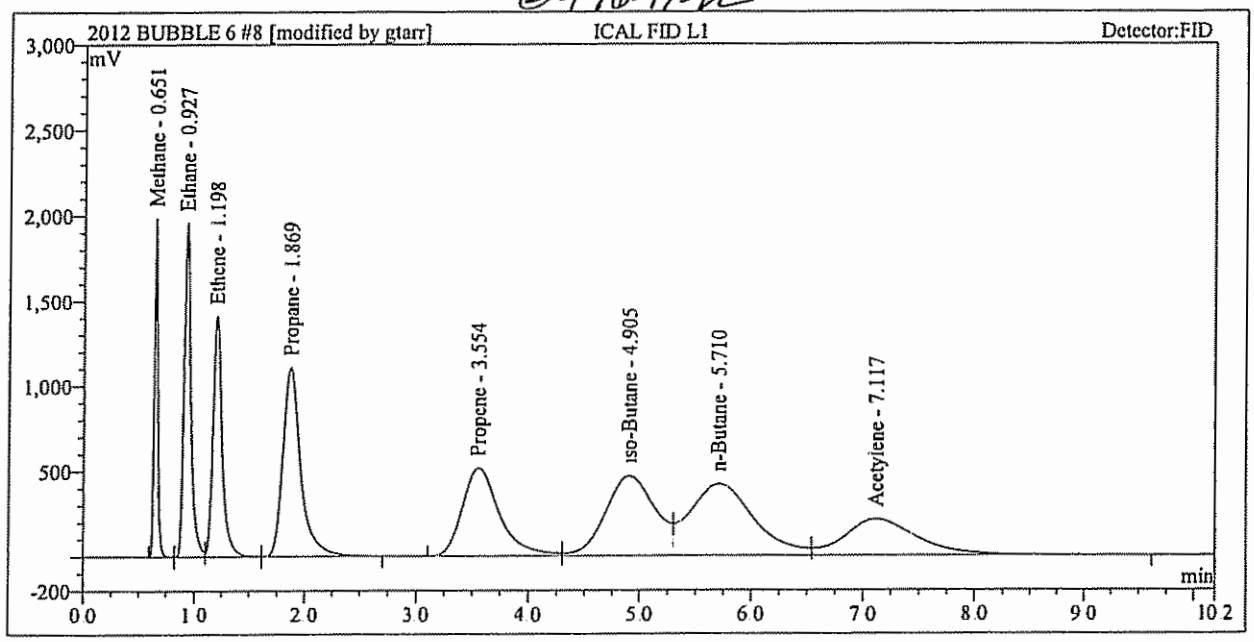
Sample Analysis Report

Sample Name:	ICAL FID L1	**Sequence No:**	8
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 11:13	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	LEVEL 1

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.651	74.461	1988.354	BM	28.4894
2	Ethane	0.927	138.458	1958.729	M	73.4585
3	Ethene	1.198	140.908	1412.531	M	173.3043
4	Propane	1.869	208.306	1108.475	MB	82.9969
5	Propene	3.554	198.420	516.327	BM *	248.4205
6	iso-Butane	4.905	242.793	468.892	M *	61.8571
7	n-Butane	5.710	279.623	420.081	M *	77.3470
8	Acetylene	7.117	161.660	214.164	MB*	1326.0333

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GT 10-19-12



MICROSEEPS

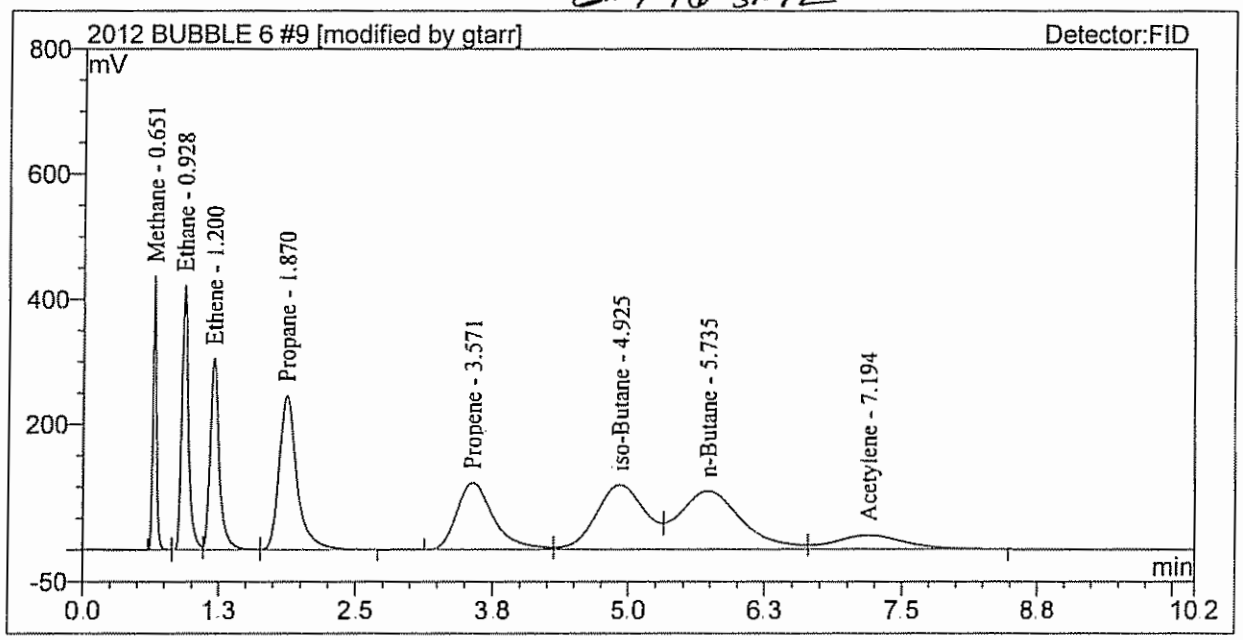
Sample Analysis Report

Sample Name:	ICV/CCV FID/RGD 101812	**Sequence No:**	9
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/18/2012 11:32	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-23 1X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount TV		%R
1	Methane	0.651	16.381	437.809	BM	5.66	5.7602	102
2	Ethane	0.928	29.858	422.562	M	14.42	14.6498	102
3	Ethene	1.200	30.471	305.127	M	35.20	35.5636	101
4	Propane	1.870	46.171	245.724	MB	16.46	16.7674	102
5	Propene	3.571	40.906	106.092	BM *	50.62	49.6833	99
6	iso-Butane	4.925	53.641	102.660	M *	12.46	13.3603	107
7	n-Butane	5.735	61.359	92.754	M *	15.24	16.2277	106
8	Acetylene	7.194	16.883	22.752	MB*	139.02	138.4851	100

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

CMT 10-31-12



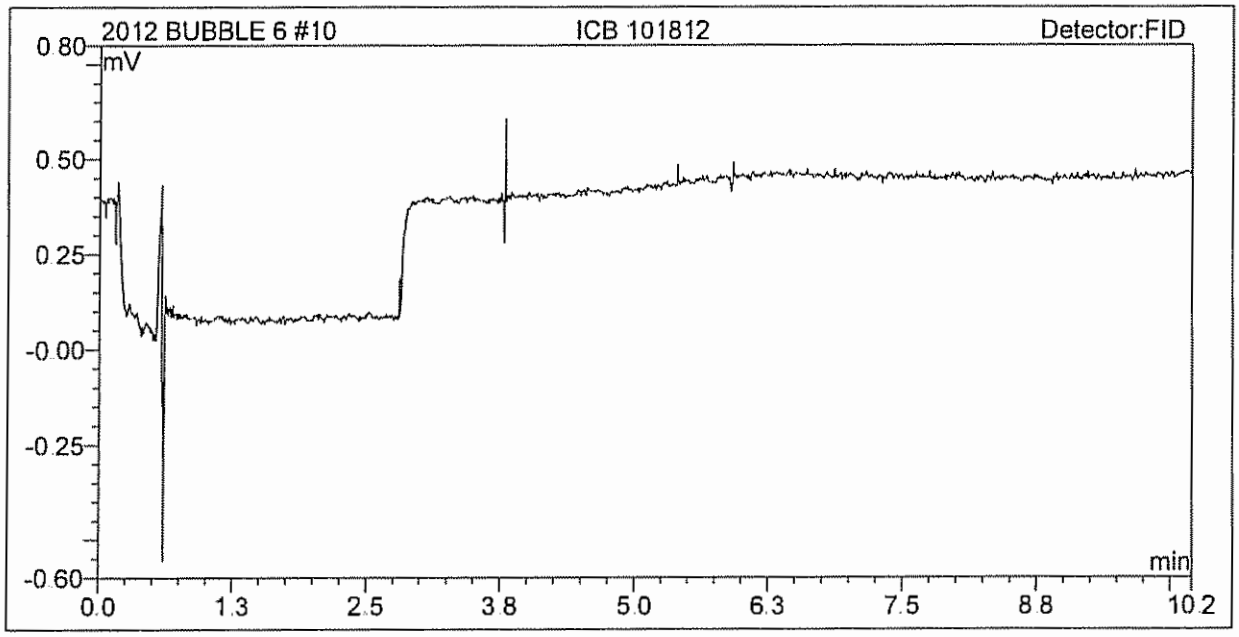
MICROSEEPS

Sample Analysis Report

Sample Name:	ICB 101812	**Sequence No:**	10
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 11:56	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	HELIUM

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



Permanent Gases

Method AM20GAX

10/18/2012

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square %	Offset	Slope	Curve
1	4.14	Carbon Dioxide	Lin	6	99.847	0.00000	0.11075	0.00000
2	6.12	Oxygen	Lin	6	99.809	0.00000	1.55463	0.00000
3	6.45	Nitrogen	Lin	6	99.877	0.00000	8.59324	0.00000
4	7.99	Methane	Lin	5	99.774	0.00000	0.00272	0.00000
5	8.73	Carbon Monoxide	Lin	5	99.869	0.00000	2.40619	0.00000

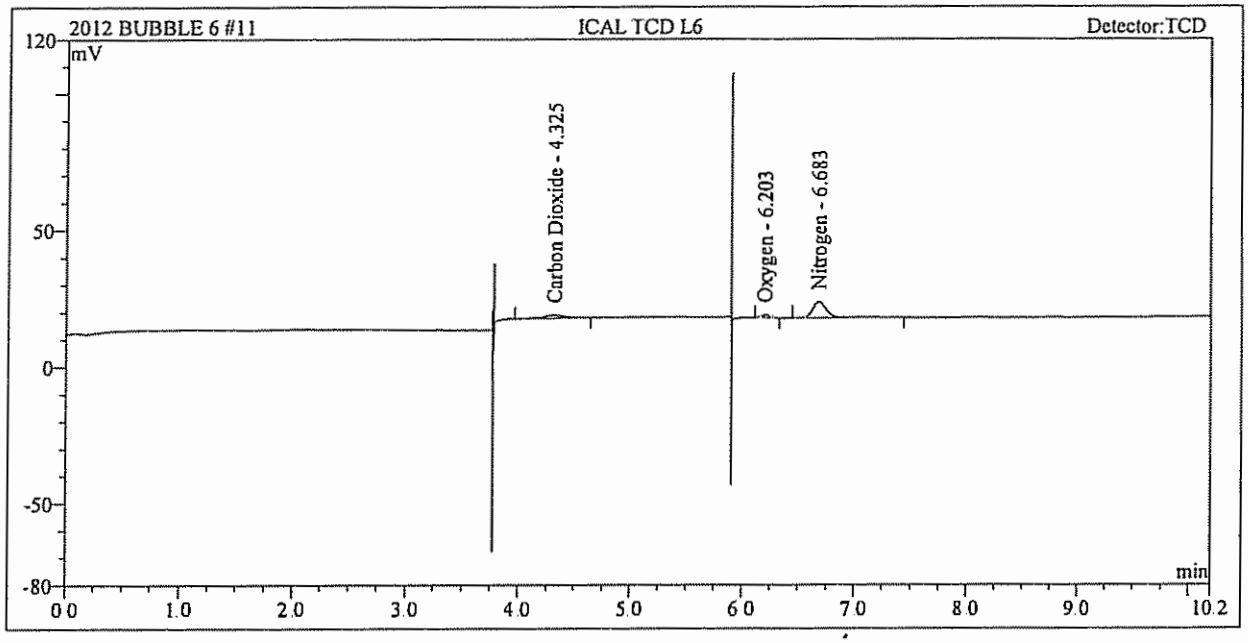
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD L6	**Sequence No:**	11
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 12:11	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.325	0.253	1.095	BMB	2.2874
2	Oxygen	6.203	0.108	1.121	BMB	0.0692
3	Nitrogen	6.683	0.868	5.793	BMB	0.1011

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

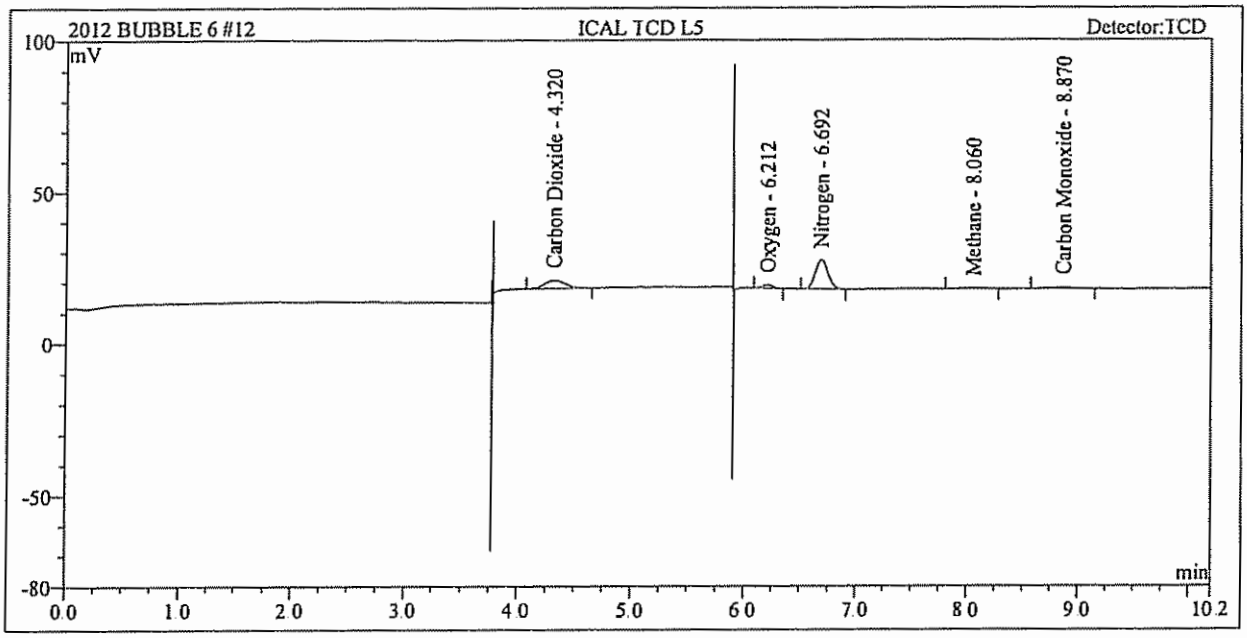


Sample Analysis Report

Sample Name:	ICAL TCD L5	**Sequence No:**	12
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 12:38	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.320	0.569	2.727	BMB	5.1421
2	Oxygen	6.212	0.114	1.160	BMB	0.0734
3	Nitrogen	6.692	1.253	9.649	BMB	0.1458
4	Methane	8.060	0.064	0.277	BMB	23.6008
5	Carbon Monoxide	8.870	0.121	0.460	BMB	0.0502

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



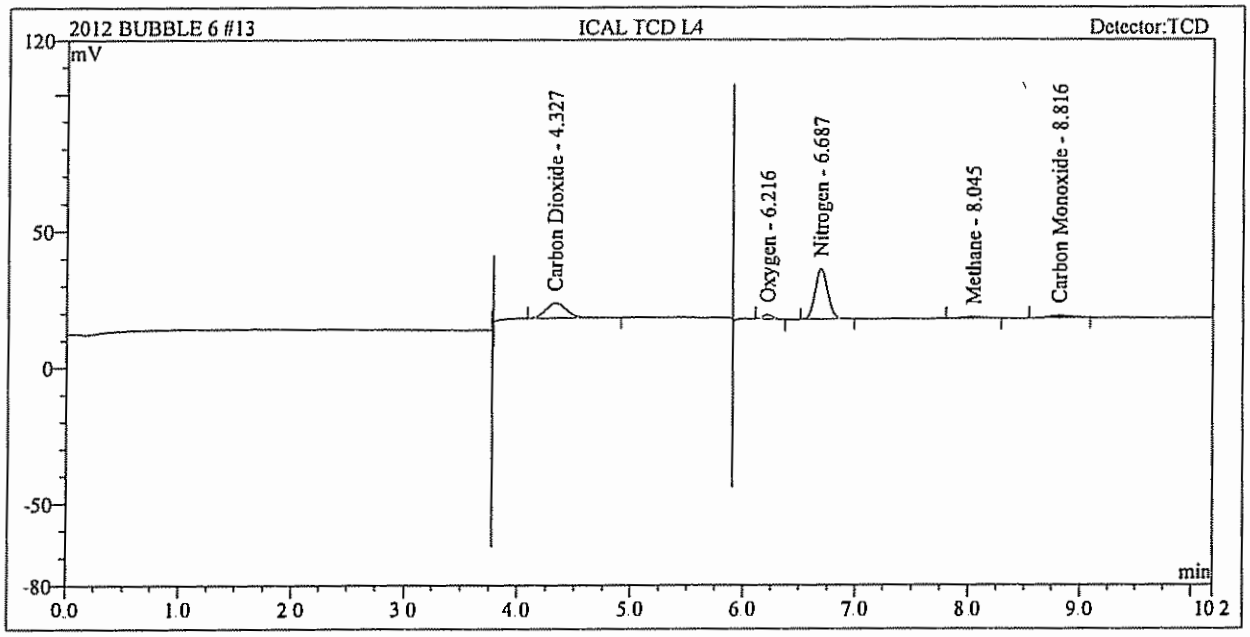
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD L4	**Sequence No:**	13
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 12:51	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.327	1.179	5.482	BMB	10.6465
2	Oxygen	6.216	0.162	1.637	BMB	0.1040
3	Nitrogen	6.687	2.416	18.376	BMB	0.2812
4	Methane	8.045	0.134	0.602	BMB	49.2896
5	Carbon Monoxide	8.816	0.205	0.888	BMB	0.0851

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



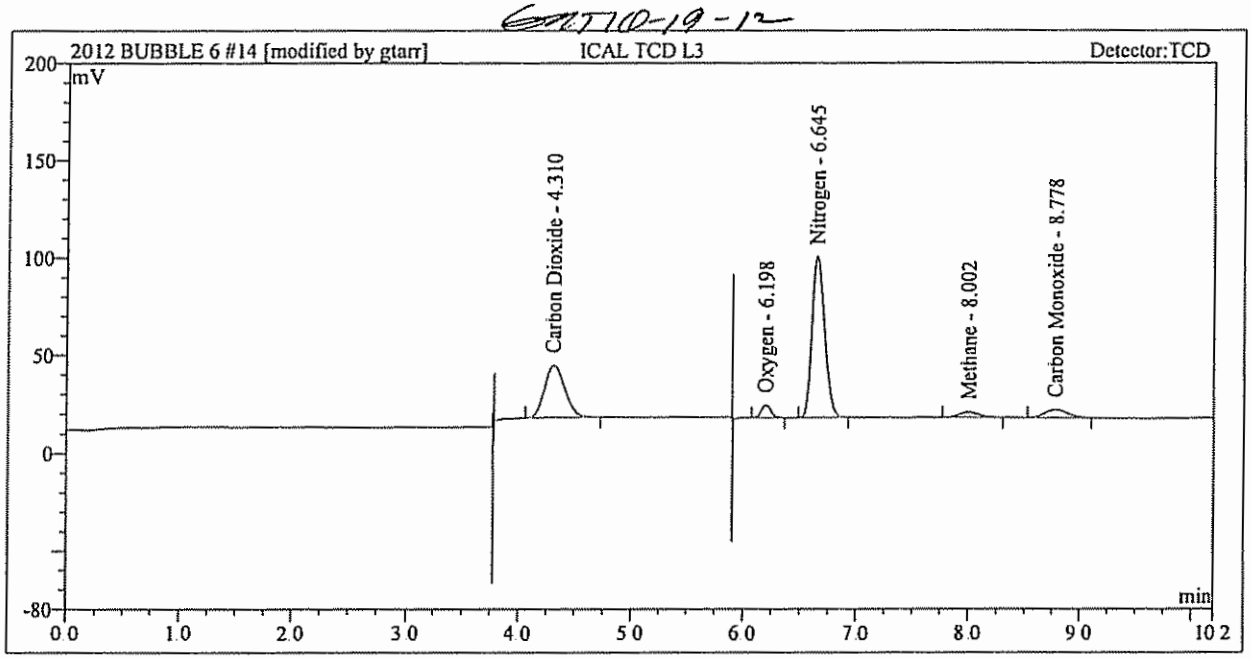
Sample Analysis Report

Sample Name:	ICAL TCD L3	**Sequence No:**	14
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 13:04	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.310	5.564	26.616	BMB*	50.2391
2	Oxygen	6.198	0.633	6.417	BMB*	0.4074
3	Nitrogen	6.645	10.739	82.521	BMB*	1.2497
4	Methane	8.002	0.566	2.787	BMB*	207.7731
5	Carbon Monoxide	8.778	1.031	4.238	BMB*	0.4287

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

CAL 10-19-12



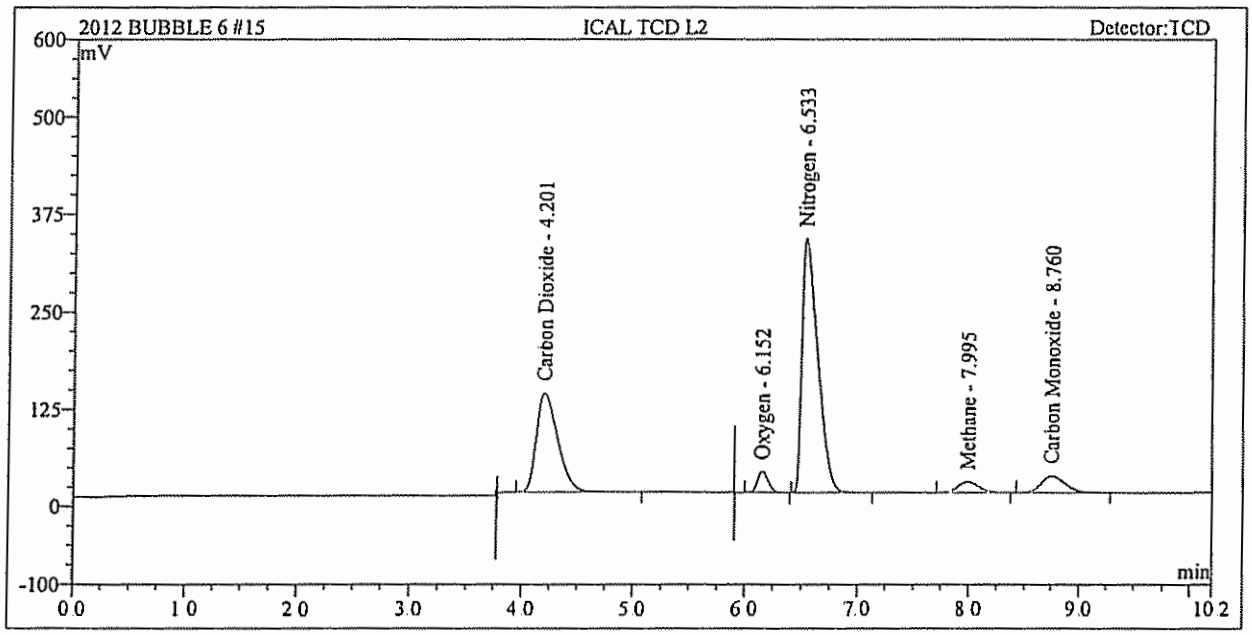
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD L2	**Sequence No:**	15
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 13:16	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.201	28.544	127.590	BMB	257.7305
2	Oxygen	6.152	2.905	26.970	BMB	1.8687
3	Nitrogen	6.533	52.165	326.474	BMB	6.0704
4	Methane	7.995	2.986	13.912	BMB	1097.1990
5	Carbon Monoxide	8.760	5.344	21.141	BMB	2.2209

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

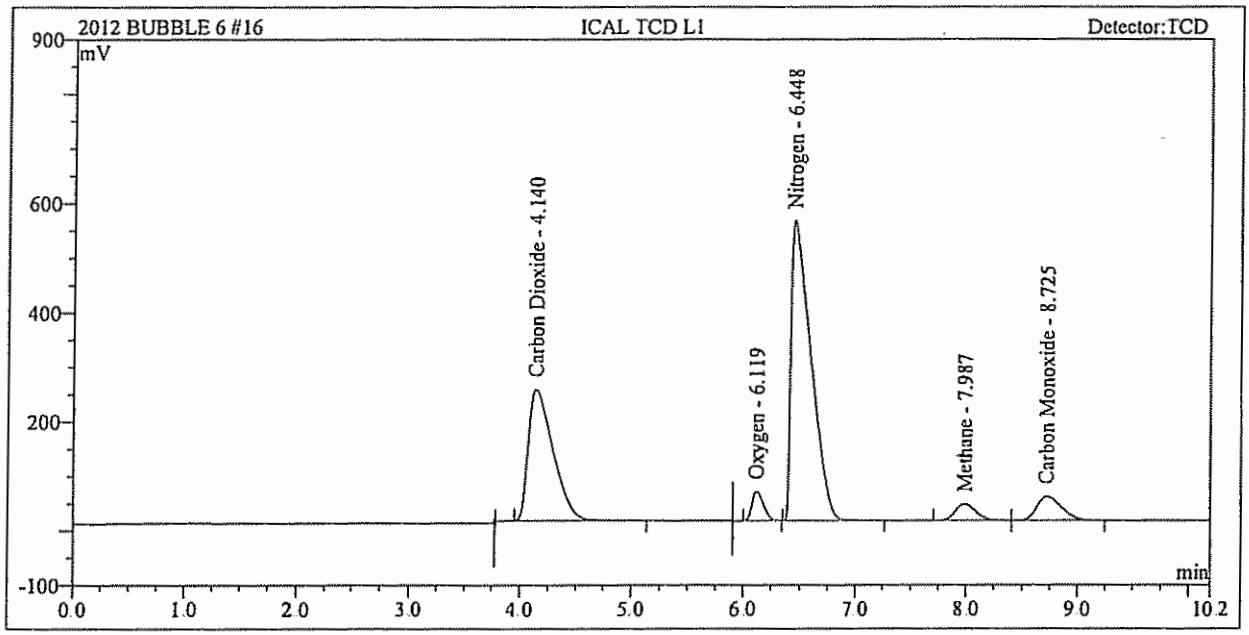


Sample Analysis Report

Sample Name:	ICAL TCD L1	**Sequence No:**	16
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 13:30	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.140	61.783	240.859	BMB	557.8606
2	Oxygen	6.119	6.302	53.944	BMB	4.0538
3	Nitrogen	6.448	112.078	550.215	BMB	13.0426
4	Methane	7.987	6.537	30.152	BM	2401.6604
5	Carbon Monoxide	8.725	11.444	43.882	MB	4.7562

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

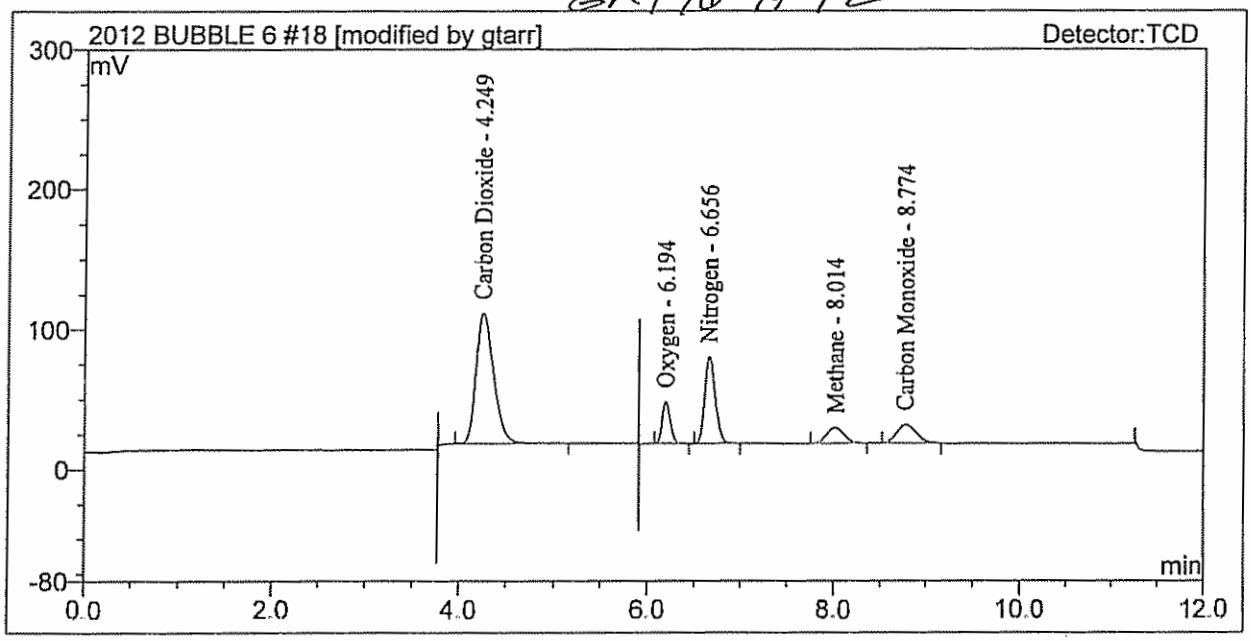
Sample Analysis Report

Sample Name:	ICV/CCV-1 TCD 101812	**Sequence No:**	18
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 14:14	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount TV	
1	Carbon Dioxide	4.249	20.218	92.901	BMB	182,63	182.5509
2	Oxygen	6.194	2.975	29.737	BMB	2,00	1.9137
3	Nitrogen	6.656	8.040	62.165	BMB	0.93	0.9356
4	Methane	8.014	2.427	11.368	BMB*	885,39	891.6766
5	Carbon Monoxide	8.774	3.211	13.231	BMB*	1,34	1.3346

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GRT 10-19-12

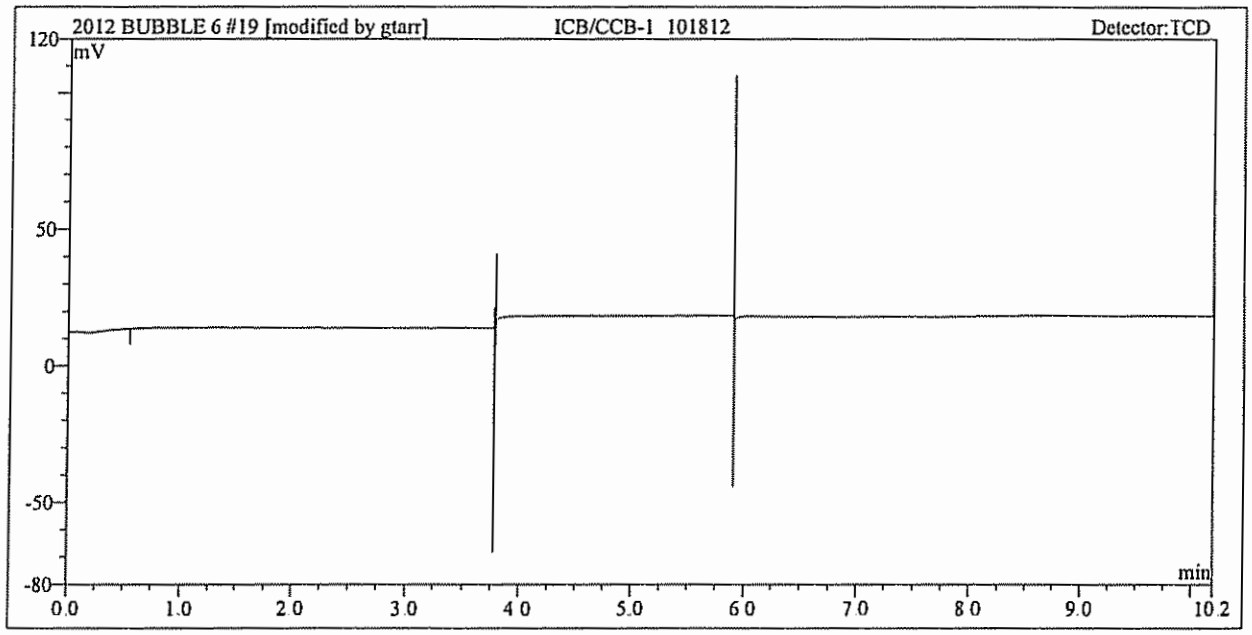


Sample Analysis Report

Sample Name:	ICB/CCB-1 101812	**Sequence No:**	19
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/18/2012 14:33	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



Sequence: 2012 BUBBLE 6
Operator: gtarr
Printed: 10/23/2012 10:07:31 AM

Title: DISSOLVED GASES IN WATER
Datasource: BIOREM11_local
Location: BIOREM14
Timebase: BIOREM14
#Samples: 45

Created: 10/17/2012 1:47:18 PM by gtarr
Last Update: 10/23/2012 9:19:12 AM by gtarr

No.	Name	Type	Pos.	Program	Method	Status	Inj. Date/Time	Comment
1	ICAL FID L8	Standard	1	AM20_090612	BUBBLE	Finished	10/18/2012 9:20:03 AM	LEVEL 8
2	ICAL FID L7	Standard	2	AM20_090612	BUBBLE	Finished	10/18/2012 9:37:01 AM	LEVEL 7
3	ICAL FID L6	Standard	3	AM20_090612	BUBBLE	Finished	10/18/2012 9:55:30 AM	LEVEL 6
4	ICAL FID L5	Standard	4	AM20_090612	BUBBLE	Finished	10/18/2012 10:07:54 AM	LEVEL 5
5	ICAL FID L4	Standard	5	AM20_090612	BUBBLE	Finished	10/18/2012 10:28:06 AM	LEVEL 4
6	ICAL FID L3	Standard	6	AM20_090612	BUBBLE	Finished	10/18/2012 10:42:38 AM	LEVEL 3
7	ICAL FID L2	Standard	7	AM20_090612	BUBBLE	Finished	10/18/2012 10:59:02 AM	LEVEL 2
8	ICAL FID L1	Standard	8	AM20_090612	BUBBLE	Finished	10/18/2012 11:13:31 AM	LEVEL 1
9	ICV/CCV FID/RGD 101812	Unknown	9	AM20_090612	BUBBLE	Finished	10/18/2012 11:32:35 AM	RA-10-23 1X
10	ICB 101812	Unknown	10	AM20_090612	BUBBLE	Finished	10/18/2012 11:56:42 AM	HELIUM
11	ICAL TCD L6	Standard	11	AM20_090612	BUBBLE	Finished	10/18/2012 12:11:10 PM	LEVEL 6
12	ICAL TCD L5	Standard	12	AM20_090612	BUBBLE	Finished	10/18/2012 12:38:49 PM	LEVEL 5
13	ICAL TCD L4	Standard	13	AM20_090612	BUBBLE	Finished	10/18/2012 12:51:17 PM	LEVEL 4
14	ICAL TCD L3	Standard	14	AM20_090612	BUBBLE	Finished	10/18/2012 1:04:11 PM	LEVEL 3
15	ICAL TCD L2	Standard	15	AM20_090612	BUBBLE	Finished	10/18/2012 1:16:27 PM	LEVEL 2
16	ICAL TCD L1	Standard	16	AM20_090612	BUBBLE	Finished	10/18/2012 1:30:45 PM	LEVEL 1
17	ICAL TCD L1A	Standard	18	AM20_090612	BUBBLE	Finished	10/18/2012 1:56:06 PM	LEVEL 1A
18	ICV/CCV-1 TCD 101812	Unknown	17	AM20_090612	BUBBLE	Finished	10/18/2012 2:14:46 PM	RA-10-26 1X
19	ICB/CCB-1 101812	Unknown	18	AM20_090612	BUBBLE	Finished	10/18/2012 2:33:24 PM	HELIUM
20	ICAL H2 L7	Standard	3	AM20_090612	BUBBLE	Finished	10/19/2012 9:34:21 AM	LEVEL 7
21	ICAL H2 L6	Standard	4	AM20_090612	BUBBLE	Finished	10/19/2012 9:52:59 AM	LEVEL 6
22	ICAL H2 L5	Standard	5	AM20_090612	BUBBLE	Finished	10/19/2012 10:05:24 AM	LEVEL 5
23	ICAL H2 L4	Standard	6	AM20_090612	BUBBLE	Finished	10/19/2012 10:18:55 AM	LEVEL 4
24	ICAL H2 L3	Standard	7	AM20_090612	BUBBLE	Finished	10/19/2012 10:31:20 AM	LEVEL 3
25	ICAL H2 L2	Standard	8	AM20_090612	BUBBLE	Finished	10/19/2012 10:48:13 AM	LEVEL 2
26	ICV/CCV-1 RGD 101912	Unknown	9	AM20_090612	BUBBLE	Finished	10/19/2012 11:15:37 AM	RA-10-23 2X
27	ICB/CCB-1 101912	Unknown	10	AM20_090612	BUBBLE	Finished	10/19/2012 11:34:54 AM	HELIUM

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Title: DISSOLVED GASES IN WATER
Datasource: BIOREM11_local
Location: BIOREM14
Timebase: BIOREM14
#Samples: 85

Created: 10/17/2012 1:47:18 PM by gtarr
Last Update: 10/24/2012 4:38:53 PM by slyon

No.	Name	Type	Pos.	Program	Method	Status	Inj. Date/Time	Comment
28	15292-LCS	Unknown	11	AM20_090612	BUBBLE	Finished	10/19/2012 11:48:50 AM	
29	15294-LCSD	Unknown	12	AM20_090612	BUBBLE	Finished	10/19/2012 12:02:53 PM	
30	15290-MB	Unknown	13	AM20_090612	BUBBLE	Finished	10/19/2012 12:15:14 PM	
31	68710001-1-DIL 10X	Unknown	14	AM20_090612	BUBBLE	Finished	10/19/2012 12:27:35 PM	10X DILUTION
32	69130001-1-DIL 10X	Unknown	15	AM20_090612	BUBBLE	Finished	10/19/2012 12:56:36 PM	10X DILUTION
33	69140001-1-DIL 50X	Unknown	16	AM20_090612	BUBBLE	Finished	10/19/2012 1:09:06 PM	50X DILUTION
34	69220002-1	Unknown	17	AM20_090612	BUBBLE	Finished	10/19/2012 1:21:22 PM	
35	69510001-1	Unknown	18	AM20_090612	BUBBLE	Finished	10/19/2012 1:33:36 PM	
36	69510002-1	Unknown	19	AM20_090612	BUBBLE	Finished	10/19/2012 1:46:09 PM	
37	69510003-1	Unknown	20	AM20_090612	BUBBLE	Finished	10/19/2012 2:03:24 PM	
38	69510004-1	Unknown	21	AM20_090612	BUBBLE	Finished	10/19/2012 2:17:33 PM	
39	69570001-1	Unknown	22	AM20_090612	BUBBLE	Finished	10/19/2012 2:29:52 PM	
40	69570002-1	Unknown	23	AM20_090612	BUBBLE	Finished	10/19/2012 2:43:50 PM	
41	69570003-1	Unknown	24	AM20_090612	BUBBLE	Finished	10/19/2012 2:56:05 PM	
42	69570004-1	Unknown	24	AM20_090612	BUBBLE	Finished	10/19/2012 3:22:44 PM	
43	69570005-1	Unknown	25	AM20_090612	BUBBLE	Finished	10/19/2012 4:06:51 PM	
44	CCV-2 RGD 101912	Unknown	26	AM20_090612	BUBBLE	Finished	10/19/2012 4:23:07 PM	RA-10-23 5X
45	he in loop	Unknown	27	AM20_090612	BUBBLE	Finished	10/24/2012 6:35:48 AM	HELIUM
46	CCV-1 FID/RGD 102412	Unknown	29	AM20_090612	BUBBLE	Finished	10/24/2012 7:23:54 AM	RA-10-25 2X
47	CCV-1 TCD 102412	Unknown	31	AM20_090612	BUBBLE	Finished	10/24/2012 8:09:50 AM	RA-10-26 1X
48	CCB-1 102412	Unknown	31	AM20_090612	BUBBLE	Finished	10/24/2012 8:21:57 AM	
49	LCS	Unknown	32	AM20_090612	BUBBLE	Finished	10/24/2012 8:36:09 AM	
50	lcsd	Unknown	35	AM20_090612	BUBBLE	Finished	10/24/2012 10:50:26 AM	
51	MB	Unknown	36	AM20_090612	BUBBLE	Finished	10/24/2012 11:03:41 AM	
52	P1210020-01A	Unknown	37	AM20_090612	BUBBLE	Finished	10/24/2012 11:16:04 AM	4X DILUTION
53	P1210020-02A	Unknown	38	AM20_090612	BUBBLE	Finished	10/24/2012 11:28:23 AM	
54	P1210021-01A	Unknown	39	AM20_090612	BUBBLE	Finished	10/24/2012 11:41:01 AM	

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Title: DISSOLVED GASES IN WATER
Datasource: BIOREM11_local
Location: BIOREM14
Timebase: BIOREM14
#Samples: 85

Created: 10/17/2012 1:47:18 PM by gtarr
Last Update: 10/24/2012 4:38:53 PM by slyon

No.	Name	Type	Pos.	Program	Method	Status	Inj. Date/Time	Comment
55	P1210028-01A	Unknown	40	AM20_090612	BUBBLE	Finished	10/24/2012 11:53:28 AM	
56	P1210028-02A	Unknown	41	AM20_090612	BUBBLE	Finished	10/24/2012 12:06:20 PM	
57	P1210028-03A	Unknown	42	AM20_090612	BUBBLE	Finished	10/24/2012 12:18:33 PM	
58	P1210028-04A	Unknown	43	AM20_090612	BUBBLE	Finished	10/24/2012 12:30:48 PM	
59	P1210028-05A	Unknown	44	AM20_090612	BUBBLE	Finished	10/24/2012 12:44:19 PM	
60	P1210028-06A	Unknown	45	AM20_090612	BUBBLE	Finished	10/24/2012 12:56:31 PM	
61	P1210028-07A	Unknown	46	AM20_090612	BUBBLE	Finished	10/24/2012 1:08:47 PM	
62	P1210028-08A	Unknown	47	AM20_090612	BUBBLE	Finished	10/24/2012 1:21:02 PM	
63	P1210028-09A	Unknown	48	AM20_090612	BUBBLE	Finished	10/24/2012 1:33:30 PM	
64	CCV-2 FID/RGD 102412	Unknown	49	AM20_090612	BUBBLE	Finished	10/24/2012 1:45:47 PM	RA-10-25 5X
65	CCV-2 TCD 102412	Unknown	50	AM20_090612	BUBBLE	Finished	10/24/2012 1:58:04 PM	RA-10-26 2X
66	CCB-2 102412	Unknown	51	AM20_090612	BUBBLE	Finished	10/24/2012 2:10:17 PM	HELIUM
67	69510001-1-DIL 4X	Unknown	37	AM20_090612	BUBBLE	Finished	10/24/2012 2:22:42 PM	4X DILUTION - RE RUN
68	69510004-1-DIL 10X	Unknown	38	AM20_090612	BUBBLE	Finished	10/24/2012 2:35:06 PM	10X DILUTION - RE RUN
69	P1210028-01A-DIL 2X	Unknown	53	AM20_090612	BUBBLE	Finished	10/24/2012 2:47:56 PM	2X DILUTION - RE RUN
70	70190001-1	Unknown	54	AM20_090612	BUBBLE	Finished	10/24/2012 3:15:06 PM	
71	70190002-1	Unknown	55	AM20_090612	BUBBLE	Finished	10/24/2012 3:31:37 PM	
72	70190003-1	Unknown	56	AM20_090612	BUBBLE	Finished	10/24/2012 3:55:45 PM	
73	70190004-1	Unknown	57	AM20_090612	BUBBLE	Finished	10/24/2012 4:18:22 PM	
74	70190005-1	Unknown	58	AM20_090612	BUBBLE	Finished	10/24/2012 4:39:30 PM	
75	70190006-1	Unknown	59	AM20_090612	BUBBLE	Finished	10/24/2012 5:18:16 PM	
76	CCV-3 FID/RGD 102412	Unknown	60	AM20_090612	BUBBLE	Finished	10/24/2012 5:35:26 PM	RA-10-25 2X
77	CCV-3 TCD 102412	Unknown	61	AM20_090612	BUBBLE	Finished	10/24/2012 5:50:19 PM	RA-10-26 1X
78		Unknown	62	AM20_090612	BUBBLE	Single		
79		Unknown	63	AM20_090612	BUBBLE	Single		
80		Unknown	64	AM20_090612	BUBBLE	Single		
81		Unknown	65	AM20_090612	BUBBLE	Single		

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10-18-12 ICAL - FID : WATER 5 (2012), BUBBLE 6 (2012), VAPOR 6 (2012)

CARRIER GAS @ 75 psi flow Helium for TCD & RGD

STANDARDS / STOCK: The following is refer to as STOCK

RA-10-08 Hydrocarbons

RA-07-14 Acetylene

W/S (WORKING STANDARDS): W/S 8: one (1) cc of each stock added to a 160cc Serum vial that was purged w/ Nitrogen (N_2). An additional 38 cc of Ultra High Purity (UHP) N_2 was added to the 160cc Serum vial.

Serum bottles were 160 cc capacity

W/S 7: eight (8) cc of each stock added to 160cc Serum vial. An additional 24cc UHP N_2 was placed in 160 Serum vial.

Vials utilized were 22cc vials w/ 21cc capacity

[* Note all vials & serum bottles were purged with N_2 UHP N_2.] ~~Vials 22cc vial, w/ 21cc capacity capacity, serum bottles~~ 160cc

ICAL - FID	STD LEVEL	CONC.	Prep
L 8	LEVEL 8	0.040 ppmv	2cc W/S 8 placed in Serum bottle ~~vial~~ 88cc UHP N_2 was added.
GRT 10-8 L 7	LEVEL 7	0.200	2cc W/S 8 placed in ~~Serum bottle~~ 22cc vial, 27cc UHP N_2 was added
GRT 10-8 L 6	LEVEL 6	0.500	4cc W/S 8 placed in ~~Serum bottle~~ 22cc vial " 15cc " "
GRT 10-8 L 5	LEVEL 5	2.00	2cc W/S 7 placed in ~~Serum bottle~~ 22cc vial 17cc UHP N_2 was added
GRT 10-8 L 4	LEVEL 4	10.00	10cc W/S 7 placed in ~~Serum bottle~~ 22cc vial, 9cc UHP N_2 was added
L 3	LEVEL 3	40.00	2cc of each STOCK, 25cc of UHP N_2 was added to vial
L 2	LEVEL 2	125.00	5cc of each STOCK, 9cc of UHP N_2 was added to vial
L 1	LEVEL 1	500.00	21cc of each STOCK placed into an evacuated 22cc vial
W/S 7 ~~W/S 8~~	W/S 7	40.00	8cc of each STOCK placed into Serum ~~vial~~ Bottle (160cc Serum vial) 24cc of UHP N_2 was added to Serum bottle.
W/S 8	W/S 8	5.00	1cc of each STOCK was placed into a Serum bottle. 38cc of UHP N_2 was added to Serum bottle.

* Unless otherwise note in Prep Notes, all 22 cc vial (21cc capacity) was purged w/ UHP N_2, Serum Bottles, 160cc capacity, were purged w/ UHP N_2

ICV / CCV FID/RGD (101812) - RA-10-23 IX

1-CB (101812) Helium

October 18, 2012

[signature]

10-18-12 ICAL TCD : WATER 5 (2012), BUBBLE 6 (2012), VAPOR 6 (2012)

CARRIER GAS @ 75 psi flow, Helium (He) for FID/RGD

STANDARD/STOCK : SCOTTY ANALYZED GASES 22) (Scotty Specialty Comp)

RA-10-12,
RA-10-12 referred to as STOCK

SAMPLE ID	LEVEL	PREP / COMMENT - NOTES	ADD TO VIAL
ICAL TCD L6	LEVEL 6	10cc of W/S #5 40cc of Ultra High Purity He in 22cc vial	(19cc He)
ICAL TCD L5	LEVEL 5	0.5cc of STOCK, 49.5cc of UHP He in 22cc vial (added 28.5cc He)	
ICAL TCD L4	LEVEL 4	1.0cc of STOCK, 49cc of UHP He in 22cc vial (Added 28cc of He)	
ICAL TCD L3	LEVEL 3	5.0cc of STOCK, 45cc of UHP He in 22cc vial (addded 24cc of He UHP)	
ICAL TCD L2	LEVEL 2	21cc of STOCK, 21cc of UHP He in 22cc vial (-)	
ICAL TCD L1	LEVEL 1	Direct - STOCK (from cylinder by syringe)	
ICAL TCD L1A	(LEVEL 1A)	5cc of (Methane) RA-07-19; 10cc of (CO_2) RA-08-04 in 22cc vial purged in atmosphere; added 14cc of atmosphere to vial	
	W/S #5	1cc of STOCK, 49cc of UHP He in 22cc vial (added 28cc of UHP He)	

ICV/CCV-1-TCD 101812 RA-10-26 1X
LCB/CCB-1 101812 Helium, UHP

NOTE: 22 cc vials have capacity of 21cc
RA-10-12 referred to as STOCK
all vials were purged w/ UHP Helium.
Carrier Gas was set for 7.5 psi flow (He, UHP)

October 18 2012

(2012) (2012)
ICAL RGD 1 BUBBLE 6 VAPOR 6

Carrier Gas: set flow at 75 psi (Helium, UHP)

STANDARD STOCK? SCOTTY ANALYZED GASES 14
Hydrogen = 100 ppm / Balance Nitrogen.
RA-11-02

STOCK: RA-11-02 will/can be referred to as STOCK

* NOTE: 22cc vial have a capacity of 21cc

All vials were purged for ~7 seconds with Ultra High Purity (UHP) Nitrogen (N_2).

Analyte	Level	Conc	Prep/Comment-Notes
H2 L7	LEVEL 7	0.2 ppmv	4cc of W/STOCK, 36cc Ultra High Purity (UHP) N_2 in 22cc vial (15cc UHP N_2)
H2 L6	LEVEL 6	0.5	10cc of W/STOCK, 30cc UHP N_2 in 22cc vial (added 9cc UHP N_2)
H2 L5	LEVEL 5	2.0	1cc of STOCK, 49cc UHP N_2 in 22cc vial (added 28cc UHP N_2)
H2 L4	LEVEL 4	5.0	2cc of STOCK, 38cc UHP N_2 in 22cc vial (added 17cc UHP N_2)
H2 L3	LEVEL 3	10.0	5cc of STOCK, 45cc UHP N_2 in 22cc vial (added 24cc UHP N_2)
H2 L2	LEVEL 2	16.0	8cc of STOCK, 42cc UHP N_2 in 22cc vial (added 21cc UHP N_2)

(ICAL) ICV/CCV - 1- RGD/FID 10/9/12 · RA-10-23 2%
ICB/CCB Helium

October 16, 2012

10-21-12 (2012) WATER 5 CCV-1-TCD RA-10-24 1X CCV-2-TCD RA-10-24 2X
CCB-1 Helium MS Helium
LCS/LCSD LCS-H16H, refer to page 95 (10-8-12) for LCS-H16H preparation
SAMPLES: 6927 (1-4) 6981 (1-2) October 21, 2012

10-22-12 2012 WATER (5) CCV-1-FID RA-10-23 2X CCV-1,3-FID RA-10-23 1X
CCV-2-TCD RA-10-26 2X CCV-1,3,-TCD RA-10-26 4X
CCB-1,2 Helium MS Helium
LCS/LCSD - LCS-H16H, refer to page 95 (10-8-12) for LCS-H16H preparation
SAMPLES: 6944 (1-4) 6948 (1-8) 6978 (1-6) 6979 (1-2) October 22, 2012

10-23-12 2012 WATER (5) CCV-1,3 TCD RA-10-26 1X CCV-2-TCD RA-10-26 2X
CCB-1,2 Helium MS Helium
LCS/LCSD - LCS-H16H, refer to page 95 (10-8-12) for LCS-H16H preparation
SAMPLES: 6952 (1-6) 6954 (1) 6965 (1-5) October 23 2012
6953 (1-2) 6964 (1-4) 6981 (3-

10-24-12 2012 BUBBLE (6)
CCV-1,3,-FID/RGD RA-10-25 2X CCV-2-FID/RGD RA-10-25 3X
CCV-1,3-TCD RA-10-26 1X CCV-2-TCD RA-10-26 2X
CCB-1,2 Helium MS ~~RA-10-~~ Helium
LCS/LCSD RA-10-06 2X
October 24, 2012
SAMPLES: 6951 (1,4) dilutions 7019 (1-6)
P1210020 (1-2) P1210021 (1) P1210028 (1-9)

M1210250001 - LHC
M1210250002 - PG
M1210250003 - H+

[redacted]

Risk Department
Case Narrative

Batch number: P1210020 (1-2) CO_2 00 MEE H+ **Original Run Date:** 10-24-12
FOP L4 ⟷ P1210021 (1) CO_2 MEE H+ 2012
Sample numbers: P1210028(1-9) CO_2 MEE H+ **Matrix:** BUBBLE 6

Out of Control Event: (attach another page, if necessary) Potential carry over on sample P1210028-1A, up to Seq # 55

Corrective Action Taken: Re-ran sample, at a 2x dilution

Result: Results similar to initial run, although previous sample did indicate that carry over would be minimal. refer to Seq #69, results ~~for~~ taken from Seq #55 for TCD & RGD

Observations to support use of data: (Note any occurrences of manual integration here)
Sample required manual integration to repair baseline inaccuracies inherent to the software.
NOTE: TCD & RGD results for sample P1210028-1A were taken from results from Seq # 55, with FID results from Seq #69

Manual Integration Checklist and Approval

- Manual Integration approved?: Yes No
- Satisfactorily documented on this narrative?
- Manually integrated chromatogram initialed and dated by analyst?

_____ _____
Signature Lead Analyst or Lab. Mgr. Date

Analyzed & Reviewed by: GKT **Date:** GKT 10-26-12
Manual Integration Conducted? (YES) NO
(Circle One)
Reviewed by: [signature] **Date:** 10/29/12

Reviewed & Entered by: JPCOMO **Date:** GKT 10-26-12

Reviewed by: _____ **Date:** _____

Corrected by: _____ **Date:** _____

2012 BUBBLE 6

TITLE: **M121025001-3**

DATE: **10/24/2012**

	CCV-1-RGD			CCV-2-RGD			CCV-3-RGD		
RA-10-25	2X	%R		5X	%R		2X	%R	
METHANE	2.48	113%	2.80	0.99	112%	1.12	2.48	114%	2.84
ETHANE	6.71	106%	7.10	2.68	105%	2.82	6.71	107%	7.19
ETHENE	16.45	105%	17.26	6.58	104%	6.84	16.45	106%	17.44
PROPANE	7.70	105%	8.10	3.08	104%	3.22	7.70	107%	8.21
PROPENE	22.92	104%	23.80	9.17	104%	9.52	22.92	106%	24.30
ISO-BUTANE	5.86	108%	6.35	2.34	110%	2.57	5.86	111%	6.53
N-BUTANE	7.16	109%	7.82	2.86	108%	3.10	7.16	110%	7.88
ACETYLENE	66.07	107%	71.00	26.43	101%	26.74	66.07	106%	69.80
HYDROGEN	24.26	104%	25.29	9.70	106%	10.32	24.26	113%	27.30

	CCV-1-TCD			CCV-2-TCD			CCV-3-TCD		
RA-10-26	1X	%R		2X	%R		1X	%R	
CARBON DIOXIDE	182.63	101%	183.93	91.32	95%	86.32	182.63	100%	182.07
OXYGEN	2.00	97%	1.94	1.00	93%	0.93	2.00	98%	1.96
NITROGEN	0.93	102%	0.95	0.46	100%	0.46	0.93	103%	0.95
METHANE	885.39	103%	912.70	442.70	97%	431.22	885.39	99%	877.08
CARBON MONOXIDE	1.34	104%	1.39	0.67	99%	0.67	1.34	104%	1.39

	LCS			LCSD		RPD
RA-10-06	2X	%R		%R		
METHANE	7.86	107%	8.42	108%	8.49	0.80%
ETHANE	6.60	109%	7.21	110%	7.26	0.67%
ETHENE	15.76	108%	17.03	109%	17.19	0.97%
PROPANE	7.24	112%	8.13	113%	8.20	0.94%
PROPENE	24.58	103%	25.44	104%	25.64	0.77%
ISO-BUTANE	5.88	110%	6.44	110%	6.45	0.21%
N-BUTANE	7.55	114%	8.57	112%	8.42	1.75%
HYDROGEN	25.34	98%	24.83	100%	25.23	1.57%
CARBON DIOXIDE	93.88	95%	89.09	95%	89.54	0.51%
OXYGEN	1.02	100%	1.02	96%	0.98	3.85%

MICROSEEPS

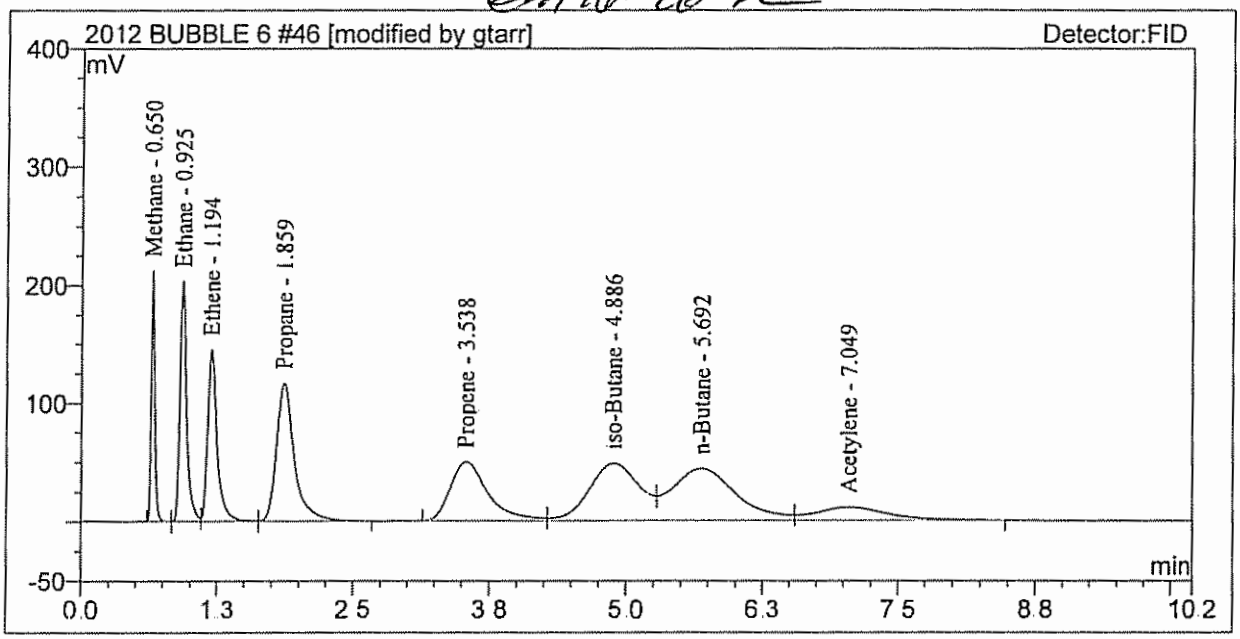
Sample Analysis Report

Sample Name:	CCV-1 FID/RGD 102412	**Sequence No:**	46
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/24/2012 7:23	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-25 2X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.650	7.954	212.483	BM	2.7970
2	Ethane	0.925	14.476	203.467	M	7.1028
3	Ethene	1.194	14.790	145.159	M	17.2624
4	Propane	1.859	22.313	116.644	MB	8.1031
5	Propene	3.538	19.593	49.596	BM *	23.7970
6	iso-Butane	4.886	25.491	48.217	M *	6.3491
7	n-Butane	5.692	29.549	43.791	M *	7.8150
8	Acetylene	7.049	8.656	11.264	MB*	70.9982

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GMT 10-26-12



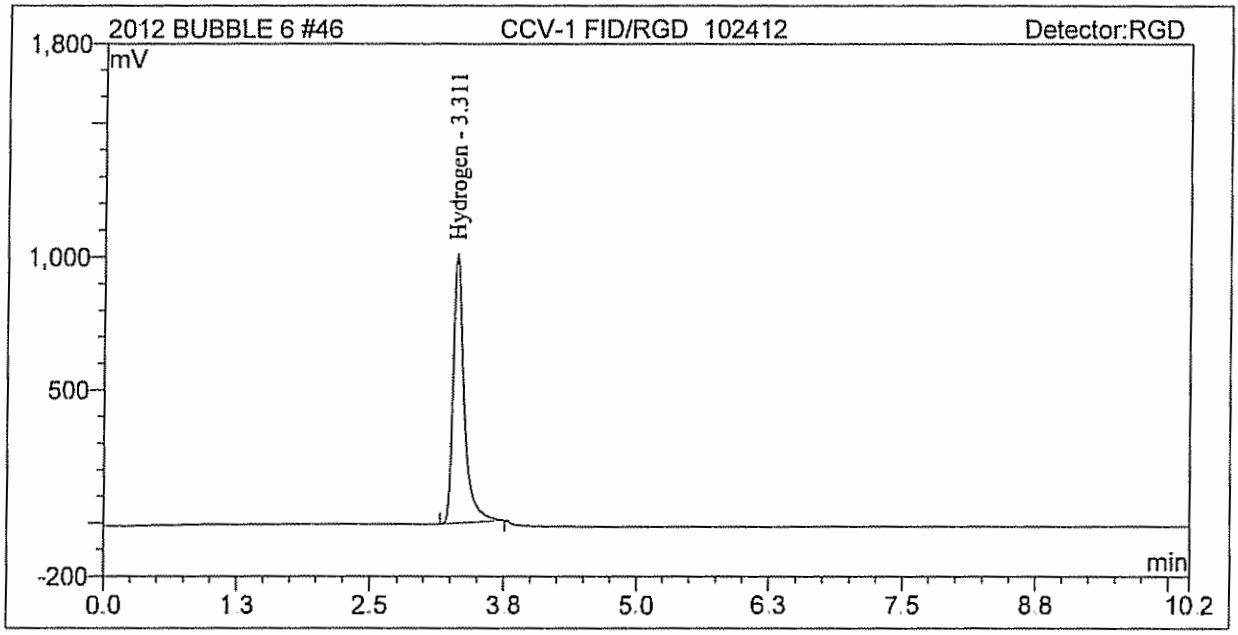
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV-1 FID/RGD 102412	**Sequence No:**	46
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 7:23	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-25 2X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.311	121.426	1011.595	BMB	25.2886

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



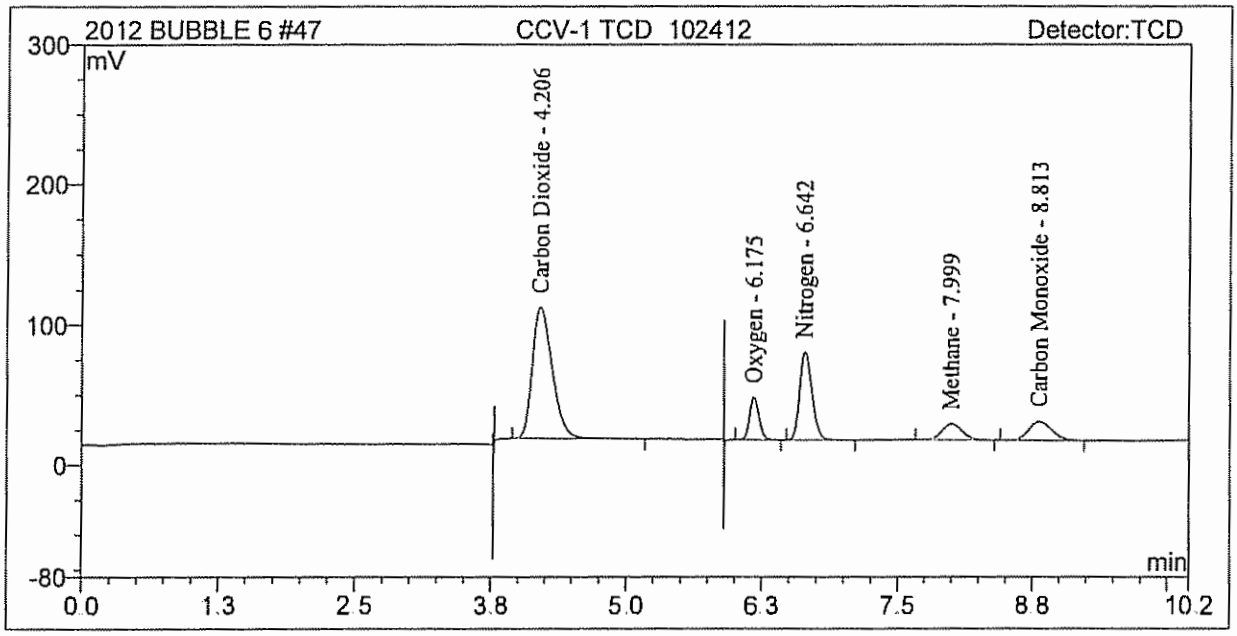
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV-1 TCD 102412	**Sequence No:**	47
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 8:09	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-26 1X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.206	20.370	93.506	BMB	183.9305
2	Oxygen	6.175	3.021	30.333	BMB	1.9435
3	Nitrogen	6.642	8.158	62.785	BMB	0.9494
4	Methane	7.999	2.484	11.557	BMB	912.7018
5	Carbon Monoxide	8.813	3.339	13.460	BMB	1.3878

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



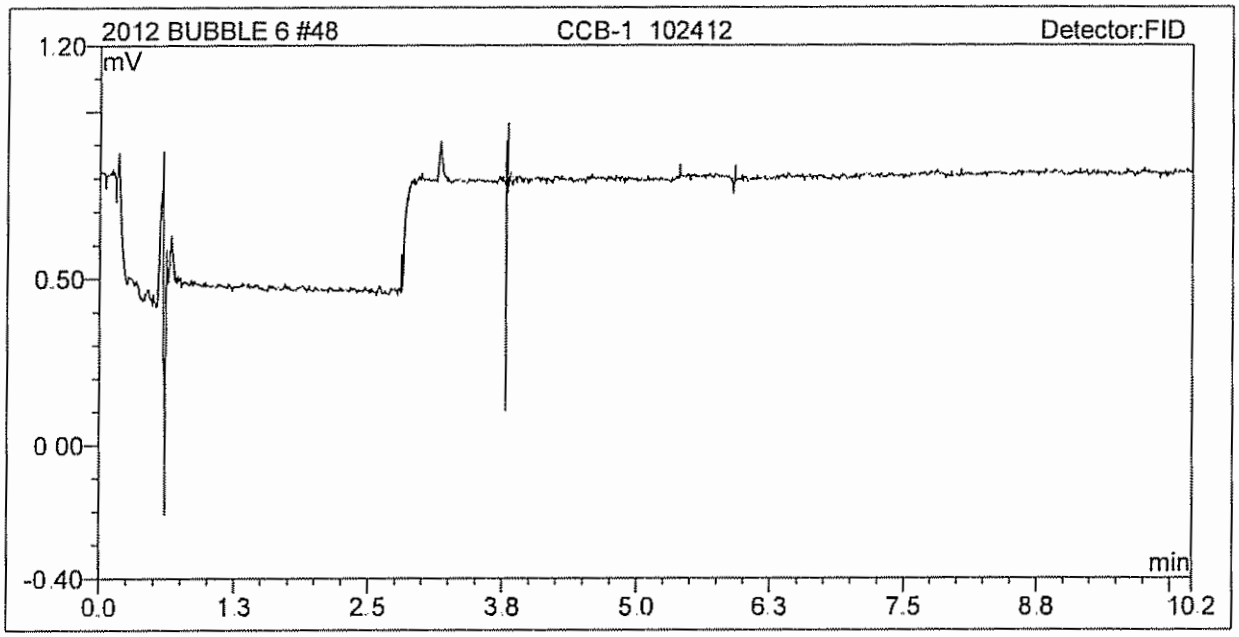
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB-1 102412	**Sequence No:**	48
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/24/2012 8:21	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



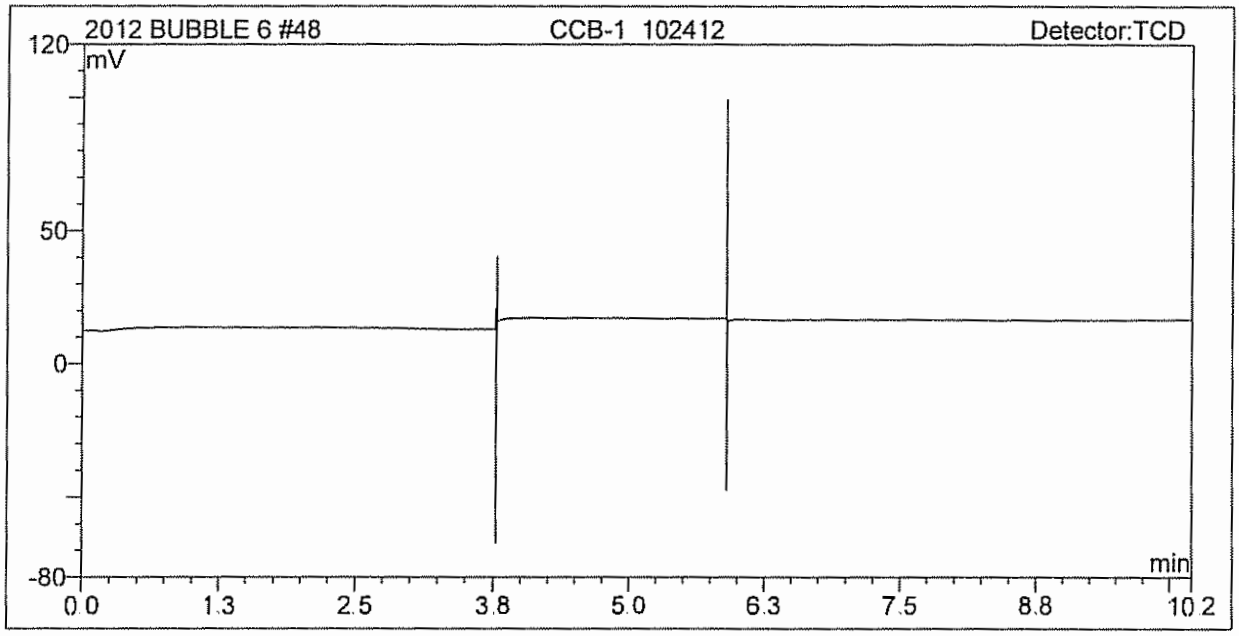
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB-1 102412	**Sequence No:**	48
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 8:21	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



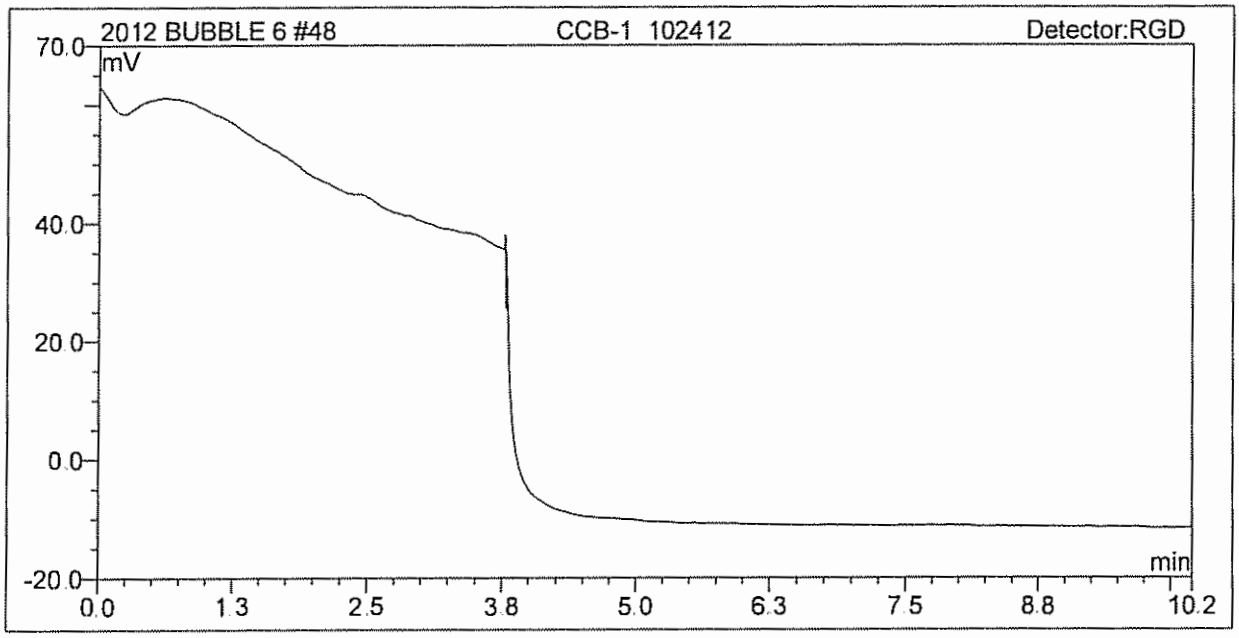
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB-1 102412	**Sequence No:**	48
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 8:21	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



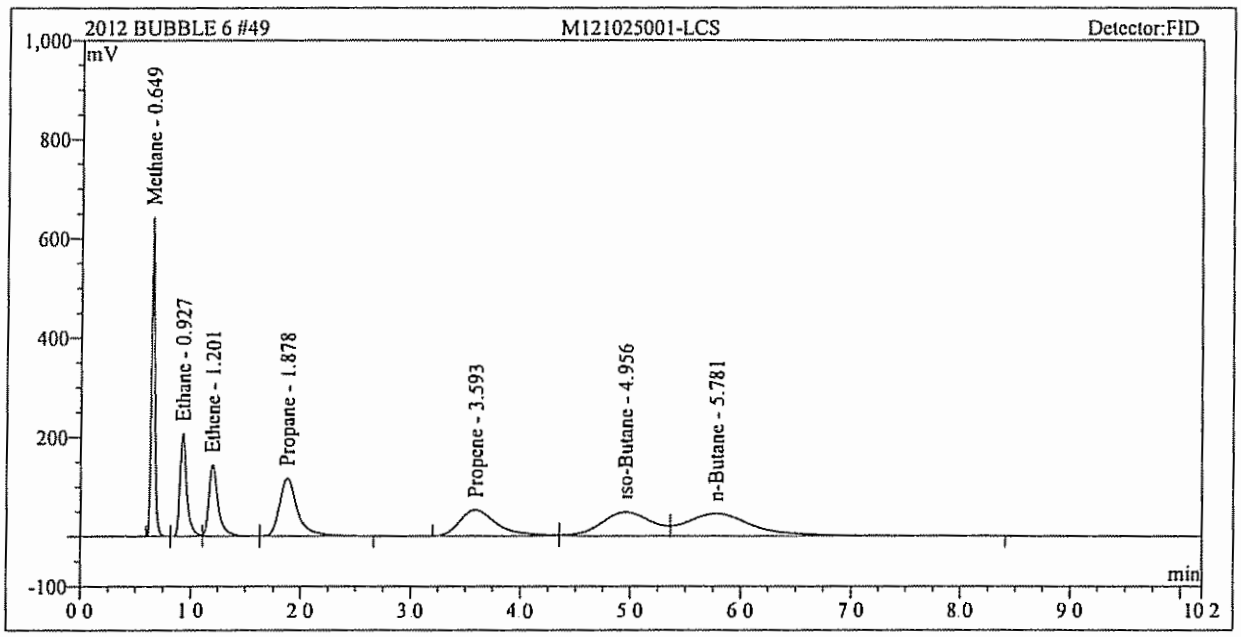
MICROSEEPS

Sample Analysis Report

Sample Name:	M121025001-LCS	**Sequence No:**	49
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 8:36	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.649	23.949	642.766	BM	8.4210
2	Ethane	0.927	14.698	207.298	M	7.2117
3	Ethene	1.201	14.589	143.736	M	17.0274
4	Propane	1.878	22.374	116.779	MB	8.1251
5	Propene	3.593	20.947	52.889	BM	25.4416
6	iso-Butane	4.956	25.858	48.434	M	6.4406
7	n-Butane	5.781	32.397	45.558	MB	8.5682

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



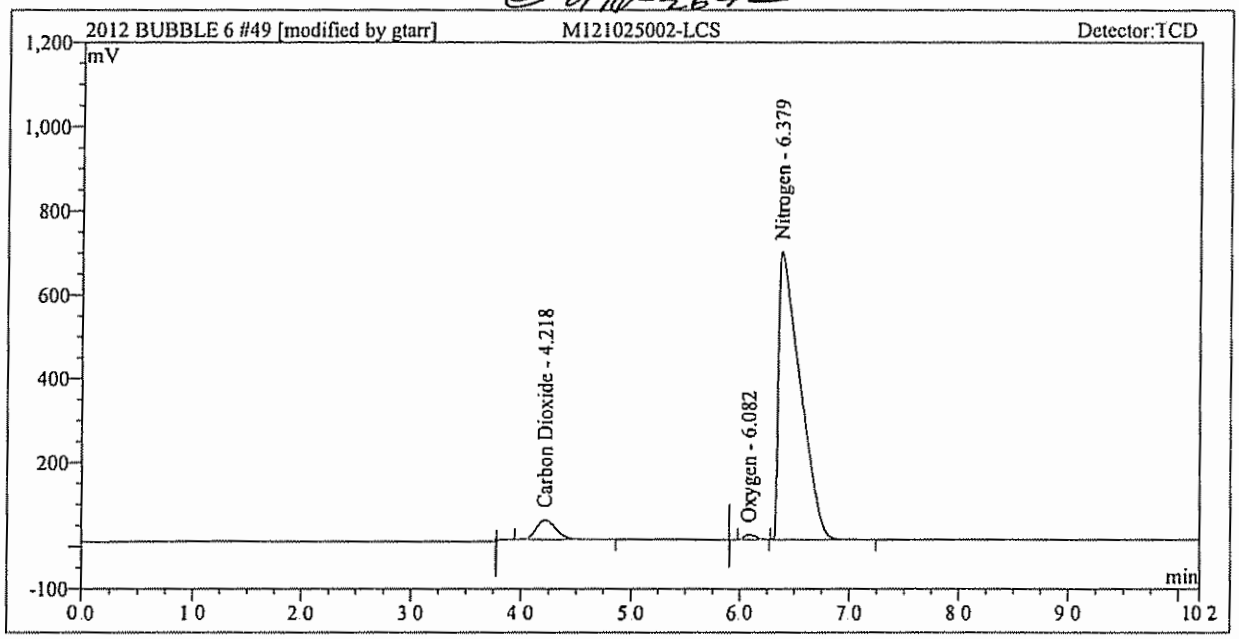
MICROSEEPS

Sample Analysis Report

Sample Name:	M121025002-LCS	**Sequence No:**	49
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 8:36	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.218	9.867	46.811	BMB	89.0890
2	Oxygen	6.082	1.588	12.901	BMB*	1.0212
3	Nitrogen	6.379	157.191	686.465	BMB	18.2925

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



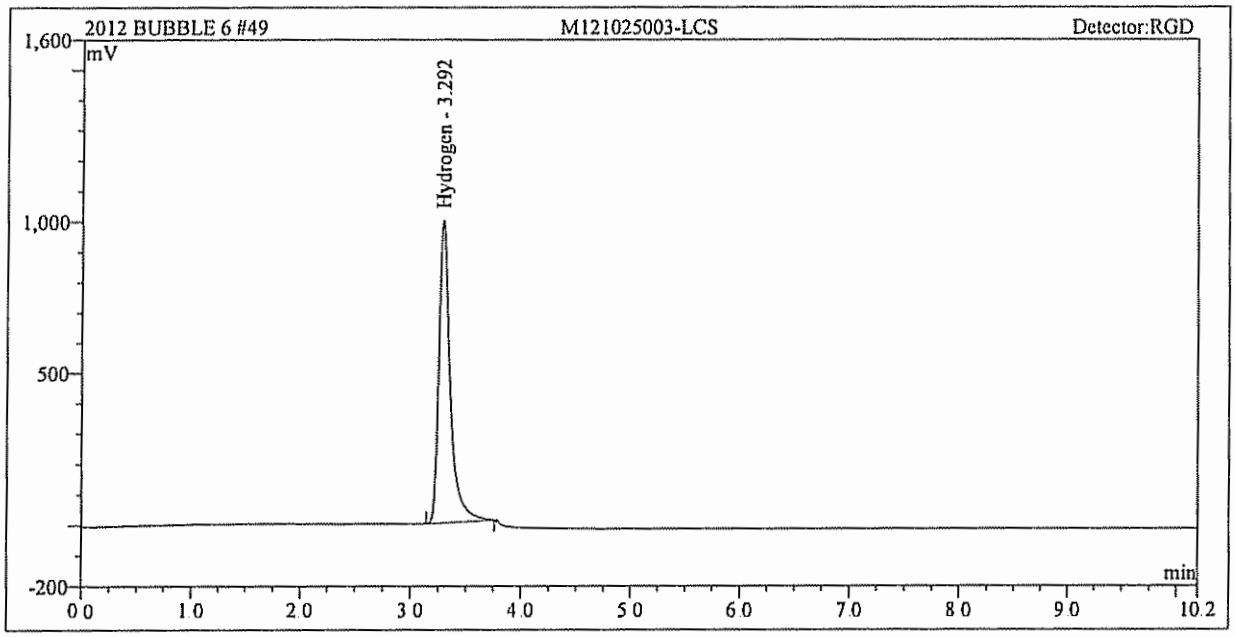
MICROSEEPS

Sample Analysis Report

Sample Name:	M121025003-LCS	**Sequence No:**	49
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 8:36	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.292	119.234	994.453	BMB	24.8321

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



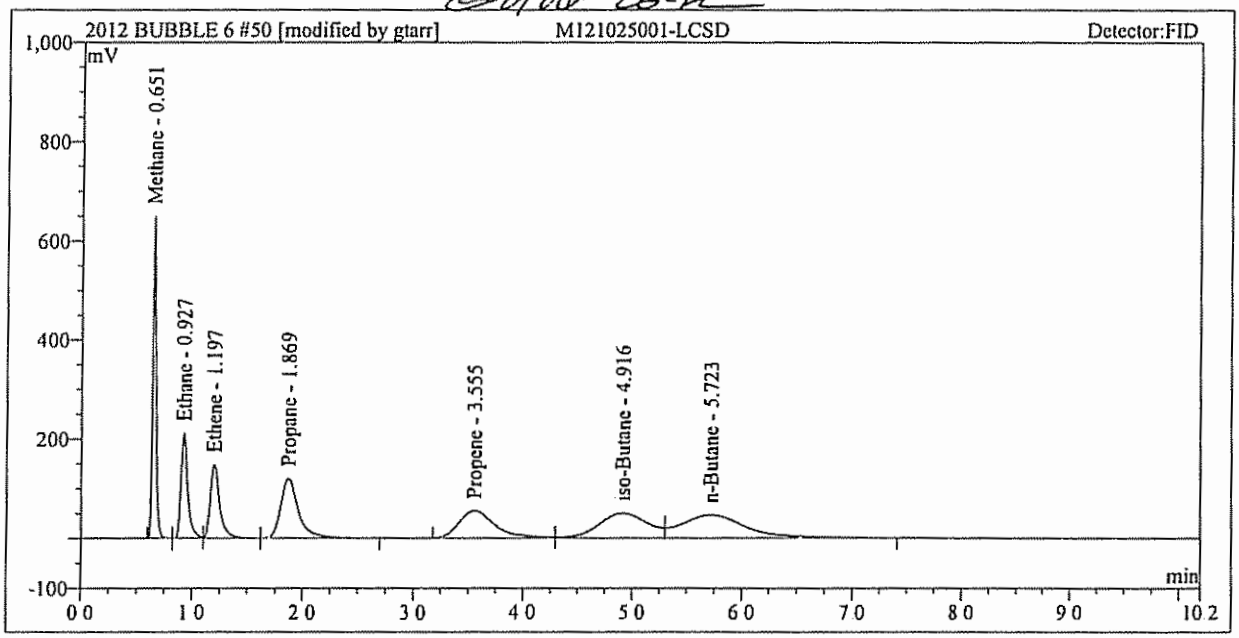
MICROSEEPS

Sample Analysis Report

Sample Name:	M121025001-LCSD	**Sequence No:**	50
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 10:50	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.651	24.141	649.531	BM	8.4887
2	Ethane	0.927	14.797	210.902	M	7.2600
3	Ethene	1.197	14.731	147.907	M	17.1930
4	Propane	1.869	22.584	120.472	MB	8.2015
5	Propene	3.555	21.109	55.330	BM *	25.6393
6	iso-Butane	4.916	25.912	50.124	M *	6.4539
7	n-Butane	5.723	31.835	46.836	MB*	8.4195

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



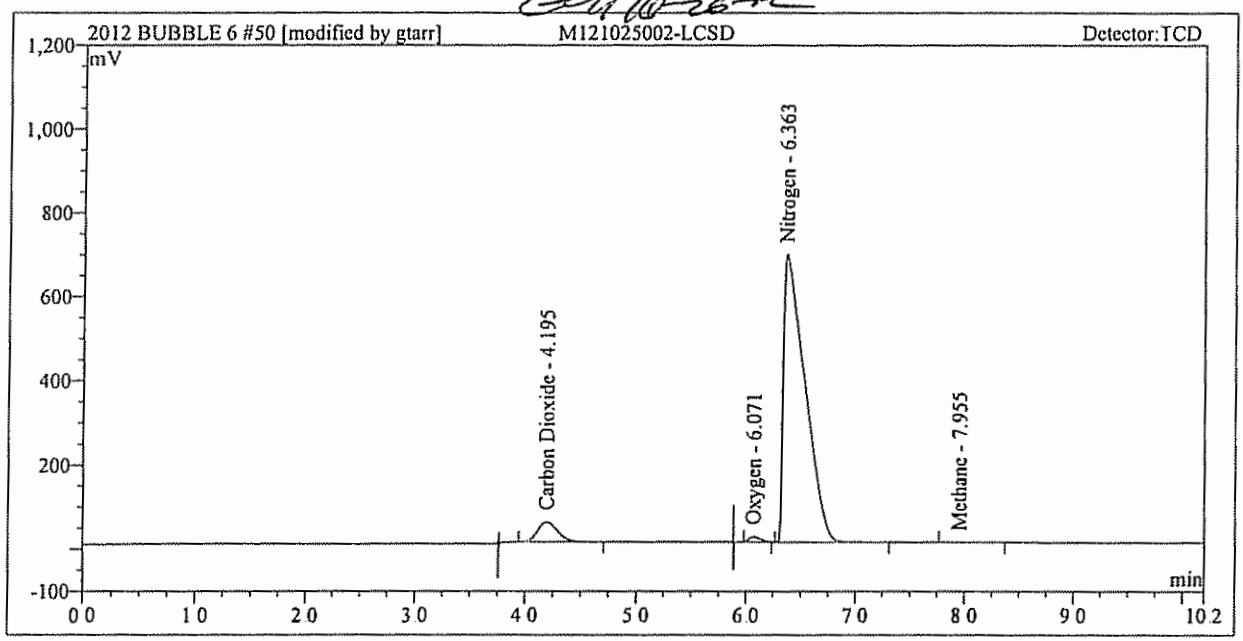
MICROSEEPS

Sample Analysis Report

Sample Name:	M121025002-LCSD	**Sequence No:**	50
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 10:50	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.195	9.917	47.622	BMB	89.5407
2	Oxygen	6.071	1.528	12.904	BMB*	0.9826
3	Nitrogen	6.363	155.995	684.183	BMB	18.1532
4	Methane	7.955	0.057	0.175	BMB	20.7914

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

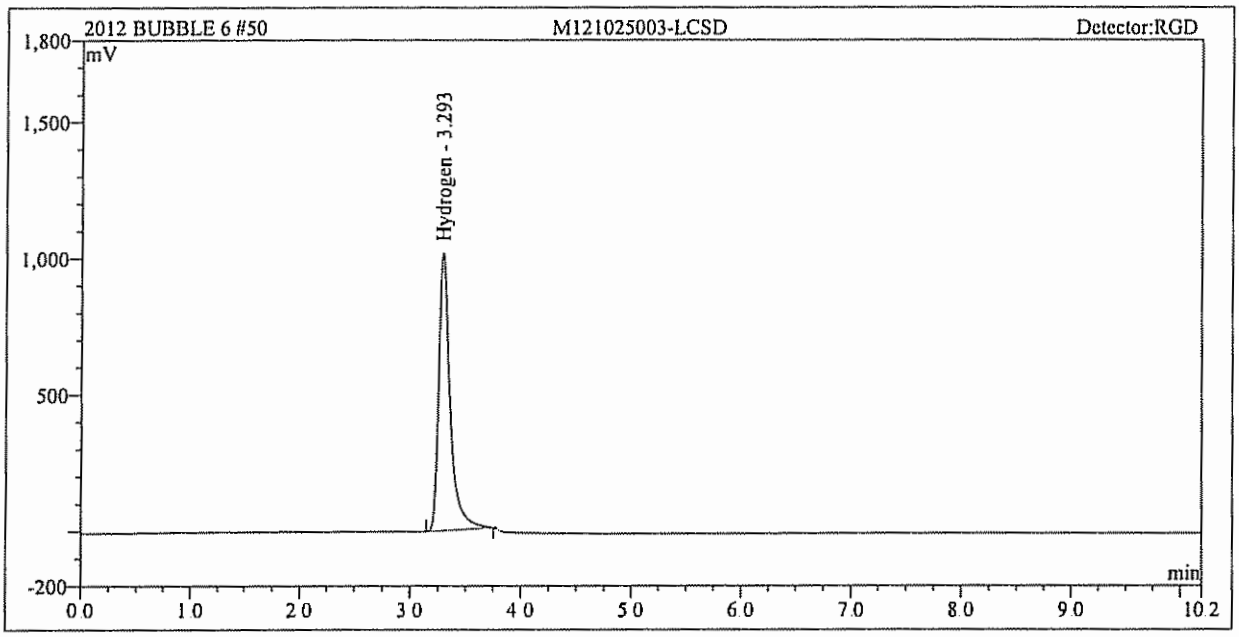


Sample Analysis Report

Sample Name:	M121025003-LCSD	**Sequence No:**	50
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 10:50	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.293	121.126	1017.048	BMB	25.2261

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

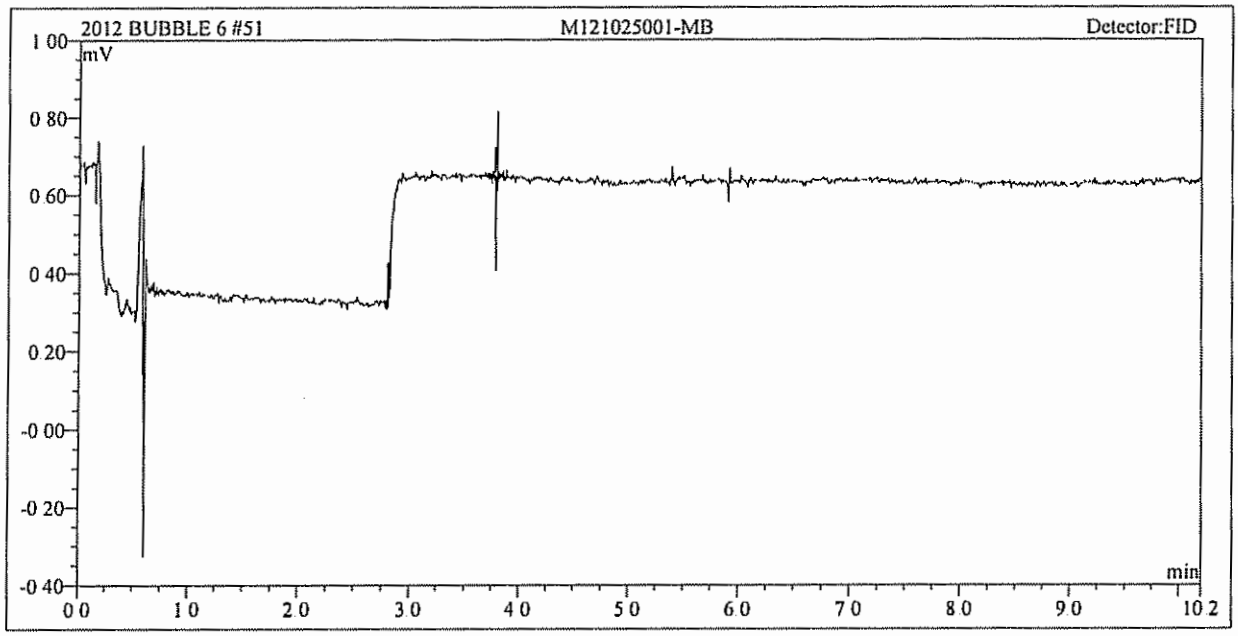


Sample Analysis Report

Sample Name:	M121025001-MB	**Sequence No:**	51
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 11:03	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



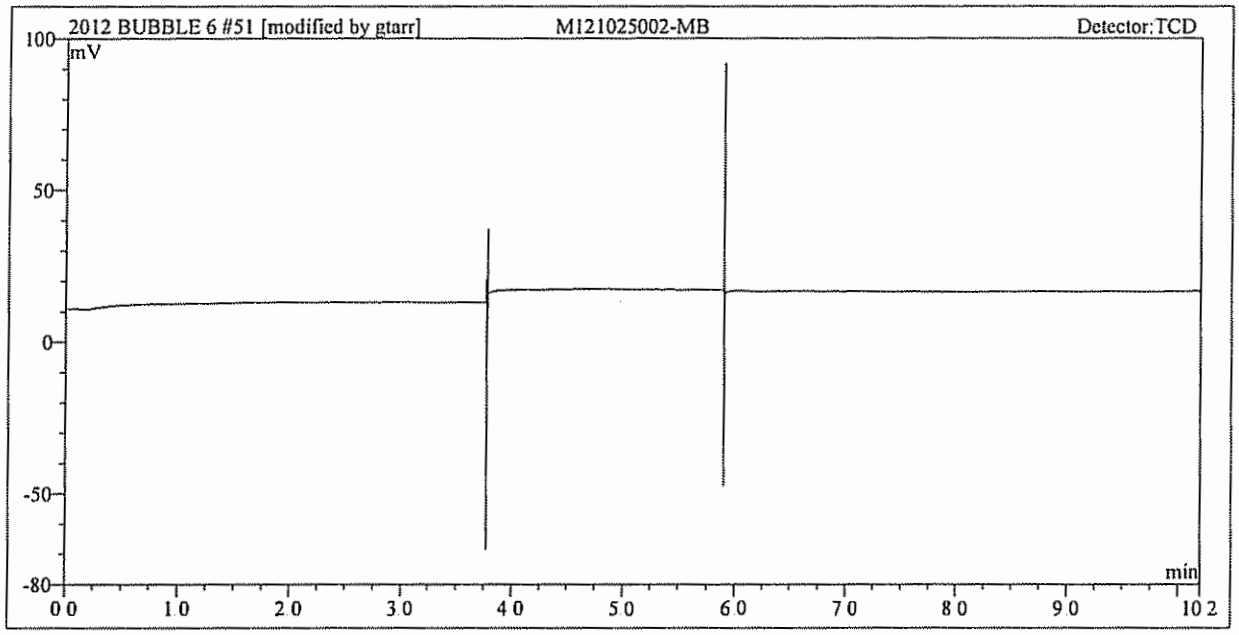
MICROSEEPS

Sample Analysis Report

Sample Name:	M121025002-MB	**Sequence No:**	51
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 11:03	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



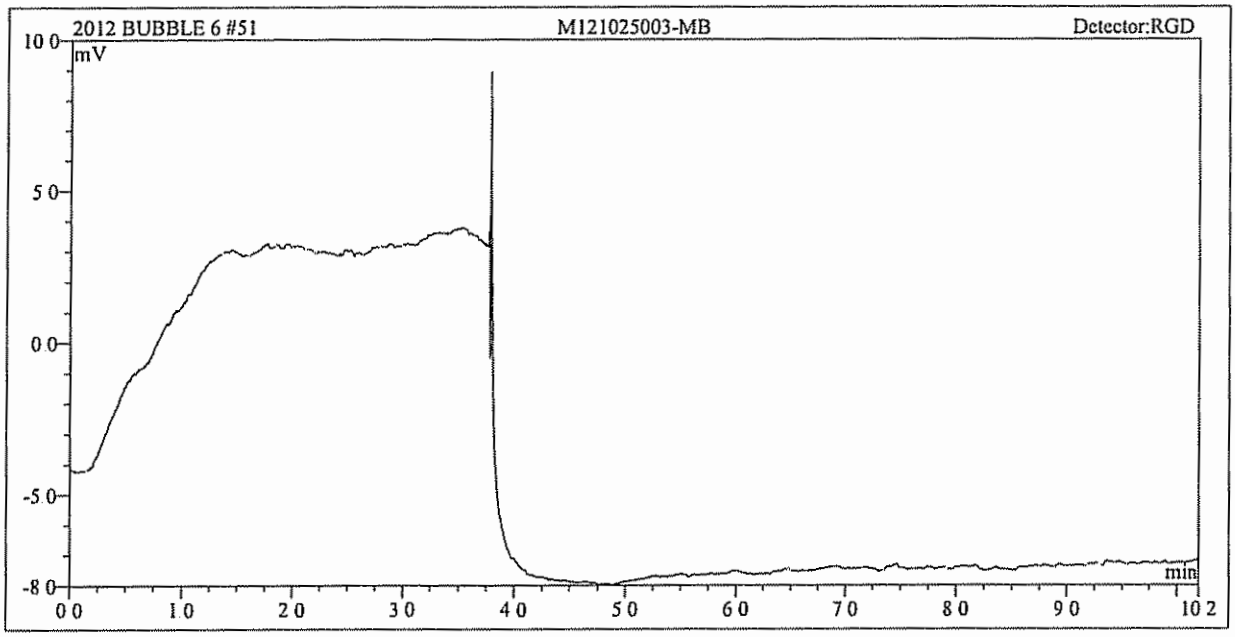
MICROSEEPS

Sample Analysis Report

Sample Name:	M121025003-MB	**Sequence No:**	51
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 11:03	**Analytical Method:**	AM20GAx/SM9
System Operator:	qtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

Sample Analysis Report

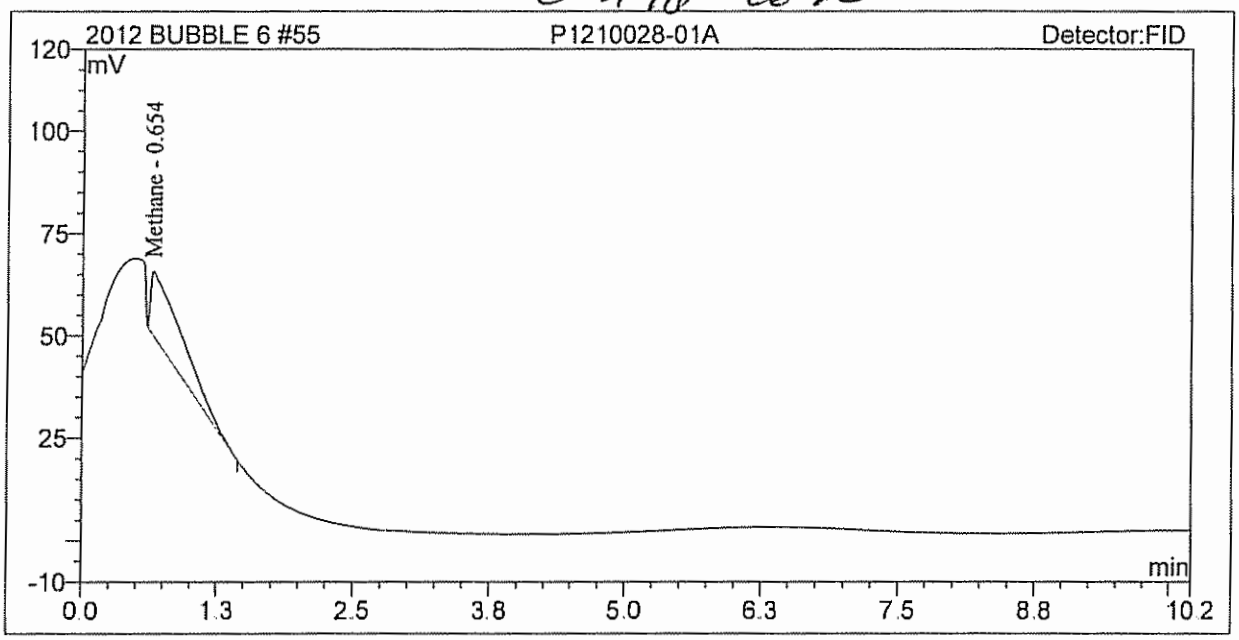
Sample Name:	P1210028-01A	**Sequence No:**	55
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 11:53	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.654	5.876	15.809	BMB	2.0663

Report

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GMT 10-26-12



MICROSEEPS

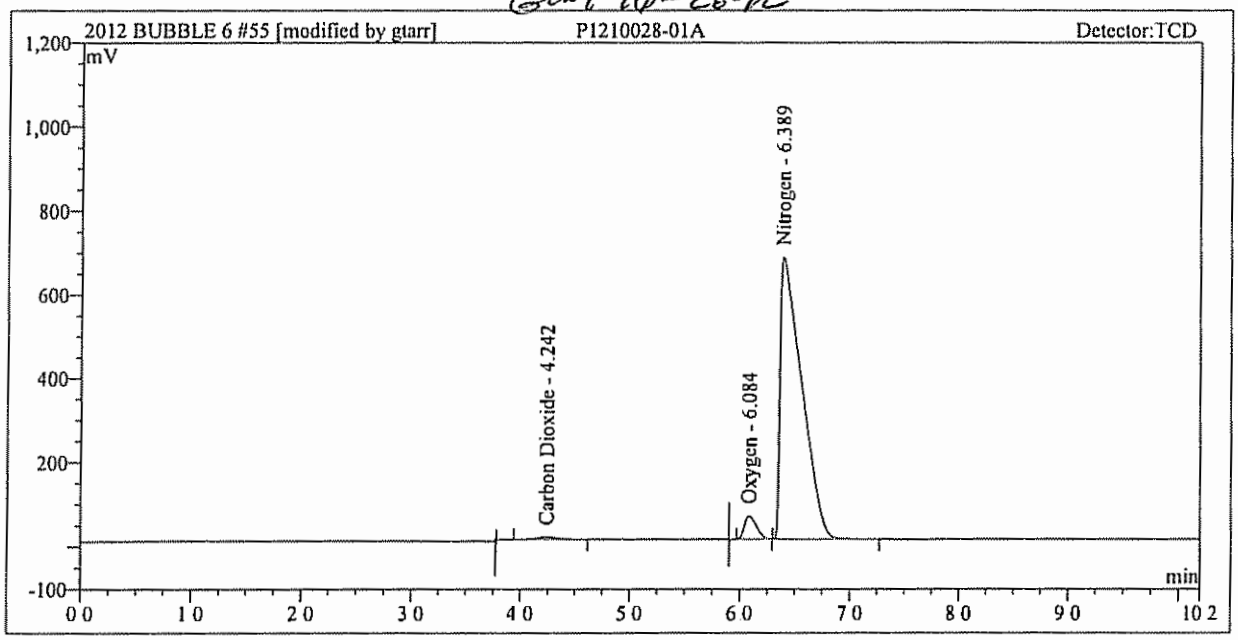
Sample Analysis Report

Sample Name:	P1210028-01A	**Sequence No:**	55
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 11:53	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.242	1.227	5.859	BMB	11.0831
2	Oxygen	6.084	6.992	55.244	BMB*	4.4978
3	Nitrogen	6.389	154.838	671.596	BMB	18.0186

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GAT 10-26-12

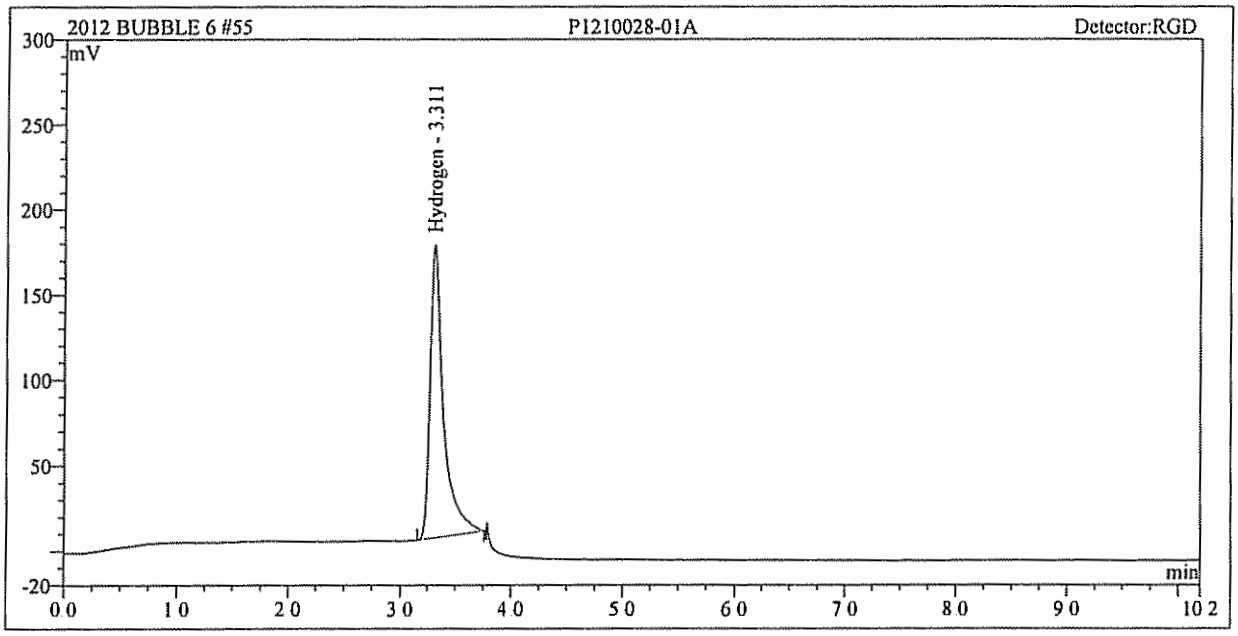


Sample Analysis Report

Sample Name:	P1210028-01A	**Sequence No:**	55
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 11:53	**Analytical Method:**	AM20GAx/SM9
System Operator:	qtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.311	24.246	171.773	BMB	5.0495

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

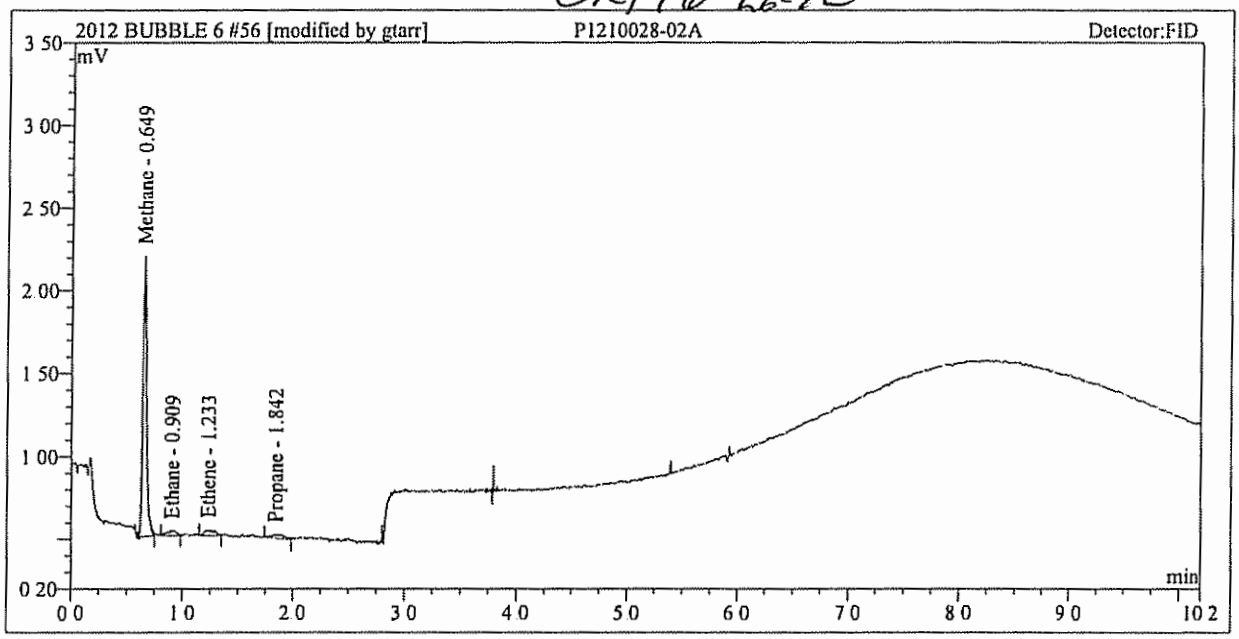
Sample Analysis Report

Sample Name:	P1210028-02A	**Sequence No:**	56
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:06	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.649	0.065	1.695	BMB*	0.0228
2	Ethane	0.909	0.003	0.032	BMB*	0.0015
3	Ethene	1.233	0.004	0.036	BMB*	0.0046
4	Propane	1.842	0.003	0.025	BMB*	0.0012

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GRT 10-26-12



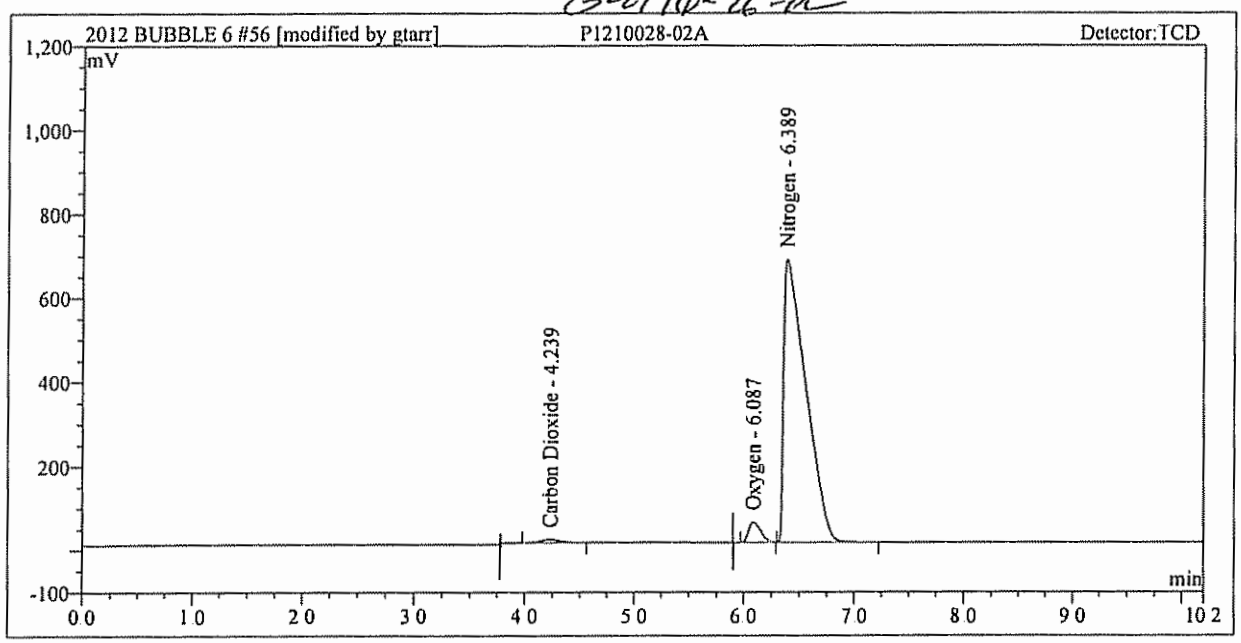
MICROSEEPS

Sample Analysis Report

Sample Name:	P1210028-02A	**Sequence No:**	56
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:06	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.239	1.663	8.052	BMB	15.0201
2	Oxygen	6.087	6.162	48.720	BMB*	3.9634
3	Nitrogen	6.389	155.285	673.536	BMB	18.0706

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

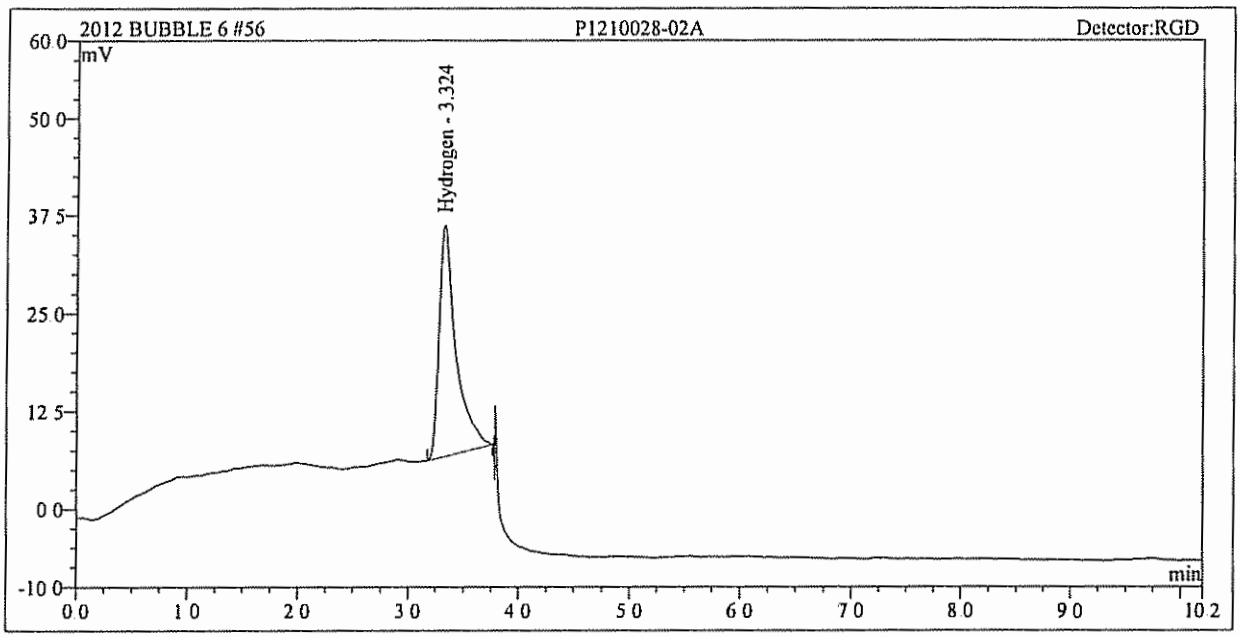


Sample Analysis Report

Sample Name:	P1210028-02A	**Sequence No:**	56
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:06	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.324	5.209	29.563	BMB	1.0848

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

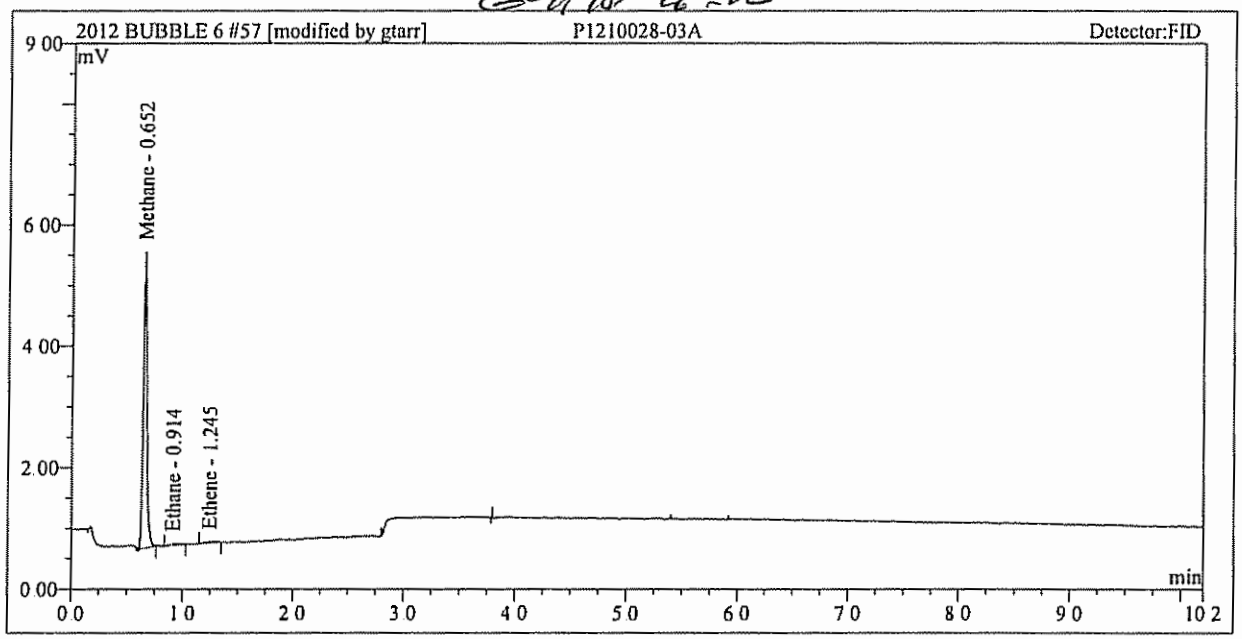


Sample Analysis Report

Sample Name:	P1210028-03A	**Sequence No:**	57
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:18	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.652	0.182	4.888	BMB*	0.0641
2	Ethane	0.914	0.003	0.040	BMB*	0.0016
3	Ethene	1.245	0.003	0.037	BMB*	0.0038

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



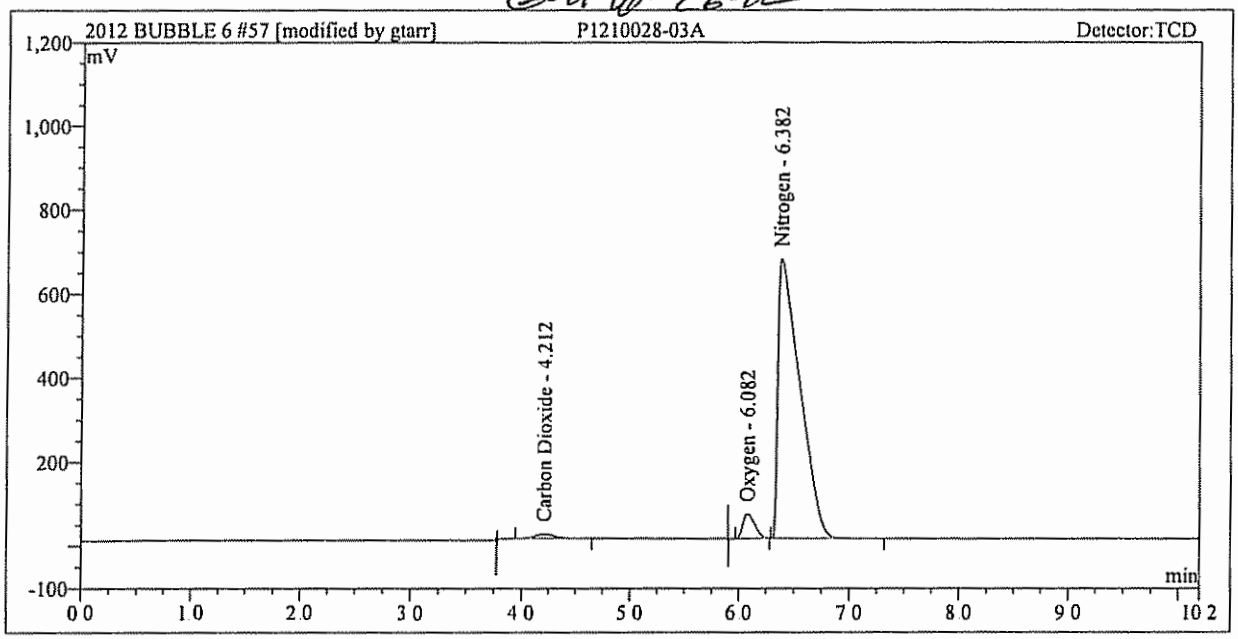
MICROSEEPS

Sample Analysis Report

Sample Name:	P1210028-03A	**Sequence No:**	57
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:18	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.212	2.349	11.297	BMB	21.2063
2	Oxygen	6.082	7.458	59.134	BMB*	4.7973
3	Nitrogen	6.382	152.241	665.825	BMB	17.7164

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

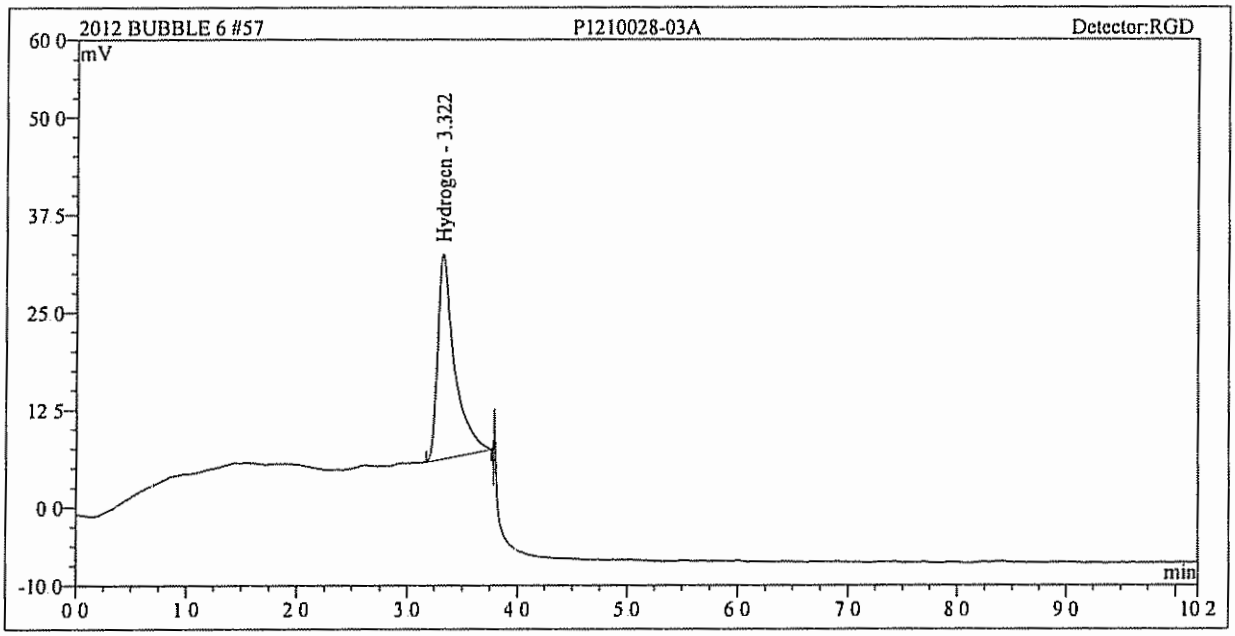


Sample Analysis Report

Sample Name:	P1210028-03A	**Sequence No:**	57
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:18	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.322	4.638	26.257	BMB	0.9660

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



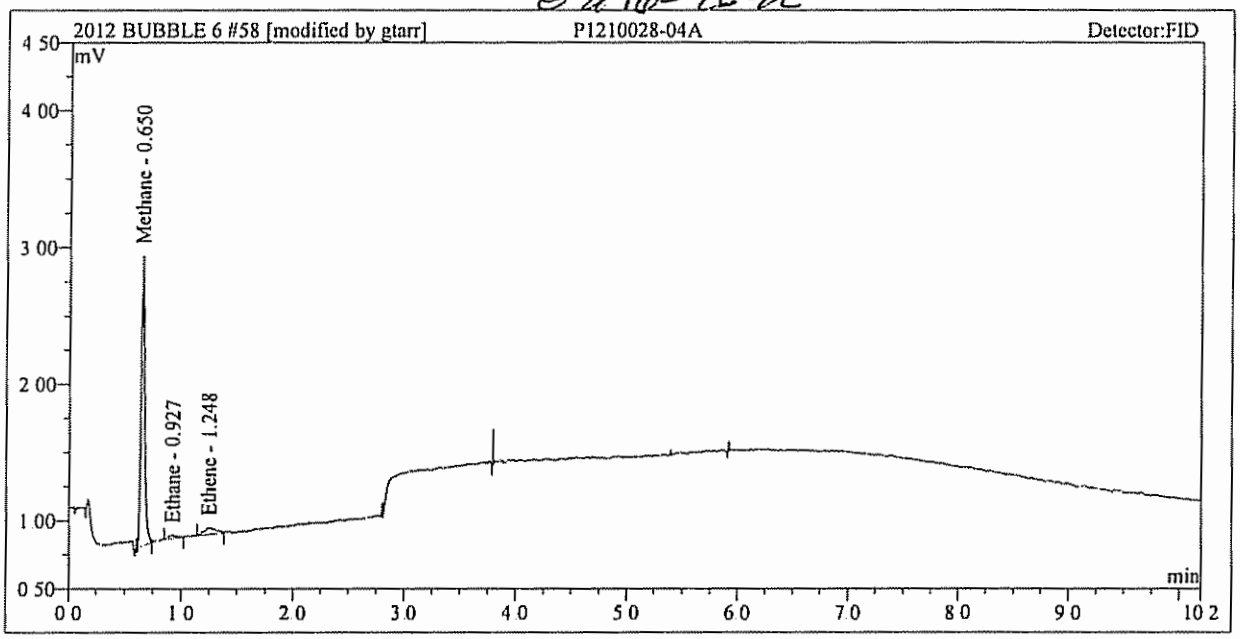
MICROSEEPS

Sample Analysis Report

Sample Name:	P1210028-04A	**Sequence No:**	58
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:30	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.650	0.078	2.129	BMB*	0.0276
2	Ethane	0.927	0.002	0.030	BMB*	0.0011
3	Ethene	1.248	0.006	0.052	BMB*	0.0072

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



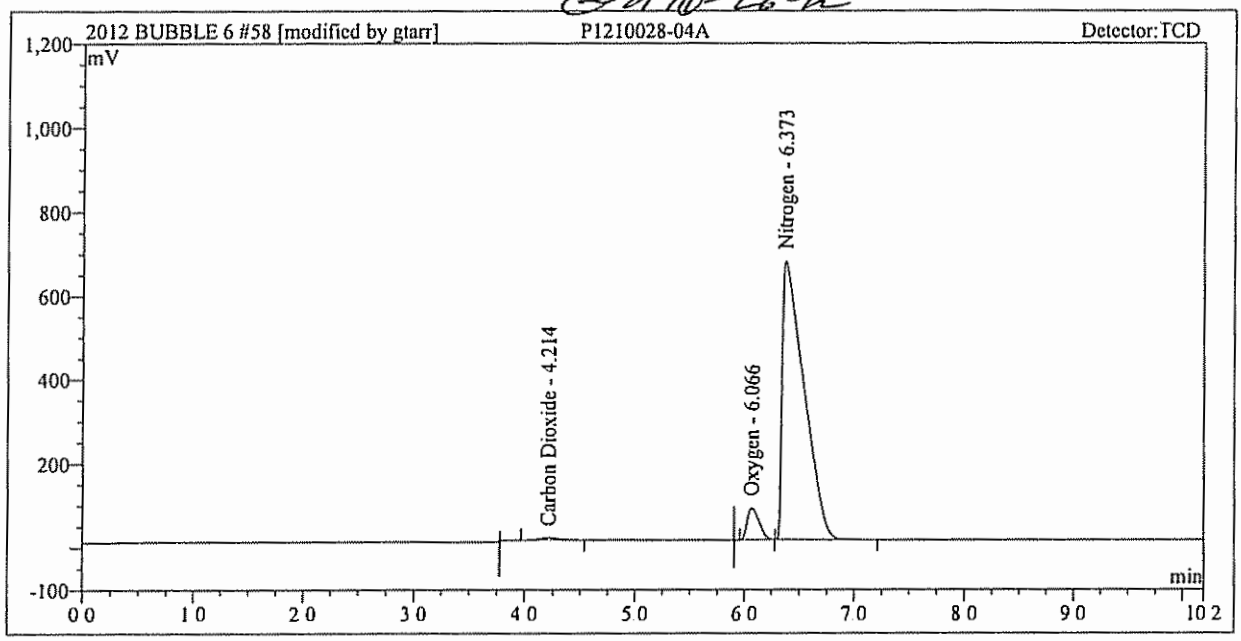
Sample Analysis Report

Sample Name:	P1210028-04A	**Sequence No:**	58
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:30	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.214	1.179	5.742	BMB	10.6445
2	Oxygen	6.066	9.691	76.105	BMB*	6.2333
3	Nitrogen	6.373	150.740	664.192	BMB	17.5417

FID UNITS (Mcthane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GM 10-26-12

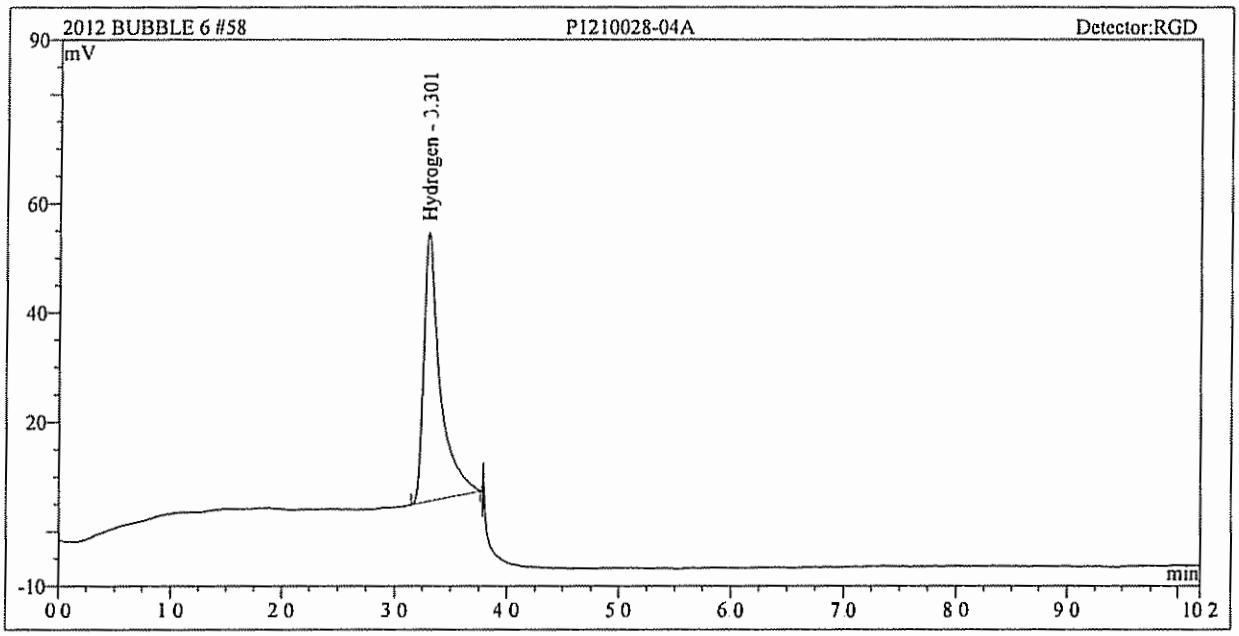


Sample Analysis Report

Sample Name:	P1210028-04A	**Sequence No:**	58
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:30	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.301	8.287	49.126	BMB	1.7258

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

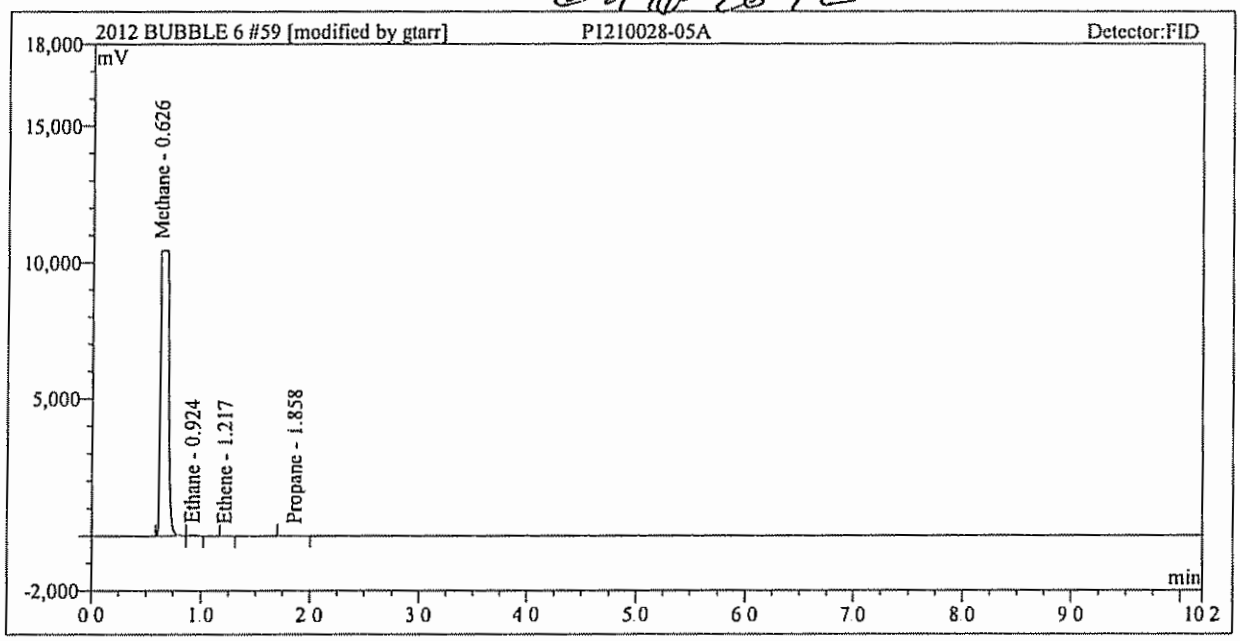
Sample Analysis Report

Sample Name:	P1210028-05A	**Sequence No:**	59
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/24/2012 12:44	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.626	886.786	10434.683	BMb*	~~311.8183~~ 1
2	Ethane	0.924	1.684	28.167	bMB*	0.8261
3	Ethene	1.217	0.015	0.203	BMB*	0.0179
4	Propane	1.858	0.023	0.167	BMB*	0.0085

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GGT 10-26-12



1 Sample experience saturated Methane Peak.
Refer to TCD for reportable Methane Concentration.

MICROSEEPS

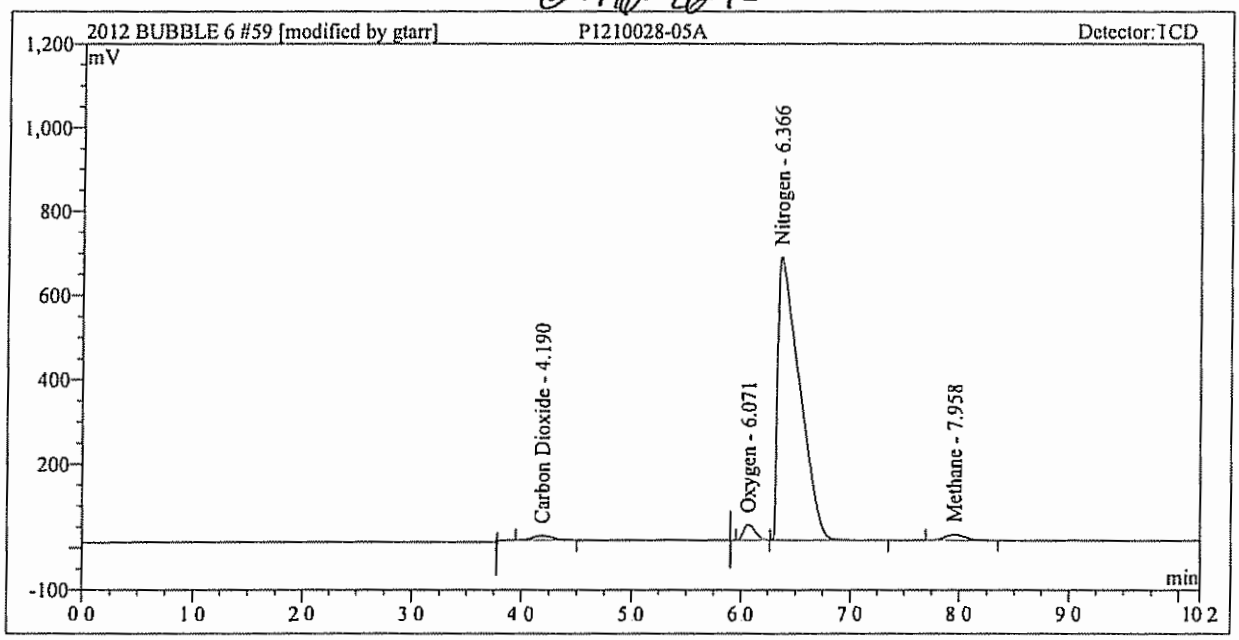
Sample Analysis Report

Sample Name:	P1210028-05A	**Sequence No:**	59
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:44	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.190	2.335	11.473	BMB	21.0860
2	Oxygen	6.071	4.725	37.012	BMB*	3.0390
3	Nitrogen	6.366	153.214	673.368	BMB	17.8296
4	Methane	7.958	3.125	14.588	BMB	1148.2633

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GT 10-26-12

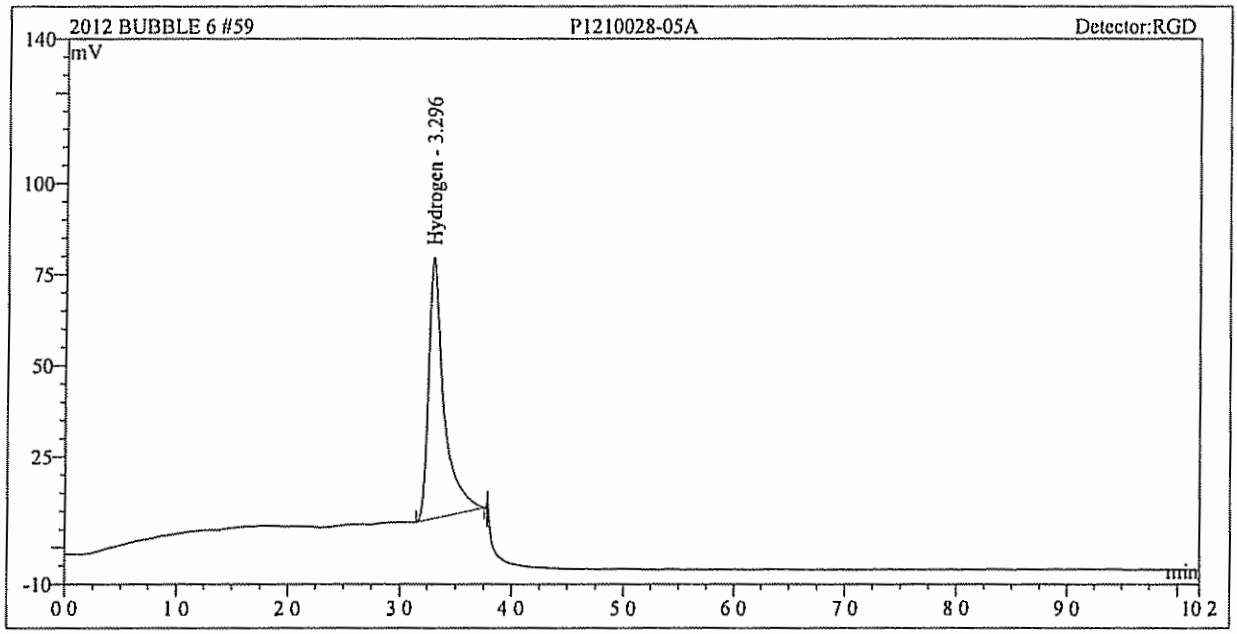


Sample Analysis Report

Sample Name:	P1210028-05A	**Sequence No:**	59
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/24/2012 12:44	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.296	11.318	71.651	BMB	2.3572

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

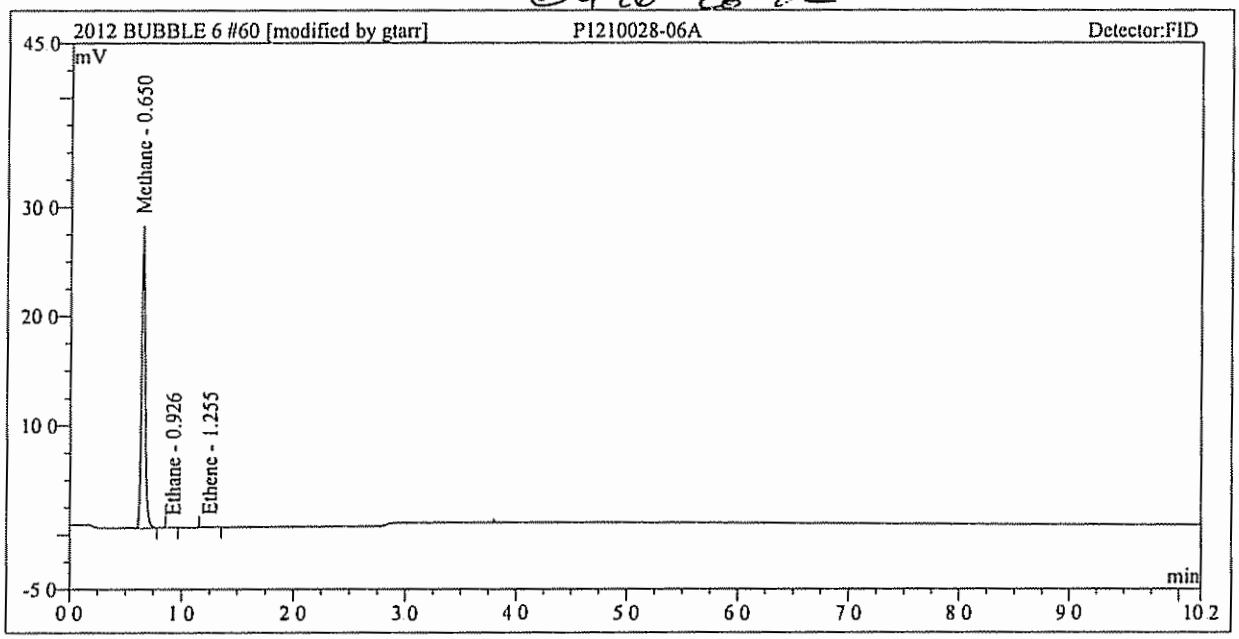
Sample Analysis Report

Sample Name:	P1210028-06A	**Sequence No:**	60
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:56	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.650	1.034	27.683	BMB	0.3635
2	Ethane	0.926	0.002	0.032	BMB*	0.0009
3	Ethene	1.255	0.004	0.046	BMB*	0.0052

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GG 10-26-12



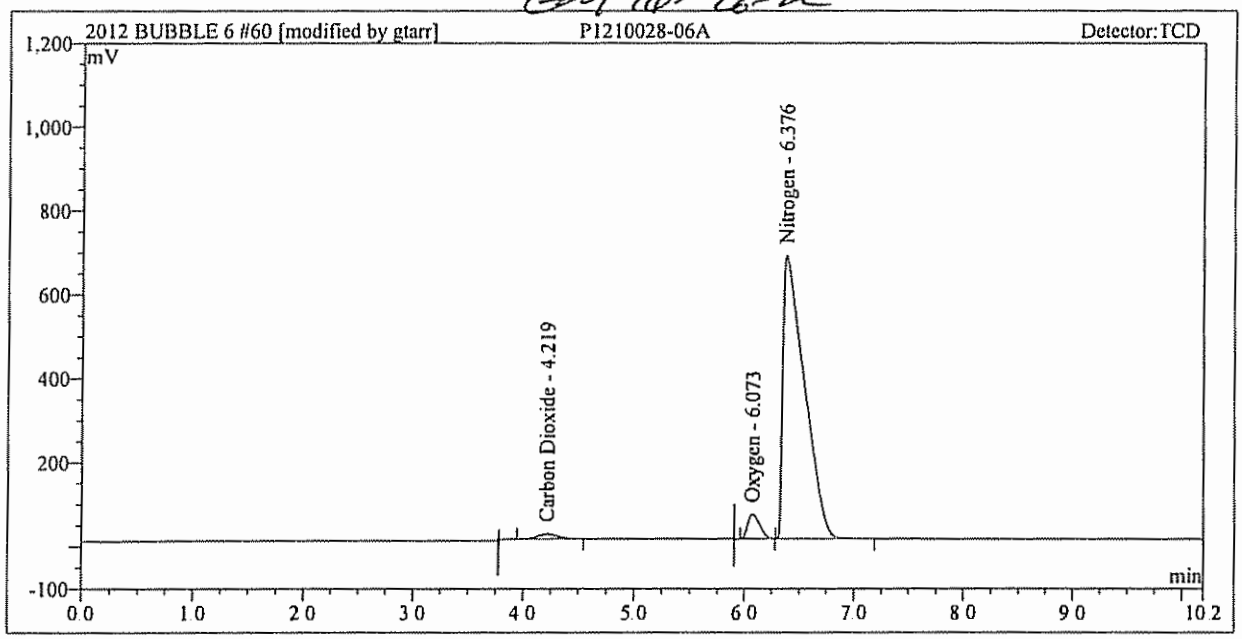
Sample Analysis Report

Sample Name:	P1210028-06A	**Sequence No:**	60
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:56	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.219	2.505	12.137	BMB	22.6140
2	Oxygen	6.073	7.465	58.456	BMB*	4.8017
3	Nitrogen	6.376	154.244	674.334	BMB	17.9495

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GGT 10-26-12

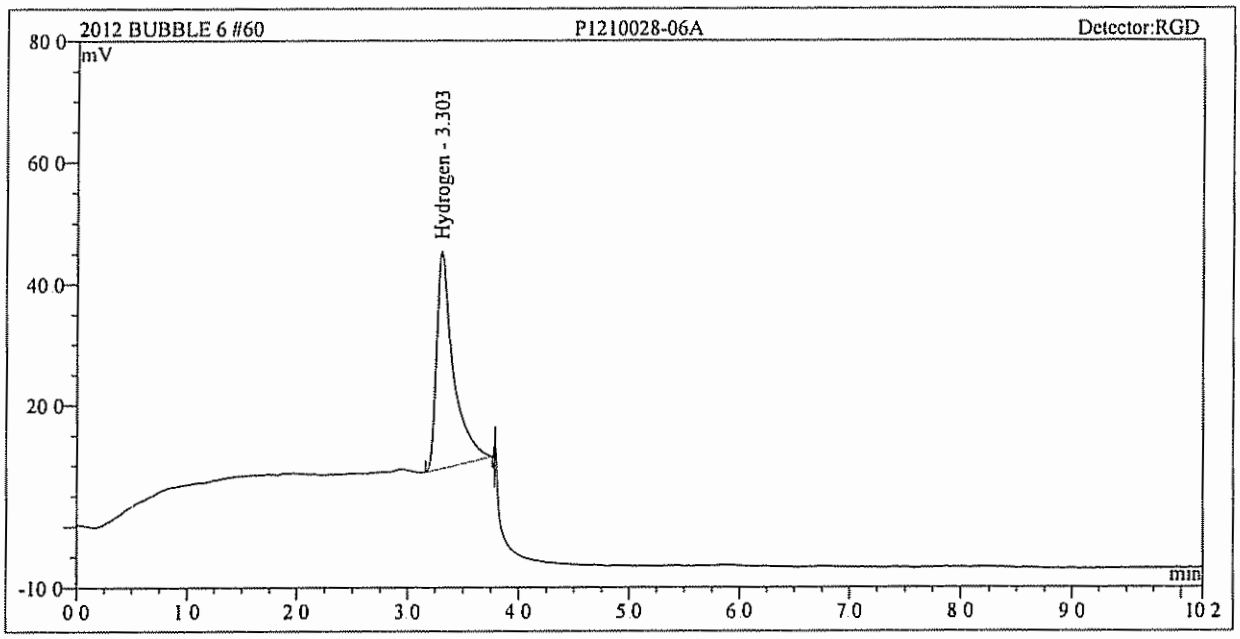


Sample Analysis Report

Sample Name:	P1210028-06A	**Sequence No:**	60
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 12:56	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.303	6.267	35.826	BMB	1.3052

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



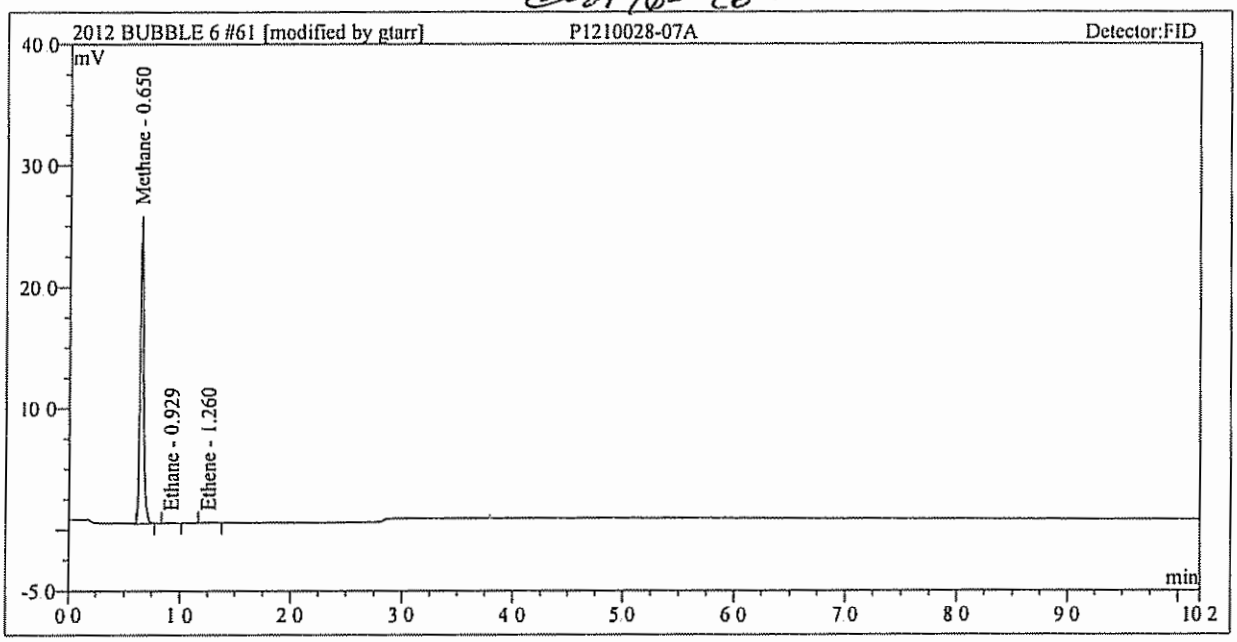
Sample Analysis Report

Sample Name:	P1210028-07A	**Sequence No:**	61
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:08	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.650	0.943	25.261	BMB*	0.3317
2	Ethane	0.929	0.004	0.052	BMB*	0.0020
3	Ethene	1.260	0.007	0.057	BMB*	0.0079

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GRT 10-26-12

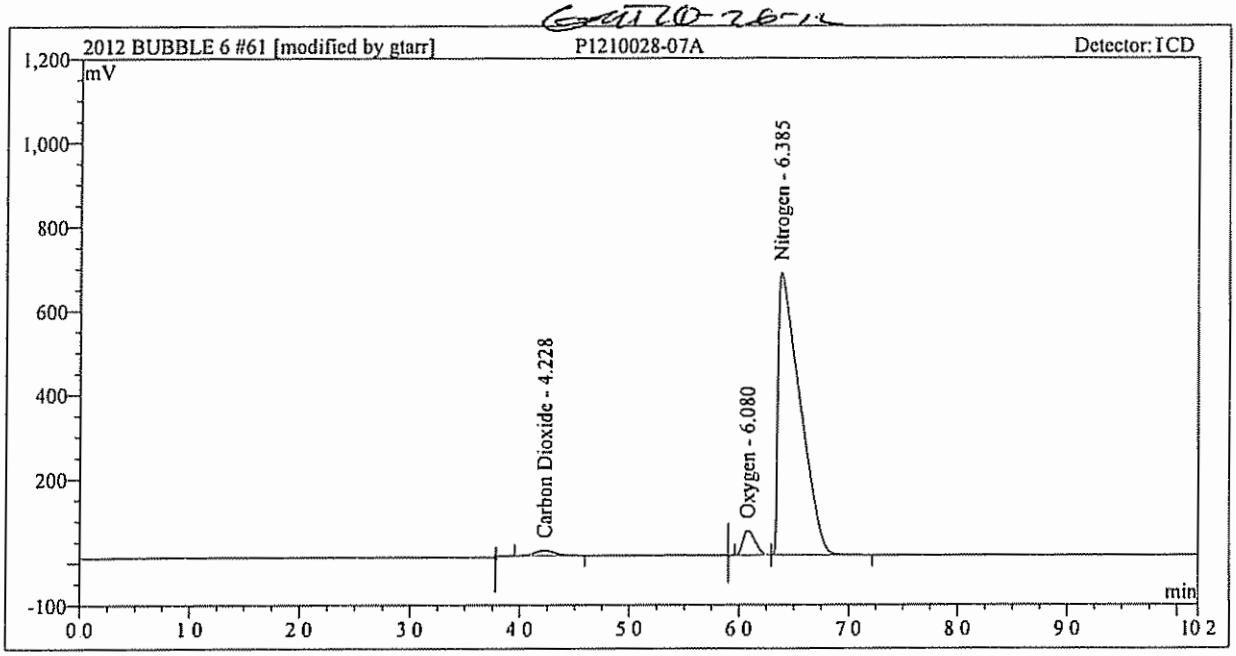


Sample Analysis Report

Sample Name:	P1210028-07A	**Sequence No:**	61
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/24/2012 13:08	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.228	2.741	13.213	BMB	24.7511
2	Oxygen	6.080	7.557	58.830	BMb*	4.8610
3	Nitrogen	6.385	154.790	671.962	bMB*	18.0130

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

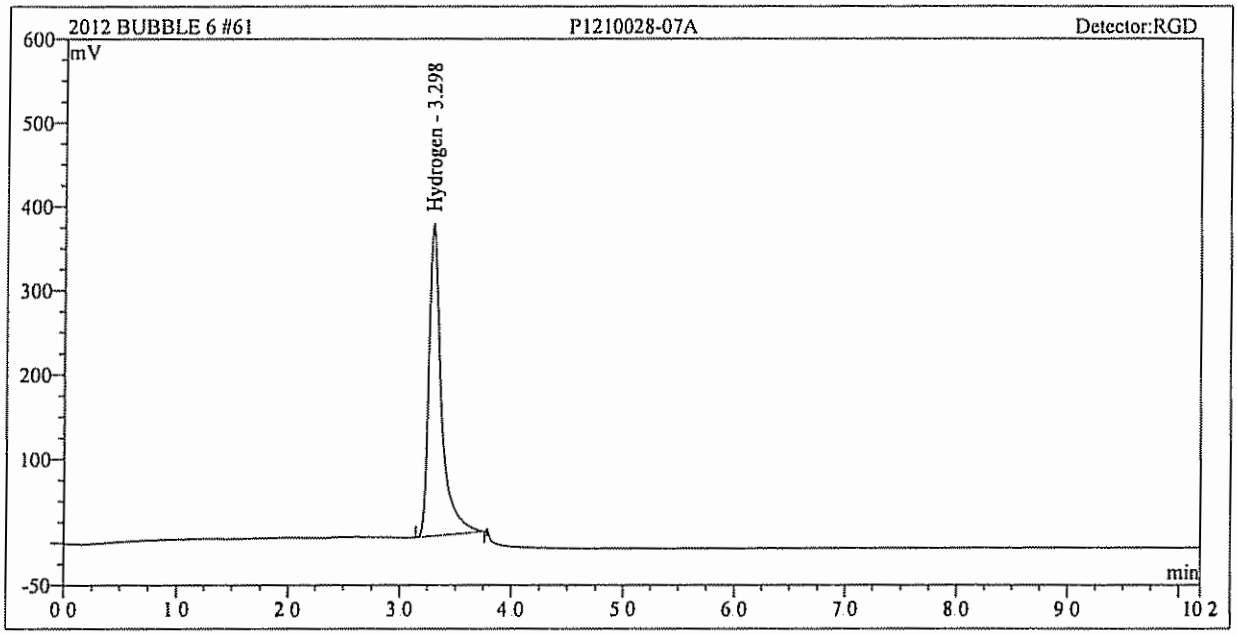


Sample Analysis Report

Sample Name:	P1210028-07A	**Sequence No:**	61
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:08	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.298	48.080	371.348	BMB	10.0134

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



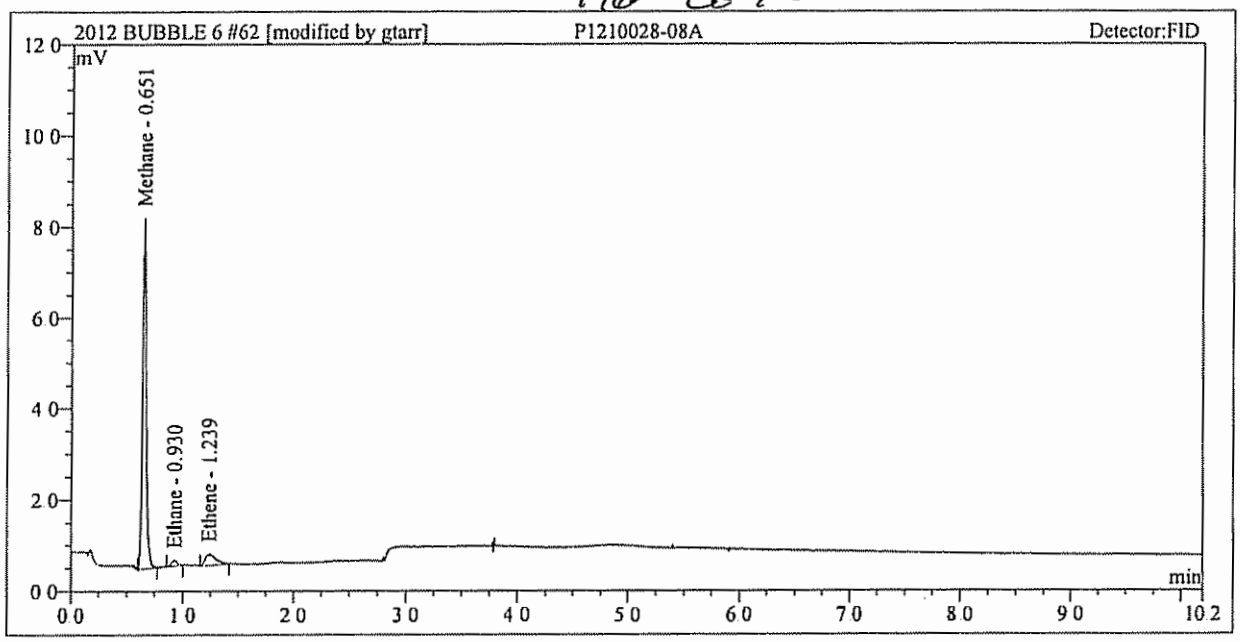
Sample Analysis Report

Sample Name:	P1210028-08A	**Sequence No:**	62
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:21	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.651	0.295	7.700	BMB*	0.1037
2	Ethane	0.930	0.008	0.123	BMB*	0.0037
3	Ethene	1.239	0.029	0.253	BMB*	0.0334

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GTR 10-26-12



MICROSEEPS

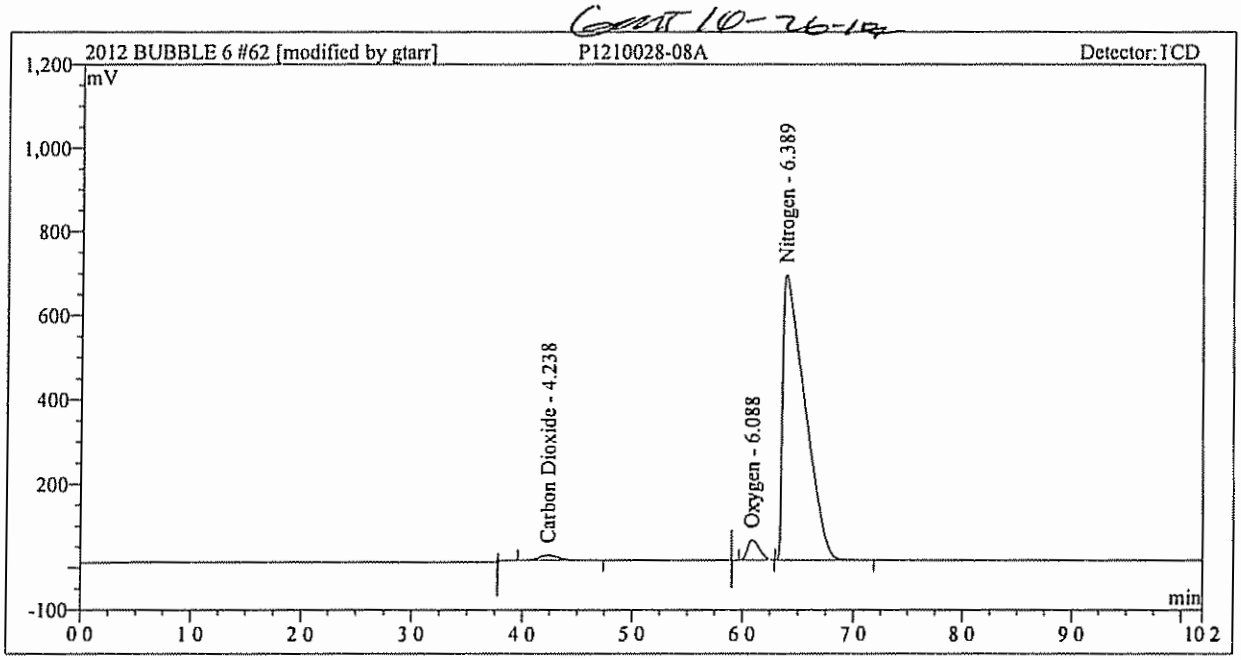
Sample Analysis Report

Sample Name:	P1210028-08A	**Sequence No:**	62
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:21	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.238	2.615	12.645	BMB	23.6074
2	Oxygen	6.088	6.212	48.840	BMB*	3.9958
3	Nitrogen	6.389	156.323	679.279	BMB	18.1914

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GMT 10-26-12

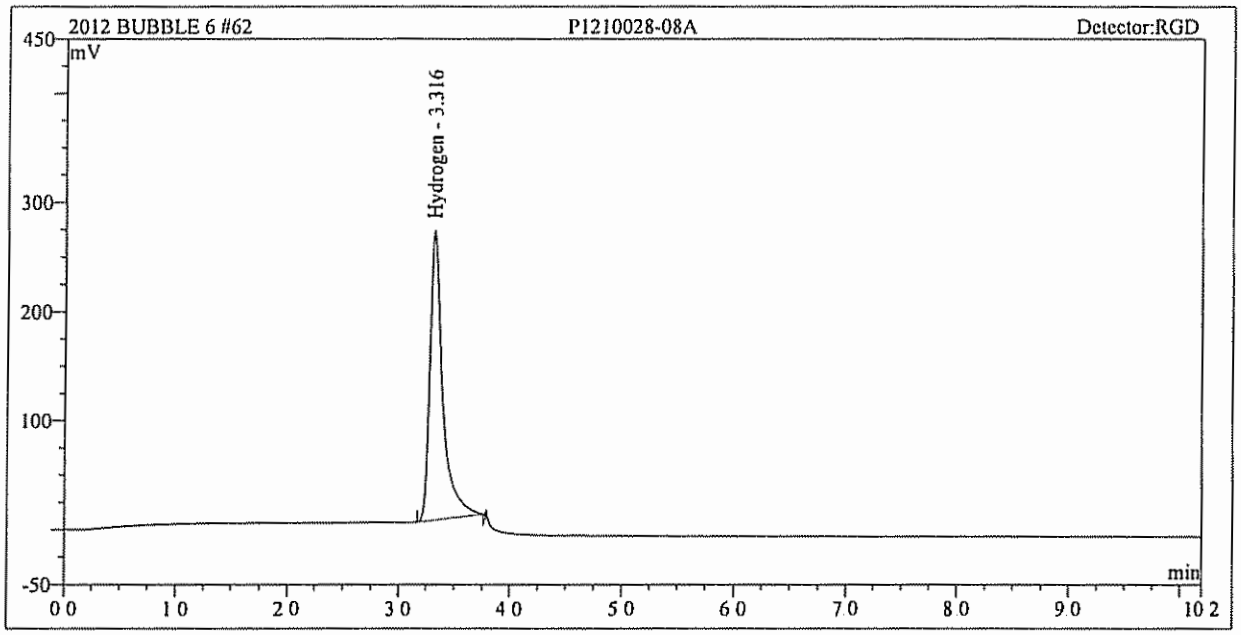


Sample Analysis Report

Sample Name:	P1210028-08A	**Sequence No:**	62
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:21	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.316	35.541	265.162	BMB	7.4020

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

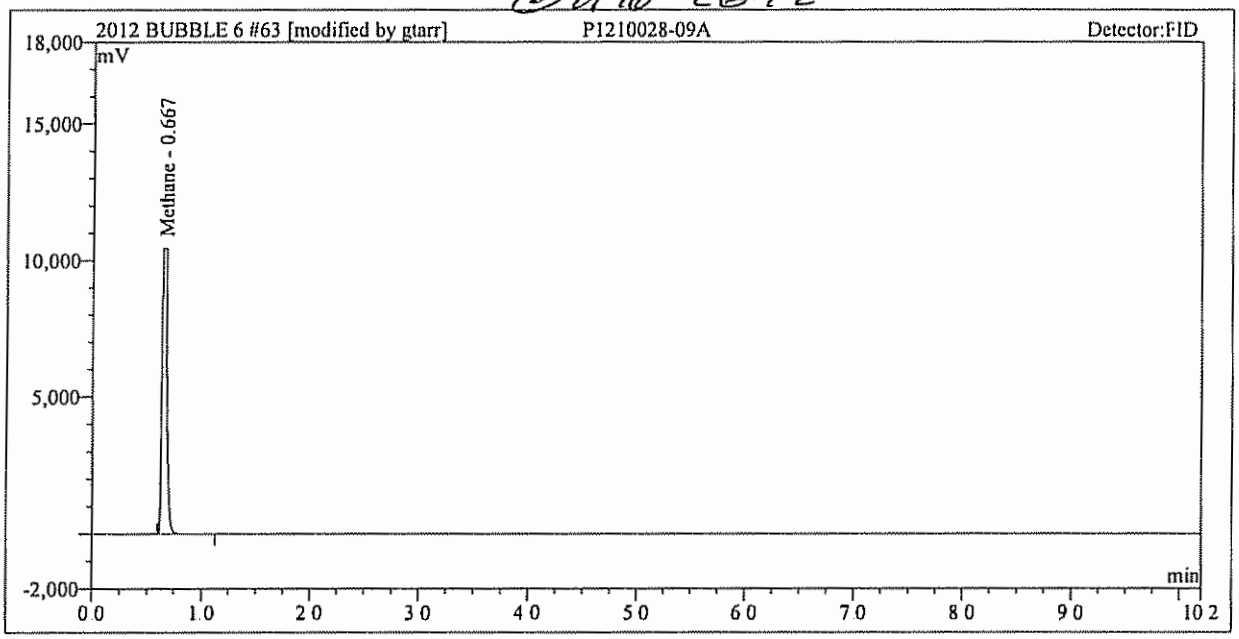
Sample Analysis Report

Sample Name:	P1210028-09A	**Sequence No:**	63
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:33	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.667	604.157	10436.271	BMB*	212.4380

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GTT 10-26-12



MICROSEEPS

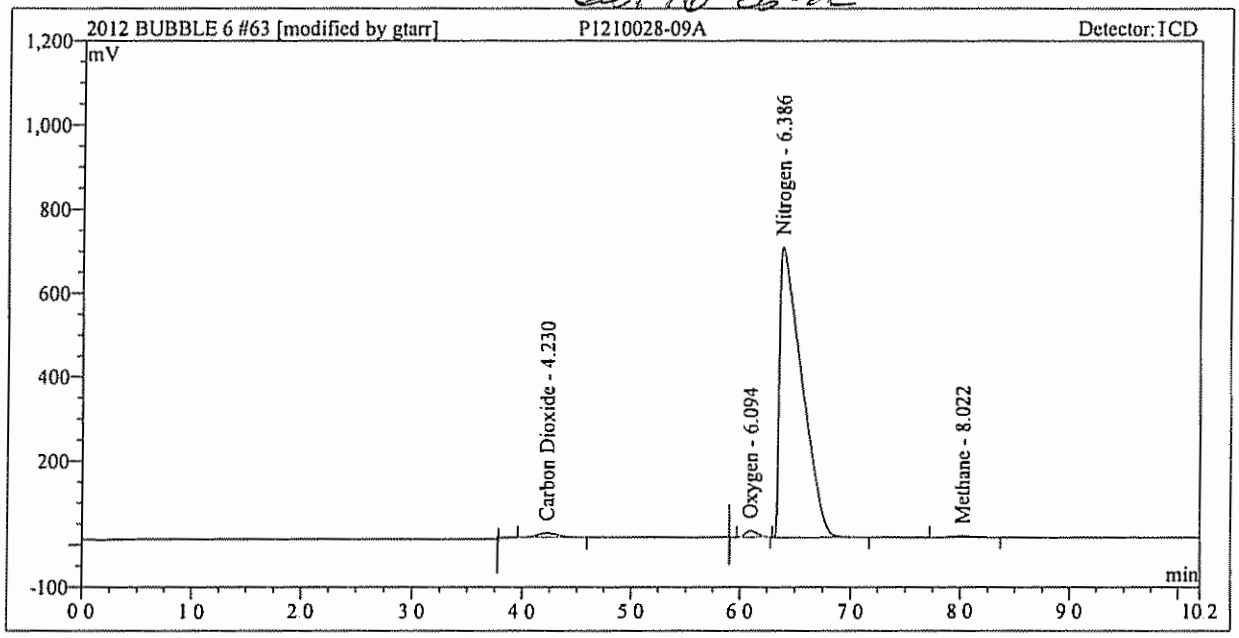
Sample Analysis Report

Sample Name:	P1210028-09A	**Sequence No:**	63
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:33	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.230	2.216	10.688	BMB	20.0075
2	Oxygen	6.094	2.108	16.279	BMB*	1.3558
3	Nitrogen	6.386	161.128	692.262	BMB	18.7505
4	Methane	8.022	0.872	3.950	BMB	320.4330

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

EXT 10-26-a



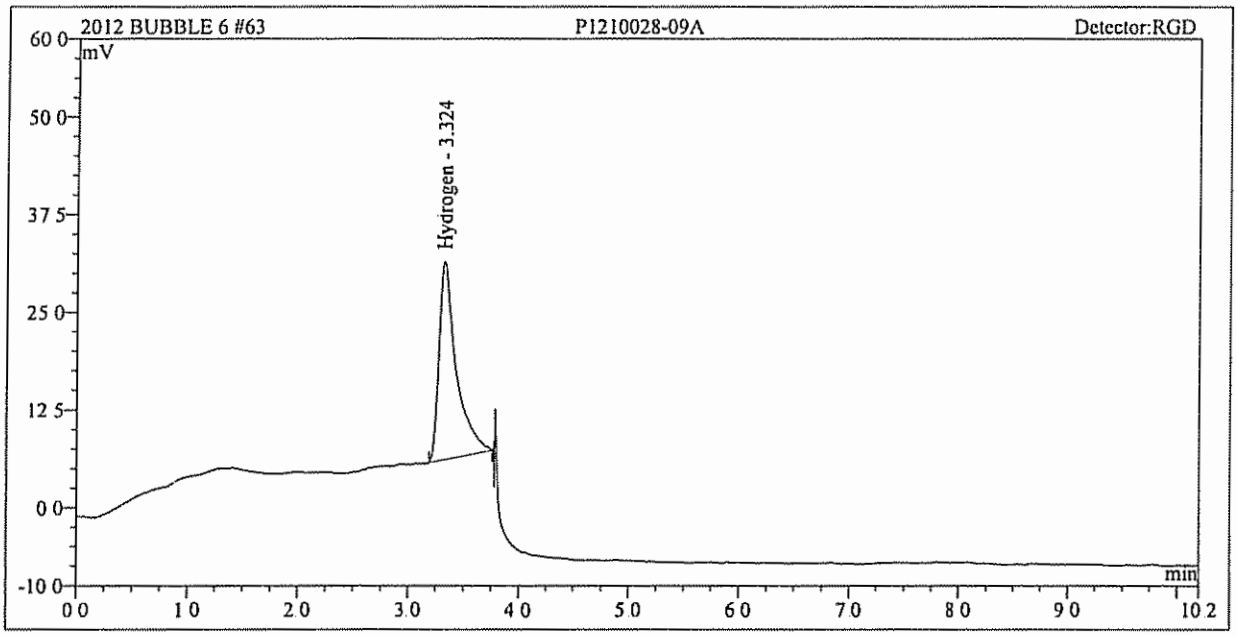
MICROSEEPS

Sample Analysis Report

Sample Name:	P1210028-09A	**Sequence No:**	63
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:33	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.324	4.567	25.385	BMB	0.9511

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

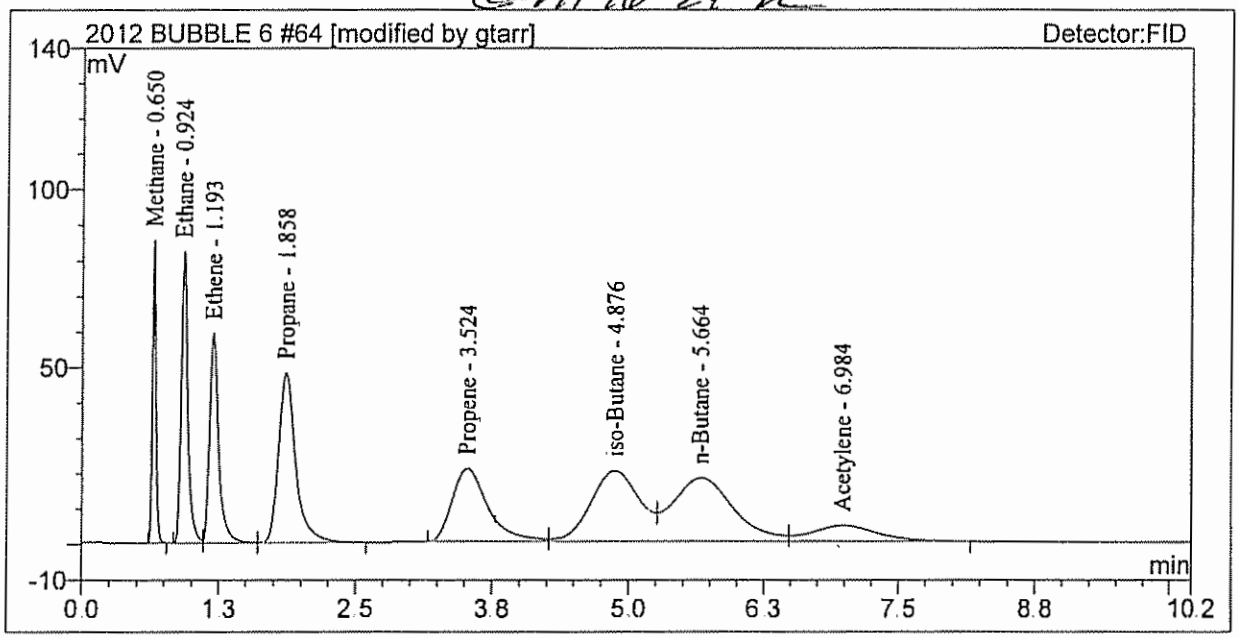
Sample Analysis Report

Sample Name:	CCV-2 FID/RGD 102412	**Sequence No:**	64
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:45	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-25 5X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.650	3.174	85.425	BMB	1.1160
2	Ethane	0.924	5.754	82.276	BM	2.8231
3	Ethene	1.193	5.861	59.367	M	6.8410
4	Propane	1.858	8.860	48.059	MB	3.2177
5	Propene	3.524	7.836	20.658	BM *	9.5177
6	iso-Butane	4.876	10.330	20.059	M *	2.5728
7	n-Butane	5.664	11.727	18.033	M *	3.1015
8	Acetylene	6.984	3.260	4.596	MB*	26.7392

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GMT 10-24-12



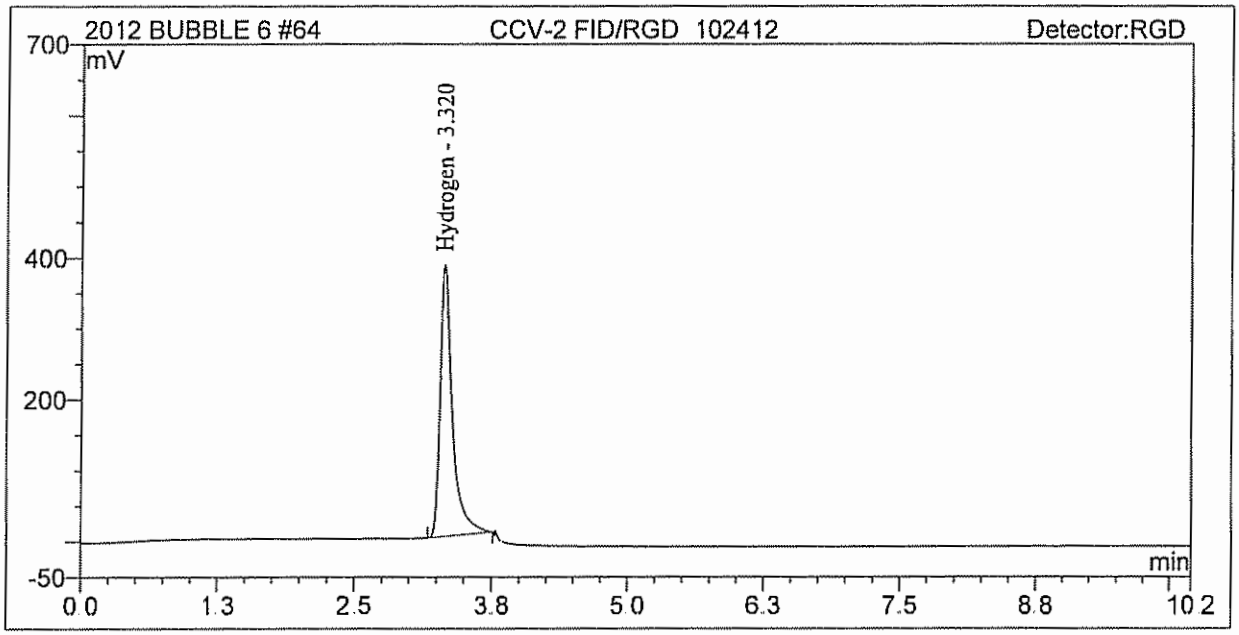
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV-2 FID/RGD 102412	**Sequence No:**	64
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:45	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-25 5X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.320	49.542	382.706	BMB	10.3179

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



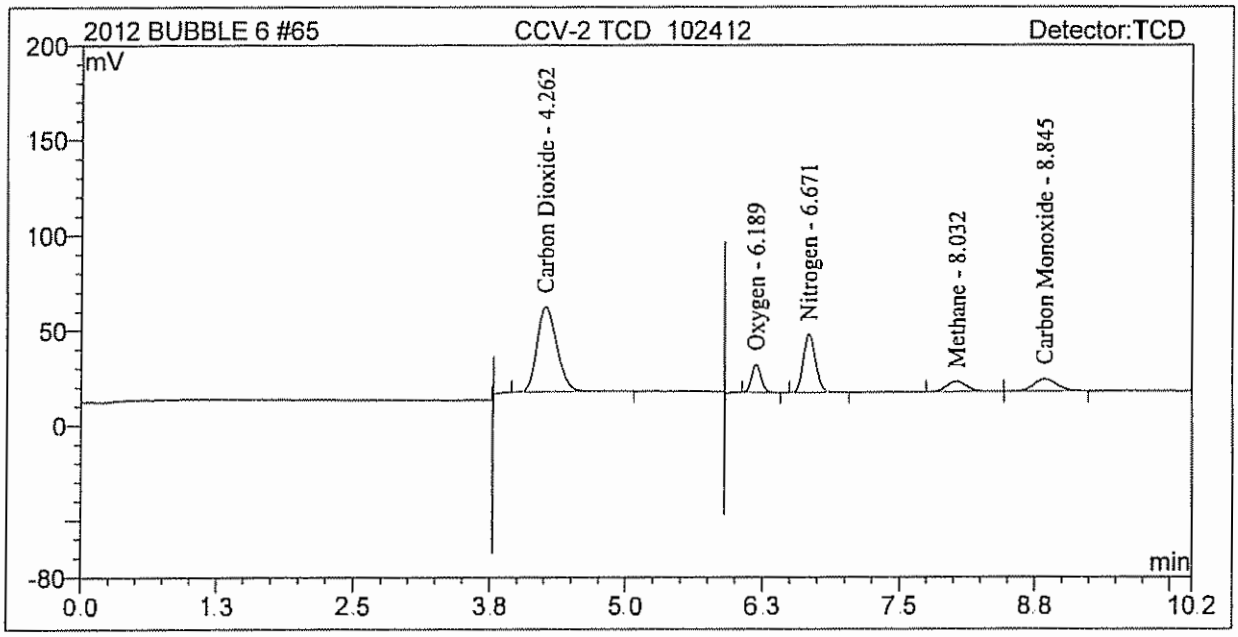
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV-2 TCD 102412	**Sequence No:**	65
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 13:58	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-26 2X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.262	9.560	44.738	BMB	86.3162
2	Oxygen	6.189	1.446	14.578	BMB	0.9303
3	Nitrogen	6.671	3.989	30.638	BMB	0.4642
4	Methane	8.032	1.174	5.452	BM	431.2160
5	Carbon Monoxide	8.845	1.603	6.463	MB	0.6664

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



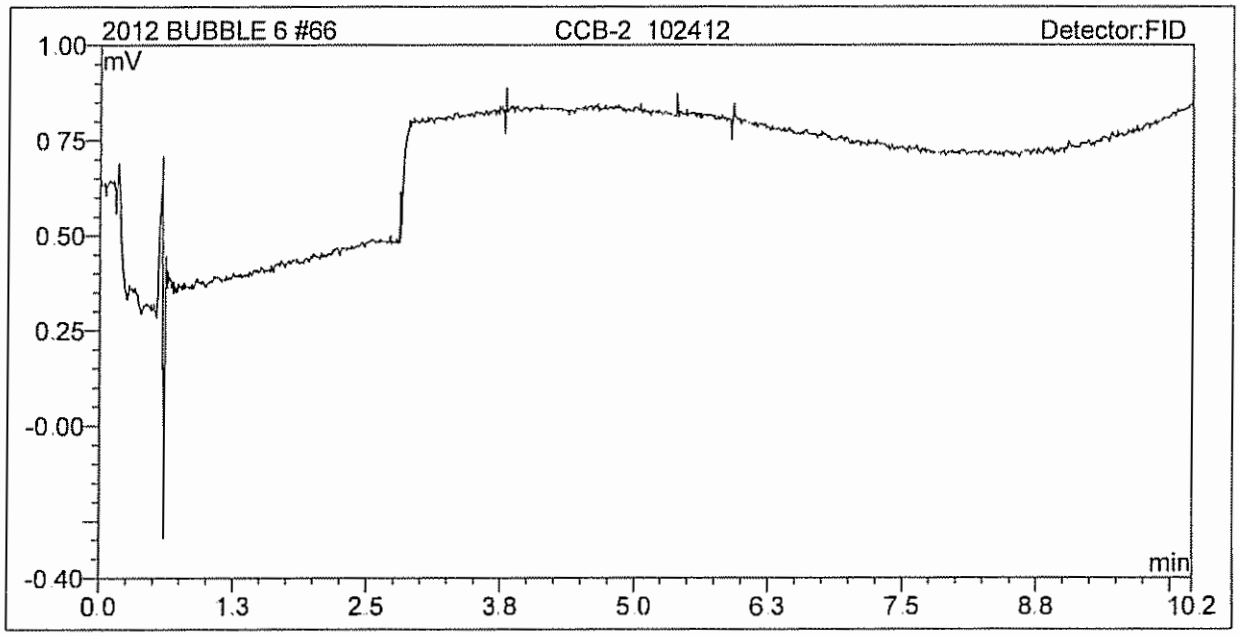
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB-2 102412	**Sequence No:**	66
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 14:10	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	HELIUM

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



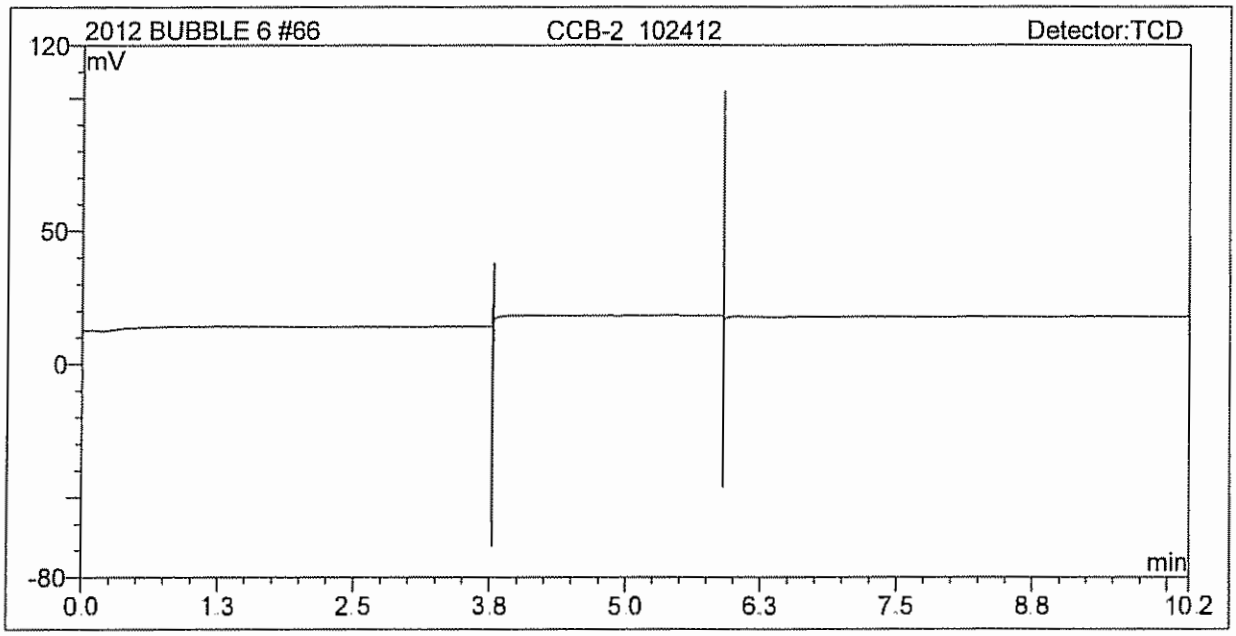
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB-2 102412	**Sequence No:**	66
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 14:10	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	HELIUM

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



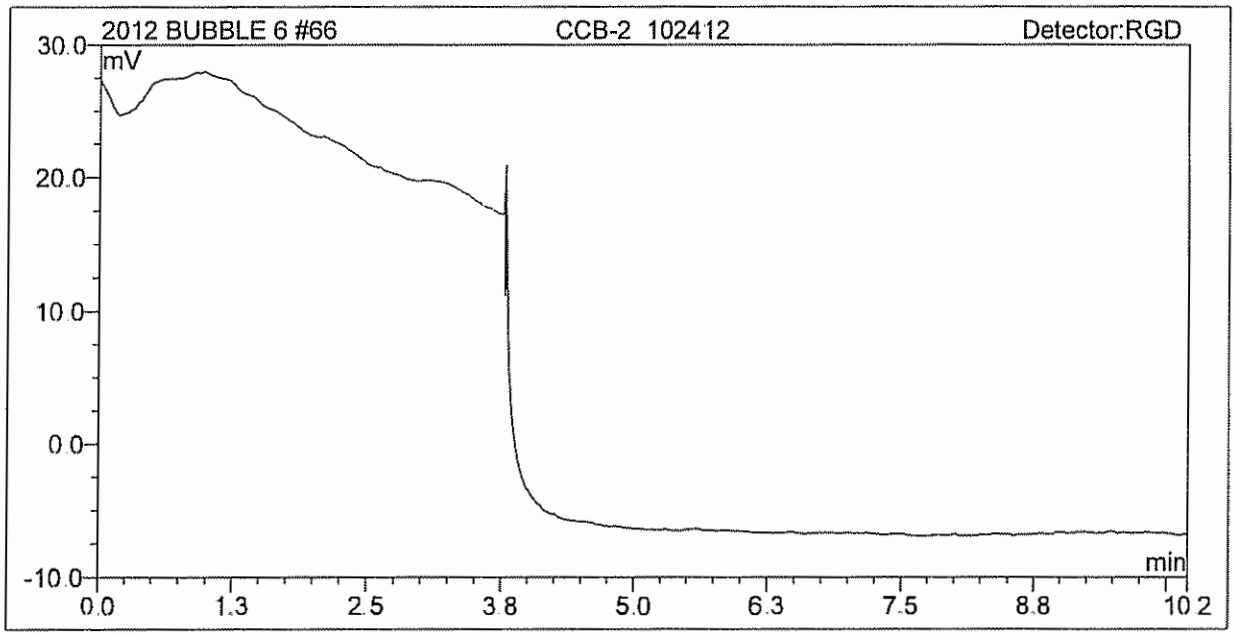
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB-2 102412	**Sequence No:**	66
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 14:10	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	HELIUM

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

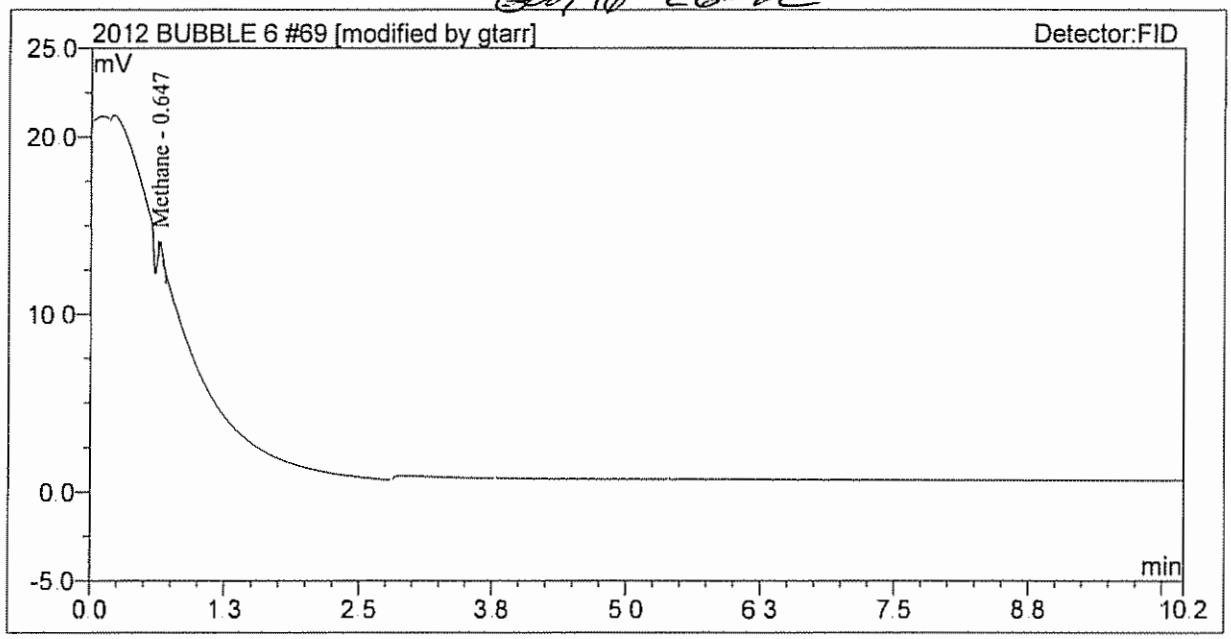
Sample Analysis Report

Sample Name:	P1210028-01A-DIL 2X	**Sequence No:**	69
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1 0000
Date Time Collected:	10/24/2012 14:47	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	X DILUTION - RE RUN

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.647	0.031	0.930	BMB*	0.0108

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GCT 10-26-12



MICROSEEPS

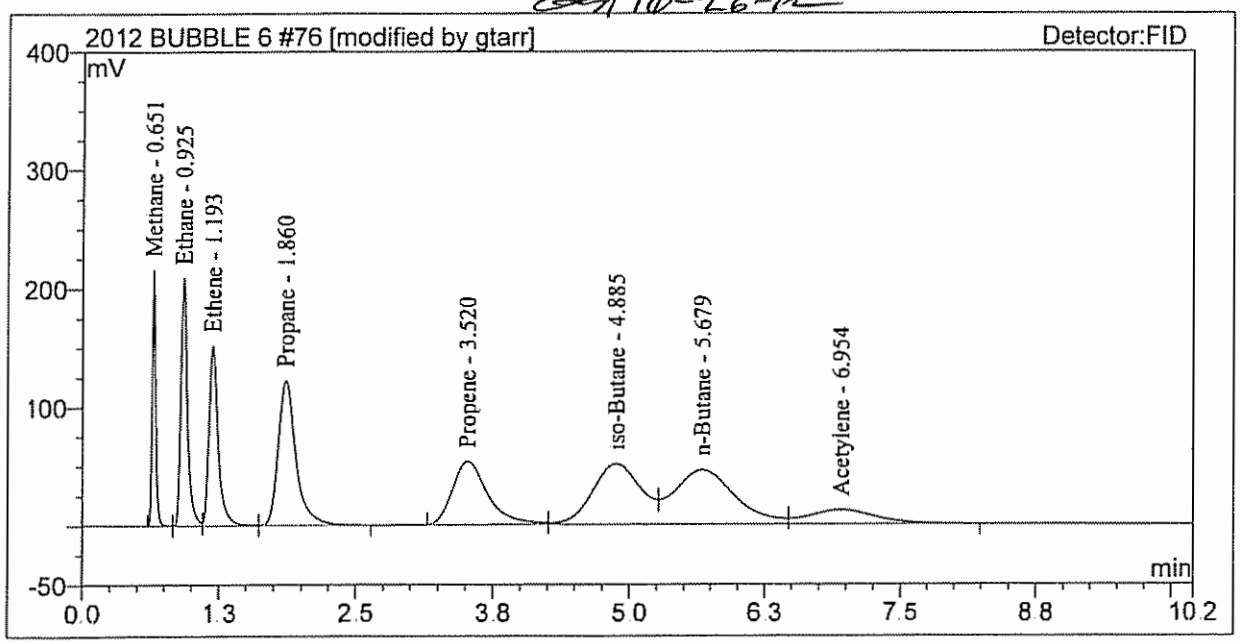
Sample Analysis Report

Sample Name:	CCV-3 FID/RGD 102412	**Sequence No:**	76
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 17:35	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-25 2X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.651	8.064	216.099	BM	2.8355
2	Ethane	0.925	14.650	209.285	M	7.1881
3	Ethene	1.193	14.939	151.849	M	17.4364
4	Propane	1.860	22.605	122.253	MB	8.2093
5	Propene	3.520	20.007	53.349	BM *	24.2998
6	iso-Butane	4.885	26.224	51.107	M *	6.5316
7	n-Butane	5.679	29.810	45.919	M *	7.8839
8	Acetylene	6.954	8.509	11.993	MB*	69.7985

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GT 10-26-12



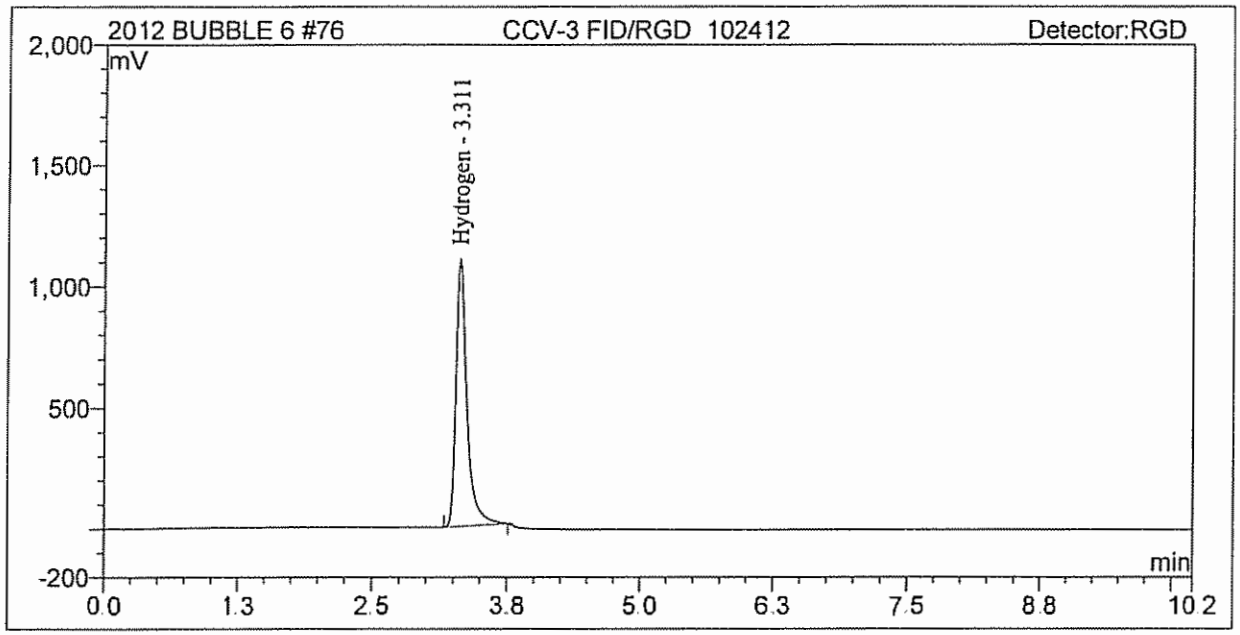
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV-3 FID/RGD 102412	**Sequence No:**	76
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1 0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 17:35	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-25 2X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Hydrogen	3.311	131.088	1102.457	BMB	27.3010

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

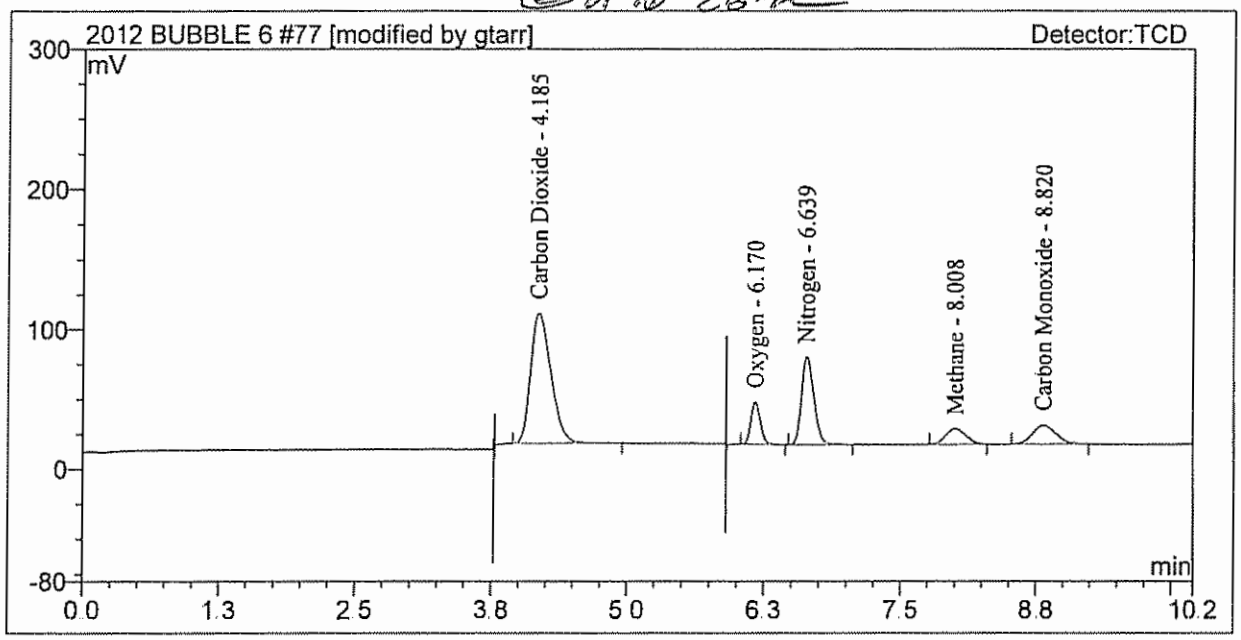
Sample Analysis Report

Sample Name:	CCV-3 TCD 102412	**Sequence No:**	77
Sequence Name:	2012 BUBBLE 6	**Instrument ID:**	BIOREM14
Program Method:	AM20_090612	**Injection vol.:**	1.0
Quantitation Method:	BUBBLE	**Dilution Factor:**	1.0000
Date Time Collected:	10/24/2012 17:50	**Analytical Method:**	AM20GAx/SM9
System Operator:	gtarr	**Comment:**	RA-10-26 1X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	4.185	20.165	93.339	BMB	182.0748
2	Oxygen	6.170	3.047	30.312	BMB	1.9601
3	Nitrogen	6.639	8.192	62.807	BMB	0.9533
4	Methane	8.008	2.387	11.258	BMB*	877.0767
5	Carbon Monoxide	8.820	3.350	13.546	BMB*	1.3924

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

GTA 10-26-12



VOC

The continuing calibration percent differences (%Ds) for acetone, chloroethane, chloromethane, 2-hexanone, methylene chloride and 4-methyl-2-pentanone were greater than the 20% quality control limit on October 22, 2012 @7:01 on instrument MS-VOA6. The positive and nondetected acetone, chloroethane, chloromethane, 2-hexanone, methylene chloride and 4-methyl-2-pentanone results were qualified as estimated (J) and (UJ), respectively.

The continuing calibration %Ds for acetone and dichlorodifluoromethane were greater than the 20% quality control limit on October 23, 2012 @ 10:18 on instrument MS-VOA6. The nondetected acetone and dichlorodifluoromethane results were qualified as estimated (UJ) in the affected samples.

The continuing calibration %Ds for acetone, carbon disulfide, chloromethane, cyclohexane, dichlorodifluoromethane, 1,1,2-trichlorotrifluoroethane and vinyl chloride were greater than the 20% quality control limit on October 20, 2012 @ 11:18 on instrument MS-VOA5. The nondetected results of the aforementioned analytes were qualified as estimated (UJ).

SVOC

The continuing calibration %Ds for 2,4-dinitrophenol, 2-nitrophenol, caprolactam and 3,3'-dichlorobenzidine were greater than the 20% quality control limit on October 23, 2012 @ 12:12 and 12:40 on instrument MS-BNA3. The nondetected 2,4-dinitrophenol, 2-nitrophenol, caprolactam and 3,3'-dichlorobenzidine results were qualified as estimated (UJ) in the affected aqueous samples.

The continuing calibration %Ds for 2,4-dinitrophenol, 2-nitrophenol, caprolactam and 3,3'-dichlorobenzidine were greater than the 20% quality control limit on October 31, 2012 @ 14:10 and 14:38 on instrument MS-BNA3. The nondetected 2,4-dinitrophenol, 2-nitrophenol, caprolactam and 3,3'-dichlorobenzidine results were qualified as estimated (UJ) in the affected soil samples.

Contamination was detected in the laboratory method blank associated with batch 2J19037 analyzed on October 31, 2012.

Contaminant	Maximum Concentration (ug/kg)	Action Level (ug/kg)
Bis (2-ethylhexyl)phthalate	302	3020

An action level of 10X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when applying the action level. Positive results less than the action level were qualified as (U).

PAH & 1,4-DIOXANE

The continuing calibration %D for 1,4-dioxane was greater than the 20% quality control limit on October 23, 2012 @ 16:11 on instrument MS-BNA4. The nondetected 1,4-dioxane results in the affected aqueous samples were qualified as estimated (UJ).

ADDITIONAL COMMENTS

The continuing calibration verification (CCV) %D for toxaphene was greater than the 20% quality control limit on October 18, 2012 @ 4:44 on column 2. No action was taken on the nondetected toxaphene results in the affected samples.

The CCV %Ds for 4,4'-DDD and delta-BHC were greater than the 20% quality control limit on October 19, 2012 @ 4:28 on column 1. No action was taken on the nondetected 4,4'-DDD and delta-BHC results in the affected aqueous samples.

The CCV %Ds for 4,4'-DDEand delta-BHC were greater than the 20% quality control limit on column 1 on October 27, 2012 @ 8:30. In addition, the CCV %D for 4,4'-DDD was greater than the 20% quality control limit on column 2. No action was taken on the nondetected 4,4'-DDE and delta-BHC results in the affected sample FD10111201. No action was taken on the positive 4,4'-DDD result because the positive result was reported from the other column.

The PEST laboratory method blank associated with batch 2J16016 contained a contaminant on column 1.

Contaminant	Maximum Concentration (ug/L)
Gamma-chlordane	0.00566

No action was taken on the nondetected gamma-chlordane results in the affected aqueous samples.

The laboratory reported some of the PAHs in the SVOC fraction for the soil samples. The total analyte count in the SVOC and PAH fraction is 67 analytes. No action was taken.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Continuing calibration %D noncompliances were found in the VOC and SVOC fractions. Contamination was detected in the SVOC fraction.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 00784	NSAMPLE	PEN-3221-07-10/12			PEN-3221-09-10/12			PEN-44-09-10/12			Trip Blank 01035		
SDG: 1210127	LAB_ID	1210127-12			1210127-10			1210127-08			1210127-13		
FRACTION: OV	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1,2,2-TETRACHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1,2-TRICHLOROTRIFLUOROETHANE				0.5	U		0.5	U		0.5	UJ	C
1,1-DICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,1-DICHLOROETHENE				0.25	U		0.25	U		0.25	U	
1,2,3-TRICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,2,4-TRICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,2-DIBROMO-3-CHLOROPROPANE				0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE				0.25	U		0.25	U		0.25	U	
1,2-DICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE				0.25	U		0.25	U		0.25	U	
1,2-DICHLOROPROPANE				0.25	U		0.25	U		0.25	U	
1,3-DICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
1,4-DICHLOROBENZENE				0.25	U		0.25	U		0.25	U	
2-BUTANONE				2.5	U		2.5	U		2.5	U	
2-HEXANONE				1.25	U		1.25	U		1.25	U	
4-METHYL-2-PENTANONE				1.25	U		1.25	U		1.25	U	
ACETONE				2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE				0.25	U		0.25	U		0.25	U	
BROMOCHLOROMETHANE				0.25	U		0.25	U		0.25	U	
BROMODICHLOROMETHANE				0.25	U		0.25	U		0.25	U	
BROMOFORM				0.25	U		0.25	U		0.25	U	
BROMOMETHANE				0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE				0.25	U		0.25	U		0.25	UJ	C
CARBON TETRACHLORIDE				0.25	U		0.25	U		0.25	U	
CHLOROBENZENE				0.25	U		0.25	U		0.25	U	
CHLORODIBROMOMETHANE				0.25	U		0.25	U		0.25	U	
CHLOROETHANE				0.5	U		0.5	U		0.5	U	
CHLOROFORM				0.25	U		0.25	U		0.25	U	
CHLOROMETHANE				0.25	U		0.25	U		0.25	UJ	C
CIS-1,2-DICHLOROETHENE	0.25	U		2.31			0.25	U		0.25	U	
CIS-1,3-DICHLOROPROPENE				0.25	U		0.25	U		0.25	U	
CYCLOHEXANE				0.25	U		0.25	U		0.25	UJ	C
DICHLORODIFLUOROMETHANE				0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ETHYLBENZENE				0.25	U		0.25	U		0.25	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-07-10/12			PEN-3221-09-10/12			PEN-44-09-10/12			Trip Blank 01035		
SDG: 1210127	LAB_ID	1210127-12			1210127-10			1210127-08			1210127-13		
FRACTION: OV	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE					0.25	U		0.25	U		0.25	U	
M+P-XYLENES					0.5	U		0.5	U		0.5	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.25	U		0.25	U		0.25	U	
METHYL TERT-BUTYL ETHER					0.25	U		0.25	U		0.25	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.25	U		0.25	U		0.25	U	
STYRENE					0.25	U		0.25	U		0.25	U	
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOLUENE					0.25	U		0.25	U		0.25	U	
TOTAL XYLENES					0.75	U		0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE					0.25	U		0.25	U		0.25	U	
TRANS-1,3-DICHLOROPROPENE					0.25	U		0.25	U		0.25	U	
TRICHLOROETHENE		0.26	J	P	54.3			0.25	U		0.25	U	
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.25	U		0.25	U		0.25	U		0.25	UJ	C

PROJ_NO: 00784	NSAMPLE	FD10111201			PEN-44-SS01-0-2-10/12			PEN-44-SS01-6-8-10/12			PEN-44-SS02-0-2-10/12		
SDG: 1210127	LAB_ID	1210127-07			1210127-01			1210127-02			1210127-03		
FRACTION: OV	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	97.5			97.9			96.6			96.0		
	DUP_OF	PEN-44-SS03-6-8-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
1,1,2,2-TETRACHLOROETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
1,1,2-TRICHLOROETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2.46	U		2.73	U		2.54	U		2.39	U	
1,1-DICHLOROETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
1,1-DICHLOROETHENE		1.23	U		1.36	U		1.27	U		1.19	U	
1,2,3-TRICHLOROBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
1,2,4-TRICHLOROBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
1,2-DIBROMO-3-CHLOROPROPANE		2.46	U		2.73	U		2.54	U		2.39	U	
1,2-DIBROMOETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
1,2-DICHLOROBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
1,2-DICHLOROETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
1,2-DICHLOROPROPANE		1.23	U		1.36	U		1.27	U		1.19	U	
1,3-DICHLOROBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
1,4-DICHLOROBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
2-BUTANONE		3.05	J	P	3.07	J	P	2.54	U		2.43	J	P
2-HEXANONE		2.46	UJ	C	2.73	UJ	C	2.54	UJ	C	2.39	UJ	C
4-METHYL-2-PENTANONE		2.46	UJ	C	2.73	UJ	C	2.54	UJ	C	2.39	UJ	C
ACETONE		21.7	J	C	15.5	J	CP	5.07	UJ	C	20.9	J	C
BENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
BROMOCHLOROMETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
BROMODICHLOROMETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
BROMOFORM		1.23	U		1.36	U		1.27	U		1.19	U	
BROMOMETHANE		2.46	U		2.73	U		2.54	U		2.39	U	
CARBON DISULFIDE		1.23	U		1.36	U		1.27	U		1.19	U	
CARBON TETRACHLORIDE		1.23	U		1.36	U		1.27	U		1.19	U	
CHLOROBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
CHLORODIBROMOMETHANE		1.23	U		1.36	U		1.27	U		1.19	U	
CHLOROETHANE		2.46	UJ	C	2.73	UJ	C	2.54	UJ	C	2.39	UJ	C
CHLOROFORM		1.23	U		1.36	U		1.27	U		1.19	U	
CHLOROMETHANE		2.46	UJ	C	2.73	UJ	C	2.54	UJ	C	2.39	UJ	C
CIS-1,2-DICHLOROETHENE		1.23	U		1.36	U		1.27	U		1.19	U	
CIS-1,3-DICHLOROPROPENE		1.23	U		1.36	U		1.27	U		1.19	U	
CYCLOHEXANE		1.23	U		1.36	U		1.27	U		1.19	U	
DICHLORODIFLUOROMETHANE		2.46	U		2.73	U		2.54	U		2.39	U	
ETHYLBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: OV	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.21	U		1.24	U		1.27	U	
1,1,2,2-TETRACHLOROETHANE		1.21	U		1.24	U		1.27	U	
1,1,2-TRICHLOROETHANE		1.21	U		1.24	U		1.27	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2.42	U		2.49	U		2.54	U	
1,1-DICHLOROETHANE		1.21	U		1.24	U		1.27	U	
1,1-DICHLOROETHENE		1.21	U		1.24	U		1.27	U	
1,2,3-TRICHLOROBENZENE		1.21	U		1.24	U		1.27	U	
1,2,4-TRICHLOROBENZENE		1.21	U		1.24	U		1.27	U	
1,2-DIBROMO-3-CHLOROPROPANE		2.42	U		2.49	U		2.54	U	
1,2-DIBROMOETHANE		1.21	U		1.24	U		1.27	U	
1,2-DICHLOROBENZENE		1.21	U		1.24	U		1.27	U	
1,2-DICHLOROETHANE		1.21	U		1.24	U		1.27	U	
1,2-DICHLOROPROPANE		1.21	U		1.24	U		1.27	U	
1,3-DICHLOROBENZENE		1.21	U		1.24	U		1.27	U	
1,4-DICHLOROBENZENE		1.21	U		1.24	U		1.27	U	
2-BUTANONE		2.42	U		3.73	J	P	2.54	U	
2-HEXANONE		2.42	UJ	C	2.49	UJ	C	2.54	UJ	C
4-METHYL-2-PENTANONE		2.42	UJ	C	2.49	UJ	C	2.54	UJ	C
ACETONE		9.56	J	CP	20.8	J	C	5.08	UJ	C
BENZENE		1.21	U		1.24	U		1.27	U	
BROMOCHLOROMETHANE		1.21	U		1.24	U		1.27	U	
BROMODICHLOROMETHANE		1.21	U		1.24	U		1.27	U	
BROMOFORM		1.21	U		1.24	U		1.27	U	
BROMOMETHANE		2.42	U		2.49	U		2.54	U	
CARBON DISULFIDE		1.21	U		1.24	U		1.27	U	
CARBON TETRACHLORIDE		1.21	U		1.24	U		1.27	U	
CHLOROBENZENE		1.21	U		1.24	U		1.27	U	
CHLORODIBROMOMETHANE		1.21	U		1.24	U		1.27	U	
CHLOROETHANE		2.42	UJ	C	2.49	UJ	C	2.54	UJ	C
CHLOROFORM		1.21	U		1.24	U		1.27	U	
CHLOROMETHANE		2.42	UJ	C	2.49	UJ	C	2.54	UJ	C
CIS-1,2-DICHLOROETHENE		1.21	U		1.24	U		1.27	U	
CIS-1,3-DICHLOROPROPENE		1.21	U		1.24	U		1.27	U	
CYCLOHEXANE		1.21	U		1.24	U		1.27	U	
DICHLORODIFLUOROMETHANE		2.42	U		2.49	U		2.54	U	
ETHYLBENZENE		1.21	U		1.24	U		1.27	U	

PROJ_NO: 00784	NSAMPLE	FD10111201			PEN-44-SS01-0-2-10/12			PEN-44-SS01-6-8-10/12			PEN-44-SS02-0-2-10/12		
SDG: 1210127	LAB_ID	1210127-07			1210127-01			1210127-02			1210127-03		
FRACTION: OV	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	97.5			97.9			96.6			96.0		
	DUP_OF	PEN-44-SS03-6-8-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE		1.23	U		1.36	U		1.27	U		1.19	U	
M+P-XYLENES		2.46	U		2.73	U		2.54	U		2.39	U	
METHYL ACETATE		2.46	U		2.73	U		2.54	U		2.39	U	
METHYL CYCLOHEXANE		1.23	U		1.36	U		1.27	U		1.19	U	
METHYL TERT-BUTYL ETHER		1.23	U		1.36	U		1.27	U		1.19	U	
METHYLENE CHLORIDE		2.46	UJ	C	2.73	UJ	C	2.54	UJ	C	2.39	UJ	C
O-XYLENE		1.23	U		1.36	U		1.27	U		1.19	U	
STYRENE		1.23	U		1.36	U		1.27	U		1.19	U	
TETRACHLOROETHENE		1.23	U		1.36	U		1.27	U		1.19	U	
TOLUENE		1.23	U		1.36	U		1.27	U		1.19	U	
TOTAL XYLENES		3.69	U		4.09	U		3.8	U		3.58	U	
TRANS-1,2-DICHLOROETHENE		1.23	U		1.36	U		1.27	U		1.19	U	
TRANS-1,3-DICHLOROPROPENE		1.23	U		1.36	U		1.27	U		1.19	U	
TRICHLOROETHENE		1.23	U		1.36	U		1.27	U		1.19	U	
TRICHLOROFLUOROMETHANE		2.46	U		2.73	U		2.54	U		2.39	U	
VINYL CHLORIDE		1.23	U		1.36	U		1.27	U		1.19	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: OV	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE		1.21	U		1.24	U		1.27	U	
M+P-XYLENES		2.42	U		2.49	U		2.54	U	
METHYL ACETATE		2.42	U		2.49	U		2.54	U	
METHYL CYCLOHEXANE		1.21	U		1.24	U		1.27	U	
METHYL TERT-BUTYL ETHER		1.21	U		1.24	U		1.27	U	
METHYLENE CHLORIDE		3	J	CP	2.49	UJ	C	2.54	UJ	C
O-XYLENE		1.21	U		1.24	U		1.27	U	
STYRENE		1.21	U		1.24	U		1.27	U	
TETRACHLOROETHENE		1.21	U		1.24	U		1.27	U	
TOLUENE		1.21	U		1.24	U		1.27	U	
TOTAL XYLENES		3.64	U		3.73	U		3.81	U	
TRANS-1,2-DICHLOROETHENE		1.21	U		1.24	U		1.27	U	
TRANS-1,3-DICHLOROPROPENE		1.21	U		1.24	U		1.27	U	
TRICHLOROETHENE		1.21	U		1.24	U		1.27	U	
TRICHLOROFLUOROMETHANE		2.42	U		2.49	U		2.54	U	
VINYL CHLORIDE		1.21	U		1.24	U		1.27	U	

PROJ_NO: 00784	NSAMPLE	FD10111201			PEN-44-SS01-0-2-10/12			PEN-44-SS01-6-8-10/12			PEN-44-SS02-0-2-10/12		
SDG: 1210127	LAB_ID	1210127-07			1210127-01			1210127-02			1210127-03		
FRACTION: OS	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	97.5			97.9			96.6			96.0		
	DUP_OF	PEN-44-SS03-6-8-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1-BIPHENYL		81.1	U		82.9	U		85.1	U		85.6	U	
1,2,4,5-TETRACHLOROBENZENE		81.1	U		82.9	U		85.1	U		85.6	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		81.1	U		82.9	U		85.1	U		85.6	U	
2,3,4,6-TETRACHLOROPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
2,4,5-TRICHLOROPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
2,4,6-TRICHLOROPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
2,4-DICHLOROPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
2,4-DIMETHYLPHENOL		324	U		331	U		340	U		342	U	
2,4-DINITROPHENOL		811	UJ	C	829	UJ	C	851	UJ	C	856	UJ	C
2,4-DINITROTOLUENE		81.1	U		82.9	U		85.1	U		85.6	U	
2,6-DINITROTOLUENE		81.1	U		82.9	U		85.1	U		85.6	U	
2-CHLORONAPHTHALENE		81.1	U		82.9	U		85.1	U		85.6	U	
2-CHLOROPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
2-METHYLNAPHTHALENE		81.1	U		82.9	U		85.1	U		85.6	U	
2-METHYLPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
2-NITROANILINE		324	U		331	U		340	U		342	U	
2-NITROPHENOL		81.1	UJ	C	82.9	UJ	C	85.1	UJ	C	85.6	UJ	C
3,3'-DICHLOROBENZIDINE		81.1	UJ	C	82.9	UJ	C	85.1	UJ	C	85.6	UJ	C
3-NITROANILINE		324	U		331	U		340	U		342	U	
4,6-DINITRO-2-METHYLPHENOL		811	U		829	U		851	U		856	U	
4-BROMOPHENYL PHENYL ETHER		81.1	U		82.9	U		85.1	U		85.6	U	
4-CHLORO-3-METHYLPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
4-CHLOROANILINE		81.1	U		82.9	U		85.1	U		85.6	U	
4-CHLOROPHENYL PHENYL ETHER		81.1	U		82.9	U		85.1	U		85.6	U	
4-METHYLPHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
4-NITROANILINE		324	U		331	U		340	U		342	U	
4-NITROPHENOL		324	U		331	U		340	U		342	U	
ACENAPHTHENE		81.1	U		82.9	U		85.1	U		85.6	U	
ACENAPHTHYLENE		81.1	U		82.9	U		85.1	U		85.6	U	
ANTHRACENE		81.1	U		82.9	U		85.1	U		85.6	U	
ATRAZINE		81.1	U		82.9	U		85.1	U		85.6	U	
BENZALDEHYDE		81.1	U		82.9	U		85.1	U		85.6	U	
BENZO(G,H,I)PERYLENE		81.1	U		82.9	U		85.1	U		144	J	P
BENZO(K)FLUORANTHENE		81.1	U		82.9	U		85.1	U		108	J	P
BIS(2-CHLOROETHOXY)METHANE		81.1	U		82.9	U		85.1	U		85.6	U	
BIS(2-CHLOROETHYL)ETHER		81.1	U		82.9	U		85.1	U		85.6	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: OS	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1-BIPHENYL		83.4	U		84	U		81.9	U	
1,2,4,5-TETRACHLOROBENZENE		83.4	U		84	U		81.9	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		83.4	U		84	U		81.9	U	
2,3,4,6-TETRACHLOROPHENOL		83.4	U		84	U		81.9	U	
2,4,5-TRICHLOROPHENOL		83.4	U		84	U		81.9	U	
2,4,6-TRICHLOROPHENOL		83.4	U		84	U		81.9	U	
2,4-DICHLOROPHENOL		83.4	U		84	U		81.9	U	
2,4-DIMETHYLPHENOL		334	U		336	U		327	U	
2,4-DINITROPHENOL		834	UJ	C	840	UJ	C	819	UJ	C
2,4-DINITROTOLUENE		83.4	U		84	U		81.9	U	
2,6-DINITROTOLUENE		83.4	U		84	U		81.9	U	
2-CHLORONAPHTHALENE		83.4	U		84	U		81.9	U	
2-CHLOROPHENOL		83.4	U		84	U		81.9	U	
2-METHYLNAPHTHALENE		83.4	U		84	U		81.9	U	
2-METHYLPHENOL		83.4	U		84	U		81.9	U	
2-NITROANILINE		334	U		336	U		327	U	
2-NITROPHENOL		83.4	UJ	C	84	UJ	C	81.9	UJ	C
3,3'-DICHLOROBENZIDINE		83.4	UJ	C	84	UJ	C	81.9	UJ	C
3-NITROANILINE		334	U		336	U		327	U	
4,6-DINITRO-2-METHYLPHENOL		834	U		840	U		819	U	
4-BROMOPHENYL PHENYL ETHER		83.4	U		84	U		81.9	U	
4-CHLORO-3-METHYLPHENOL		83.4	U		84	U		81.9	U	
4-CHLOROANILINE		83.4	U		84	U		81.9	U	
4-CHLOROPHENYL PHENYL ETHER		83.4	U		84	U		81.9	U	
4-METHYLPHENOL		83.4	U		84	U		81.9	U	
4-NITROANILINE		334	U		336	U		327	U	
4-NITROPHENOL		334	U		336	U		327	U	
ACENAPHTHENE		83.4	U		84	U		81.9	U	
ACENAPHTHYLENE		83.4	U		84	U		81.9	U	
ANTHRACENE		83.4	U		84	U		81.9	U	
ATRAZINE		83.4	U		84	U		81.9	U	
BENZALDEHYDE		83.4	U		84	U		81.9	U	
BENZO(G,H,I)PERYLENE		83.4	U		84	U		81.9	U	
BENZO(K)FLUORANTHENE		83.4	U		84	U		81.9	U	
BIS(2-CHLOROETHOXY)METHANE		83.4	U		84	U		81.9	U	
BIS(2-CHLOROETHYL)ETHER		83.4	U		84	U		81.9	U	

PROJ_NO: 00784	NSAMPLE	FD10111201			PEN-44-SS01-0-2-10/12			PEN-44-SS01-6-8-10/12			PEN-44-SS02-0-2-10/12		
SDG: 1210127	LAB_ID	1210127-07			1210127-01			1210127-02			1210127-03		
FRACTION: OS	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	97.5			97.9			96.6			96.0		
	DUP_OF	PEN-44-SS03-6-8-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BIS(2-ETHYLHEXYL)PHTHALATE		81.1	U		82.9	U		85.1	U		371	U	A
BUTYL BENZYL PHTHALATE		81.1	U		82.9	U		85.1	U		85.6	U	
CAPROLACTAM		81.1	UJ	C	82.9	UJ	C	85.1	UJ	C	85.6	UJ	C
CARBAZOLE		81.1	U		82.9	U		85.1	U		85.6	U	
CHRYSENE		81.1	U		82.9	U		85.1	U		85.6	U	
DIBENZOFURAN		81.1	U		82.9	U		85.1	U		85.6	U	
DIETHYL PHTHALATE		81.1	U		82.9	U		85.1	U		85.6	U	
DIMETHYL PHTHALATE		81.1	U		82.9	U		85.1	U		85.6	U	
DI-N-BUTYL PHTHALATE		81.1	U		82.9	U		85.1	U		85.6	U	
DI-N-OCTYL PHTHALATE		81.1	U		82.9	U		85.1	U		85.6	U	
FLUORANTHENE		81.1	U		82.9	U		85.1	U		85.6	U	
FLUORENE		81.1	U		82.9	U		85.1	U		85.6	U	
HEXACHLOROBENZENE		81.1	U		82.9	U		85.1	U		85.6	U	
HEXACHLOROBUTADIENE		81.1	U		82.9	U		85.1	U		85.6	U	
HEXACHLOROCYCLOPENTADIENE		81.1	U		82.9	U		85.1	U		85.6	U	
HEXACHLOROETHANE		81.1	U		82.9	U		85.1	U		85.6	U	
INDENO(1,2,3-CD)PYRENE		81.1	U		82.9	U		85.1	U		98	J	P
ISOPHORONE		81.1	U		82.9	U		85.1	U		85.6	U	
NITROBENZENE		81.1	U		82.9	U		85.1	U		85.6	U	
N-NITROSODIMETHYLAMINE		81.1	U		82.9	U		85.1	U		85.6	U	
N-NITROSO-DI-N-PROPYLAMINE		81.1	U		82.9	U		85.1	U		85.6	U	
PENTACHLOROPHENOL		324	U		331	U		340	U		342	U	
PHENANTHRENE		81.1	U		82.9	U		85.1	U		85.6	U	
PHENOL		81.1	U		82.9	U		85.1	U		85.6	U	
PYRENE		81.1	U		82.9	U		85.1	U		85.6	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: OS	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BIS(2-ETHYLHEXYL)PHTHALATE		83.4	U		84	U		81.9	U	
BUTYL BENZYL PHTHALATE		83.4	U		84	U		81.9	U	
CAPROLACTAM		83.4	UJ	C	84	UJ	C	81.9	UJ	C
CARBAZOLE		83.4	U		84	U		81.9	U	
CHRYSENE		83.4	U		84	U		81.9	U	
DIBENZOFURAN		83.4	U		84	U		81.9	U	
DIETHYL PHTHALATE		83.4	U		84	U		81.9	U	
DIMETHYL PHTHALATE		83.4	U		84	U		81.9	U	
DI-N-BUTYL PHTHALATE		83.4	U		84	U		81.9	U	
DI-N-OCTYL PHTHALATE		83.4	U		84	U		81.9	U	
FLUORANTHENE		83.4	U		84	U		81.9	U	
FLUORENE		83.4	U		84	U		81.9	U	
HEXACHLOROBENZENE		83.4	U		84	U		81.9	U	
HEXACHLOROBUTADIENE		83.4	U		84	U		81.9	U	
HEXACHLOROCYCLOPENTADIENE		83.4	U		84	U		81.9	U	
HEXACHLOROETHANE		83.4	U		84	U		81.9	U	
INDENO(1,2,3-CD)PYRENE		83.4	U		84	U		81.9	U	
ISOPHORONE		83.4	U		84	U		81.9	U	
NITROBENZENE		83.4	U		84	U		81.9	U	
N-NITROSODIMETHYLAMINE		83.4	U		84	U		81.9	U	
N-NITROSO-DI-N-PROPYLAMINE		83.4	U		84	U		81.9	U	
PENTACHLOROPHENOL		334	U		336	U		327	U	
PHENANTHRENE		83.4	U		84	U		81.9	U	
PHENOL		83.4	U		84	U		81.9	U	
PYRENE		83.4	U		84	U		81.9	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-10			1210127-08		
FRACTION: OS	SAMP_DATE	10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1-BIPHENYL		1.18	U		1.16	U	
1,2,4,5-TETRACHLOROBENZENE		1.18	U		1.16	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		1.18	U		1.16	U	
2,3,4,6-TETRACHLOROPHENOL		2.36	U		2.31	U	
2,4,5-TRICHLOROPHENOL		1.18	U		1.16	U	
2,4,6-TRICHLOROPHENOL		1.18	U		1.16	U	
2,4-DICHLOROPHENOL		1.18	U		1.16	U	
2,4-DIMETHYLPHENOL		4.72	U		4.63	U	
2,4-DINITROPHENOL		7.86	UJ	C	7.71	UJ	C
2,4-DINITROTOLUENE		1.18	U		1.16	U	
2,6-DINITROTOLUENE		1.18	U		1.16	U	
2-CHLORONAPHTHALENE		1.18	U		1.16	U	
2-CHLOROPHENOL		1.18	U		1.16	U	
2-METHYLPHENOL		1.18	U		1.16	U	
2-NITROANILINE		4.72	U		4.63	U	
2-NITROPHENOL		1.18	UJ	C	1.16	UJ	C
3,3'-DICHLOROBENZIDINE		1.18	UJ	C	1.16	UJ	C
3-NITROANILINE		4.72	U		4.63	U	
4,6-DINITRO-2-METHYLPHENOL		4.72	U		4.63	U	
4-BROMOPHENYL PHENYL ETHER		1.18	U		1.16	U	
4-CHLORO-3-METHYLPHENOL		1.18	U		1.16	U	
4-CHLOROANILINE		1.18	U		1.16	U	
4-CHLOROPHENYL PHENYL ETHER		1.18	U		1.16	U	
4-METHYLPHENOL		1.18	U		1.16	U	
4-NITROANILINE		4.72	U		4.63	U	
4-NITROPHENOL		4.72	U		4.63	U	
ATRAZINE		1.18	U		1.16	U	
BENZALDEHYDE		1.18	U		1.16	U	
BIS(2-CHLOROETHOXY)METHANE		1.18	U		1.16	U	
BIS(2-CHLOROETHYL)ETHER		1.18	U		1.16	U	
BIS(2-ETHYLHEXYL)PHTHALATE		1.18	U		1.16	U	
BUTYL BENZYL PHTHALATE		1.18	U		1.16	U	
CAPROLACTAM		1.18	UJ	C	1.16	UJ	C
CARBAZOLE		1.18	U		1.16	U	
DIBENZOFURAN		1.18	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-10			1210127-08		
FRACTION: OS	SAMP_DATE	10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DIETHYL PHTHALATE		1.18	U		1.16	U	
DIMETHYL PHTHALATE		1.18	U		1.16	U	
DI-N-BUTYL PHTHALATE		1.18	U		1.16	U	
DI-N-OCTYL PHTHALATE		1.18	U		1.16	U	
HEXACHLOROBENZENE		1.18	U		1.16	U	
HEXACHLOROBUTADIENE		1.18	U		1.16	U	
HEXACHLOROCYCLOPENTADIENE		1.18	U		1.16	U	
HEXACHLOROETHANE		1.18	U		1.16	U	
ISOPHORONE		1.18	U		1.16	U	
NITROBENZENE		1.18	U		1.16	U	
N-NITROSODIMETHYLAMINE		1.18	U		1.16	U	
N-NITROSO-DI-N-PROPYLAMINE		1.18	U		1.16	U	
PENTACHLOROPHENOL		4.72	U		4.63	U	
PHENOL		1.18	U		1.16	U	

PROJ_NO: 00784	NSAMPLE	FD10111201			PEN-44-SS01-0-2-10/12			PEN-44-SS01-6-8-10/12			PEN-44-SS02-0-2-10/12		
SDG: 1210127	LAB_ID	1210127-07			1210127-01			1210127-02			1210127-03		
FRACTION: PAH	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	97.5			97.9			96.6			96.0		
	DUP_OF	PEN-44-SS03-6-8-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		16.3	U		16.6	U		17.1	U		17.2	U	
BENZO(A)ANTHRACENE		1.63	U		1.66	U		1.71	U		1.72	U	
BENZO(A)PYRENE		6.78			13.1			1.71	U		78.2		
BENZO(B)FLUORANTHENE		5.84	J	P	16.2			1.71	U		108		
DIBENZO(A,H)ANTHRACENE		1.63	U		1.66	U		1.71	U		1.72	U	
NAPHTHALENE		1.63	U		1.66	U		1.71	U		1.72	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: PAH	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		16.7	U		16.8	U		16.4	U	
BENZO(A)ANTHRACENE		1.67	U		1.68	U		1.64	U	
BENZO(A)PYRENE		4.17	J	P	1.68	U		1.64	U	
BENZO(B)FLUORANTHENE		6.08	J	P	1.68	U		1.64	U	
DIBENZO(A,H)ANTHRACENE		1.67	U		1.68	U		1.64	U	
NAPHTHALENE		1.67	U		1.68	U		1.64	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-10			1210127-08		
FRACTION: PAH	SAMP_DATE	10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.472	UJ	C	0.463	UJ	C
2-METHYLNAPHTHALENE		0.0472	U		0.0463	U	
ACENAPHTHENE		0.0472	U		0.0463	U	
ACENAPHTHYLENE		0.0472	U		0.0463	U	
ANTHRACENE		0.0472	U		0.0463	U	
BENZO(A)ANTHRACENE		0.0472	U		0.0463	U	
BENZO(A)PYRENE		0.0472	U		0.0463	U	
BENZO(B)FLUORANTHENE		0.0472	U		0.0463	U	
BENZO(G,H,I)PERYLENE		0.0472	U		0.0463	U	
BENZO(K)FLUORANTHENE		0.0472	U		0.0463	U	
CHRYSENE		0.0472	U		0.0463	U	
DIBENZO(A,H)ANTHRACENE		0.0472	U		0.0463	U	
FLUORANTHENE		0.0472	U		0.0463	U	
FLUORENE		0.0472	U		0.0463	U	
INDENO(1,2,3-CD)PYRENE		0.0472	U		0.0463	U	
NAPHTHALENE		0.0472	U		0.0463	U	
PHENANTHRENE		0.0472	U		0.0463	U	
PYRENE		0.0472	U		0.0463	U	

PROJ_NO: 00784	NSAMPLE	FD10111201			PEN-44-SS01-0-2-10/12			PEN-44-SS01-6-8-10/12			PEN-44-SS02-0-2-10/12		
SDG: 1210127	LAB_ID	1210127-07			1210127-01			1210127-02			1210127-03		
FRACTION: PCB	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	97.5			97.9			96.6			96.0		
	DUP_OF	PEN-44-SS03-6-8-10/12											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		4.09	U		4.07	U		4.15	U		4.15	U	
AROCLOR-1221		4.09	U		4.07	U		4.15	U		4.15	U	
AROCLOR-1232		4.09	U		4.07	U		4.15	U		4.15	U	
AROCLOR-1242		4.09	U		4.07	U		4.15	U		4.15	U	
AROCLOR-1248		4.09	U		4.07	U		4.15	U		4.15	U	
AROCLOR-1254		4.09	U		4.07	U		4.15	U		4.15	U	
AROCLOR-1260		4.09	U		4.07	U		4.15	U		21.7		

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: PCB	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		4.18	U		4.13	U		4.16	U	
AROCLOR-1221		4.18	U		4.13	U		4.16	U	
AROCLOR-1232		4.18	U		4.13	U		4.16	U	
AROCLOR-1242		4.18	U		4.13	U		4.16	U	
AROCLOR-1248		4.18	U		4.13	U		4.16	U	
AROCLOR-1254		4.18	U		24.1			4.16	U	
AROCLOR-1260		4.18	U		20.8			4.16	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-10			1210127-08		
FRACTION: PCB	SAMP_DATE	10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.111	U		0.113	U	
AROCLOR-1221		0.111	U		0.113	U	
AROCLOR-1232		0.111	U		0.113	U	
AROCLOR-1242		0.111	U		0.113	U	
AROCLOR-1248		0.111	U		0.113	U	
AROCLOR-1254		0.111	U		0.113	U	
AROCLOR-1260		0.111	U		0.113	U	

PROJ_NO: 00784	NSAMPLE	FD10111201	PEN-44-SS01-0-2-10/12	PEN-44-SS01-6-8-10/12	PEN-44-SS02-0-2-10/12
SDG: 1210127	LAB_ID	1210127-07	1210127-01	1210127-02	1210127-03
FRACTION: PEST	SAMP_DATE	10/11/2012	10/11/2012	10/11/2012	10/11/2012
MEDIA: SOIL	QC_TYPE	NM	NM	NM	NM
	UNITS	UG/KG	UG/KG	UG/KG	UG/KG
	PCT_SOLIDS	97.5	97.9	96.6	96.0
	DUP_OF	PEN-44-SS03-6-8-10/12			

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
4,4'-DDD	0.944			0.165	U		0.168	U		0.312	J	P
4,4'-DDE	0.166	U		0.165	U		0.168	U		0.475		
4,4'-DDT	0.166	U		0.165	U		0.168	U		1.2		
ALDRIN	0.107	U		0.107	U		0.109	U		0.109	U	
ALPHA-BHC	0.107	U		0.107	U		0.109	U		0.109	U	
ALPHA-CHLORDANE	0.107	U		0.107	U		0.109	U		0.915		
BETA-BHC	0.107	U		0.107	U		0.109	U		0.109	U	
DELTA-BHC	0.107	U		0.107	U		0.109	U		0.109	U	
DIELDRIN	0.166	U		0.165	U		0.168	U		0.356	J	P
ENDOSULFAN I	0.107	U		0.107	U		0.109	U		0.109	U	
ENDOSULFAN II	1.21			0.432	J	P	0.168	U		3.43		
ENDOSULFAN SULFATE	0.166	U		0.165	U		0.168	U		0.168	U	
ENDRIN	0.166	U		0.267	J	P	0.168	U		0.168	U	
ENDRIN ALDEHYDE	0.166	U		0.165	U		0.168	U		0.168	U	
ENDRIN KETONE	0.166	U		0.165	U		0.168	U		0.168	U	
GAMMA-BHC (LINDANE)	0.789			0.306	J	P	0.109	U		0.109	U	
GAMMA-CHLORDANE	0.328	J	P	1.06			1.24			4.86		
HEPTACHLOR	0.107	U		0.107	U		0.109	U		0.109	U	
HEPTACHLOR EPOXIDE	0.107	U		0.107	U		0.109	U		0.109	U	
METHOXYCHLOR	0.107	U		0.107	U		0.109	U		0.109	U	
TOXAPHENE	10.7	U		10.7	U		10.9	U		10.9	U	

PROJ_NO: 00784	NSAMPLE	PEN-44-SS02-6-8-10/12			PEN-44-SS03-0-2-10/12			PEN-44-SS03-6-8-10/12		
SDG: 1210127	LAB_ID	1210127-04			1210127-05			1210127-06		
FRACTION: PEST	SAMP_DATE	10/11/2012			10/11/2012			10/11/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	96.0			97.3			97.2		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
4,4'-DDD		0.169	U		0.489	J	P	0.168	U	
4,4'-DDE		0.169	U		0.167	U		0.168	U	
4,4'-DDT		0.169	U		0.167	U		0.168	U	
ALDRIN		0.109	U		0.108	U		0.109	U	
ALPHA-BHC		0.109	U		0.108	U		0.109	U	
ALPHA-CHLORDANE		0.109	U		1.06			0.109	U	
BETA-BHC		0.109	U		0.108	U		0.109	U	
DELTA-BHC		0.109	U		0.108	U		0.109	U	
DIELDRIN		0.169	U		1.46			0.168	U	
ENDOSULFAN I		0.109	U		0.108	U		0.109	U	
ENDOSULFAN II		0.329	J	P	0.169	J	P	0.168	U	
ENDOSULFAN SULFATE		0.169	U		0.167	U		0.168	U	
ENDRIN		0.169	U		0.167	U		0.243	J	P
ENDRIN ALDEHYDE		0.169	U		0.917			0.168	U	
ENDRIN KETONE		0.169	U		0.167	U		0.168	U	
GAMMA-BHC (LINDANE)		0.109	U		0.108	U		0.109	U	
GAMMA-CHLORDANE		1.06			4.35			0.68		
HEPTACHLOR		0.109	U		0.108	U		0.109	U	
HEPTACHLOR EPOXIDE		0.109	U		0.108	U		0.109	U	
METHOXYCHLOR		0.109	U		0.146	J	P	0.109	U	
TOXAPHENE		10.9	U		10.8	U		10.9	U	

PROJ_NO: 00784	NSAMPLE	PEN-3221-09-10/12			PEN-44-09-10/12		
SDG: 1210127	LAB_ID	1210127-10			1210127-08		
FRACTION: PEST	SAMP_DATE	10/11/2012			10/11/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
4,4'-DDD		0.00463	U		0.00472	U	
4,4'-DDE		0.00463	U		0.00472	U	
4,4'-DDT		0.00463	U		0.00472	U	
ALDRIN		0.00306	U		0.00311	U	
ALPHA-BHC		0.00306	U		0.00311	U	
ALPHA-CHLORDANE		0.00306	U		0.00311	U	
BETA-BHC		0.00306	U		0.00311	U	
DELTA-BHC		0.00306	U		0.00311	U	
DIELDRIN		0.00463	U		0.00472	U	
ENDOSULFAN I		0.00306	U		0.00311	U	
ENDOSULFAN II		0.00463	U		0.00472	U	
ENDOSULFAN SULFATE		0.00463	U		0.00472	U	
ENDRIN		0.00463	U		0.00472	U	
ENDRIN ALDEHYDE		0.00463	U		0.00472	U	
ENDRIN KETONE		0.00463	U		0.00472	U	
GAMMA-BHC (LINDANE)		0.00306	U		0.00311	U	
GAMMA-CHLORDANE		0.00306	U		0.00311	U	
HEPTACHLOR		0.00306	U		0.00311	U	
HEPTACHLOR EPOXIDE		0.00306	U		0.00311	U	
METHOXYCHLOR		0.00306	U		0.00311	U	
TOXAPHENE		0.306	U		0.311	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

FD10111201

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-07 File ID: 1012707A.D

Sampled: 10/11/12 00:00 Prepared: 10/22/12 00:00 Analyzed: 10/22/12 12:38

Solids: 97.48 Preparation: 5035A Dilution: 1

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-64-1	Acetone	21.7	4.92	9.85	19.7	Y
71-43-2	Benzene		1.23	2.46	4.92	U
74-97-5	Bromochloromethane		1.23	2.46	4.92	U
75-27-4	Bromodichloromethane		1.23	2.46	4.92	U
75-25-2	Bromoform		1.23	2.46	4.92	U
74-83-9	Bromomethane		2.46	4.92	9.85	U
78-93-3	2-Butanone	3.05	2.46	4.92	9.85	I
75-15-0	Carbon disulfide		1.23	2.46	4.92	U
56-23-5	Carbon tetrachloride		1.23	2.46	4.92	U
108-90-7	Chlorobenzene		1.23	2.46	4.92	U
75-00-3	Chloroethane		2.46	4.92	9.85	Y, U
67-66-3	Chloroform		1.23	2.46	4.92	U
74-87-3	Chloromethane		2.46	4.92	9.85	Y, U
110-82-7	Cyclohexane		1.23	2.46	4.92	U
124-48-1	Dibromochloromethane		1.23	2.46	4.92	U
96-12-8	1,2-Dibromo-3-chloropropane		2.46	4.92	9.85	U
106-93-4	1,2-Dibromoethane (EDB)		1.23	2.46	4.92	U
95-50-1	1,2-Dichlorobenzene		1.23	2.46	4.92	U
541-73-1	1,3-Dichlorobenzene		1.23	2.46	4.92	U
106-46-7	1,4-Dichlorobenzene		1.23	2.46	4.92	U
75-71-8	Dichlorodifluoromethane		2.46	4.92	9.85	U
75-34-3	1,1-Dichloroethane		1.23	2.46	4.92	Q, U
107-06-2	1,2-Dichloroethane		1.23	2.46	4.92	U
75-35-4	1,1-Dichloroethene		1.23	2.46	4.92	U
156-59-2	cis-1,2-Dichloroethene		1.23	2.46	4.92	U
156-60-5	trans-1,2-Dichloroethene		1.23	2.46	4.92	U
78-87-5	1,2-Dichloropropane		1.23	2.46	4.92	U
10061-01-5	cis-1,3-Dichloropropene		1.23	2.46	4.92	U
10061-02-6	trans-1,3-Dichloropropene		1.23	2.46	4.92	U
100-41-4	Ethylbenzene		1.23	2.46	4.92	U
591-78-6	2-Hexanone		2.46	4.92	9.85	X, U
98-82-8	Isopropylbenzene		1.23	2.46	4.92	U
75-09-2	Methylene chloride		2.46	4.92	9.85	Y, U
79-20-9	Methyl Acetate		2.46	4.92	9.85	U
108-87-2	Methylcyclohexane		1.23	2.46	4.92	U
108-10-1	4-Methyl-2-pentanone		2.46	4.92	9.85	X, U
1634-04-4	Methyl t-Butyl Ether		1.23	2.46	4.92	U
100-42-5	Styrene		1.23	2.46	4.92	U
79-34-5	1,1,2,2-Tetrachloroethane		1.23	2.46	4.92	U

ANALYSIS DATA SHEET

FD10111201

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-07 File ID: 1012707A.D

Sampled: 10/11/12 00:00 Prepared: 10/22/12 00:00 Analyzed: 10/22/12 12:38

Solids: 97.48 Preparation: 5035A Dilution: 1

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.23	2.46	4.92	U
108-88-3	Toluene		1.23	2.46	4.92	U
87-61-6	1,2,3-Trichlorobenzene		1.23	2.46	4.92	U
120-82-1	1,2,4-Trichlorobenzene		1.23	2.46	4.92	U
79-00-5	1,1,2-Trichloroethane		1.23	2.46	4.92	U
71-55-6	1,1,1-Trichloroethane		1.23	2.46	4.92	U
79-01-6	Trichloroethene		1.23	2.46	4.92	U
75-69-4	Trichlorofluoromethane		2.46	4.92	9.85	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.46	4.92	9.85	U
75-01-4	Vinyl chloride		1.23	2.46	4.92	U
108-38-3/106-42-	m,p-Xylene		2.46	4.92	9.85	U
95-47-6	o-Xylene		1.23	2.46	4.92	U
1330-20-7	Xylenes (total)		3.69	7.38	14.8	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.54	30.12	102	85 - 120	
Dibromofluoromethane	29.54	31.41	106	80 - 125	
1,2-Dichloroethane-d4	29.54	32.73	111	75 - 140	
Toluene-d8	29.54	29.91	101	85 - 115	

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-01	File ID:	1012701AX.D
Sampled:	10/11/12 08:35	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 09:34
Solids:	97.93	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-64-1	Acetone	15.5	5.45	10.9	21.8	Y, I
71-43-2	Benzene		1.36	2.73	5.45	U
74-97-5	Bromochloromethane		1.36	2.73	5.45	U
75-27-4	Bromodichloromethane		1.36	2.73	5.45	U
75-25-2	Bromoform		1.36	2.73	5.45	U
74-83-9	Bromomethane		2.73	5.45	10.9	U
78-93-3	2-Butanone	3.07	2.73	5.45	10.9	1
75-15-0	Carbon disulfide		1.36	2.73	5.45	U
56-23-5	Carbon tetrachloride		1.36	2.73	5.45	U
108-90-7	Chlorobenzene		1.36	2.73	5.45	N, U
75-00-3	Chloroethane		2.73	5.45	10.9	Y, U
67-66-3	Chloroform		1.36	2.73	5.45	U
74-87-3	Chloromethane		2.73	5.45	10.9	Y, U
110-82-7	Cyclohexane		1.36	2.73	5.45	N, U
124-48-1	Dibromochloromethane		1.36	2.73	5.45	U
96-12-8	1,2-Dibromo-3-chloropropane		2.73	5.45	10.9	U
106-93-4	1,2-Dibromoethane (EDB)		1.36	2.73	5.45	U
95-50-1	1,2-Dichlorobenzene		1.36	2.73	5.45	N, U
541-73-1	1,3-Dichlorobenzene		1.36	2.73	5.45	N, U
106-46-7	1,4-Dichlorobenzene		1.36	2.73	5.45	N, U
75-71-8	Dichlorodifluoromethane		2.73	5.45	10.9	U
75-34-3	1,1-Dichloroethane		1.36	2.73	5.45	, Q, N U
107-06-2	1,2-Dichloroethane		1.36	2.73	5.45	U
75-35-4	1,1-Dichloroethene		1.36	2.73	5.45	, N U
156-59-2	cis-1,2-Dichloroethene		1.36	2.73	5.45	U
156-60-5	trans-1,2-Dichloroethene		1.36	2.73	5.45	U
78-87-5	1,2-Dichloropropane		1.36	2.73	5.45	U
10061-01-5	cis-1,3-Dichloropropene		1.36	2.73	5.45	U
10061-02-6	trans-1,3-Dichloropropene		1.36	2.73	5.45	U
100-41-4	Ethylbenzene		1.36	2.73	5.45	U
591-78-6	2-Hexanone		2.73	5.45	10.9	X, U
98-82-8	Isopropylbenzene		1.36	2.73	5.45	N, U
75-09-2	Methylene chloride		2.73	5.45	10.9	Y, U
79-20-9	Methyl Acetate		2.73	5.45	10.9	U
108-87-2	Methylcyclohexane		1.36	2.73	5.45	N, U
108-10-1	4-Methyl-2-pentanone		2.73	5.45	10.9	X, U
1634-04-4	Methyl t-Butyl Ether		1.36	2.73	5.45	U
100-42-5	Styrene		1.36	2.73	5.45	N, U
79-34-5	1,1,2,2-Tetrachloroethane		1.36	2.73	5.45	U

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-01 File ID: 1012701AX.D

Sampled: 10/11/12 08:35 Prepared: 10/22/12 00:00 Analyzed: 10/22/12 09:34

Solids: 97.93 Preparation: 5035A Dilution: 1

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.36	2.73	5.45	U
108-88-3	Toluene		1.36	2.73	5.45	U
87-61-6	1,2,3-Trichlorobenzene		1.36	2.73	5.45	N, U
120-82-1	1,2,4-Trichlorobenzene		1.36	2.73	5.45	N, U
79-00-5	1,1,2-Trichloroethane		1.36	2.73	5.45	U
71-55-6	1,1,1-Trichloroethane		1.36	2.73	5.45	U
79-01-6	Trichloroethene		1.36	2.73	5.45	U
75-69-4	Trichlorofluoromethane		2.73	5.45	10.9	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.73	5.45	10.9	U
75-01-4	Vinyl chloride		1.36	2.73	5.45	U
108-38-3/106-42-	m,p-Xylene		2.73	5.45	10.9	N, U
95-47-6	o-Xylene		1.36	2.73	5.45	N, U
1330-20-7	Xylenes (total)		4.09	8.18	16.4	N, U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.73	33.74	103	85 - 120	
Dibromofluoromethane	32.73	34.73	106	80 - 125	
1,2-Dichloroethane-d4	32.73	37.13	113	75 - 140	
Toluene-d8	32.73	33.32	102	85 - 115	

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-02	File ID:	1012702AX.D
Sampled:	10/11/12 09:30	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 10:05
Solids:	96.63	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-64-1	Acetone		5.07	10.1	20.3	Y, U
71-43-2	Benzene		1.27	2.54	5.07	U
74-97-5	Bromochloromethane		1.27	2.54	5.07	U
75-27-4	Bromodichloromethane		1.27	2.54	5.07	U
75-25-2	Bromoform		1.27	2.54	5.07	U
74-83-9	Bromomethane		2.54	5.07	10.1	U
78-93-3	2-Butanone		2.54	5.07	10.1	U
75-15-0	Carbon disulfide		1.27	2.54	5.07	U
56-23-5	Carbon tetrachloride		1.27	2.54	5.07	U
108-90-7	Chlorobenzene		1.27	2.54	5.07	U
75-00-3	Chloroethane		2.54	5.07	10.1	Y, U
67-66-3	Chloroform		1.27	2.54	5.07	U
74-87-3	Chloromethane		2.54	5.07	10.1	Y, U
110-82-7	Cyclohexane		1.27	2.54	5.07	U
124-48-1	Dibromochloromethane		1.27	2.54	5.07	U
96-12-8	1,2-Dibromo-3-chloropropane		2.54	5.07	10.1	U
106-93-4	1,2-Dibromoethane (EDB)		1.27	2.54	5.07	U
95-50-1	1,2-Dichlorobenzene		1.27	2.54	5.07	U
541-73-1	1,3-Dichlorobenzene		1.27	2.54	5.07	U
106-46-7	1,4-Dichlorobenzene		1.27	2.54	5.07	U
75-71-8	Dichlorodifluoromethane		2.54	5.07	10.1	U
75-34-3	1,1-Dichloroethane		1.27	2.54	5.07	Q, U
107-06-2	1,2-Dichloroethane		1.27	2.54	5.07	U
75-35-4	1,1-Dichloroethene		1.27	2.54	5.07	U
156-59-2	cis-1,2-Dichloroethene		1.27	2.54	5.07	U
156-60-5	trans-1,2-Dichloroethene		1.27	2.54	5.07	U
78-87-5	1,2-Dichloropropane		1.27	2.54	5.07	U
10061-01-5	cis-1,3-Dichloropropene		1.27	2.54	5.07	U
10061-02-6	trans-1,3-Dichloropropene		1.27	2.54	5.07	U
100-41-4	Ethylbenzene		1.27	2.54	5.07	U
591-78-6	2-Hexanone		2.54	5.07	10.1	X, U
98-82-8	Isopropylbenzene		1.27	2.54	5.07	U
75-09-2	Methylene chloride		2.54	5.07	10.1	Y, U
79-20-9	Methyl Acetate		2.54	5.07	10.1	U
108-87-2	Methylcyclohexane		1.27	2.54	5.07	U
108-10-1	4-Methyl-2-pentanone		2.54	5.07	10.1	X, U
1634-04-4	Methyl t-Butyl Ether		1.27	2.54	5.07	U
100-42-5	Styrene		1.27	2.54	5.07	U
79-34-5	1,1,2,2-Tetrachloroethane		1.27	2.54	5.07	U

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-02	File ID:	1012702AX.D
Sampled:	10/11/12 09:30	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 10:05
Solids:	96.63	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.27	2.54	5.07	U
108-88-3	Toluene		1.27	2.54	5.07	U
87-61-6	1,2,3-Trichlorobenzene		1.27	2.54	5.07	U
120-82-1	1,2,4-Trichlorobenzene		1.27	2.54	5.07	U
79-00-5	1,1,2-Trichloroethane		1.27	2.54	5.07	U
71-55-6	1,1,1-Trichloroethane		1.27	2.54	5.07	U
79-01-6	Trichloroethene		1.27	2.54	5.07	U
75-69-4	Trichlorofluoromethane		2.54	5.07	10.1	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.54	5.07	10.1	U
75-01-4	Vinyl chloride		1.27	2.54	5.07	U
108-38-3/106-42-	m,p-Xylene		2.54	5.07	10.1	U
95-47-6	o-Xylene		1.27	2.54	5.07	U
1330-20-7	Xylenes (total)		3.80	7.61	15.2	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.44	31.94	105	85 - 120	
Dibromofluoromethane	30.44	32.66	107	80 - 125	
1,2-Dichloroethane-d4	30.44	35.19	116	75 - 140	
Toluene-d8	30.44	30.80	101	85 - 115	

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-03	File ID:	1012703A.D
Sampled:	10/11/12 10:00	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 10:36
Solids:	96.02	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-64-1	Acetone	20.9	4.78	9.55	19.1	Y
71-43-2	Benzene		1.19	2.39	4.78	U
74-97-5	Bromochloromethane		1.19	2.39	4.78	U
75-27-4	Bromodichloromethane		1.19	2.39	4.78	U
75-25-2	Bromoform		1.19	2.39	4.78	U
74-83-9	Bromomethane		2.39	4.78	9.55	U
78-93-3	2-Butanone	2.43	2.39	4.78	9.55	I
75-15-0	Carbon disulfide		1.19	2.39	4.78	U
56-23-5	Carbon tetrachloride		1.19	2.39	4.78	U
108-90-7	Chlorobenzene		1.19	2.39	4.78	U
75-00-3	Chloroethane		2.39	4.78	9.55	Y, U
67-66-3	Chloroform		1.19	2.39	4.78	U
74-87-3	Chloromethane		2.39	4.78	9.55	Y, U
110-82-7	Cyclohexane		1.19	2.39	4.78	U
124-48-1	Dibromochloromethane		1.19	2.39	4.78	U
96-12-8	1,2-Dibromo-3-chloropropane		2.39	4.78	9.55	U
106-93-4	1,2-Dibromoethane (EDB)		1.19	2.39	4.78	U
95-50-1	1,2-Dichlorobenzene		1.19	2.39	4.78	U
541-73-1	1,3-Dichlorobenzene		1.19	2.39	4.78	U
106-46-7	1,4-Dichlorobenzene		1.19	2.39	4.78	U
75-71-8	Dichlorodifluoromethane		2.39	4.78	9.55	U
75-34-3	1,1-Dichloroethane		1.19	2.39	4.78	Q, U
107-06-2	1,2-Dichloroethane		1.19	2.39	4.78	U
75-35-4	1,1-Dichloroethene		1.19	2.39	4.78	U
156-59-2	cis-1,2-Dichloroethene		1.19	2.39	4.78	U
156-60-5	trans-1,2-Dichloroethene		1.19	2.39	4.78	U
78-87-5	1,2-Dichloropropane		1.19	2.39	4.78	U
10061-01-5	cis-1,3-Dichloropropene		1.19	2.39	4.78	U
10061-02-6	trans-1,3-Dichloropropene		1.19	2.39	4.78	U
100-41-4	Ethylbenzene		1.19	2.39	4.78	U
591-78-6	2-Hexanone		2.39	4.78	9.55	X, U
98-82-8	Isopropylbenzene		1.19	2.39	4.78	U
75-09-2	Methylene chloride		2.39	4.78	9.55	Y, U
79-20-9	Methyl Acetate		2.39	4.78	9.55	U
108-87-2	Methylcyclohexane		1.19	2.39	4.78	U
108-10-1	4-Methyl-2-pentanone		2.39	4.78	9.55	X, U
1634-04-4	Methyl t-Butyl Ether		1.19	2.39	4.78	U
100-42-5	Styrene		1.19	2.39	4.78	U
79-34-5	1,1,2,2-Tetrachloroethane		1.19	2.39	4.78	U

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-03 File ID: 1012703A.D

Sampled: 10/11/12 10:00 Prepared: 10/22/12 00:00 Analyzed: 10/22/12 10:36

Solids: 96.02 Preparation: 5035A Dilution: 1

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.19	2.39	4.78	U
108-88-3	Toluene		1.19	2.39	4.78	U
87-61-6	1,2,3-Trichlorobenzene		1.19	2.39	4.78	U
120-82-1	1,2,4-Trichlorobenzene		1.19	2.39	4.78	U
79-00-5	1,1,2-Trichloroethane		1.19	2.39	4.78	U
71-55-6	1,1,1-Trichloroethane		1.19	2.39	4.78	U
79-01-6	Trichloroethene		1.19	2.39	4.78	U
75-69-4	Trichlorofluoromethane		2.39	4.78	9.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.39	4.78	9.55	U
75-01-4	Vinyl chloride		1.19	2.39	4.78	U
108-38-3/106-42-	m,p-Xylene		2.39	4.78	9.55	U
95-47-6	o-Xylene		1.19	2.39	4.78	U
1330-20-7	Xylenes (total)		3.58	7.17	14.3	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	28.66	30.14	105	85 - 120	
Dibromofluoromethane	28.66	30.67	107	80 - 125	
1,2-Dichloroethane-d4	28.66	32.39	113	75 - 140	
Toluene-d8	28.66	29.29	102	85 - 115	

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-04	File ID:	1012704A.D
Sampled:	10/11/12 10:20	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 11:06
Solids:	96.01	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
				Instrument:	MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-64-1	Acetone	9.56	4.85	9.70	19.4	Y, I
71-43-2	Benzene		1.21	2.42	4.85	U
74-97-5	Bromochloromethane		1.21	2.42	4.85	U
75-27-4	Bromodichloromethane		1.21	2.42	4.85	U
75-25-2	Bromoform		1.21	2.42	4.85	U
74-83-9	Bromomethane		2.42	4.85	9.70	U
78-93-3	2-Butanone		2.42	4.85	9.70	U
75-15-0	Carbon disulfide		1.21	2.42	4.85	U
56-23-5	Carbon tetrachloride		1.21	2.42	4.85	U
108-90-7	Chlorobenzene		1.21	2.42	4.85	U
75-00-3	Chloroethane		2.42	4.85	9.70	Y, U
67-66-3	Chloroform		1.21	2.42	4.85	U
74-87-3	Chloromethane		2.42	4.85	9.70	Y, U
110-82-7	Cyclohexane		1.21	2.42	4.85	U
124-48-1	Dibromochloromethane		1.21	2.42	4.85	U
96-12-8	1,2-Dibromo-3-chloropropane		2.42	4.85	9.70	U
106-93-4	1,2-Dibromoethane (EDB)		1.21	2.42	4.85	U
95-50-1	1,2-Dichlorobenzene		1.21	2.42	4.85	U
541-73-1	1,3-Dichlorobenzene		1.21	2.42	4.85	U
106-46-7	1,4-Dichlorobenzene		1.21	2.42	4.85	U
75-71-8	Dichlorodifluoromethane		2.42	4.85	9.70	U
75-34-3	1,1-Dichloroethane		1.21	2.42	4.85	Q, U
107-06-2	1,2-Dichloroethane		1.21	2.42	4.85	U
75-35-4	1,1-Dichloroethene		1.21	2.42	4.85	U
156-59-2	cis-1,2-Dichloroethene		1.21	2.42	4.85	U
156-60-5	trans-1,2-Dichloroethene		1.21	2.42	4.85	U
78-87-5	1,2-Dichloropropane		1.21	2.42	4.85	U
10061-01-5	cis-1,3-Dichloropropene		1.21	2.42	4.85	U
10061-02-6	trans-1,3-Dichloropropene		1.21	2.42	4.85	U
100-41-4	Ethylbenzene		1.21	2.42	4.85	U
591-78-6	2-Hexanone		2.42	4.85	9.70	X, U
98-82-8	Isopropylbenzene		1.21	2.42	4.85	U
75-09-2	Methylene chloride	3.00	2.42	4.85	9.70	Y, I
79-20-9	Methyl Acetate		2.42	4.85	9.70	U
108-87-2	Methylcyclohexane		1.21	2.42	4.85	U
108-10-1	4-Methyl-2-pentanone		2.42	4.85	9.70	X, U
1634-04-4	Methyl t-Butyl Ether		1.21	2.42	4.85	U
100-42-5	Styrene		1.21	2.42	4.85	U
79-34-5	1,1,2,2-Tetrachloroethane		1.21	2.42	4.85	U

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-04	File ID:	1012704A.D
Sampled:	10/11/12 10:20	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 11:06
Solids:	96.01	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.21	2.42	4.85	U
108-88-3	Toluene		1.21	2.42	4.85	U
87-61-6	1,2,3-Trichlorobenzene		1.21	2.42	4.85	U
120-82-1	1,2,4-Trichlorobenzene		1.21	2.42	4.85	U
79-00-5	1,1,2-Trichloroethane		1.21	2.42	4.85	U
71-55-6	1,1,1-Trichloroethane		1.21	2.42	4.85	U
79-01-6	Trichloroethene		1.21	2.42	4.85	U
75-69-4	Trichlorofluoromethane		2.42	4.85	9.70	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.42	4.85	9.70	U
75-01-4	Vinyl chloride		1.21	2.42	4.85	U
108-38-3/106-42-	m,p-Xylene		2.42	4.85	9.70	U
95-47-6	o-Xylene		1.21	2.42	4.85	U
1330-20-7	Xylenes (total)		3.64	7.27	14.5	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.09	30.22	104	85 - 120	
Dibromofluoromethane	29.09	30.81	106	80 - 125	
1,2-Dichloroethane-d4	29.09	32.38	111	75 - 140	
Toluene-d8	29.09	29.80	102	85 - 115	

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-05	File ID:	1012705A.D
Sampled:	10/11/12 10:35	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 11:37
Solids:	97.26	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-64-1	Acetone	20.8	4.97	9.94	19.9	Y
71-43-2	Benzene		1.24	2.49	4.97	U
74-97-5	Bromochloromethane		1.24	2.49	4.97	U
75-27-4	Bromodichloromethane		1.24	2.49	4.97	U
75-25-2	Bromoform		1.24	2.49	4.97	U
74-83-9	Bromomethane		2.49	4.97	9.94	U
78-93-3	2-Butanone	3.73	2.49	4.97	9.94	I
75-15-0	Carbon disulfide		1.24	2.49	4.97	U
56-23-5	Carbon tetrachloride		1.24	2.49	4.97	U
108-90-7	Chlorobenzene		1.24	2.49	4.97	U
75-00-3	Chloroethane		2.49	4.97	9.94	Y, U
67-66-3	Chloroform		1.24	2.49	4.97	U
74-87-3	Chloromethane		2.49	4.97	9.94	Y, U
110-82-7	Cyclohexane		1.24	2.49	4.97	U
124-48-1	Dibromochloromethane		1.24	2.49	4.97	U
96-12-8	1,2-Dibromo-3-chloropropane		2.49	4.97	9.94	U
106-93-4	1,2-Dibromoethane (EDB)		1.24	2.49	4.97	U
95-50-1	1,2-Dichlorobenzene		1.24	2.49	4.97	U
541-73-1	1,3-Dichlorobenzene		1.24	2.49	4.97	U
106-46-7	1,4-Dichlorobenzene		1.24	2.49	4.97	U
75-71-8	Dichlorodifluoromethane		2.49	4.97	9.94	U
75-34-3	1,1-Dichloroethane		1.24	2.49	4.97	Q, U
107-06-2	1,2-Dichloroethane		1.24	2.49	4.97	U
75-35-4	1,1-Dichloroethene		1.24	2.49	4.97	U
156-59-2	cis-1,2-Dichloroethene		1.24	2.49	4.97	U
156-60-5	trans-1,2-Dichloroethene		1.24	2.49	4.97	U
78-87-5	1,2-Dichloropropane		1.24	2.49	4.97	U
10061-01-5	cis-1,3-Dichloropropene		1.24	2.49	4.97	U
10061-02-6	trans-1,3-Dichloropropene		1.24	2.49	4.97	U
100-41-4	Ethylbenzene		1.24	2.49	4.97	U
591-78-6	2-Hexanone		2.49	4.97	9.94	X, U
98-82-8	Isopropylbenzene		1.24	2.49	4.97	U
75-09-2	Methylene chloride		2.49	4.97	9.94	Y, U
79-20-9	Methyl Acetate		2.49	4.97	9.94	U
108-87-2	Methylcyclohexane		1.24	2.49	4.97	U
108-10-1	4-Methyl-2-pentanone		2.49	4.97	9.94	X, U
1634-04-4	Methyl t-Butyl Ether		1.24	2.49	4.97	U
100-42-5	Styrene		1.24	2.49	4.97	U
79-34-5	1,1,2,2-Tetrachloroethane		1.24	2.49	4.97	U

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-05 File ID: 1012705A.D

Sampled: 10/11/12 10:35 Prepared: 10/22/12 00:00 Analyzed: 10/22/12 11:37

Solids: 97.26 Preparation: 5035A Dilution: 1

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.24	2.49	4.97	U
108-88-3	Toluene		1.24	2.49	4.97	U
87-61-6	1,2,3-Trichlorobenzene		1.24	2.49	4.97	U
120-82-1	1,2,4-Trichlorobenzene		1.24	2.49	4.97	U
79-00-5	1,1,2-Trichloroethane		1.24	2.49	4.97	U
71-55-6	1,1,1-Trichloroethane		1.24	2.49	4.97	U
79-01-6	Trichloroethene		1.24	2.49	4.97	U
75-69-4	Trichlorofluoromethane		2.49	4.97	9.94	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.49	4.97	9.94	U
75-01-4	Vinyl chloride		1.24	2.49	4.97	U
108-38-3/106-42-	m,p-Xylene		2.49	4.97	9.94	U
95-47-6	o-Xylene		1.24	2.49	4.97	U
1330-20-7	Xylenes (total)		3.73	7.46	14.9	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	29.83	30.86	103	85 - 120	
Dibromofluoromethane	29.83	31.47	106	80 - 125	
1.2-Dichloroethane-d4	29.83	33.29	112	75 - 140	
Toluene-d8	29.83	30.63	103	85 - 115	

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-06	File ID:	1012706A.D
Sampled:	10/11/12 10:55	Prepared:	10/22/12 00:00	Analyzed:	10/22/12 12:08
Solids:	97.17	Preparation:	5035A	Dilution:	1
Batch:	2J22007	Sequence:	2J29702	Calibration:	2284004
Instrument:	MS-VOA6				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-64-1	Acetone		5.08	10.2	20.3	Y, U
71-43-2	Benzene		1.27	2.54	5.08	U
74-97-5	Bromochloromethane		1.27	2.54	5.08	U
75-27-4	Bromodichloromethane		1.27	2.54	5.08	U
75-25-2	Bromoform		1.27	2.54	5.08	U
74-83-9	Bromomethane		2.54	5.08	10.2	U
78-93-3	2-Butanone		2.54	5.08	10.2	U
75-15-0	Carbon disulfide		1.27	2.54	5.08	U
56-23-5	Carbon tetrachloride		1.27	2.54	5.08	U
108-90-7	Chlorobenzene		1.27	2.54	5.08	U
75-00-3	Chloroethane		2.54	5.08	10.2	Y, U
67-66-3	Chloroform		1.27	2.54	5.08	U
74-87-3	Chloromethane		2.54	5.08	10.2	Y, U
110-82-7	Cyclohexane		1.27	2.54	5.08	U
124-48-1	Dibromochloromethane		1.27	2.54	5.08	U
96-12-8	1,2-Dibromo-3-chloropropane		2.54	5.08	10.2	U
106-93-4	1,2-Dibromoethane (EDB)		1.27	2.54	5.08	U
95-50-1	1,2-Dichlorobenzene		1.27	2.54	5.08	U
541-73-1	1,3-Dichlorobenzene		1.27	2.54	5.08	U
106-46-7	1,4-Dichlorobenzene		1.27	2.54	5.08	U
75-71-8	Dichlorodifluoromethane		2.54	5.08	10.2	U
75-34-3	1,1-Dichloroethane		1.27	2.54	5.08	Q, U
107-06-2	1,2-Dichloroethane		1.27	2.54	5.08	U
75-35-4	1,1-Dichloroethene		1.27	2.54	5.08	U
156-59-2	cis-1,2-Dichloroethene		1.27	2.54	5.08	U
156-60-5	trans-1,2-Dichloroethene		1.27	2.54	5.08	U
78-87-5	1,2-Dichloropropane		1.27	2.54	5.08	U
10061-01-5	cis-1,3-Dichloropropene		1.27	2.54	5.08	U
10061-02-6	trans-1,3-Dichloropropene		1.27	2.54	5.08	U
100-41-4	Ethylbenzene		1.27	2.54	5.08	U
591-78-6	2-Hexanone		2.54	5.08	10.2	X, U
98-82-8	Isopropylbenzene		1.27	2.54	5.08	U
75-09-2	Methylene chloride		2.54	5.08	10.2	Y, U
79-20-9	Methyl Acetate		2.54	5.08	10.2	U
108-87-2	Methylcyclohexane		1.27	2.54	5.08	U
108-10-1	4-Methyl-2-pentanone		2.54	5.08	10.2	X, U
1634-04-4	Methyl t-Butyl Ether		1.27	2.54	5.08	U
100-42-5	Styrene		1.27	2.54	5.08	U
79-34-5	1,1,2,2-Tetrachloroethane		1.27	2.54	5.08	U

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-06 File ID: 1012706A.D

Sampled: 10/11/12 10:55 Prepared: 10/22/12 00:00 Analyzed: 10/22/12 12:08

Solids: 97.17 Preparation: 5035A Dilution: 1

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.27	2.54	5.08	U
108-88-3	Toluene		1.27	2.54	5.08	U
87-61-6	1,2,3-Trichlorobenzene		1.27	2.54	5.08	U
120-82-1	1,2,4-Trichlorobenzene		1.27	2.54	5.08	U
79-00-5	1,1,2-Trichloroethane		1.27	2.54	5.08	U
71-55-6	1,1,1-Trichloroethane		1.27	2.54	5.08	U
79-01-6	Trichloroethene		1.27	2.54	5.08	U
75-69-4	Trichlorofluoromethane		2.54	5.08	10.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.54	5.08	10.2	U
75-01-4	Vinyl chloride		1.27	2.54	5.08	U
108-38-3/106-42-	m,p-Xylene		2.54	5.08	10.2	U
95-47-6	o-Xylene		1.27	2.54	5.08	U
1330-20-7	Xylenes (total)		3.81	7.63	15.3	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.51	32.14	105	85 - 120	
Dibromofluoromethane	30.51	32.29	106	80 - 125	
1,2-Dichloroethane-d4	30.51	33.85	111	75 - 140	
Toluene-d8	30.51	31.50	103	85 - 115	

ANALYSIS DATA SHEET

PEN-3221-07-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-12 File ID: 1012712.D

Sampled: 10/11/12 14:25 Prepared: 10/23/12 15:06 Analyzed: 10/23/12 15:06

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23004 Sequence: 2J29804 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-01-6	Trichloroethene	0.260	0.250	0.500	1.00	I
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

Total Target Analytes Reported: 4

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.48	105	75 - 120	
Dibromofluoromethane	30.00	32.34	108	85 - 115	
1,2-Dichloroethane-d4	30.00	29.86	99.5	70 - 120	I
Toluene-d8	30.00	30.39	101	85 - 120	

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-10 File ID: 1012710.D

Sampled: 10/11/12 12:18 Prepared: 10/23/12 14:37 Analyzed: 10/23/12 14:37

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23004 Sequence: 2J29804 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene	2.31	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-10 File ID: 1012710.D

Sampled: 10/11/12 12:18 Prepared: 10/23/12 14:37 Analyzed: 10/23/12 14:37

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23004 Sequence: 2J29804 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene	54.3	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.25	104	75 - 120	
Dibromofluoromethane	30.00	32.90	110	85 - 115	
1,2-Dichloroethane-d4	30.00	30.05	100	70 - 120	
Toluene-d8	30.00	30.96	103	85 - 120	

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-08 File ID: 1012708.D

Sampled: 10/11/12 09:15 Prepared: 10/23/12 14:08 Analyzed: 10/23/12 14:08

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23004 Sequence: 2J29804 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-08 File ID: 1012708.D

Sampled: 10/11/12 09:15 Prepared: 10/23/12 14:08 Analyzed: 10/23/12 14:08

Solids: Preparation: 5030B Dilution: 1

Batch: 2J23004 Sequence: 2J29804 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.07	104	75 - 120	
Dibromofluoromethane	30.00	32.81	109	85 - 115	
1,2-Dichloroethane-d4	30.00	29.60	98.7	70 - 120	I
Toluene-d8	30.00	30.72	102	85 - 120	

ANALYSIS DATA SHEET

Trip Blank 01035

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-13 File ID: 1012713.D

Sampled: 10/11/12 00:00 Prepared: 10/20/12 15:00 Analyzed: 10/20/12 15:00

Solids: Preparation: 5030B Dilution: 1

Batch: 2J19029 Sequence: 2J29608 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

Trip Blank 01035

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-13 File ID: 1012713.D

Sampled: 10/11/12 00:00 Prepared: 10/20/12 15:00 Analyzed: 10/20/12 15:00

Solids: Preparation: 5030B Dilution: 1

Batch: 2J19029 Sequence: 2J29608 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

Total Target Analytes Reported: 52

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.76	95.9	75 - 120	I
Dibromofluoromethane	30.00	29.56	98.5	85 - 115	I
1,2-Dichloroethane-d4	30.00	31.94	106	70 - 120	
Toluene-d8	30.00	30.56	102	85 - 120	

ANALYSIS DATA SHEET

FD10111201

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-07 File ID: 1012707.D

Sampled: 10/11/12 00:00 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 22:28

Solids: 97.48 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		81.1	163	324	U
208-96-8	Acenaphthylene		81.1	163	324	U
120-12-7	Anthracene		81.1	163	324	U
1912-24-9	Atrazine		81.1	163	324	U
100-52-7	Benzaldehyde		81.1	163	324	U
191-24-2	Benzo(g,h,i)perylene		81.1	163	324	U
207-08-9	Benzo(k)fluoranthene		81.1	163	324	U
92-52-4	1,1-Biphenyl		81.1	163	324	U
101-55-3	4-Bromophenyl-phenylether		81.1	163	324	U
85-68-7	Butylbenzylphthalate		81.1	163	324	U
105-60-2	Caprolactam		81.1	163	324	X, Q, U
86-74-8	Carbazole		81.1	163	324	U
59-50-7	4-Chloro-3-methylphenol		81.1	163	324	U
106-47-8	4-Chloroaniline		81.1	163	324	U
111-91-1	Bis(2-chloroethoxy)methane		81.1	163	324	U
111-44-4	Bis(2-chloroethyl)ether		81.1	163	324	U
108-60-1	2,2'-Oxybis-1-chloropropane		81.1	163	324	U
91-58-7	2-Chloronaphthalene		81.1	163	324	U
95-57-8	2-Chlorophenol		81.1	163	324	U
7005-72-3	4-Chlorophenyl phenyl ether		81.1	163	324	U
218-01-9	Chrysene		81.1	163	324	U
132-64-9	Dibenzofuran		81.1	163	324	U
84-74-2	Di-n-butylphthalate		81.1	163	324	U
91-94-1	3,3'-Dichlorobenzidine		81.1	163	324	X, U
120-83-2	2,4-Dichlorophenol		81.1	163	324	U
84-66-2	Diethylphthalate		81.1	163	324	U
105-67-9	2,4-Dimethylphenol		324	650	1300	U
131-11-3	Dimethyl phthalate		81.1	163	324	U
534-52-1	4,6-Dinitro-2-methylphenol		811	1630	3240	U
51-28-5	2,4-Dinitrophenol		811	1630	3240	X, U
121-14-2	2,4-Dinitrotoluene		81.1	163	324	U
606-20-2	2,6-Dinitrotoluene		81.1	163	324	U
117-84-0	Di-n-octylphthalate		81.1	163	324	U
117-81-7	Bis(2-ethylhexyl)phthalate		81.1	163	324	U
206-44-0	Fluoranthene		81.1	163	324	U
86-73-7	Fluorene		81.1	163	324	U
118-74-1	Hexachlorobenzene		81.1	163	324	U
87-68-3	Hexachlorobutadiene		81.1	163	324	U
77-47-4	Hexachlorocyclopentadiene		81.1	163	324	U

ANALYSIS DATA SHEET

FD10111201

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-07 File ID: 1012707.D

Sampled: 10/11/12 00:00 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 22:28

Solids: 97.48 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		81.1	163	324	U
193-39-5	Indeno(1,2,3-cd)pyrene		81.1	163	324	U
78-59-1	Isophorone		81.1	163	324	U
91-57-6	2-Methylnaphthalene		81.1	163	324	U
95-48-7	2-Methylphenol		81.1	163	324	U
106-44-5	4-Methylphenol		81.1	163	324	U
100-01-6	4-Nitroaniline		324	650	1300	U
99-09-2	3-Nitroaniline		324	650	1300	U
88-74-4	2-Nitroaniline		324	650	1300	U
98-95-3	Nitrobenzene		81.1	163	324	U
100-02-7	4-Nitrophenol		324	650	1300	U
88-75-5	2-Nitrophenol		81.1	163	324	X, U
62-75-9	N-Nitrosodimethylamine		81.1	163	324	U
621-64-7	N-Nitroso-di-n-propylamine		81.1	163	324	U
87-86-5	Pentachlorophenol		324	650	1300	U
85-01-8	Phenanthrene		81.1	163	324	U
108-95-2	Phenol		81.1	163	324	U
129-00-0	Pyrene		81.1	163	324	U
95-94-3	1,2,4,5-Tetrachlorobenzene		81.1	163	324	U
58-90-2	2,3,4,6-Tetrachlorophenol		81.1	163	324	U
88-06-2	2,4,6-Trichlorophenol		81.1	163	324	U
95-95-4	2,4,5-Trichlorophenol		81.1	163	324	U

Total Target Analytes Reported: 61

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3246	2611	80.4	45 - 105	
2-Fluorophenol	6493	5771	88.9	35 - 105	
Nitrobenzene-d5	3246	2669	82.2	35 - 100	
Phenol-d6	6493	5759	88.7	40 - 100	
Terphenyl-d14	3246	3229	99.5	30 - 125	
2,4,6-Tribromophenol	6493	6307	97.1	35 - 125	

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-01	File ID:	1012701.D
Sampled:	10/11/12 08:35	Prepared:	10/22/12 15:37	Analyzed:	10/31/12 18:48
Solids:	97.93	Preparation:	EXT_3546	Dilution:	1
Batch:	2J19037	Sequence:	2K30609	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		82.9	166	331	U
208-96-8	Acenaphthylene		82.9	166	331	U
120-12-7	Anthracene		82.9	166	331	U
1912-24-9	Atrazine		82.9	166	331	U
100-52-7	Benzaldehyde		82.9	166	331	U
191-24-2	Benzo(g,h,i)perylene		82.9	166	331	U
207-08-9	Benzo(k)fluoranthene		82.9	166	331	U
92-52-4	1,1-Biphenyl		82.9	166	331	U
101-55-3	4-Bromophenyl-phenylether		82.9	166	331	U
85-68-7	Butylbenzylphthalate		82.9	166	331	U
105-60-2	Caprolactam		82.9	166	331	X, N, Q, U
86-74-8	Carbazole		82.9	166	331	U
59-50-7	4-Chloro-3-methylphenol		82.9	166	331	U
106-47-8	4-Chloroaniline		82.9	166	331	U
111-91-1	Bis(2-chloroethoxy)methane		82.9	166	331	U
111-44-4	Bis(2-chloroethyl)ether		82.9	166	331	U
108-60-1	2,2'-Oxybis-1-chloropropane		82.9	166	331	U
91-58-7	2-Chloronaphthalene		82.9	166	331	U
95-57-8	2-Chlorophenol		82.9	166	331	U
7005-72-3	4-Chlorophenyl phenyl ether		82.9	166	331	U
218-01-9	Chrysene		82.9	166	331	U
132-64-9	Dibenzofuran		82.9	166	331	U
84-74-2	Di-n-butylphthalate		82.9	166	331	U
91-94-1	3,3'-Dichlorobenzidine		82.9	166	331	X, U
120-83-2	2,4-Dichlorophenol		82.9	166	331	U
84-66-2	Diethylphthalate		82.9	166	331	U
105-67-9	2,4-Dimethylphenol		331	663	1320	U
131-11-3	Dimethyl phthalate		82.9	166	331	U
534-52-1	4,6-Dinitro-2-methylphenol		829	1660	3310	U
51-28-5	2,4-Dinitrophenol		829	1660	3310	X, U
121-14-2	2,4-Dinitrotoluene		82.9	166	331	U
606-20-2	2,6-Dinitrotoluene		82.9	166	331	U
117-84-0	Di-n-octylphthalate		82.9	166	331	U
117-81-7	Bis(2-ethylhexyl)phthalate		82.9	166	331	U
206-44-0	Fluoranthene		82.9	166	331	U
86-73-7	Fluorene		82.9	166	331	U
118-74-1	Hexachlorobenzene		82.9	166	331	U
87-68-3	Hexachlorobutadiene		82.9	166	331	U
77-47-4	Hexachlorocyclopentadiene		82.9	166	331	U

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-01 File ID: 1012701.D

Sampled: 10/11/12 08:35 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 18:48

Solids: 97.93 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		82.9	166	331	U
193-39-5	Indeno(1,2,3-cd)pyrene		82.9	166	331	U
78-59-1	Isophorone		82.9	166	331	U
91-57-6	2-Methylnaphthalene		82.9	166	331	U
95-48-7	2-Methylphenol		82.9	166	331	U
106-44-5	4-Methylphenol		82.9	166	331	U
100-01-6	4-Nitroaniline		331	663	1320	U
99-09-2	3-Nitroaniline		331	663	1320	U
88-74-4	2-Nitroaniline		331	663	1320	U
98-95-3	Nitrobenzene		82.9	166	331	U
100-02-7	4-Nitrophenol		331	663	1320	U
88-75-5	2-Nitrophenol		82.9	166	331	X, U
62-75-9	N-Nitrosodimethylamine		82.9	166	331	U
621-64-7	N-Nitroso-di-n-propylamine		82.9	166	331	U
87-86-5	Pentachlorophenol		331	663	1320	U
85-01-8	Phenanthrene		82.9	166	331	U
108-95-2	Phenol		82.9	166	331	U
129-00-0	Pyrene		82.9	166	331	U
95-94-3	1,2,4,5-Tetrachlorobenzene		82.9	166	331	U
58-90-2	2,3,4,6-Tetrachlorophenol		82.9	166	331	U
88-06-2	2,4,6-Trichlorophenol		82.9	166	331	U
95-95-4	2,4,5-Trichlorophenol		82.9	166	331	U

Total Target Analytes Reported: 61

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3315	2693	81.2	45 - 105	
2-Fluorophenol	6631	5963	89.9	35 - 105	
Nitrobenzene-d5	3315	2628	79.3	35 - 100	
Phenol-d6	6631	5999	90.5	40 - 100	
Terphenyl-d14	3315	3280	98.9	30 - 125	
2,4,6-Tribromophenol	6631	6395	96.4	35 - 125	

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-02 File ID: 1012702.D

Sampled: 10/11/12 09:30 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 20:10

Solids: 96.63 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		85.1	171	340	U
208-96-8	Acenaphthylene		85.1	171	340	U
120-12-7	Anthracene		85.1	171	340	U
1912-24-9	Atrazine		85.1	171	340	U
100-52-7	Benzaldehyde		85.1	171	340	U
191-24-2	Benzo(g,h,i)perylene		85.1	171	340	U
207-08-9	Benzo(k)fluoranthene		85.1	171	340	U
92-52-4	1,1-Biphenyl		85.1	171	340	U
101-55-3	4-Bromophenyl-phenylether		85.1	171	340	U
85-68-7	Butylbenzylphthalate		85.1	171	340	U
105-60-2	Caprolactam		85.1	171	340	X, Q, U
86-74-8	Carbazole		85.1	171	340	U
59-50-7	4-Chloro-3-methylphenol		85.1	171	340	U
106-47-8	4-Chloroaniline		85.1	171	340	U
111-91-1	Bis(2-chloroethoxy)methane		85.1	171	340	U
111-44-4	Bis(2-chloroethyl)ether		85.1	171	340	U
108-60-1	2,2'-Oxybis-1-chloropropane		85.1	171	340	U
91-58-7	2-Chloronaphthalene		85.1	171	340	U
95-57-8	2-Chlorophenol		85.1	171	340	U
7005-72-3	4-Chlorophenyl phenyl ether		85.1	171	340	U
218-01-9	Chrysene		85.1	171	340	U
132-64-9	Dibenzofuran		85.1	171	340	U
84-74-2	Di-n-butylphthalate		85.1	171	340	U
91-94-1	3,3'-Dichlorobenzidine		85.1	171	340	X, U
120-83-2	2,4-Dichlorophenol		85.1	171	340	U
84-66-2	Diethylphthalate		85.1	171	340	U
105-67-9	2,4-Dimethylphenol		340	681	1360	U
131-11-3	Dimethyl phthalate		85.1	171	340	U
534-52-1	4,6-Dinitro-2-methylphenol		851	1710	3400	U
51-28-5	2,4-Dinitrophenol		851	1710	3400	X, U
121-14-2	2,4-Dinitrotoluene		85.1	171	340	U
606-20-2	2,6-Dinitrotoluene		85.1	171	340	U
117-84-0	Di-n-octylphthalate		85.1	171	340	U
117-81-7	Bis(2-ethylhexyl)phthalate		85.1	171	340	U
206-44-0	Fluoranthene		85.1	171	340	U
86-73-7	Fluorene		85.1	171	340	U
118-74-1	Hexachlorobenzene		85.1	171	340	U
87-68-3	Hexachlorobutadiene		85.1	171	340	U
77-47-4	Hexachlorocyclopentadiene		85.1	171	340	U

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-02 File ID: 1012702.D

Sampled: 10/11/12 09:30 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 20:10

Solids: 96.63 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		85.1	171	340	U
193-39-5	Indeno(1,2,3-cd)pyrene		85.1	171	340	U
78-59-1	Isophorone		85.1	171	340	U
91-57-6	2-Methylnaphthalene		85.1	171	340	U
95-48-7	2-Methylphenol		85.1	171	340	U
106-44-5	4-Methylphenol		85.1	171	340	U
100-01-6	4-Nitroaniline		340	681	1360	U
99-09-2	3-Nitroaniline		340	681	1360	U
88-74-4	2-Nitroaniline		340	681	1360	U
98-95-3	Nitrobenzene		85.1	171	340	U
100-02-7	4-Nitrophenol		340	681	1360	U
88-75-5	2-Nitrophenol		85.1	171	340	X, U
62-75-9	N-Nitrosodimethylamine		85.1	171	340	U
621-64-7	N-Nitroso-di-n-propylamine		85.1	171	340	U
87-86-5	Pentachlorophenol		340	681	1360	U
85-01-8	Phenanthrene		85.1	171	340	U
108-95-2	Phenol		85.1	171	340	U
129-00-0	Pyrene		85.1	171	340	U
95-94-3	1,2,4,5-Tetrachlorobenzene		85.1	171	340	U
58-90-2	2,3,4,6-Tetrachlorophenol		85.1	171	340	U
88-06-2	2,4,6-Trichlorophenol		85.1	171	340	U
95-95-4	2,4,5-Trichlorophenol		85.1	171	340	U

Total Target Analytes Reported: 61

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3404	2812	82.6	45 - 105	
2-Fluorophenol	6809	6295	92.5	35 - 105	
Nitrobenzene-d5	3404	2830	83.1	35 - 100	
Phenol-d6	6809	6206	91.2	40 - 100	
Terphenyl-d14	3404	3441	101	30 - 125	
2,4,6-Tribromophenol	6809	6737	98.9	35 - 125	

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Solid
Laboratory ID: 1210127-03
File ID: 1012703.D
Sampled: 10/11/12 10:00
Prepared: 10/22/12 15:37
Analyzed: 10/31/12 20:38
Solids: 96.02
Preparation: EXT_3546
Dilution: 1
Batch: 2J19037
Sequence: 2K30609
Calibration: 2261001
Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		85.6	172	342	U
208-96-8	Acenaphthylene		85.6	172	342	U
120-12-7	Anthracene		85.6	172	342	U
1912-24-9	Atrazine		85.6	172	342	U
100-52-7	Benzaldehyde		85.6	172	342	U
191-24-2	Benzo(g,h,i)perylene	144	85.6	172	342	1
207-08-9	Benzo(k)fluoranthene	108	85.6	172	342	1
92-52-4	1,1-Biphenyl		85.6	172	342	U
101-55-3	4-Bromophenyl-phenylether		85.6	172	342	U
85-68-7	Butylbenzylphthalate		85.6	172	342	U
105-60-2	Caprolactam		85.6	172	342	X, Q, U
86-74-8	Carbazole		85.6	172	342	U
59-50-7	4-Chloro-3-methylphenol		85.6	172	342	U
106-47-8	4-Chloroaniline		85.6	172	342	U
111-91-1	Bis(2-chloroethoxy)methane		85.6	172	342	U
111-44-4	Bis(2-chloroethyl)ether		85.6	172	342	U
108-60-1	2,2'-Oxybis-1-chloropropane		85.6	172	342	U
91-58-7	2-Chloronaphthalene		85.6	172	342	U
95-57-8	2-Chlorophenol		85.6	172	342	U
7005-72-3	4-Chlorophenyl phenyl ether		85.6	172	342	U
218-01-9	Chrysene		85.6	172	342	U
132-64-9	Dibenzofuran		85.6	172	342	U
84-74-2	Di-n-butylphthalate		85.6	172	342	U
91-94-1	3,3'-Dichlorobenzidine		85.6	172	342	X, U
120-83-2	2,4-Dichlorophenol		85.6	172	342	U
84-66-2	Diethylphthalate		85.6	172	342	U
105-67-9	2,4-Dimethylphenol		342	686	1370	U
131-11-3	Dimethyl phthalate		85.6	172	342	U
534-52-1	4,6-Dinitro-2-methylphenol		856	1720	3420	U
51-28-5	2,4-Dinitrophenol		856	1720	3420	X, U
121-14-2	2,4-Dinitrotoluene		85.6	172	342	U
606-20-2	2,6-Dinitrotoluene		85.6	172	342	U
117-84-0	Di-n-octylphthalate		85.6	172	342	U
117-81-7	Bis(2-ethylhexyl)phthalate	371	85.6	172	342	V
206-44-0	Fluoranthene		85.6	172	342	U
86-73-7	Fluorene		85.6	172	342	U
118-74-1	Hexachlorobenzene		85.6	172	342	U
87-68-3	Hexachlorobutadiene		85.6	172	342	U
77-47-4	Hexachlorocyclopentadiene		85.6	172	342	U

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-03 File ID: 1012703.D

Sampled: 10/11/12 10:00 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 20:38

Solids: 96.02 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		85.6	172	342	U
193-39-5	Indeno(1,2,3-cd)pyrene	98.0	85.6	172	342	I
78-59-1	Isophorone		85.6	172	342	U
91-57-6	2-Methylnaphthalene		85.6	172	342	U
95-48-7	2-Methylphenol		85.6	172	342	U
106-44-5	4-Methylphenol		85.6	172	342	U
100-01-6	4-Nitroaniline		342	686	1370	U
99-09-2	3-Nitroaniline		342	686	1370	U
88-74-4	2-Nitroaniline		342	686	1370	U
98-95-3	Nitrobenzene		85.6	172	342	U
100-02-7	4-Nitrophenol		342	686	1370	U
88-75-5	2-Nitrophenol		85.6	172	342	X, U
62-75-9	N-Nitrosodimethylamine		85.6	172	342	U
621-64-7	N-Nitroso-di-n-propylamine		85.6	172	342	U
87-86-5	Pentachlorophenol		342	686	1370	U
85-01-8	Phenanthrene		85.6	172	342	U
108-95-2	Phenol		85.6	172	342	U
129-00-0	Pyrene		85.6	172	342	U
95-94-3	1,2,4,5-Tetrachlorobenzene		85.6	172	342	U
58-90-2	2,3,4,6-Tetrachlorophenol		85.6	172	342	U
88-06-2	2,4,6-Trichlorophenol		85.6	172	342	U
95-95-4	2,4,5-Trichlorophenol		85.6	172	342	U

Total Target Analytes Reported: 61

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3426	2606	76.1	45 - 105	
2-Fluorophenol	6852	5622	82.1	35 - 105	
Nitrobenzene-d5	3426	2630	76.8	35 - 100	
Phenol-d6	6852	5809	84.8	40 - 100	
Terphenyl-d14	3426	3268	95.4	30 - 125	
2,4,6-Tribromophenol	6852	6359	92.8	35 - 125	

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-04	File ID:	1012704.D
Sampled:	10/11/12 10:20	Prepared:	10/22/12 15:37	Analyzed:	10/31/12 21:05
Solids:	96.01	Preparation:	EXT_3546	Dilution:	1
Batch:	2J19037	Sequence:	2K30609	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		83.4	167	334	U
208-96-8	Acenaphthylene		83.4	167	334	U
120-12-7	Anthracene		83.4	167	334	U
1912-24-9	Atrazine		83.4	167	334	U
100-52-7	Benzaldehyde		83.4	167	334	U
191-24-2	Benzo(g,h,i)perylene		83.4	167	334	U
207-08-9	Benzo(k)fluoranthene		83.4	167	334	U
92-52-4	1,1-Biphenyl		83.4	167	334	U
101-55-3	4-Bromophenyl-phenylether		83.4	167	334	U
85-68-7	Butylbenzylphthalate		83.4	167	334	U
105-60-2	Caprolactam		83.4	167	334	X, Q, U
86-74-8	Carbazole		83.4	167	334	U
59-50-7	4-Chloro-3-methylphenol		83.4	167	334	U
106-47-8	4-Chloroaniline		83.4	167	334	U
111-91-1	Bis(2-chloroethoxy)methane		83.4	167	334	U
111-44-4	Bis(2-chloroethyl)ether		83.4	167	334	U
108-60-1	2,2'-Oxybis-1-chloropropane		83.4	167	334	U
91-58-7	2-Chloronaphthalene		83.4	167	334	U
95-57-8	2-Chlorophenol		83.4	167	334	U
7005-72-3	4-Chlorophenyl phenyl ether		83.4	167	334	U
218-01-9	Chrysene		83.4	167	334	U
132-64-9	Dibenzofuran		83.4	167	334	U
84-74-2	Di-n-butylphthalate		83.4	167	334	U
91-94-1	3,3'-Dichlorobenzidine		83.4	167	334	X, U
120-83-2	2,4-Dichlorophenol		83.4	167	334	U
84-66-2	Diethylphthalate		83.4	167	334	U
105-67-9	2,4-Dimethylphenol		334	668	1330	U
131-11-3	Dimethyl phthalate		83.4	167	334	U
534-52-1	4,6-Dinitro-2-methylphenol		834	1670	3340	U
51-28-5	2,4-Dinitrophenol		834	1670	3340	X, U
121-14-2	2,4-Dinitrotoluene		83.4	167	334	U
606-20-2	2,6-Dinitrotoluene		83.4	167	334	U
117-84-0	Di-n-octylphthalate		83.4	167	334	U
117-81-7	Bis(2-ethylhexyl)phthalate		83.4	167	334	U
206-44-0	Fluoranthene		83.4	167	334	U
86-73-7	Fluorene		83.4	167	334	U
118-74-1	Hexachlorobenzene		83.4	167	334	U
87-68-3	Hexachlorobutadiene		83.4	167	334	U
77-47-4	Hexachlorocyclopentadiene		83.4	167	334	U

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-04 File ID: 1012704.D

Sampled: 10/11/12 10:20 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 21:05

Solids: 96.01 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		83.4	167	334	U
193-39-5	Indeno(1,2,3-cd)pyrene		83.4	167	334	U
78-59-1	Isophorone		83.4	167	334	U
91-57-6	2-Methylnaphthalene		83.4	167	334	U
95-48-7	2-Methylphenol		83.4	167	334	U
106-44-5	4-Methylphenol		83.4	167	334	U
100-01-6	4-Nitroaniline		334	668	1330	U
99-09-2	3-Nitroaniline		334	668	1330	U
88-74-4	2-Nitroaniline		334	668	1330	U
98-95-3	Nitrobenzene		83.4	167	334	U
100-02-7	4-Nitrophenol		334	668	1330	U
88-75-5	2-Nitrophenol		83.4	167	334	X, U
62-75-9	N-Nitrosodimethylamine		83.4	167	334	U
621-64-7	N-Nitroso-di-n-propylamine		83.4	167	334	U
87-86-5	Pentachlorophenol		334	668	1330	U
85-01-8	Phenanthrene		83.4	167	334	U
108-95-2	Phenol		83.4	167	334	U
129-00-0	Pyrene		83.4	167	334	U
95-94-3	1,2,4,5-Tetrachlorobenzene		83.4	167	334	U
58-90-2	2,3,4,6-Tetrachlorophenol		83.4	167	334	U
88-06-2	2,4,6-Trichlorophenol		83.4	167	334	U
95-95-4	2,4,5-Trichlorophenol		83.4	167	334	U

Total Target Analytes Reported: 61

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3338	2803	83.9	45 - 105	
2-Fluorophenol	6677	6364	95.3	35 - 105	
Nitrobenzene-d5	3338	2860	85.7	35 - 100	
Phenol-d6	6677	6250	93.6	40 - 100	
Terphenyl-d14	3338	3541	106	30 - 125	
2,4,6-Tribromophenol	6677	6879	103	35 - 125	

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-05	File ID:	1012705.D
Sampled:	10/11/12 10:35	Prepared:	10/22/12 15:37	Analyzed:	10/31/12 21:33
Solids:	97.26	Preparation:	EXT_3546	Dilution:	1
Batch:	2J19037	Sequence:	2K30609	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		84.0	168	336	U
208-96-8	Acenaphthylene		84.0	168	336	U
120-12-7	Anthracene		84.0	168	336	U
1912-24-9	Atrazine		84.0	168	336	U
100-52-7	Benzaldehyde		84.0	168	336	U
191-24-2	Benzo(g,h,i)perylene		84.0	168	336	U
207-08-9	Benzo(k)fluoranthene		84.0	168	336	U
92-52-4	1,1-Biphenyl		84.0	168	336	U
101-55-3	4-Bromophenyl-phenylether		84.0	168	336	U
85-68-7	Butylbenzylphthalate		84.0	168	336	U
105-60-2	Caprolactam		84.0	168	336	X, Q, U
86-74-8	Carbazole		84.0	168	336	U
59-50-7	4-Chloro-3-methylphenol		84.0	168	336	U
106-47-8	4-Chloroaniline		84.0	168	336	U
111-91-1	Bis(2-chloroethoxy)methane		84.0	168	336	U
111-44-4	Bis(2-chloroethyl)ether		84.0	168	336	U
108-60-1	2,2'-Oxybis-1-chloropropane		84.0	168	336	U
91-58-7	2-Chloronaphthalene		84.0	168	336	U
95-57-8	2-Chlorophenol		84.0	168	336	U
7005-72-3	4-Chlorophenyl phenyl ether		84.0	168	336	U
218-01-9	Chrysene		84.0	168	336	U
132-64-9	Dibenzofuran		84.0	168	336	U
84-74-2	Di-n-butylphthalate		84.0	168	336	U
91-94-1	3,3'-Dichlorobenzidine		84.0	168	336	X, U
120-83-2	2,4-Dichlorophenol		84.0	168	336	U
84-66-2	Diethylphthalate		84.0	168	336	U
105-67-9	2,4-Dimethylphenol		336	672	1340	U
131-11-3	Dimethyl phthalate		84.0	168	336	U
534-52-1	4,6-Dinitro-2-methylphenol		840	1680	3360	U
51-28-5	2,4-Dinitrophenol		840	1680	3360	X, U
121-14-2	2,4-Dinitrotoluene		84.0	168	336	U
606-20-2	2,6-Dinitrotoluene		84.0	168	336	U
117-84-0	Di-n-octylphthalate		84.0	168	336	U
117-81-7	Bis(2-ethylhexyl)phthalate		84.0	168	336	U
206-44-0	Fluoranthene		84.0	168	336	U
86-73-7	Fluorene		84.0	168	336	U
118-74-1	Hexachlorobenzene		84.0	168	336	U
87-68-3	Hexachlorobutadiene		84.0	168	336	U
77-47-4	Hexachlorocyclopentadiene		84.0	168	336	U

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-05 File ID: 1012705.D

Sampled: 10/11/12 10:35 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 21:33

Solids: 97.26 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		84.0	168	336	U
193-39-5	Indeno(1,2,3-cd)pyrene		84.0	168	336	U
78-59-1	Isophorone		84.0	168	336	U
91-57-6	2-Methylnaphthalene		84.0	168	336	U
95-48-7	2-Methylphenol		84.0	168	336	U
106-44-5	4-Methylphenol		84.0	168	336	U
100-01-6	4-Nitroaniline		336	672	1340	U
99-09-2	3-Nitroaniline		336	672	1340	U
88-74-4	2-Nitroaniline		336	672	1340	U
98-95-3	Nitrobenzene		84.0	168	336	U
100-02-7	4-Nitrophenol		336	672	1340	U
88-75-5	2-Nitrophenol		84.0	168	336	X, U
62-75-9	N-Nitrosodimethylamine		84.0	168	336	U
621-64-7	N-Nitroso-di-n-propylamine		84.0	168	336	U
87-86-5	Pentachlorophenol		336	672	1340	U
85-01-8	Phenanthrene		84.0	168	336	U
108-95-2	Phenol		84.0	168	336	U
129-00-0	Pyrene		84.0	168	336	U
95-94-3	1,2,4,5-Tetrachlorobenzene		84.0	168	336	U
58-90-2	2,3,4,6-Tetrachlorophenol		84.0	168	336	U
88-06-2	2,4,6-Trichlorophenol		84.0	168	336	U
95-95-4	2,4,5-Trichlorophenol		84.0	168	336	U

Total Target Analytes Reported: 61

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3360	2620	78.0	45 - 105	
2-Fluorophenol	6720	5574	82.9	35 - 105	
Nitrobenzene-d5	3360	2550	75.9	35 - 100	
Phenol-d6	6720	5809	86.4	40 - 100	
Terphenyl-d14	3360	3264	97.1	30 - 125	
2,4,6-Tribromophenol	6720	6452	96.0	35 - 125	

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-06	File ID:	1012706.D
Sampled:	10/11/12 10:55	Prepared:	10/22/12 15:37	Analyzed:	10/31/12 22:01
Solids:	97.17	Preparation:	EXT_3546	Dilution:	1
Batch:	2J19037	Sequence:	2K30609	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		81.9	164	327	U
208-96-8	Acenaphthylene		81.9	164	327	U
120-12-7	Anthracene		81.9	164	327	U
1912-24-9	Atrazine		81.9	164	327	U
100-52-7	Benzaldehyde		81.9	164	327	U
191-24-2	Benzo(g,h,i)perylene		81.9	164	327	U
207-08-9	Benzo(k)fluoranthene		81.9	164	327	U
92-52-4	1,1-Biphenyl		81.9	164	327	U
101-55-3	4-Bromophenyl-phenylether		81.9	164	327	U
85-68-7	Butylbenzylphthalate		81.9	164	327	U
105-60-2	Caprolactam		81.9	164	327	X, Q, U
86-74-8	Carbazole		81.9	164	327	U
59-50-7	4-Chloro-3-methylphenol		81.9	164	327	U
106-47-8	4-Chloroaniline		81.9	164	327	U
111-91-1	Bis(2-chloroethoxy)methane		81.9	164	327	U
111-44-4	Bis(2-chloroethyl)ether		81.9	164	327	U
108-60-1	2,2'-Oxybis-1-chloropropane		81.9	164	327	U
91-58-7	2-Chloronaphthalene		81.9	164	327	U
95-57-8	2-Chlorophenol		81.9	164	327	U
7005-72-3	4-Chlorophenyl phenyl ether		81.9	164	327	U
218-01-9	Chrysene		81.9	164	327	U
132-64-9	Dibenzofuran		81.9	164	327	U
84-74-2	Di-n-butylphthalate		81.9	164	327	U
91-94-1	3,3'-Dichlorobenzidine		81.9	164	327	X, U
120-83-2	2,4-Dichlorophenol		81.9	164	327	U
84-66-2	Diethylphthalate		81.9	164	327	U
105-67-9	2,4-Dimethylphenol		327	656	1310	U
131-11-3	Dimethyl phthalate		81.9	164	327	U
534-52-1	4,6-Dinitro-2-methylphenol		819	1640	3270	U
51-28-5	2,4-Dinitrophenol		819	1640	3270	X, U
121-14-2	2,4-Dinitrotoluene		81.9	164	327	U
606-20-2	2,6-Dinitrotoluene		81.9	164	327	U
117-84-0	Di-n-octylphthalate		81.9	164	327	U
117-81-7	Bis(2-ethylhexyl)phthalate		81.9	164	327	U
206-44-0	Fluoranthene		81.9	164	327	U
86-73-7	Fluorene		81.9	164	327	U
118-74-1	Hexachlorobenzene		81.9	164	327	U
87-68-3	Hexachlorobutadiene		81.9	164	327	U
77-47-4	Hexachlorocyclopentadiene		81.9	164	327	U

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-06 File ID: 1012706.D

Sampled: 10/11/12 10:55 Prepared: 10/22/12 15:37 Analyzed: 10/31/12 22:01

Solids: 97.17 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		81.9	164	327	U
193-39-5	Indeno(1,2,3-cd)pyrene		81.9	164	327	U
78-59-1	Isophorone		81.9	164	327	U
91-57-6	2-Methylnaphthalene		81.9	164	327	U
95-48-7	2-Methylphenol		81.9	164	327	U
106-44-5	4-Methylphenol		81.9	164	327	U
100-01-6	4-Nitroaniline		327	656	1310	U
99-09-2	3-Nitroaniline		327	656	1310	U
88-74-4	2-Nitroaniline		327	656	1310	U
98-95-3	Nitrobenzene		81.9	164	327	U
100-02-7	4-Nitrophenol		327	656	1310	U
88-75-5	2-Nitrophenol		81.9	164	327	X, U
62-75-9	N-Nitrosodimethylamine		81.9	164	327	U
621-64-7	N-Nitroso-di-n-propylamine		81.9	164	327	U
87-86-5	Pentachlorophenol		327	656	1310	U
85-01-8	Phenanthrene		81.9	164	327	U
108-95-2	Phenol		81.9	164	327	U
129-00-0	Pyrene		81.9	164	327	U
95-94-3	1,2,4,5-Tetrachlorobenzene		81.9	164	327	U
58-90-2	2,3,4,6-Tetrachlorophenol		81.9	164	327	U
88-06-2	2,4,6-Trichlorophenol		81.9	164	327	U
95-95-4	2,4,5-Trichlorophenol		81.9	164	327	U

Total Target Analytes Reported: 61

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3277	2663	81.3	45 - 105	
2-Fluorophenol	6555	5756	87.8	35 - 105	
Nitrobenzene-d5	3277	2702	82.4	35 - 100	
Phenol-d6	6555	5801	88.5	40 - 100	
Terphenyl-d14	3277	3326	101	30 - 125	
2,4,6-Tribromophenol	6555	6535	99.7	35 - 125	

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210127-10	File ID:	1012710.D
Sampled:	10/11/12 12:18	Prepared:	10/17/12 09:54	Analyzed:	10/23/12 18:42
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17004	Sequence:	2J29819	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.18	2.36	4.72	U
100-52-7	Benzaldehyde		1.18	2.36	4.72	U
92-52-4	1,1-Biphenyl		1.18	2.36	4.72	U
101-55-3	4-Bromophenyl-phenylether		1.18	2.36	4.72	U
85-68-7	Butylbenzylphthalate		1.18	2.36	4.72	U
105-60-2	Caprolactam		1.18	2.36	4.72	X, U
86-74-8	Carbazole		1.18	2.36	4.72	U
59-50-7	4-Chloro-3-methylphenol		1.18	2.36	4.72	U
106-47-8	4-Chloroaniline		1.18	2.36	4.72	U
111-91-1	Bis(2-chloroethoxy)methane		1.18	2.36	4.72	U
111-44-4	Bis(2-chloroethyl)ether		1.18	2.36	4.72	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.18	2.36	4.72	U
91-58-7	2-Chloronaphthalene		1.18	2.36	4.72	U
95-57-8	2-Chlorophenol		1.18	2.36	4.72	U
7005-72-3	4-Chlorophenyl phenyl ether		1.18	2.36	4.72	U
132-64-9	Dibenzofuran		1.18	2.36	4.72	U
84-74-2	Di-n-butylphthalate		1.18	2.36	4.72	U
91-94-1	3,3'-Dichlorobenzidine		1.18	2.36	4.72	X, U
120-83-2	2,4-Dichlorophenol		1.18	2.36	4.72	U
84-66-2	Diethylphthalate		1.18	2.36	4.72	U
105-67-9	2,4-Dimethylphenol		4.72	9.43	18.9	U
131-11-3	Dimethyl phthalate		1.18	2.36	4.72	U
534-52-1	4,6-Dinitro-2-methylphenol		4.72	9.43	18.9	Q, U
51-28-5	2,4-Dinitrophenol		7.86	23.6	47.2	Q, X, U
121-14-2	2,4-Dinitrotoluene		1.18	2.36	4.72	U
606-20-2	2,6-Dinitrotoluene		1.18	2.36	4.72	U
117-84-0	Di-n-octylphthalate		1.18	2.36	4.72	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.18	2.36	4.72	U
118-74-1	Hexachlorobenzene		1.18	2.36	4.72	U
87-68-3	Hexachlorobutadiene		1.18	2.36	4.72	U
77-47-4	Hexachlorocyclopentadiene		1.18	4.72	9.43	U
67-72-1	Hexachloroethane		1.18	2.36	4.72	U
78-59-1	Isophorone		1.18	2.36	4.72	U
95-48-7	2-Methylphenol		1.18	2.36	4.72	U
106-44-5	4-Methylphenol		1.18	2.36	4.72	U
100-01-6	4-Nitroaniline		4.72	9.43	18.9	U
99-09-2	3-Nitroaniline		4.72	9.43	18.9	U
88-74-4	2-Nitroaniline		4.72	9.43	18.9	U
98-95-3	Nitrobenzene		1.18	2.36	4.72	U

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-10 File ID: 1012710.D

Sampled: 10/11/12 12:18 Prepared: 10/17/12 09:54 Analyzed: 10/23/12 18:42

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17004 Sequence: 2J29819 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.72	9.43	18.9	Q, U
88-75-5	2-Nitrophenol		1.18	2.36	4.72	X, U
62-75-9	N-Nitrosodimethylamine		1.18	2.36	4.72	U
621-64-7	N-Nitroso-di-n-propylamine		1.18	2.36	4.72	U
87-86-5	Pentachlorophenol		4.72	9.43	18.9	Q, U
108-95-2	Phenol		1.18	2.36	4.72	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.18	2.36	4.72	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.36	4.72	9.43	Q, U
88-06-2	2,4,6-Trichlorophenol		1.18	2.36	4.72	Q, U
95-95-4	2,4,5-Trichlorophenol		1.18	2.36	4.72	Q, U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	34.25	72.6	50 - 110	
2-Fluorophenol	94.34	16.15	17.1	20 - 110	*
Nitrobenzene-d5	47.17	34.96	74.1	40 - 110	
Phenol-d6	94.34	13.97	14.8	0 - 110	
Terphenyl-d14	47.17	45.64	96.8	50 - 135	
2,4,6-Tribromophenol	94.34	47.99	50.9	40 - 125	

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210127-08	File ID:	1012708.D
Sampled:	10/11/12 09:15	Prepared:	10/17/12 09:54	Analyzed:	10/23/12 18:14
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17004	Sequence:	2J29819	Calibration:	2261001
Instrument:	MS-BNA3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.16	2.31	4.63	U
100-52-7	Benzaldehyde		1.16	2.31	4.63	U
92-52-4	1,1-Biphenyl		1.16	2.31	4.63	U
101-55-3	4-Bromophenyl-phenylether		1.16	2.31	4.63	U
85-68-7	Butylbenzylphthalate		1.16	2.31	4.63	U
105-60-2	Caprolactam		1.16	2.31	4.63	X, U
86-74-8	Carbazole		1.16	2.31	4.63	U
59-50-7	4-Chloro-3-methylphenol		1.16	2.31	4.63	U
106-47-8	4-Chloroaniline		1.16	2.31	4.63	U
111-91-1	Bis(2-chloroethoxy)methane		1.16	2.31	4.63	U
111-44-4	Bis(2-chloroethyl)ether		1.16	2.31	4.63	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.16	2.31	4.63	U
91-58-7	2-Chloronaphthalene		1.16	2.31	4.63	U
95-57-8	2-Chlorophenol		1.16	2.31	4.63	U
7005-72-3	4-Chlorophenyl phenyl ether		1.16	2.31	4.63	U
132-64-9	Dibenzofuran		1.16	2.31	4.63	U
84-74-2	Di-n-butylphthalate		1.16	2.31	4.63	U
91-94-1	3,3'-Dichlorobenzidine		1.16	2.31	4.63	X, U
120-83-2	2,4-Dichlorophenol		1.16	2.31	4.63	U
84-66-2	Diethylphthalate		1.16	2.31	4.63	U
105-67-9	2,4-Dimethylphenol		4.63	9.26	18.5	U
131-11-3	Dimethyl phthalate		1.16	2.31	4.63	U
534-52-1	4,6-Dinitro-2-methylphenol		4.63	9.26	18.5	Q, U
51-28-5	2,4-Dinitrophenol		7.71	23.1	46.3	Q, X, U
121-14-2	2,4-Dinitrotoluene		1.16	2.31	4.63	U
606-20-2	2,6-Dinitrotoluene		1.16	2.31	4.63	U
117-84-0	Di-n-octylphthalate		1.16	2.31	4.63	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.16	2.31	4.63	U
118-74-1	Hexachlorobenzene		1.16	2.31	4.63	U
87-68-3	Hexachlorobutadiene		1.16	2.31	4.63	U
77-47-4	Hexachlorocyclopentadiene		1.16	4.63	9.26	U
67-72-1	Hexachloroethane		1.16	2.31	4.63	U
78-59-1	Isophorone		1.16	2.31	4.63	U
95-48-7	2-Methylphenol		1.16	2.31	4.63	U
106-44-5	4-Methylphenol		1.16	2.31	4.63	U
100-01-6	4-Nitroaniline		4.63	9.26	18.5	U
99-09-2	3-Nitroaniline		4.63	9.26	18.5	U
88-74-4	2-Nitroaniline		4.63	9.26	18.5	U
98-95-3	Nitrobenzene		1.16	2.31	4.63	U

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-08 File ID: 1012708.D

Sampled: 10/11/12 09:15 Prepared: 10/17/12 09:54 Analyzed: 10/23/12 18:14

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J17004 Sequence: 2J29819 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
100-02-7	4-Nitrophenol		4.63	9.26	18.5	Q, U
88-75-5	2-Nitrophenol		1.16	2.31	4.63	X, U
62-75-9	N-Nitrosodimethylamine		1.16	2.31	4.63	U
621-64-7	N-Nitroso-di-n-propylamine		1.16	2.31	4.63	U
87-86-5	Pentachlorophenol		4.63	9.26	18.5	Q, U
108-95-2	Phenol		1.16	2.31	4.63	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.16	2.31	4.63	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.31	4.63	9.26	Q, U
88-06-2	2,4,6-Trichlorophenol		1.16	2.31	4.63	Q, U
95-95-4	2,4,5-Trichlorophenol		1.16	2.31	4.63	Q, U

Total Target Analytes Reported: 49

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	31.63	68.3	50 - 110	
2-Fluorophenol	92.59	13.88	15.0	20 - 110	*
Nitrobenzene-d5	46.30	31.91	68.9	40 - 110	
Phenol-d6	92.59	12.34	13.3	0 - 110	
Terphenyl-d14	46.30	41.49	89.6	50 - 135	
2,4,6-Tribromophenol	92.59	36.86	39.8	40 - 125	*

ANALYSIS DATA SHEET

FD10111201

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-07 File ID: 1012707.D

Sampled: 10/11/12 00:00 Prepared: 10/22/12 15:37 Analyzed: 11/01/12 23:00

Solids: 97.48 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30718 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.63	3.24	6.50	U
50-32-8	Benzo(a)pyrene	6.78	1.63	3.24	6.50	
205-99-2	Benzo(b)fluoranthene	5.84	1.63	3.24	6.50	I
123-91-1	1,4-Dioxane		16.3	32.4	65.0	U
53-70-3	Dibenz(a,h)anthracene		1.63	3.24	6.50	U
91-20-3	Naphthalene		1.63	3.24	6.50	U

Total Target Analytes Reported: 6

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3246	2419	74.5	14 - 129	
Terphenyl-d14	3246	2599	80.1	14 - 129	
2,4,6-Tribromophenol	6493	5944	91.5	14 - 129	

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-01	File ID:	1012701.D
Sampled:	10/11/12 08:35	Prepared:	10/22/12 15:37	Analyzed:	11/01/12 19:19
Solids:	97.93	Preparation:	EXT_3546	Dilution:	1
Batch:	2J19037	Sequence:	2K30718	Calibration:	2263001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.66	3.31	6.63	U
50-32-8	Benzo(a)pyrene	13.1	1.66	3.31	6.63	
205-99-2	Benzo(b)fluoranthene	16.2	1.66	3.31	6.63	
123-91-1	1,4-Dioxane		16.6	33.1	66.3	U
53-70-3	Dibenz(a,h)anthracene		1.66	3.31	6.63	U
91-20-3	Naphthalene		1.66	3.31	6.63	U

Total Target Analytes Reported: 6

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3315	2513	75.8	14 - 129	
Terphenyl-d14	3315	2731	82.4	14 - 129	
2,4,6-Tribromophenol	6631	6185	93.3	14 - 129	

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-02 File ID: 1012702.D

Sampled: 10/11/12 09:30 Prepared: 10/22/12 15:37 Analyzed: 11/01/12 20:41

Solids: 96.63 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30718 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.71	3.40	6.81	U
50-32-8	Benzo(a)pyrene		1.71	3.40	6.81	U
205-99-2	Benzo(b)fluoranthene		1.71	3.40	6.81	U
123-91-1	1,4-Dioxane		17.1	34.0	68.1	U
53-70-3	Dibenz(a,h)anthracene		1.71	3.40	6.81	U
91-20-3	Naphthalene		1.71	3.40	6.81	U

Total Target Analytes Reported: 6

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3404	2685	78.9	14 - 129	
Terphenyl-d14	3404	2901	85.2	14 - 129	
2,4,6-Tribromophenol	6809	6677	98.1	14 - 129	

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Solid
Laboratory ID: 1210127-03
File ID: 1012703.D
Sampled: 10/11/12 10:00
Prepared: 10/22/12 15:37
Analyzed: 11/01/12 21:09
Solids: 96.02
Preparation: EXT_3546
Dilution: 1
Batch: 2J19037
Sequence: 2K30718
Calibration: 2263001
Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.72	3.42	6.86	U
50-32-8	Benzo(a)pyrene	78.2	1.72	3.42	6.86	
205-99-2	Benzo(b)fluoranthene	108	1.72	3.42	6.86	
123-91-1	1,4-Dioxane		17.2	34.2	68.6	U
53-70-3	Dibenz(a,h)anthracene		1.72	3.42	6.86	U
91-20-3	Naphthalene		1.72	3.42	6.86	U

Total Target Analytes Reported: 6

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3426	2327	67.9	14 - 129	
Terphenyl-d14	3426	2547	74.3	14 - 129	
2,4,6-Tribromophenol	6852	5987	87.4	14 - 129	

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-04 File ID: 1012704.D

Sampled: 10/11/12 10:20 Prepared: 10/22/12 15:37 Analyzed: 11/01/12 21:37

Solids: 96.01 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30718 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.67	3.34	6.68	U
50-32-8	Benzo(a)pyrene	4.17	1.67	3.34	6.68	I
205-99-2	Benzo(b)fluoranthene	6.08	1.67	3.34	6.68	1
123-91-1	1,4-Dioxane		16.7	33.4	66.8	U
53-70-3	Dibenz(a,h)anthracene		1.67	3.34	6.68	U
91-20-3	Naphthalene		1.67	3.34	6.68	U

Total Target Analytes Reported: 6

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3338	2514	75.3	14 - 129	
Terphenyl-d14	3338	2665	79.8	14 - 129	
2,4,6-Tribromophenol	6677	6251	93.6	14 - 129	

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Solid
Laboratory ID: 1210127-05
File ID: 1012705.D
Sampled: 10/11/12 10:35
Prepared: 10/22/12 15:37
Analyzed: 11/01/12 22:05
Solids: 97.26
Preparation: EXT_3546
Dilution: 1
Batch: 2J19037
Sequence: 2K30718
Calibration: 2263001
Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.68	3.36	6.72	U
50-32-8	Benzo(a)pyrene		1.68	3.36	6.72	U
205-99-2	Benzo(b)fluoranthene		1.68	3.36	6.72	U
123-91-1	1,4-Dioxane		16.8	33.6	67.2	U
53-70-3	Dibenz(a,h)anthracene		1.68	3.36	6.72	U
91-20-3	Naphthalene		1.68	3.36	6.72	U

Total Target Analytes Reported: 6

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3360	2529	75.3	14 - 129	
Terphenyl-d14	3360	2746	81.7	14 - 129	
2,4,6-Tribromophenol	6720	6400	95.2	14 - 129	

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-06 File ID: 1012706.D

Sampled: 10/11/12 10:55 Prepared: 10/22/12 15:37 Analyzed: 11/01/12 22:33

Solids: 97.17 Preparation: EXT_3546 Dilution: 1

Batch: 2J19037 Sequence: 2K30718 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.64	3.27	6.56	U
50-32-8	Benzo(a)pyrene		1.64	3.27	6.56	U
205-99-2	Benzo(b)fluoranthene		1.64	3.27	6.56	U
123-91-1	1,4-Dioxane		16.4	32.7	65.6	U
53-70-3	Dibenz(a,h)anthracene		1.64	3.27	6.56	U
91-20-3	Naphthalene		1.64	3.27	6.56	U

Total Target Analytes Reported: 6

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3277	2400	73.2	14 - 129	
Terphenyl-d14	3277	2544	77.6	14 - 129	
2,4,6-Tribromophenol	6555	5858	89.4	14 - 129	

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210127-10	File ID:	1012710.D
Sampled:	10/11/12 12:18	Prepared:	10/17/12 09:54	Analyzed:	10/23/12 19:00
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J17004	Sequence:	2J29806	Calibration:	2263001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0472	0.0943	0.189	U
208-96-8	Acenaphthylene		0.0472	0.0943	0.189	U
120-12-7	Anthracene		0.0472	0.0943	0.189	U
56-55-3	Benzo(a)anthracene		0.0472	0.0943	0.189	U
50-32-8	Benzo(a)pyrene		0.0472	0.0943	0.189	U
205-99-2	Benzo(b)fluoranthene		0.0472	0.0943	0.189	U
191-24-2	Benzo(g,h,i)perylene		0.0472	0.0943	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.0943	0.189	U
123-91-1	1,4-Dioxane		0.472	0.943	1.89	, Q, Y U
218-01-9	Chrysene		0.0472	0.0943	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.0943	0.189	U
206-44-0	Fluoranthene		0.0472	0.0943	0.189	U
86-73-7	Fluorene		0.0472	0.0943	0.189	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0472	0.0943	0.189	U
91-57-6	2-Methylnaphthalene		0.0472	0.0943	0.189	U
91-20-3	Naphthalene		0.0472	0.0943	0.189	U
85-01-8	Phenanthrene		0.0472	0.189	0.377	U
129-00-0	Pyrene		0.0472	0.0943	0.189	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	32.95	69.8	34 - 167	
Terphenyl-d14	47.17	44.26	93.8	34 - 167	
2,4,6-Tribromophenol	94.34	51.94	55.1	34 - 167	

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Water
Laboratory ID: 1210127-08
File ID: 1012708.D
Sampled: 10/11/12 09:15
Prepared: 10/17/12 09:54
Analyzed: 10/23/12 18:32
Solids:
Preparation: EXT_3510
Dilution: 1
Batch: 2J17004
Sequence: 2J29806
Calibration: 2263001
Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
123-91-1	1,4-Dioxane		0.463	0.926	1.85	Q, Y, U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0463	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

Total Target Analytes Reported: 18

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	33.19	71.7	34 - 167	
Terphenyl-d14	46.30	39.65	85.6	34 - 167	
2,4,6-Tribromophenol	92.59	40.21	43.4	34 - 167	

ANALYSIS DATA SHEET

FD10111201

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-07 File ID: 071F7101.D

Sampled: 10/11/12 00:00 Prepared: 10/22/12 10:20 Analyzed: 10/27/12 05:38

Solids: 97.48 Preparation: EXT_3546 Dilution: 1

Batch: 2J19031 Sequence: 2J30449 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.166	0.321	0.653	UX
72-54-8	4,4'-DDD	0.944	0.166	0.321	0.653	XP
50-29-3	4,4'-DDT		0.166	0.321	0.653	U
309-00-2	Aldrin		0.107	0.321	0.653	U
319-84-6	alpha-BHC		0.107	0.321	0.653	U
5103-71-9	alpha-Chlordane [2C]		0.107	0.321	0.653	U
319-85-7	beta-BHC		0.107	0.321	0.653	U
319-86-8	delta-BHC [2C]		0.107	0.321	0.653	U
60-57-1	Dieldrin		0.166	0.321	0.653	U
959-98-8	Endosulfan I		0.107	0.321	0.653	U
33213-65-9	Endosulfan II [2C]	1.21	0.166	0.321	0.653	P
1031-07-8	Endosulfan sulfate		0.166	0.321	0.653	U
72-20-8	Endrin [2C]		0.166	0.321	0.653	U
7421-93-4	Endrin aldehyde		0.166	0.321	0.653	U
53494-70-5	Endrin ketone		0.166	0.321	0.653	U
58-89-9	gamma-BHC (Lindane) [2C]	0.789	0.107	0.321	0.653	P
5103-74-2	gamma-Chlordane [2C]	0.328	0.107	0.321	0.653	J
76-44-8	Heptachlor		0.107	0.321	0.653	U
1024-57-3	Heptachlor epoxide [2C]		0.107	0.321	0.653	U
72-43-5	Methoxychlor [2C]		0.107	0.321	0.653	U
8001-35-2	Toxaphene		10.7	21.4	32.1	UY

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.23	9.613	59.2	70 - 125	*
Tetrachloro-m-xylene [2C]	16.23	8.628	53.2	70 - 125	*
Decachlorobiphenyl	16.23	11.61	71.5	55 - 130	
Decachlorobiphenyl [2C]	16.23	11.29	69.6	55 - 130	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-01 File ID: 042F4201.D

Sampled: 10/11/12 08:35 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 01:15

Solids: 97.93 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.165	0.320	0.650	U
72-54-8	4,4'-DDD [2C]		0.165	0.320	0.650	U
50-29-3	4,4'-DDT		0.165	0.320	0.650	U
309-00-2	Aldrin		0.107	0.320	0.650	U
319-84-6	alpha-BHC		0.107	0.320	0.650	U
5103-71-9	alpha-Chlordane [2C]		0.107	0.320	0.650	UN
319-85-7	beta-BHC		0.107	0.320	0.650	U
319-86-8	delta-BHC		0.107	0.320	0.650	U
60-57-1	Dieldrin		0.165	0.320	0.650	U
959-98-8	Endosulfan I [2C]		0.107	0.320	0.650	U
33213-65-9	Endosulfan II	0.432	0.165	0.320	0.650	J
1031-07-8	Endosulfan sulfate		0.165	0.320	0.650	U
72-20-8	Endrin [2C]	0.267	0.165	0.320	0.650	JPN, M
7421-93-4	Endrin aldehyde [2C]		0.165	0.320	0.650	U
53494-70-5	Endrin ketone		0.165	0.320	0.650	U
58-89-9	gamma-BHC (Lindane)	0.306	0.107	0.320	0.650	JP
5103-74-2	gamma-Chlordane [2C]	1.06	0.107	0.320	0.650	N
76-44-8	Heptachlor		0.107	0.320	0.650	U
1024-57-3	Heptachlor epoxide [2C]		0.107	0.320	0.650	UN
72-43-5	Methoxychlor [2C]		0.107	0.320	0.650	U
8001-35-2	Toxaphene		10.7	21.3	32.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.16	9.658	59.8	70 - 125	*
Tetrachloro-m-xylene [2C]	16.16	8.982	55.6	70 - 125	*
Decachlorobiphenyl	16.16	11.37	70.4	55 - 130	
Decachlorobiphenyl [2C]	16.16	9.948	61.6	55 - 130	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-02 File ID: 047F4701.D

Sampled: 10/11/12 09:30 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 02:50

Solids: 96.63 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.168	0.326	0.662	U
72-54-8	4,4'-DDD [2C]		0.168	0.326	0.662	U
50-29-3	4,4'-DDT		0.168	0.326	0.662	U
309-00-2	Aldrin		0.109	0.326	0.662	U
319-84-6	alpha-BHC		0.109	0.326	0.662	U
5103-71-9	alpha-Chlordane		0.109	0.326	0.662	U
319-85-7	beta-BHC		0.109	0.326	0.662	U
319-86-8	delta-BHC [2C]		0.109	0.326	0.662	U
60-57-1	Dieldrin		0.168	0.326	0.662	U
959-98-8	Endosulfan I [2C]		0.109	0.326	0.662	U
33213-65-9	Endosulfan II		0.168	0.326	0.662	U
1031-07-8	Endosulfan sulfate		0.168	0.326	0.662	U
72-20-8	Endrin [2C]		0.168	0.326	0.662	U
7421-93-4	Endrin aldehyde [2C]		0.168	0.326	0.662	U
53494-70-5	Endrin ketone		0.168	0.326	0.662	U
58-89-9	gamma-BHC (Lindane) [2C]		0.109	0.326	0.662	U
5103-74-2	gamma-Chlordane [2C]	1.24	0.109	0.326	0.662	P
76-44-8	Heptachlor		0.109	0.326	0.662	U
1024-57-3	Heptachlor epoxide		0.109	0.326	0.662	U
72-43-5	Methoxychlor [2C]		0.109	0.326	0.662	U
8001-35-2	Toxaphene		10.9	21.8	32.6	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.48	10.46	63.5	70 - 125	*
Tetrachloro-m-xylene [2C]	16.48	9.436	57.3	70 - 125	*
Decachlorobiphenyl	16.48	11.89	72.1	55 - 130	
Decachlorobiphenyl [2C]	16.48	10.93	66.3	55 - 130	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-03 File ID: 048F4801.D

Sampled: 10/11/12 10:00 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 03:09

Solids: 96.02 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE	0.475	0.168	0.326	0.662	J
72-54-8	4,4'-DDD [2C]	0.312	0.168	0.326	0.662	JPM
50-29-3	4,4'-DDT	1.20	0.168	0.326	0.662	PM
309-00-2	Aldrin		0.109	0.326	0.662	U
319-84-6	alpha-BHC		0.109	0.326	0.662	U
5103-71-9	alpha-Chlordane [2C]	0.915	0.109	0.326	0.662	PM
319-85-7	beta-BHC		0.109	0.326	0.662	U
319-86-8	delta-BHC		0.109	0.326	0.662	U
60-57-1	Dieldrin	0.356	0.168	0.326	0.662	JPM
959-98-8	Endosulfan I		0.109	0.326	0.662	U
33213-65-9	Endosulfan II	3.43	0.168	0.326	0.662	
1031-07-8	Endosulfan sulfate		0.168	0.326	0.662	U
72-20-8	Endrin [2C]		0.168	0.326	0.662	U
7421-93-4	Endrin aldehyde [2C]		0.168	0.326	0.662	U
53494-70-5	Endrin ketone		0.168	0.326	0.662	U
58-89-9	gamma-BHC (Lindane)		0.109	0.326	0.662	U
5103-74-2	gamma-Chlordane [2C]	4.86	0.109	0.326	0.662	P
76-44-8	Heptachlor		0.109	0.326	0.662	U
1024-57-3	Heptachlor epoxide [2C]		0.109	0.326	0.662	U
72-43-5	Methoxychlor		0.109	0.326	0.662	U
8001-35-2	Toxaphene		10.9	21.8	32.6	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.48	10.88	66.0	70 - 125	*
Tetrachloro-m-xylene [2C]	16.48	9.620	58.4	70 - 125	*
Decachlorobiphenyl	16.48	12.39	75.2	55 - 130	
Decachlorobiphenyl [2C]	16.48	9.363	56.8	55 - 130	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-04 File ID: 049F4901.D

Sampled: 10/11/12 10:20 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 03:28

Solids: 96.01 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.169	0.328	0.667	U
72-54-8	4,4'-DDD [2C]		0.169	0.328	0.667	U
50-29-3	4,4'-DDT		0.169	0.328	0.667	U
309-00-2	Aldrin		0.109	0.328	0.667	U
319-84-6	alpha-BHC		0.109	0.328	0.667	U
5103-71-9	alpha-Chlordane [2C]		0.109	0.328	0.667	U
319-85-7	beta-BHC		0.109	0.328	0.667	U
319-86-8	delta-BHC		0.109	0.328	0.667	U
60-57-1	Dieldrin		0.169	0.328	0.667	U
959-98-8	Endosulfan I [2C]		0.109	0.328	0.667	U
33213-65-9	Endosulfan II	0.329	0.169	0.328	0.667	J
1031-07-8	Endosulfan sulfate		0.169	0.328	0.667	U
72-20-8	Endrin [2C]		0.169	0.328	0.667	U
7421-93-4	Endrin aldehyde [2C]		0.169	0.328	0.667	U
53494-70-5	Endrin ketone		0.169	0.328	0.667	U
58-89-9	gamma-BHC (Lindane)		0.109	0.328	0.667	U
5103-74-2	gamma-Chlordane [2C]	1.06	0.109	0.328	0.667	P
76-44-8	Heptachlor		0.109	0.328	0.667	U
1024-57-3	Heptachlor epoxide		0.109	0.328	0.667	U
72-43-5	Methoxychlor [2C]		0.109	0.328	0.667	U
8001-35-2	Toxaphene		10.9	21.9	32.8	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.59	9.773	58.9	70 - 125	*
Tetrachloro-m-xylene [2C]	16.59	8.951	54.0	70 - 125	*
Decachlorobiphenyl	16.59	12.14	73.2	55 - 130	
Decachlorobiphenyl [2C]	16.59	9.544	57.5	55 - 130	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-05	File ID:	050R5001.D
Sampled:	10/11/12 10:35	Prepared:	10/17/12 07:46	Analyzed:	10/18/12 03:47
Solids:	97.26	Preparation:	EXT_3546	Dilution:	1
Batch:	2J12031	Sequence:	2J29616	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE [2C]		0.167	0.324	0.658	U
72-54-8	4,4'-DDD [2C]	0.489	0.167	0.324	0.658	JPM
50-29-3	4,4'-DDT		0.167	0.324	0.658	U
309-00-2	Aldrin		0.108	0.324	0.658	U
319-84-6	alpha-BHC		0.108	0.324	0.658	U
5103-71-9	alpha-Chlordane [2C]	1.06	0.108	0.324	0.658	PM
319-85-7	beta-BHC		0.108	0.324	0.658	U
319-86-8	delta-BHC		0.108	0.324	0.658	U
60-57-1	Dieldrin	1.46	0.167	0.324	0.658	P
959-98-8	Endosulfan I [2C]		0.108	0.324	0.658	U
33213-65-9	Endosulfan II	0.169	0.167	0.324	0.658	JPM
1031-07-8	Endosulfan sulfate		0.167	0.324	0.658	U
72-20-8	Endrin [2C]		0.167	0.324	0.658	U
7421-93-4	Endrin aldehyde [2C]	0.917	0.167	0.324	0.658	P
53494-70-5	Endrin ketone		0.167	0.324	0.658	U
58-89-9	gamma-BHC (Lindane)		0.108	0.324	0.658	U
5103-74-2	gamma-Chlordane	4.35	0.108	0.324	0.658	
76-44-8	Heptachlor		0.108	0.324	0.658	U
1024-57-3	Heptachlor epoxide [2C]		0.108	0.324	0.658	U
72-43-5	Methoxychlor [2C]	0.146	0.108	0.324	0.658	JPM
8001-35-2	Toxaphene		10.8	21.6	32.4	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.37	10.03	61.3	70 - 125	*
Tetrachloro-m-xylene [2C]	16.37	9.217	56.3	70 - 125	*
Decachlorobiphenyl	16.37	11.84	72.3	55 - 130	
Decachlorobiphenyl [2C]	16.37	7.606	46.5	55 - 130	*

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-06 File ID: 051F5101.D

Sampled: 10/11/12 10:55 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 04:06

Solids: 97.17 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.168	0.327	0.663	U
72-54-8	4,4'-DDD [2C]		0.168	0.327	0.663	U
50-29-3	4,4'-DDT		0.168	0.327	0.663	U
309-00-2	Aldrin		0.109	0.327	0.663	U
319-84-6	alpha-BHC		0.109	0.327	0.663	U
5103-71-9	alpha-Chlordane [2C]		0.109	0.327	0.663	U
319-85-7	beta-BHC		0.109	0.327	0.663	U
319-86-8	delta-BHC		0.109	0.327	0.663	U
60-57-1	Dieldrin		0.168	0.327	0.663	U
959-98-8	Endosulfan I [2C]		0.109	0.327	0.663	U
33213-65-9	Endosulfan II		0.168	0.327	0.663	U
1031-07-8	Endosulfan sulfate		0.168	0.327	0.663	U
72-20-8	Endrin [2C]	0.243	0.168	0.327	0.663	JPM
7421-93-4	Endrin aldehyde [2C]		0.168	0.327	0.663	U
53494-70-5	Endrin ketone		0.168	0.327	0.663	U
58-89-9	gamma-BHC (Lindane)		0.109	0.327	0.663	U
5103-74-2	gamma-Chlordane [2C]	0.680	0.109	0.327	0.663	
76-44-8	Heptachlor		0.109	0.327	0.663	U
1024-57-3	Heptachlor epoxide		0.109	0.327	0.663	U
72-43-5	Methoxychlor [2C]		0.109	0.327	0.663	U
8001-35-2	Toxaphene		10.9	21.8	32.7	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.49	10.13	61.4	70 - 125	*
Tetrachloro-m-xylene [2C]	16.49	9.621	58.3	70 - 125	*
Decachlorobiphenyl	16.49	12.12	73.5	55 - 130	
Decachlorobiphenyl [2C]	16.49	8.301	50.3	55 - 130	*

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210127-10	File ID:	048F4801.D
Sampled:	10/11/12 12:18	Prepared:	10/16/12 14:38	Analyzed:	10/19/12 00:39
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J16016	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00463	0.00926	0.0185	U
72-54-8	4,4'-DDD		0.00463	0.00926	0.0185	UX
50-29-3	4,4'-DDT		0.00463	0.00926	0.0185	U
309-00-2	Aldrin		0.00306	0.00926	0.0185	U
319-84-6	alpha-BHC		0.00306	0.00926	0.0185	U
5103-71-9	alpha-Chlordane		0.00306	0.00926	0.0185	U
319-85-7	beta-BHC		0.00306	0.00926	0.0185	U
319-86-8	delta-BHC		0.00306	0.00926	0.0185	UX
60-57-1	Dieldrin		0.00463	0.00926	0.0185	U
959-98-8	Endosulfan I		0.00306	0.00926	0.0185	U
33213-65-9	Endosulfan II		0.00463	0.00926	0.0185	U
1031-07-8	Endosulfan sulfate		0.00463	0.00926	0.0185	U
72-20-8	Endrin		0.00463	0.00926	0.0185	U
7421-93-4	Endrin aldehyde		0.00463	0.00926	0.0185	U
53494-70-5	Endrin ketone		0.00463	0.00926	0.0185	U
58-89-9	gamma-BHC (Lindane)		0.00306	0.00926	0.0185	U
5103-74-2	gamma-Chlordane		0.00306	0.00926	0.0185	U
76-44-8	Heptachlor		0.00306	0.00926	0.0185	U
1024-57-3	Heptachlor epoxide		0.00306	0.00926	0.0185	U
72-43-5	Methoxychlor		0.00306	0.00926	0.0185	U
8001-35-2	Toxaphene		0.306	0.463	0.926	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3433	74.1	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3231	69.8	25 - 140	Y
Decachlorobiphenyl	0.4630	0.3244	70.1	30 - 135	
Decachlorobiphenyl [2C]	0.4630	0.3045	65.8	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Water	Laboratory ID:	1210127-08	File ID:	047F4701.D
Sampled:	10/11/12 09:15	Prepared:	10/16/12 14:38	Analyzed:	10/19/12 00:20
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	2J16016	Sequence:	2J29706	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00472	0.00943	0.0189	U
72-54-8	4,4'-DDD		0.00472	0.00943	0.0189	UX
50-29-3	4,4'-DDT		0.00472	0.00943	0.0189	U
309-00-2	Aldrin		0.00311	0.00943	0.0189	U
319-84-6	alpha-BHC		0.00311	0.00943	0.0189	U
5103-71-9	alpha-Chlordane		0.00311	0.00943	0.0189	U
319-85-7	beta-BHC		0.00311	0.00943	0.0189	U
319-86-8	delta-BHC		0.00311	0.00943	0.0189	UX
60-57-1	Dieldrin		0.00472	0.00943	0.0189	U
959-98-8	Endosulfan I		0.00311	0.00943	0.0189	U
33213-65-9	Endosulfan II		0.00472	0.00943	0.0189	U
1031-07-8	Endosulfan sulfate		0.00472	0.00943	0.0189	U
72-20-8	Endrin		0.00472	0.00943	0.0189	U
7421-93-4	Endrin aldehyde		0.00472	0.00943	0.0189	U
53494-70-5	Endrin ketone		0.00472	0.00943	0.0189	U
58-89-9	gamma-BHC (Lindane)		0.00311	0.00943	0.0189	U
5103-74-2	gamma-Chlordane		0.00311	0.00943	0.0189	U
76-44-8	Heptachlor		0.00311	0.00943	0.0189	U
1024-57-3	Heptachlor epoxide		0.00311	0.00943	0.0189	U
72-43-5	Methoxychlor		0.00311	0.00943	0.0189	U
8001-35-2	Toxaphene		0.311	0.472	0.943	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3624	76.8	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3379	71.6	25 - 140	Y
Decachlorobiphenyl	0.4717	0.3333	70.7	30 - 135	
Decachlorobiphenyl [2C]	0.4717	0.3184	67.5	30 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

FD10111201

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-07	File ID:	071F7101.D
Sampled:	10/11/12 00:00	Prepared:	10/22/12 10:20	Analyzed:	10/27/12 05:38
Solids:	97.48	Preparation:	EXT_3546	Dilution:	1
Batch:	2J19031	Sequence:	2J30449	Calibration:	2299003
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.09	8.11	16.6	U
11104-28-2	Aroclor-1221		4.09	8.11	16.6	U
11141-16-5	Aroclor-1232		4.09	8.11	16.6	U
53469-21-9	Aroclor-1242		4.09	8.11	16.6	U
12672-29-6	Aroclor-1248		4.09	8.11	16.6	U
11097-69-1	Aroclor-1254		4.09	8.11	16.6	U
11096-82-5	Aroclor-1260		4.09	8.11	16.6	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.23	9.613	59.2	70 - 125	*
Tetrachloro-m-xylene [2C]	16.23	8.628	53.2	70 - 125	*
Decachlorobiphenyl	16.23	11.61	71.5	60 - 125	
Decachlorobiphenyl [2C]	16.23	11.29	69.6	60 - 125	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS01-0-2-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Solid
Laboratory ID: 1210127-01
File ID: 042F4201.D
Sampled: 10/11/12 08:35
Prepared: 10/17/12 07:46
Analyzed: 10/18/12 01:15
Solids: 97.93
Preparation: EXT_3546
Dilution: 1
Batch: 2J12031
Sequence: 2J29616
Calibration: 2284005
Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.07	8.08	16.5	U
11104-28-2	Aroclor-1221		4.07	8.08	16.5	U
11141-16-5	Aroclor-1232		4.07	8.08	16.5	U
53469-21-9	Aroclor-1242		4.07	8.08	16.5	U
12672-29-6	Aroclor-1248		4.07	8.08	16.5	U
11097-69-1	Aroclor-1254		4.07	8.08	16.5	U
11096-82-5	Aroclor-1260		4.07	8.08	16.5	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.16	9.658	59.8	70 - 125	*
Tetrachloro-m-xylene [2C]	16.16	8.982	55.6	70 - 125	*
Decachlorobiphenyl	16.16	11.37	70.4	60 - 125	
Decachlorobiphenyl [2C]	16.16	9.948	61.6	60 - 125	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS01-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-02 File ID: 047F4701.D

Sampled: 10/11/12 09:30 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 02:50

Solids: 96.63 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.15	8.24	16.8	U
11104-28-2	Aroclor-1221		4.15	8.24	16.8	U
11141-16-5	Aroclor-1232		4.15	8.24	16.8	U
53469-21-9	Aroclor-1242		4.15	8.24	16.8	U
12672-29-6	Aroclor-1248		4.15	8.24	16.8	U
11097-69-1	Aroclor-1254		4.15	8.24	16.8	U
11096-82-5	Aroclor-1260		4.15	8.24	16.8	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.48	10.46	63.5	70 - 125	*
Tetrachloro-m-xylene [2C]	16.48	9.436	57.3	70 - 125	*
Decachlorobiphenyl	16.48	11.89	72.1	60 - 125	
Decachlorobiphenyl [2C]	16.48	10.93	66.3	60 - 125	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS02-0-2-10/12

Laboratory:	Empirical Laboratories, LLC			SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Pensacola CTO 0079 Site 44
Matrix:	Solid	Laboratory ID:	1210127-03	File ID:	048F4801.D
Sampled:	10/11/12 10:00	Prepared:	10/17/12 07:46	Analyzed:	10/18/12 03:09
Solids:	96.02	Preparation:	EXT_3546	Dilution:	1
Batch:	2J12031	Sequence:	2J29616	Calibration:	2284005
Instrument:	GL-ECD3				

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.15	8.24	16.8	U
11104-28-2	Aroclor-1221		4.15	8.24	16.8	U
11141-16-5	Aroclor-1232		4.15	8.24	16.8	U
53469-21-9	Aroclor-1242		4.15	8.24	16.8	U
12672-29-6	Aroclor-1248		4.15	8.24	16.8	U
11097-69-1	Aroclor-1254		4.15	8.24	16.8	U
11096-82-5	Aroclor-1260	21.7	4.15	8.24	16.8	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.48	10.88	66.0	70 - 125	*
Tetrachloro-m-xylene [2C]	16.48	9.620	58.4	70 - 125	*
Decachlorobiphenyl	16.48	12.39	75.2	60 - 125	
Decachlorobiphenyl [2C]	16.48	9.363	56.8	60 - 125	*

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS02-6-8-10/12

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Matrix: Solid
Laboratory ID: 1210127-04
File ID: 049F4901.D
Sampled: 10/11/12 10:20
Prepared: 10/17/12 07:46
Analyzed: 10/18/12 03:28
Solids: 96.01
Preparation: EXT_3546
Dilution: 1
Batch: 2J12031
Sequence: 2J29616
Calibration: 2284005
Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.18	8.29	16.9	U
11104-28-2	Aroclor-1221		4.18	8.29	16.9	U
11141-16-5	Aroclor-1232		4.18	8.29	16.9	U
53469-21-9	Aroclor-1242		4.18	8.29	16.9	U
12672-29-6	Aroclor-1248		4.18	8.29	16.9	U
11097-69-1	Aroclor-1254		4.18	8.29	16.9	U
11096-82-5	Aroclor-1260		4.18	8.29	16.9	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.59	9.773	58.9	70 - 125	*
Tetrachloro-m-xylene [2C]	16.59	8.951	54.0	70 - 125	*
Decachlorobiphenyl	16.59	12.14	73.2	60 - 125	
Decachlorobiphenyl [2C]	16.59	9.544	57.5	60 - 125	*

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS03-0-2-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-05 File ID: 050F5001.D

Sampled: 10/11/12 10:35 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 03:47

Solids: 97.26 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.13	8.18	16.7	U
11104-28-2	Aroclor-1221		4.13	8.18	16.7	U
11141-16-5	Aroclor-1232		4.13	8.18	16.7	U
53469-21-9	Aroclor-1242		4.13	8.18	16.7	U
12672-29-6	Aroclor-1248		4.13	8.18	16.7	U
11097-69-1	Aroclor-1254	24.1	4.13	8.18	16.7	
11096-82-5	Aroclor-1260	20.8	4.13	8.18	16.7	P

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.37	10.03	61.3	70 - 125	*
Tetrachloro-m-xylene [2C]	16.37	9.217	56.3	70 - 125	*
Decachlorobiphenyl	16.37	11.84	72.3	60 - 125	
Decachlorobiphenyl [2C]	16.37	7.606	46.5	60 - 125	*

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-SS03-6-8-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Solid Laboratory ID: 1210127-06 File ID: 051F5101.D

Sampled: 10/11/12 10:55 Prepared: 10/17/12 07:46 Analyzed: 10/18/12 04:06

Solids: 97.17 Preparation: EXT_3546 Dilution: 1

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg dry	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.16	8.24	16.8	U
11104-28-2	Aroclor-1221		4.16	8.24	16.8	U
11141-16-5	Aroclor-1232		4.16	8.24	16.8	U
53469-21-9	Aroclor-1242		4.16	8.24	16.8	U
12672-29-6	Aroclor-1248		4.16	8.24	16.8	U
11097-69-1	Aroclor-1254		4.16	8.24	16.8	U
11096-82-5	Aroclor-1260		4.16	8.24	16.8	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.49	10.13	61.4	70 - 125	*
Tetrachloro-m-xylene [2C]	16.49	9.621	58.3	70 - 125	*
Decachlorobiphenyl	16.49	12.12	73.5	60 - 125	
Decachlorobiphenyl [2C]	16.49	8.301	50.3	60 - 125	*

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-3221-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-10 File ID: 048F4801.D

Sampled: 10/11/12 12:18 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 00:39

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.111	0.231	0.463	U
11104-28-2	Aroclor-1221		0.111	0.231	0.463	U
11141-16-5	Aroclor-1232		0.111	0.231	0.463	U
53469-21-9	Aroclor-1242		0.111	0.231	0.463	U
12672-29-6	Aroclor-1248		0.111	0.231	0.463	U
11097-69-1	Aroclor-1254		0.111	0.231	0.463	U
11096-82-5	Aroclor-1260		0.111	0.231	0.463	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4630	0.3433	74.1	25 - 140	
Tetrachloro-m-xylene [2C]	0.4630	0.3231	69.8	25 - 140	Y
Decachlorobiphenyl	0.4630	0.3244	70.1	40 - 135	
Decachlorobiphenyl [2C]	0.4630	0.3045	65.8	40 - 135	

* Values outside of QC limits

ANALYSIS DATA SHEET

PEN-44-09-10/12

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Water Laboratory ID: 1210127-08 File ID: 047F4701.D

Sampled: 10/11/12 09:15 Prepared: 10/16/12 14:38 Analyzed: 10/19/12 00:20

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.113	0.236	0.472	U
11104-28-2	Aroclor-1221		0.113	0.236	0.472	U
11141-16-5	Aroclor-1232		0.113	0.236	0.472	U
53469-21-9	Aroclor-1242		0.113	0.236	0.472	U
12672-29-6	Aroclor-1248		0.113	0.236	0.472	U
11097-69-1	Aroclor-1254		0.113	0.236	0.472	U
11096-82-5	Aroclor-1260		0.113	0.236	0.472	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.4717	0.3624	76.8	25 - 140	
Tetrachloro-m-xylene [2C]	0.4717	0.3379	71.6	25 - 140	Y
Decachlorobiphenyl	0.4717	0.3333	70.7	40 - 135	
Decachlorobiphenyl [2C]	0.4717	0.3184	67.5	40 - 135	

* Values outside of QC limits

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Sample PEN-3221-07-10/12 was received for dissolved metals but was not listed on the COC.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following batch spikes exceeded criteria:
2J22007-BSD1 with a negative bias for 1,1-Dichloroethane

The following matrix spikes exceeded criteria:
2J22007-MS1/MSD1 (1210127-01) with a negative bias for Chlorobenzene, Cyclohexane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,1-Dichloroethane, 1,1-Dichloroethene, Isopropylbenzene, Methylcyclohexane, Styrene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, m,p-Xylene, o-Xylene, and Xylene (total)

The following was analyzed after the 12-hour tune criteria:
2J29702-BSD1 was analyzed 12 hours 16 minutes after the associated tune standard
2J23004-BSD1 was analyzed 12 hours 28 minutes after the associated tune standard

The following continuing calibration verifications exceeded criteria:
2J29608-CCV1 with a negative bias for Acetone and a positive bias for Carbon Disulfide, Chloromethane, Cyclohexane, Dichlorodifluoromethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, and Vinyl Chloride
2J29702-CCV1 with a negative bias for Acetone, Chloroethane, Chloromethane, and Methylene Chloride and a positive bias for 2-Hexanone and 4-Methyl-2-pentanone
2J29804-CCV1 CCV1 with a negative bias for Acetone and a positive bias for Dichlorodifluoromethane

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA:
The following surrogates exceeded criteria:
2-Fluorophenol with a negative bias in 1210127-08 and -10
2,4,6-Tribromophenol with a negative bias in 1210127-08

The following batch spikes exceeded criteria:
2J17004-BS1/BSD1 exceeded relative percent difference criteria for 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, 4-Nitrophenol, Pentachlorophenol, 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, and 2,4,6-Trichlorophenol
2J19037-BS1 with a positive bias for Caprolactam

The following matrix spikes exceeded criteria:
2J19037-MS1/MSD1 (1210127-01) with a positive bias for Caprolactam

The following blanks have reported results:
2J19037-BLK1 for Bis(2-ethylhexyl)phthalate

The following continuing calibration verifications exceeded criteria:

2J29819-CCV1 with a positive bias for 2,4-Dinitrophenol and 2-Nitrophenol
2J29819-CCV2 with a positive bias for Caprolactam and 3,3'-Dichlorobenzidine
2K30609-CCV1 with a positive bias for 2,4-Dinitrophenol and 2-Nitrophenol
2K30609-CCV2 with a positive bias for Caprolactam and 3,3'-Dichlorobenzidine

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D BNA LOW:
Note - There was a mismatch between the bid and the SAP, and the 1,4-Dioxane was missed when the project was set up in the LIMS, which drives the spiking and reporting. When this was discovered, the samples were already outside of 1x holding time. As per the client's okay, samples are being reported with 1,4-Dioxane CCVs only and no batch, matrix spike, or matrix spike duplicates.

The following continuing calibration verifications exceeded criteria:
2J29806-CCV1 with a negative bias for 1,4-Dioxane and a positive bias for 2,4,6-Tribromophenol

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8081A:
Note –Samples with positive results for PCBs may attribute to higher results and/or false positives for individual Pesticide analytes.

The following surrogates exceeded criteria:
Tetrachloro-m-xylene with a negative bias on both columns in 1210127-01, -02, -03, -04, -05, -06, -07, 2J12031-MS1, and –MSD1 and on column 2 in 2J12031-BLK1 and -BS1
Decachlorobiphenyl with a negative bias on column 2 in 1210127-05 and -06

The following batch spikes exceeded criteria:
2J12031-BS1 with a negative bias on column 2 for Endrin Ketone
2J16016-BS1 with a negative bias on column 2 for Endrin Ketone

The following matrix spikes exceeded criteria:
2J12031-MS1/MSD1 (1210127-01) with a negative bias on column 2 for 4,4'-DDE, Alpha-BHC, Alpha-chlordane, Dieldrin, Endrin, Endrin Ketone, Gamma-BHC, Gamma-chlordane, and Heptachlor Epoxide

The following blanks have reported results:
2J16016-BLK1 for Gamma-chlordane; note – no positive results were detected in the

associated samples

The following initial calibration verifications exceeded criteria:
2J28406-ICV2 with a negative bias on column 2 for Toxaphene
2J29909-ICV2 with a negative bias on both columns for Toxaphene

The following continuing calibration verifications exceeded criteria:
2J29616-CCVH with a negative bias on column 2 for Toxaphene
2J29706-CCVB with a negative bias on column 1 for Decachlorobiphenyl
2J29706-CCVG with a positive bias on column 1 for 4,4'-DDD and Delta-BHC
2J30449-CCV1 with a negative bias on column 2 for Decachlorobiphenyl
2J30449-CCVB with a positive bias on column 1 for 4,4'-DDE, 4,4'-DDD, and Delta-BHC
2J30449-CCVL with a positive bias on column 1 for 4,4'-DDE, 4,4'-DDD, and Delta-BHC

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8082A:
The following surrogates exceeded criteria:
Tetrachloro-m-xylene with a negative bias on both columns in 1210127-01, -02, -03, -04, -05, -06, -07, 2J12031-MS2, and –MSD2 and on column 2 in 2J12031-BLK1 and -BS2
Decachlorobiphenyl with a negative bias on column 2 in 1210127-03, -04, -05, and -06

The following continuing calibration verifications exceeded criteria:
2J29706-CCVB with a negative bias on column 2 for Tetrachloro-m-xylene
2J30449-CCV1 with a negative bias on column 2 for Decachlorobiphenyl

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C/SW7470A:
The following continuing calibration verifications exceeded criteria:
2J29918-CCV9 with a negative bias for Nickel

The following matrix spikes exceeded criteria:
2J24020-MS2/MSD2 (1210127-01) with a positive bias for Iron and Calcium, exceeded relative percent difference criteria for Calcium, and exceeded criteria for Aluminum; note – the parent sample concentration for Aluminum is greater than 4 times the amount spiked
2J26015-MS1/MSD1 (1210127-01) exceeded relative percent difference criteria for

Mercury

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:
The following compounds are qualified with an M to indicate that the LOQ was raised to the level of the reporting limit standard within criteria:
Chloride (1.0mg/L) in 1210127-08, -10, and -12

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

1210127

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 1983 | PAGE 1 OF 1

PROJECT NO: 112G 0394	FACILITY: NAS Pensacola Site 44	PROJECT MANAGER Gerry Walker	PHONE NUMBER 850-385-9844	LABORATORY NAME AND CONTACT: Empirical Laboratory Yo Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Amber Iges	PHONE NUMBER 850-332-8033	ADDRESS 621 Mainstream Drive Suite 210
		CARRIER/WAYBILL NUMBER 8003 2540 7606		CITY, STATE Nashville TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TCL VOCs	PCE, TCE, cis 1,2-DCE, VC	TCL Pesticides + PCBs	TAL metals with mercury	Anions	TCL SVOCs w/ LL PAHs	Alkalinity	BOD	COD	COMMENTS
10/11/12	0835	PEN-44-SS01-0-2-10/12	SS01	0	2	SO	G	18	9		3	~~4~~ 3		3				01
	0930	PEN-44-SS01-6-8-10/12	" "	6	8			6	3		1	1		1				02
	1000	PEN-44-SS02-0-2-10/12	SS02	0	2			6	3		1	1		1				03
	1020	PEN-44-SS02-6-8-10/12	" "	6	8			6	3		1	1		1				04
	1035	PEN-44-SS03-0-2-10/12	SS03	0	2			6	3		1	1		1				05
	1055	PEN-44-SS03-6-8-10/12	" "	6	8			6	3		1	1		1				06
	0000	FD 101112 01				↓	↓	6	3		1	1		1				07
	0915	PEN-44-09-10/12				GW		11	3		1	1	1	2	1	1/1		08/09
	1218	PEN-3221-09-10/12						11	3		1	1	1	2	1	1/1		10/11
	1425	PEN-3221-07-10/12				↓		7		3			1		1	1/1		12
		Trip Blank 01035				01			3									13

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	10/11/12	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY jack davilla jr.	10-12-12	0835

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

13

1210127 Summ Package

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/12/12 @ 0835 Workorder# 1210127

1. Tracking # 0315 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 4.2 °C + *correction factor (+ 0.2)* = 4.4 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

   If yes, how many and where: 2 FRONT&BACK

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)..NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) JD

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)..NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES..(NO)..NA

    b. Was there any observable headspace present in any VOA vial? YES...NO..(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence # 1

I certify that I unloaded the cooler and answered questions 7-14 (initial) JD

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? (YES)..NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO..(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JD

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JD

I certify that I attached a label with the unique LIMS number to each container (initial) JD

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES (NO) Was a NCR generated? YES (NO) #____

Additional Details:

Sample -12 arrived with bottles for anions, alkalinity, BOD, COC, and VOCs, a dissolved metals container arrived with these, but the analysis wasn't included on COC.

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 10/12/12 @ 0835 Workorder# 1210127

1. Tracking # 7606 (last 4 digits, FedEx)

   Courier: FED-EX

2. Temperature of rep. sample or temp blank when opened: 0.5 °C + *correction factor (+ 0.2)* = 0.7 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

   If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? YES...(NO)...NA

I certify that I opened the cooler and answered questions 1-6 (initial) JV

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

   Were these signed and dated correctly? YES...NO...(NA)

8. Packing material used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13. a. Were VOA vials received? YES...(NO)...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...(NA)

14. Was there a Trip Blank in this cooler? YES...NO...(NA) If multiple coolers, sequence # 2

I certify that I unloaded the cooler and answered questions 7-14 (initial) JV

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

    b. Did the bottle labels indicate that the correct preservatives were used YES...NO...(NA)

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) JV

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) JV

I certify that I attached a label with the unique LIMS number to each container (initial) JV

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance issues at login? YES (NO) Was a NCR generated? YES (NO) #____

Additional Details:

HOLDTIME

SDG 1210127

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	MG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	MG/KG	FD10111201	1210127-07	NM	10/11/2012	10/30/2012	10/31/2012	19	1	20
HG	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/27/2012	10/29/2012	16	2	18
HG	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/27/2012	10/29/2012	16	2	18
M	MG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	MG/KG	FD10111201	1210127-07	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
M	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/24/2012	10/25/2012	13	1	14
MF	UG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/17/2012	10/17/2012	6	0	6
MF	UG/L	PEN-44-09-10/12	1210127-09	NM	10/11/2012	10/17/2012	10/17/2012	6	0	6
MF	UG/L	PEN-3221-09-10/12	1210127-11	NM	10/11/2012	10/17/2012	10/17/2012	6	0	6
ALK	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/24/2012	10/24/2012	13	0	13
ALK	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/24/2012	10/24/2012	13	0	13
ALK	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/24/2012	10/24/2012	13	0	13
BOD	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/17/2012	1	5	6
BOD	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/17/2012	1	5	6
BOD	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/17/2012	1	5	6
CL	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
CL	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
CL	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
COD	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
COD	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4
COD	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/15/2012	10/15/2012	4	0	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTA	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTA	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTA	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTI	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTI	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
NTI	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
SO4	MG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
SO4	MG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
SO4	MG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/12/2012	10/12/2012	1	0	1
OS	UG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	FD10111201	1210127-07	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/22/2012	10/31/2012	11	9	20
OS	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/17/2012	10/23/2012	6	6	12
OS	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/17/2012	10/23/2012	6	6	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/22/2012	10/22/2012	11	0	11
OV	UG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/22/2012	10/22/2012	11	0	11
OV	UG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/22/2012	10/22/2012	11	0	11
OV	UG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/22/2012	10/22/2012	11	0	11
OV	UG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/22/2012	10/22/2012	11	0	11
OV	UG/KG	FD10111201	1210127-07	NM	10/11/2012	10/22/2012	10/22/2012	11	0	11
OV	UG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/22/2012	10/22/2012	11	0	11
OV	UG/L	PEN-3221-07-10/12	1210127-12	NM	10/11/2012	10/23/2012	10/23/2012	12	0	12
OV	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/23/2012	10/23/2012	12	0	12
OV	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/23/2012	10/23/2012	12	0	12
OV	UG/L	Trip Blank 01035	1210127-13	NM	10/11/2012	10/20/2012	10/20/2012	9	0	9
PAH	UG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/22/2012	11/1/2012	11	10	21
PAH	UG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/22/2012	11/1/2012	11	10	21
PAH	UG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/22/2012	11/1/2012	11	10	21
PAH	UG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/22/2012	11/1/2012	11	10	21
PAH	UG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/22/2012	11/1/2012	11	10	21
PAH	UG/KG	FD10111201	1210127-07	NM	10/11/2012	10/22/2012	11/1/2012	11	10	21
PAH	UG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/22/2012	11/1/2012	11	10	21

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/17/2012	10/23/2012	6	6	12
PAH	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/17/2012	10/23/2012	6	6	12
PCB	UG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PCB	UG/KG	FD10111201	1210127-07	NM	10/11/2012	10/22/2012	10/27/2012	11	5	16
PCB	UG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PCB	UG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PCB	UG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PCB	UG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PCB	UG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PCB	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/16/2012	10/19/2012	5	3	8
PCB	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/16/2012	10/19/2012	5	3	8
PEST	UG/KG	FD10111201	1210127-07	NM	10/11/2012	10/22/2012	10/27/2012	11	5	16
PEST	UG/KG	PEN-44-SS01-0-2-10/12	1210127-01	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PEST	UG/KG	PEN-44-SS01-6-8-10/12	1210127-02	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PEST	UG/KG	PEN-44-SS02-0-2-10/12	1210127-03	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PEST	UG/KG	PEN-44-SS02-6-8-10/12	1210127-04	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PEST	UG/KG	PEN-44-SS03-0-2-10/12	1210127-05	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7
PEST	UG/KG	PEN-44-SS03-6-8-10/12	1210127-06	NM	10/11/2012	10/17/2012	10/18/2012	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PEST	UG/L	PEN-3221-09-10/12	1210127-10	NM	10/11/2012	10/16/2012	10/19/2012	5	3	8
PEST	UG/L	PEN-44-09-10/12	1210127-08	NM	10/11/2012	10/16/2012	10/19/2012	5	3	8

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-SS01-0-2-10/12	10/11/12 08:35	10/12/12 08:35	10/22/12 00:00	10.64	14.00	10/22/12 09:34	0.40	14.00	
PEN-44-SS01-6-8-10/12	10/11/12 09:30	10/12/12 08:35	10/22/12 00:00	10.60	14.00	10/22/12 10:05	0.42	14.00	
PEN-44-SS02-0-2-10/12	10/11/12 10:00	10/12/12 08:35	10/22/12 00:00	10.58	14.00	10/22/12 10:36	0.44	14.00	
PEN-44-SS02-6-8-10/12	10/11/12 10:20	10/12/12 08:35	10/22/12 00:00	10.57	14.00	10/22/12 11:06	0.46	14.00	
PEN-44-SS03-0-2-10/12	10/11/12 10:35	10/12/12 08:35	10/22/12 00:00	10.56	14.00	10/22/12 11:37	0.48	14.00	
PEN-44-SS03-6-8-10/12	10/11/12 10:55	10/12/12 08:35	10/22/12 00:00	10.55	14.00	10/22/12 12:08	0.51	14.00	
FD10111201	10/11/12 00:00	10/12/12 08:35	10/22/12 00:00	11.00	14.00	10/22/12 12:38	0.53	14.00	
PEN-44-09-10/12	10/11/12 09:15	10/12/12 08:35	10/23/12 14:08	N/A	14.00	10/23/12 14:08	12.20	14.00	
PEN-3221-09-10/12	10/11/12 12:18	10/12/12 08:35	10/23/12 14:37	N/A	14.00	10/23/12 14:37	12.10	14.00	
PEN-3221-07-10/12	10/11/12 14:25	10/12/12 08:35	10/23/12 15:06	N/A	14.00	10/23/12 15:06	12.03	14.00	
Trip Blank 01035	10/11/12 00:00	10/12/12 08:35	10/20/12 15:00	N/A	14.00	10/20/12 15:00	9.63	14.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-SS01-0-2-10/12	10/11/12 08:35	10/12/12 08:35	10/22/12 15:37	11.29	14.00	10/31/12 18:48	9.13	40.00	
PEN-44-SS01-6-8-10/12	10/11/12 09:30	10/12/12 08:35	10/22/12 15:37	11.25	14.00	10/31/12 20:10	9.19	40.00	
PEN-44-SS02-0-2-10/12	10/11/12 10:00	10/12/12 08:35	10/22/12 15:37	11.23	14.00	10/31/12 20:38	9.21	40.00	
PEN-44-SS02-6-8-10/12	10/11/12 10:20	10/12/12 08:35	10/22/12 15:37	11.22	14.00	10/31/12 21:05	9.23	40.00	
PEN-44-SS03-0-2-10/12	10/11/12 10:35	10/12/12 08:35	10/22/12 15:37	11.21	14.00	10/31/12 21:33	9.25	40.00	
PEN-44-SS03-6-8-10/12	10/11/12 10:55	10/12/12 08:35	10/22/12 15:37	11.20	14.00	10/31/12 22:01	9.27	40.00	
FD10111201	10/11/12 00:00	10/12/12 08:35	10/22/12 15:37	11.65	14.00	10/31/12 22:28	9.29	40.00	
PEN-44-09-10/12	10/11/12 09:15	10/12/12 08:35	10/17/12 09:54	6.03	7.00	10/23/12 18:14	6.35	40.00	
PEN-3221-09-10/12	10/11/12 12:18	10/12/12 08:35	10/17/12 09:54	5.90	7.00	10/23/12 18:42	6.37	40.00	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-SS01-0-2-10/12	10/11/12 08:35	10/12/12 08:35	10/22/12 15:37	11.29	14.00	11/01/12 19:19	10.15	40.00	
PEN-44-SS01-6-8-10/12	10/11/12 09:30	10/12/12 08:35	10/22/12 15:37	11.25	14.00	11/01/12 20:41	10.21	40.00	
PEN-44-SS02-0-2-10/12	10/11/12 10:00	10/12/12 08:35	10/22/12 15:37	11.23	14.00	11/01/12 21:09	10.23	40.00	
PEN-44-SS02-6-8-10/12	10/11/12 10:20	10/12/12 08:35	10/22/12 15:37	11.22	14.00	11/01/12 21:37	10.25	40.00	
PEN-44-SS03-0-2-10/12	10/11/12 10:35	10/12/12 08:35	10/22/12 15:37	11.21	14.00	11/01/12 22:05	10.27	40.00	
PEN-44-SS03-6-8-10/12	10/11/12 10:55	10/12/12 08:35	10/22/12 15:37	11.20	14.00	11/01/12 22:33	10.29	40.00	
FD10111201	10/11/12 00:00	10/12/12 08:35	10/22/12 15:37	11.65	14.00	11/01/12 23:00	10.31	40.00	
PEN-44-09-10/12	10/11/12 09:15	10/12/12 08:35	10/17/12 09:54	6.03	7.00	10/23/12 18:32	6.36	40.00	
PEN-3221-09-10/12	10/11/12 12:18	10/12/12 08:35	10/17/12 09:54	5.90	7.00	10/23/12 19:00	6.38	40.00	

HOLDING TIME SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-SS01-0-2-10/12	10/11/12 08:35	10/12/12 08:35	10/17/12 07:46	5.97	14.00	10/18/12 01:15	0.73	40.00	
PEN-44-SS01-6-8-10/12	10/11/12 09:30	10/12/12 08:35	10/17/12 07:46	5.93	14.00	10/18/12 02:50	0.79	40.00	
PEN-44-SS02-0-2-10/12	10/11/12 10:00	10/12/12 08:35	10/17/12 07:46	5.91	14.00	10/18/12 03:09	0.81	40.00	
PEN-44-SS02-6-8-10/12	10/11/12 10:20	10/12/12 08:35	10/17/12 07:46	5.89	14.00	10/18/12 03:28	0.82	40.00	
PEN-44-SS03-0-2-10/12	10/11/12 10:35	10/12/12 08:35	10/17/12 07:46	5.88	14.00	10/18/12 03:47	0.83	40.00	
PEN-44-SS03-6-8-10/12	10/11/12 10:55	10/12/12 08:35	10/17/12 07:46	5.87	14.00	10/18/12 04:06	0.85	40.00	
FD10111201	10/11/12 00:00	10/12/12 08:35	10/22/12 10:20	11.43	14.00	10/27/12 05:38	4.80	40.00	
PEN-44-09-10/12	10/11/12 09:15	10/12/12 08:35	10/16/12 14:38	5.22	7.00	10/19/12 00:20	2.40	40.00	
PEN-3221-09-10/12	10/11/12 12:18	10/12/12 08:35	10/16/12 14:38	5.10	7.00	10/19/12 00:39	2.42	40.00	

HOLDING TIME SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PEN-44-SS01-0-2-10/12	10/11/12 08:35	10/12/12 08:35	10/17/12 07:46	5.97	14.00	10/18/12 01:15	0.73	40.00	
PEN-44-SS01-6-8-10/12	10/11/12 09:30	10/12/12 08:35	10/17/12 07:46	5.93	14.00	10/18/12 02:50	0.79	40.00	
PEN-44-SS02-0-2-10/12	10/11/12 10:00	10/12/12 08:35	10/17/12 07:46	5.91	14.00	10/18/12 03:09	0.81	40.00	
PEN-44-SS02-6-8-10/12	10/11/12 10:20	10/12/12 08:35	10/17/12 07:46	5.89	14.00	10/18/12 03:28	0.82	40.00	
PEN-44-SS03-0-2-10/12	10/11/12 10:35	10/12/12 08:35	10/17/12 07:46	5.88	14.00	10/18/12 03:47	0.83	40.00	
PEN-44-SS03-6-8-10/12	10/11/12 10:55	10/12/12 08:35	10/17/12 07:46	5.87	14.00	10/18/12 04:06	0.85	40.00	
FD10111201	10/11/12 00:00	10/12/12 08:35	10/22/12 10:20	11.43	14.00	10/27/12 05:38	4.80	40.00	
PEN-44-09-10/12	10/11/12 09:15	10/12/12 08:35	10/16/12 14:38	5.22	7.00	10/19/12 00:20	2.40	40.00	
PEN-3221-09-10/12	10/11/12 12:18	10/12/12 08:35	10/16/12 14:38	5.10	7.00	10/19/12 00:39	2.42	40.00	

FIELD DUPLICATE PRECISION				
ANALYTE	**PEN-44-SS03-6-8-10/12**	**FD10111201**	**RPD**	**DIFFERENCE**
2-butanone	ND	3.05	200.00	7.15
acetone	ND	21.7	200.00	1.4

ANALYTE	**PEN-44-SS03-6-8-10/12**	**FD10111201**	**RPD**	**DIFFERENCE**
BENZO(A)PYRENE	ND	6.78	200.00	5.14
BENZO(B)FLUORANTHENE	ND	5.84	200.00	4.2

ANALYTE	**PEN-44-SS03-6-8-10/12**	**FD10111201**	**RPD**	**DIFFERENCE**
4,4'-DDD	ND	0.944	200.00	0.776
ENDOSULFAN II	ND	1.21	200.00	1.042
ENDRIN	0.243	0.166	37.65	0.077
GAMMA-BHC (LINDANE)	ND	0.789	200.00	0.68
GAMMA-CHLORDANE	0.68	0.328	69.84	0.352

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2D12109	Instrument:	MS-VOA6
Calibration:	2121003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2D12109-TUN1	0427TUN1.D	04/27/12 08:36
Cal Standard	2D12109-CAL1	0427CAL1.D	04/27/12 09:57
Cal Standard	2D12109-CAL2	0427CAL2.D	04/27/12 10:24
Cal Standard	2D12109-CAL3	0427CAL3.D	04/27/12 10:51
Cal Standard	2D12109-CAL4	0427CAL4.D	04/27/12 11:17
Cal Standard	2D12109-CAL5	0427CAL5.D	04/27/12 11:44
Cal Standard	2D12109-CAL6	0427CAL6.D	04/27/12 12:11
Cal Standard	2D12109-CAL7	0427CAL7.D	04/27/12 12:38
Cal Standard	2D12109-CAL8	0427CAL8.D	04/27/12 13:05
Cal Standard	2D12109-CAL9	0427CAL9.D	04/27/12 13:31
Initial Cal Check	2D12109-ICV2	0427ICV2.D	04/27/12 14:52

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	0427TUN1.D	Injection Date:	04/27/12
Instrument ID:	MS-VOA6	Injection Time:	08:36
Sequence:	2D12109	Lab Sample ID:	2D12109-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	22.1	PASS
75	30 - 60% of 95	46.9	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.51	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.6	PASS
175	5 - 9% of 174	7.25	PASS
176	95 - 101% of 174	97.2	PASS
177	5 - 9% of 176	6.42	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2121003
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 4/27/12 9:57 4/27/12 13:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	8.548666E-02	13.62246	3.79875	9.274653E-02			15	
Acrolein	3.525752E-02	14.25592	3.67625	0.1406711			15	
Acrylonitrile	8.527776E-02	5.393199	4.643333	0.1072277			15	
Benzene	0.9315107	2.122697	7.685555	9.539806E-02			15	
Bromobenzene	0.7087812	2.200287	12.42	2.226331E-02			15	
Bromochloromethane	0.1195172	3.640977	6.781111	8.876222E-02			15	
Tert-Amyl Methyl Ether	0.6634772	2.496612	7.881111	4.329758E-02			15	
Bromodichloromethane	0.2918713	8.490543	8.666667	5.634014E-02			15	
Bromoform	0.2807903	27.07999	11.82333	0.0385467		0.9999206 ✓	SPCC (0.1)	
Bromomethane	0.1508425	6.0413	2.827778	0.1564675			15	
Bromofluorobenzene	0.8581783	5.320451	12.25222	3.512838E-02			15	
n-Butylbenzene	1.996493	3.36345	13.84778	3.214818E-02			15	
2-Butanone	0.1504013	9.901311	6.253333	8.003784E-02			15	
sec-Butylbenzene	2.683693	3.138093	13.30222	2.896654E-02			15	
tert-Butylbenzene	1.962219	3.583794	13.07222	3.164283E-02			15	
Carbon disulfide	0.549092	7.8436	4.795556	0.1085594			15	
Carbon tetrachloride	0.2201406	14.06956	7.652222	5.963417E-02			15	
Chlorobenzene	1.46879	2.490997	11.1	1.265792E-02			SPCC (0.3)	
Chloroethane	0.1477522	6.651077	2.965556	0.177739			15	
Chloroform	0.4138944	2.873397	6.754445	7.677392E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1620108	4.014319	9.023334	5.188695E-02			15	
Chloromethane	0.2843574	12.91666	2.231111	0.1482605			SPCC (0.1)	
1-Chlorohexane	0.751668	11.54226	11.06222	3.856191E-02			15	
2-Chlorotoluene	2.089316	2.074047	12.63333	4.148019E-02			15	
4-Chlorotoluene	2.383943	2.617429	12.69444	3.969977E-02			15	
Cyclohexane	0.3976941	3.654048	7.583333	6.438874E-02			15	
Dibromochloromethane	0.4682909	19.58175	10.33111	3.516709E-02		0.9999077 ✓	0.99	
1,2-Dibromo-3-chloropropane	0.1119305	17.66175	14.45	1.563473E-02		0.9998905 ✓	0.99	
1,2-Dibromoethane (EDB)	0.5515188	4.059789	10.55	1.218384E-02			15	
Dibromomethane	0.159759	2.732959	8.607778	5.269306E-02			15	
1,2-Dichlorobenzene	1.203659	2.780049	13.81	8.95784E-03			15	
1,3-Dichlorobenzene	1.256964	2.176385	13.39333	3.806423E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2121003
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 4/27/12 9:57 4/27/12 13:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.26803	2.71936	13.48444	3.695711E-02			15	
Dichlorodifluoromethane	0.1924809	12.76598	2.02	0.0136054			15	
1,1-Dichloroethane	0.4594785	2.373803	5.8	1.821231E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3510167	2.112895	7.514445	7.102877E-02			15	
1,1-Dichloroethene	0.1816551	1.754323	4.266667	0.1186659			CCC (20)	
cis-1,2-Dichloroethene	0.2461851	1.74528	6.51	7.808219E-02			15	
trans-1,2-Dichloroethene	0.2335685	2.303894	5.422222	0.1220387			15	
1,2-Dichloroethene (total)	0.2398768	1.736859	6.51	7.808219E-02			15	
1,2-Dichloropropane	0.259293	2.312194	8.492222	4.863254E-02			CCC (20)	
1,3-Dichloropropane	0.8986729	1.994678	10.07333	4.862251E-02			15	
2,2-Dichloropropane	0.2935838	2.733695	6.614444	7.823592E-02			15	
1,1-Dichloropropene	0.319009	2.335894	7.533333	6.861941E-02			15	
cis-1,3-Dichloropropene	0.3521134	5.766677	9.241111	3.306317E-02			15	
trans-1,3-Dichloropropene	0.8239793	7.699482	9.71	1.779117E-02			15	
Diisopropyl Ether	1.014381	1.907698	6.173333	0.0812548			15	
Ethylbenzene	2.511121	2.398092	11.24778	3.875475E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.7722566	1.449832	6.641111	5.284476E-02			15	
Ethyl Methacrylate	0.7620413	5.994742	9.901111	0.0370684			15	
Hexachlorobutadiene	0.2973976	6.462892	15.81111	2.267311E-02			15	
2-Hexanone	0.4846361	3.044602	10.01222	6.526454E-02			15	
Iodomethane	0.2588278	17.84729	4.46125	7.694245E-02		0.9994425	0.99	
Isopropylbenzene	2.072041	2.992551	12.14222	3.773169E-02			15	
p-Isopropyltoluene	2.123426	3.336119	13.44222	3.452873E-02			15	
Methylene chloride	0.2190071	8.77048	4.755556	0.1109935			15	
Methyl Acetate	0.1792449	5.975949	4.631111	7.186884E-02			15	
Methylcyclohexane	0.3060391	3.107595	8.814445	5.861741E-02			15	
Naphthalene	1.40191	9.049186	15.68111	0.0229818			15	
Methyl Methacrylate	0.2622156	2.752967	8.627778	4.639833E-02			15	
4-Methyl-2-pentanone	0.2742899	2.362881	9.17	2.223127E-02			15	
Methyl t-Butyl Ether	0.6034362	2.078315	5.425555	0.0958311			15	
n-Propylbenzene	3.366424	2.705707	12.55111	4.793217E-02			15	
Styrene	1.582432	4.214249	11.72	2.468036E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2121003
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 4/27/12 9:57 4/27/12 13:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.8277083	3.040542	12.06444	0.0394937			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.4212623	13.45017	11.14111	3.262536E-02			15	
tert-Butyl alcohol	0.0177652	3.114812	4.438889	0.1349856			15	
Tetrachloroethene	0.5209978	4.094883	10.44222	4.320136E-02			15	
Toluene	1.306882	2.880498	9.711111	3.882733E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.6431937	6.053357	15.96444	3.389544E-02			15	
1,2,4-Trichlorobenzene	0.7381814	5.252041	15.53	7.599921E-03			15	
1,1,2-Trichloroethane	0.4426374	1.531824	9.867778	4.848003E-02			15	
1,1,1-Trichloroethane	0.2930192	6.725129	7.317778	5.889306E-02			15	
Tetrahydrofuran	2.682705E-02	4.716978	6.973333	7.377964E-02			15	
Trichloroethene	0.2340808	2.116677	8.442222	4.746849E-02			15	
Trichlorofluoromethane	0.3110129	6.814927	3.471111	0.1732996			15	
1,2,3-Trichloropropane	0.1727305	3.725216	12.19333	3.802018E-02			15	
1,3,5-Trimethylbenzene	2.198041	3.035595	12.73222	3.176895E-02			15	
1,2,4-Trimethylbenzene	2.208168	3.306208	13.10222	3.678199E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1847629	3.554268	4.348889	7.522899E-02			15	
Vinyl chloride	0.1848242	6.933849	2.381111	0.1402005			CCC (20)	
m,p-Xylene	1.895141	3.964217	11.35333	4.439117E-02			15	
o-Xylene	1.959051	2.382637	11.75	0			15	
Vinyl acetate	0.6467053	7.665063	5.88	1.287752E-02			15	
Xylenes (total)	1.916445	2.97403	11.75	0			15	
Dibromofluoromethane	0.2631144	3.397573	6.932222	0.0649494			15	
1,2-Dichloroethane-d4	6.156409E-02	3.607168	7.423333	6.721134E-02			15	
Toluene-d8	2.250463	5.782973	9.635556	5.182899E-02			15	
tert-Amyl alcohol	1.396476E-02	7.58956	7.14	7.130057E-02			15	
tert-Amyl ethyl ether	0.6279509	2.173103	8.757778	7.543113E-02			15	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28309	Instrument:	MS-VOA6
Calibration:	2284004		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J28309-TUN1	1005TUN2.D	10/05/12 11:21
Cal Standard	2J28309-CAL1	1005CAL1.D	10/05/12 12:22
Cal Standard	2J28309-CAL2	1005CAL2.D	10/05/12 12:53
Cal Standard	2J28309-CAL3	1005CAL3.D	10/05/12 13:24
Cal Standard	2J28309-CAL4	1005CAL4.D	10/05/12 13:54
Cal Standard	2J28309-CAL5	1005CAL5.D	10/05/12 14:25
Cal Standard	2J28309-CAL6	1005CAL6.D	10/05/12 14:56
Cal Standard	2J28309-CAL7	1005CAL7.D	10/05/12 15:26
Cal Standard	2J28309-CAL8	1005CAL8.D	10/05/12 15:57
Initial Cal Check	2J28309-ICV1	1005ICV1.D	10/05/12 16:58

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1005TUN2.D	Injection Date:	10/05/12
Instrument ID:	MS-VOA6	Injection Time:	11:21
Sequence:	2J28309	Lab Sample ID:	2J28309-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	23.5	PASS
75	30 - 60% of 95	48.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.51	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	70.3	PASS
175	5 - 9% of 174	7.19	PASS
176	95 - 101% of 174	96.3	PASS
177	5 - 9% of 176	6.61	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2284004	Instrument:	MS-VOA6
Matrix:	Water	Calibration Dates:	10/5/12 12:22 10/5/12 15:57

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	9.050097E-02	9.116636	3.63	5.389468E-03			15	
Acrolein	0.0381831	5.450359	3.50875	0.1003496			15	
Acrylonitrile	6.718164E-02	2.646812	4.475	0.1687564			15	
Benzene	1.029868	1.774576	7.55	9.378384E-03			15	
Bromobenzene	0.7424227	1.693178	12.2775	4.430225E-02			15	
Bromochloromethane	0.1142567	3.260342	6.64375	7.845035E-02			15	
Tert-Amyl Methyl Ether	0.7189865	2.268634	7.74625	0.0668845			15	
Bromodichloromethane	0.3269771	3.473291	8.535	6.415095E-02			15	
Bromoform	0.2881874	11.0492	11.68625	4.898315E-02			SPCC (0.1)	
Bromomethane	0.142972	10.99677	2.6825	0.2633219			15	
Bromofluorobenzene	0.8523354	4.409745	12.12	0.0160355			15	
n-Butylbenzene	2.920088	2.668729	13.715	0.0353001			15	
2-Butanone	0.1371471	4.039421	6.11125	0.0539124			15	
sec-Butylbenzene	3.74994	2.139187	13.17375	3.536483E-02			15	
tert-Butylbenzene	2.686623	1.881081	12.9375	3.467883E-02			15	
Carbon disulfide	0.8050153	4.203268	4.61625	0.1614582			15	
Carbon tetrachloride	0.3046544	6.008742	7.51125	4.908619E-02			15	
Chlorobenzene	1.59299	2.235788	10.95875	5.658732E-02			SPCC (0.3)	
Chloroethane	0.1988989	3.621209	2.81125	0.1252813			15	
Chloroform	0.4624826	3.46782	6.6175	0.1060159			CCC (20)	
2-Chloroethyl vinyl ether	9.015673E-02	5.021805	8.90125	3.740756E-02			15	
Chloromethane	0.4357573	3.42338	2.10375	0.2447981			SPCC (0.1)	
1-Chlorohexane	0.8988292	2.841393	10.93625	4.844308E-02			15	
2-Chlorotoluene	2.445417	2.861439	12.5	6.022651E-02			15	
4-Chlorotoluene	2.751659	2.201124	12.5625	4.214488E-02			15	
Cyclohexane	0.5514692	2.380515	7.44125	4.538606E-02			15	
Dibromochloromethane	0.5082914	7.916105	10.2	1.760928E-02			15	
1,2-Dibromo-3-chloropropane	0.1158725	6.434151	14.31375	3.464606E-02			15	
1,2-Dibromoethane (EDB)	0.453569	3.171436	10.40625	4.727253E-02			15	
Dibromomethane	0.135629	3.948506	8.46625	6.271864E-02			15	
1,2-Dichlorobenzene	1.292089	1.60094	13.66625	3.508681E-02			15	
1,3-Dichlorobenzene	1.405762	1.343806	13.25875	2.680588E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284004
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 10/5/12 12:22 10/5/12 15:57

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.397417	2.316162	13.35125	1.888568E-02			15	
Dichlorodifluoromethane	0.3052265	7.858081	1.9	0.2812705			15	
1,1-Dichloroethane	0.5376746	1.76158	5.64875	6.156616E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3509977	2.449844	7.38125	4.722479E-02			15	
1,1-Dichloroethene	0.2380203	3.477472	4.0825	0.1118562			CCC (20)	
cis-1,2-Dichloroethene	0.2741397	1.594663	6.36	0.1172715			15	
trans-1,2-Dichloroethene	0.266763	2.374307	5.265	0.1014806			15	
1,2-Dichloroethene (total)	0.2704514	1.87842	6.36	0.1172715			15	
1,2-Dichloropropane	0.2899011	2.055793	8.3575	5.523956E-02			CCC (20)	
1,3-Dichloropropane	0.7948204	1.204245	9.9425	4.342328E-02			15	
2,2-Dichloropropane	0.4048721	1.913256	6.46625	0.0805816			15	
1,1-Dichloropropene	0.3893568	2.439261	7.3925	6.374827E-02			15	
cis-1,3-Dichloropropene	0.3940958	2.160651	9.10625	5.769514E-02			15	
trans-1,3-Dichloropropene	0.9415256	2.664286	9.10625	5.769514E-02			15	
Diisopropyl Ether	1.195384	1.759107	6.0325	7.328369E-02			15	
Ethylbenzene	2.803804	2.08924	11.1125	3.988889E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.904984	2.115706	6.505	8.305957E-02			15	
Ethyl Methacrylate	0.719146	2.17962	9.77625	5.179821E-02			15	
Hexachlorobutadiene	0.6546821	3.090361	15.67625	3.437233E-02			15	
2-Hexanone	0.4812653	3.504555	9.885	0.0524226			15	
Iodomethane	0.2430688	14.94414	4.28	1.710302E-02			15	
Isopropylbenzene	2.500535	2.10628	12.01125	3.613466E-02			15	
p-Isopropyltoluene	3.034963	1.94128	13.31125	2.838314E-02			15	
Methylene chloride	0.2529087	8.354698	4.588333	8.981565E-02			15	
Methyl Acetate	0.152333	5.697259	4.465	0.1186213			15	
Methylcyclohexane	0.4446035	2.488631	8.68125	4.324847E-02			15	
Naphthalene	1.686953	2.908657	15.54	1.741317E-02			15	
Methyl Methacrylate	0.2422615	2.900446	8.4975	8.236654E-02			15	
4-Methyl-2-pentanone	0.2658607	3.32805	9.0375	4.684871E-02			15	
Methyl t-Butyl Ether	0.620423	1.804535	5.275	0.1016605			15	
n-Propylbenzene	4.13957	3.701357	12.4175	6.099448E-02			15	
Styrene	1.750075	2.458252	11.5825	4.651606E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284004
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 10/5/12 12:22 10/5/12 15:57

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.7044261	1.992312	11.93125	2.606123E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.5080591	4.524759	11.005	0.0500042			15	
tert-Butyl alcohol	2.327552E-02	6.192842	4.27	0.1265399			15	
Tetrachloroethene	0.5793686	1.844821	10.3075	4.788504E-02			15	
Toluene	1.444619	1.522009	9.5775	4.689987E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.7993655	2.341477	15.83125	2.297979E-02			15	
1,2,4-Trichlorobenzene	0.8670225	2.142073	15.39125	2.410882E-02			15	
1,1,2-Trichloroethane	0.3739765	2.213991	9.735	5.205279E-02			15	
1,1,1-Trichloroethane	0.3821014	2.468622	7.17625	0.0732808			15	
Tetrahydrofuran	2.301567E-02	4.46704	6.8325	0.0681328			15	
Trichloroethene	0.2728331	1.997162	8.30875	7.609666E-02			15	
Trichlorofluoromethane	0.4164127	2.255827	3.30625	0.1559334			15	
1,2,3-Trichloropropane	0.1424203	2.567906	12.06125	1.966078E-02			15	
1,3,5-Trimethylbenzene	2.759928	1.762839	12.59875	0.0280059			15	
1,2,4-Trimethylbenzene	2.781337	1.718999	12.96625	3.427294E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2580401	1.451619	4.16875	8.545254E-02			15	
Vinyl chloride	0.2958424	12.10999	2.24875	0.1572371			CCC (20)	
m,p-Xylene	2.114073	6.481256	11.22375	4.630093E-02			15	
o-Xylene	2.193307	1.993144	11.61125	5.906479E-02			15	
Vinyl acetate	0.5742257	6.287064	5.735	9.404895E-02			15	
Xylenes (total)	2.140485	4.689305	11.61125	5.906479E-02			15	
Dibromofluoromethane	0.2636144	1.805529	6.79125	0.0513504			15	
1,2-Dichloroethane-d4	5.073832E-02	2.119154	7.28875	8.777719E-02			15	
Toluene-d8	2.235525	4.346009	9.50125	3.662706E-02			15	
tert-Amyl alcohol	2.085427E-02	6.708778	7.0075	6.496507E-02			15	
tert-Amyl ethyl ether	0.7512501	1.798588	8.6325	0.0489607			15	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29702
Instrument: MS-VOA6
Calibration: 2284004

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29702-TUN1	1022TUN1.D	10/22/12 06:30
Calibration Check	2J29702-CCV1	1022CCV1.D	10/22/12 07:01
LCS	2J22007-BS1	1022LCS1.D	10/22/12 07:32
Blank	2J22007-BLK1	1022BLK1.D	10/22/12 09:04
PEN-44-SS01-0-2-10/12	1210127-01	1012701AX.D	10/22/12 09:34
PEN-44-SS01-6-8-10/12	1210127-02	1012702AX.D	10/22/12 10:05
PEN-44-SS02-0-2-10/12	1210127-03	1012703A.D	10/22/12 10:36
PEN-44-SS02-6-8-10/12	1210127-04	1012704A.D	10/22/12 11:06
PEN-44-SS03-0-2-10/12	1210127-05	1012705A.D	10/22/12 11:37
PEN-44-SS03-6-8-10/12	1210127-06	1012706A.D	10/22/12 12:08
FD10111201	1210127-07	1012707A.D	10/22/12 12:38
PEN-44-SS01-0-2-10/12	2J22007-MS1	101271BM.D	10/22/12 17:14
PEN-44-SS01-0-2-10/12	2J22007-MSD1	101271DS.D	10/22/12 17:45
LCS Dup	2J22007-BSD1	1022LCD1.D	10/22/12 18:46 ✓

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1022TUN1.D	Injection Date:	10/22/12
Instrument ID:	MS-VOA6	Injection Time:	06:30
Sequence:	2J29702	Lab Sample ID:	2J29702-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	23.3	PASS
75	30 - 60% of 95	49.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.42	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	75.5	PASS
175	5 - 9% of 174	7.46	PASS
176	95 - 101% of 174	97.3	PASS
177	5 - 9% of 176	6.55	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA6	Calibration:	2284004
Lab File ID:	1022CCV1.D	Calibration Date:	10/05/12 12:22
Sequence:	2J29702	Injection Date:	10/22/12
Lab Sample ID:	2J29702-CCV1	Injection Time:	07:01

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	200.0	154.7	9.050097E-02	7.000301E-02		-22.6	20	*
Benzene	A	100.0	92.55	1.029868	0.9531726		-7.4	20	
Bromochloromethane	A	100.0	105.9	0.1142567	0.1210177		5.9	20	
Bromodichloromethane	A	100.0	100.2	0.3269771	0.3276419		0.2	20	
Bromoform	A	100.0	119.1	0.2881874	0.3432787	0.1	19.1	20	
Bromomethane	A	100.0	80.98	0.142972	0.1157843		-19.0	20	
2-Butanone	A	200.0	231.1	0.1371471	0.158477		15.6	20	
Carbon disulfide	A	100.0	80.25	0.8050153	0.6460163		-19.8	20	
Carbon tetrachloride	A	100.0	106.8	0.3046544	0.3253457		6.8	20	
Chlorobenzene	A	100.0	103.8	1.59299	1.653795	0.3	3.8	20	
Chloroethane	A	100.0	75.57	0.1988989	0.1503111		-24.4	20	*
Chloroform	A	100.0	95.34	0.4624826	0.440935		-4.7	20	
Chloromethane	A	100.0	69.70	0.4357573	0.3037421	0.1	-30.3	20	*
Cyclohexane	A	100.0	88.65	0.5514692	0.4888514		-11.4	20	
Dibromochloromethane	A	100.0	110.8	0.5082914	0.562963		10.8	20	
1,2-Dibromo-3-chloropropane	A	100.0	119.1	0.1158725	0.1380488		19.1	20	
1,2-Dibromoethane (EDB)	A	100.0	108.5	0.453569	0.4921234		8.5	20	
1,2-Dichlorobenzene	A	100.0	102.7	1.292089	1.327043		2.7	20	
1,3-Dichlorobenzene	A	100.0	102.5	1.405762	1.441426		2.5	20	
1,4-Dichlorobenzene	A	100.0	102.3	1.397417	1.430106		2.3	20	
Dichlorodifluoromethane	A	100.0	104.4	0.3052265	0.3187286		4.4	20	
1,1-Dichloroethane	A	100.0	87.45	0.5376746	0.4701925	0.1	-12.6	20	
1,2-Dichloroethane	A	100.0	104.2	0.3509977	0.3657695		4.2	20	
1,1-Dichloroethene	A	100.0	80.73	0.2380203	0.1921589		-19.3	20	
cis-1,2-Dichloroethene	A	100.0	93.47	0.2741397	0.2562386		-6.5	20	
trans-1,2-Dichloroethene	A	100.0	89.34	0.266763	0.2383325		-10.7	20	
1,2-Dichloropropane	A	100.0	90.25	0.2899011	0.2616428		-9.7	20	
cis-1,3-Dichloropropene	A	100.0	97.92	0.3940958	0.3858931		-2.1	20	
trans-1,3-Dichloropropene	A	100.0	99.71	0.9415256	0.9387521		-0.3	20	

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA6	Calibration:	2284004
Lab File ID:	1022CCV1.D	Calibration Date:	10/05/12 12:22
Sequence:	2J29702	Injection Date:	10/22/12
Lab Sample ID:	2J29702-CCV1	Injection Time:	07:01

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Ethylbenzene	A	100.0	100.3	2.803804	2.81185		0.3	20
2-Hexanone	A	200.0	266.2	0.4812653	0.6404572		33.1	20 *
Isopropylbenzene	A	100.0	103.6	2.500535	2.58993		3.6	20
Methylene chloride	A	100.0	76.18	0.2529087	0.1926642		-23.8	20 *
Methyl Acetate	A	100.0	92.20	0.152333	0.1404557		-7.8	20
Methylcyclohexane	A	100.0	95.72	0.4446035	0.4255745		-4.3	20
4-Methyl-2-pentanone	A	200.0	272.4	0.2658607	0.3620581		36.2	20 *
Methyl t-Butyl Ether	A	100.0	99.23	0.620423	0.615668		-0.8	20
Styrene	A	100.0	103.5	1.750075	1.811108		3.5	20
1,1,2,2-Tetrachloroethane	A	100.0	96.49	0.7044261	0.6796727	0.3	-3.5	20
Tetrachloroethene	A	100.0	108.7	0.5793686	0.629534		8.7	20
Toluene	A	100.0	98.71	1.444619	1.425991		-1.3	20
1,2,3-Trichlorobenzene	A	100.0	101.1	0.7993655	0.80849		1.1	20
1,2,4-Trichlorobenzene	A	100.0	102.0	0.8670225	0.8846345		2.0	20
1,1,2-Trichloroethane	A	100.0	101.5	0.3739765	0.379493		1.5	20
1,1,1-Trichloroethane	A	100.0	98.89	0.3821014	0.3778571		-1.1	20
Trichloroethene	A	100.0	97.00	0.2728331	0.2646557		-3.0	20
Trichlorofluoromethane	A	100.0	89.88	0.4164127	0.3742603		-10.1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	100.0	87.60	0.2580401	0.2260354		-12.4	20
Vinyl chloride	A	100.0	89.23	0.2958424	0.2639666		-10.8	20
Xylenes (total)	A	300.0	306.8	2.140485	2.188936		2.3	20
Bromofluorobenzene	A	30.00	32.42	0.8523354	0.9211059		8.1	20
Dibromofluoromethane	A	30.00	31.14	0.2636144	0.2736691		3.8	20
1,2-Dichloroethane-d4	A	30.00	31.44	5.073832E-02	5.317689E-02		4.8	20
Toluene-d8	A	30.00	31.42	2.235525	2.341496		4.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J22007 Batch Matrix: Solid Preparation: 5035A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-SS01-0-2-10/12	1210127-01	10/22/12 00:00	4.68	5.00
PEN-44-SS01-6-8-10/12	1210127-02	10/22/12 00:00	5.10	5.00
PEN-44-SS02-0-2-10/12	1210127-03	10/22/12 00:00	5.45	5.00
PEN-44-SS02-6-8-10/12	1210127-04	10/22/12 00:00	5.37	5.00
PEN-44-SS03-0-2-10/12	1210127-05	10/22/12 00:00	5.17	5.00
PEN-44-SS03-6-8-10/12	1210127-06	10/22/12 00:00	5.06	5.00
FD10111201	1210127-07	10/22/12 00:00	5.21	5.00
Blank	2J22007-BLK1	10/22/12 00:00	5.00	5.00
LCS	2J22007-BS1	10/22/12 00:00	5.00	5.00
LCS Dup	2J22007-BSD1	10/22/12 00:00	5.00	5.00
PEN-44-SS01-0-2-10/12	2J22007-MS1	10/22/12 00:00	5.04	5.00
PEN-44-SS01-0-2-10/12	2J22007-MSD1	10/22/12 00:00	5.14	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J22007-BLK1 File ID: 1022BLK1.D

Sampled: Prepared: Analyzed: 10/22/12 09:04

Solids: Preparation: 5035A Dilution:

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg wet)	DL	LOD	LOQ	Q
67-64-1	Acetone		5.00	10.0	20.0	Y, U
71-43-2	Benzene		1.25	2.50	5.00	U
74-97-5	Bromochloromethane		1.25	2.50	5.00	U
75-27-4	Bromodichloromethane		1.25	2.50	5.00	U
75-25-2	Bromoform		1.25	2.50	5.00	U
74-83-9	Bromomethane		2.50	5.00	10.0	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		1.25	2.50	5.00	U
56-23-5	Carbon tetrachloride		1.25	2.50	5.00	U
108-90-7	Chlorobenzene		1.25	2.50	5.00	U
75-00-3	Chloroethane		2.50	5.00	10.0	Y, U
67-66-3	Chloroform		1.25	2.50	5.00	U
74-87-3	Chloromethane		2.50	5.00	10.0	Y, U
110-82-7	Cyclohexane		1.25	2.50	5.00	U
124-48-1	Dibromochloromethane		1.25	2.50	5.00	U
96-12-8	1,2-Dibromo-3-chloropropane		2.50	5.00	10.0	U
106-93-4	1,2-Dibromoethane (EDB)		1.25	2.50	5.00	U
95-50-1	1,2-Dichlorobenzene		1.25	2.50	5.00	U
541-73-1	1,3-Dichlorobenzene		1.25	2.50	5.00	U
106-46-7	1,4-Dichlorobenzene		1.25	2.50	5.00	U
75-71-8	Dichlorodifluoromethane		2.50	5.00	10.0	U
75-34-3	1,1-Dichloroethane		1.25	2.50	5.00	Q, U
107-06-2	1,2-Dichloroethane		1.25	2.50	5.00	U
75-35-4	1,1-Dichloroethene		1.25	2.50	5.00	U
156-59-2	cis-1,2-Dichloroethene		1.25	2.50	5.00	U
156-60-5	trans-1,2-Dichloroethene		1.25	2.50	5.00	U
78-87-5	1,2-Dichloropropane		1.25	2.50	5.00	U
10061-01-5	cis-1,3-Dichloropropene		1.25	2.50	5.00	U
10061-02-6	trans-1,3-Dichloropropene		1.25	2.50	5.00	U
100-41-4	Ethylbenzene		1.25	2.50	5.00	U
591-78-6	2-Hexanone		2.50	5.00	10.0	X, U
98-82-8	Isopropylbenzene		1.25	2.50	5.00	U
75-09-2	Methylene chloride		2.50	5.00	10.0	Y, U
79-20-9	Methyl Acetate		2.50	5.00	10.0	U
108-87-2	Methylcyclohexane		1.25	2.50	5.00	U
108-10-1	4-Methyl-2-pentanone		2.50	5.00	10.0	X, U
1634-04-4	Methyl t-Butyl Ether		1.25	2.50	5.00	U
100-42-5	Styrene		1.25	2.50	5.00	U
79-34-5	1,1,2,2-Tetrachloroethane		1.25	2.50	5.00	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J22007-BLK1 File ID: 1022BLK1.D

Sampled: Prepared: Analyzed: 10/22/12 09:04

Solids: Preparation: 5035A Dilution:

Batch: 2J22007 Sequence: 2J29702 Calibration: 2284004 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/Kg wet)	DL	LOD	LOQ	Q
127-18-4	Tetrachloroethene		1.25	2.50	5.00	U
108-88-3	Toluene		1.25	2.50	5.00	U
87-61-6	1,2,3-Trichlorobenzene		1.25	2.50	5.00	U
120-82-1	1,2,4-Trichlorobenzene		1.25	2.50	5.00	U
79-00-5	1,1,2-Trichloroethane		1.25	2.50	5.00	U
71-55-6	1,1,1-Trichloroethane		1.25	2.50	5.00	U
79-01-6	Trichloroethene		1.25	2.50	5.00	U
75-69-4	Trichlorofluoromethane		2.50	5.00	10.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		2.50	5.00	10.0	U
75-01-4	Vinyl chloride		1.25	2.50	5.00	U
1330-20-7	Xylenes (total)		3.75	7.50	15.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.04	103	85 - 120	
Dibromofluoromethane	30.00	30.68	102	80 - 125	
1.2-Dichloroethane-d4	30.00	31.55	105	75 - 140	
Toluene-d8	30.00	31.07	104	85 - 115	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29804
Instrument: MS-VOA6
Calibration: 2121003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29804-TUN1	1023TUN1.D	10/23/12 09:48
Calibration Check	2J29804-CCV1	1023CCV1.D	10/23/12 10:18
LCS	2J23004-BS1	1023LCS1.D	10/23/12 10:47
Blank	2J23004-BLK1	1023BLK1.D	10/23/12 12:13
PEN-44-09-10/12	1210127-08	1012708.D	10/23/12 14:08
PEN-3221-09-10/12	1210127-10	1012710.D	10/23/12 14:37
PEN-3221-07-10/12	1210127-12	1012712.D	10/23/12 15:06
LCS Dup	2J23004-BSD1	1023LCD1.D	10/23/12 22:16 ✓

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1023TUN1.D	Injection Date:	10/23/12
Instrument ID:	MS-VOA6	Injection Time:	09:48
Sequence:	2J29804	Lab Sample ID:	2J29804-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	23.6	PASS
75	30 - 60% of 95	49.2	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.45	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	78.3	PASS
175	5 - 9% of 174	7.21	PASS
176	95 - 101% of 174	96.9	PASS
177	5 - 9% of 176	6.44	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA6	Calibration:	2121003
Lab File ID:	1023CCV1.D	Calibration Date:	04/27/12 09:57
Sequence:	2J29804	Injection Date:	10/23/12
Lab Sample ID:	2J29804-CCV1	Injection Time:	10:18

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	200.0	144.8	8.548666E-02	6.188078E-02		-27.6	20 *
Benzene	A	100.0	92.31	0.9315107	0.8598374		-7.7	20
Bromochloromethane	A	100.0	104.4	0.1195172	0.1247849		4.4	20
Bromodichloromethane	A	100.0	106.9	0.2918713	0.311901		6.9	20
Bromoform	Q	100.0	104.6	0.2807903	0.3669771	0.1	4.6	20
Bromomethane	A	100.0	95.12	0.1508425	0.1434829		-4.9	20
2-Butanone	A	200.0	168.9	0.1504013	0.1270317		-15.5	20
Carbon disulfide	A	100.0	101.7	0.549092	0.5586533		1.7	20
Carbon tetrachloride	A	100.0	119.0	0.2201406	0.261864		19.0	20
Chlorobenzene	A	100.0	100.0	1.46879	1.46936	0.3	0.04	20
Chloroethane	A	100.0	90.77	0.1477522	0.1341138		-9.2	20
Chloroform	A	100.0	96.78	0.4138944	0.4005633		-3.2	20
Chloromethane	A	100.0	92.01	0.2843574	0.2616503	0.1	-8.0	20
Cyclohexane	A	100.0	94.44	0.3976941	0.3755866		-5.6	20
Dibromochloromethane	Q	100.0	104.5	0.4682909	0.5773524		4.5	20
1,2-Dibromo-3-chloropropane	Q	100.0	99.73	0.1119305	0.1381495		-0.3	20
1,2-Dibromoethane (EDB)	A	100.0	98.17	0.5515188	0.5414193		-1.8	20
1,2-Dichlorobenzene	A	100.0	98.30	1.203659	1.183222		-1.7	20
1,3-Dichlorobenzene	A	100.0	98.19	1.256964	1.234224		-1.8	20
1,4-Dichlorobenzene	A	100.0	96.91	1.26803	1.228871		-3.1	20
Dichlorodifluoromethane	A	100.0	124.7	0.1924809	0.240072		24.7	20 *
1,1-Dichloroethane	A	100.0	93.05	0.4594785	0.4275488	0.1	-6.9	20
1,2-Dichloroethane	A	100.0	106.7	0.3510167	0.3745104		6.7	20
1,1-Dichloroethene	A	100.0	89.74	0.1816551	0.1630234		-10.3	20
cis-1,2-Dichloroethene	A	100.0	96.18	0.2461851	0.2367857		-3.8	20
trans-1,2-Dichloroethene	A	100.0	90.82	0.2335685	0.2121247		-9.2	20
1,2-Dichloropropane	A	100.0	95.15	0.259293	0.246713		-4.9	20
cis-1,3-Dichloropropene	A	100.0	103.9	0.3521134	0.3657159		3.9	20
trans-1,3-Dichloropropene	A	100.0	108.3	0.8239793	0.892324		8.3	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA6	Calibration:	2121003
Lab File ID:	1023CCV1.D	Calibration Date:	04/27/12 09:57
Sequence:	2J29804	Injection Date:	10/23/12
Lab Sample ID:	2J29804-CCV1	Injection Time:	10:18

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Ethylbenzene	A	100.0	96.03	2.511121	2.411476		-4.0	20
2-Hexanone	A	200.0	195.8	0.4846361	0.4743379		-2.1	20
Isopropylbenzene	A	100.0	99.65	2.072041	2.064743		-0.4	20
Methylene chloride	A	100.0	83.64	0.2190071	0.1831723		-16.4	20
Methyl Acetate	A	100.0	95.55	0.1792449	0.1712757		-4.4	20
Methylcyclohexane	A	100.0	90.15	0.3060391	0.275901		-9.8	20
4-Methyl-2-pentanone	A	200.0	202.0	0.2742899	0.2770132		1.0	20
Methyl t-Butyl Ether	A	100.0	98.27	0.6034362	0.5930231		-1.7	20
Styrene	A	100.0	102.1	1.582432	1.615797		2.1	20
1,1,2,2-Tetrachloroethane	A	100.0	85.25	0.8277083	0.7056283	0.3	-14.7	20
Tetrachloroethene	A	100.0	97.61	0.5209978	0.5085558		-2.4	20
Toluene	A	100.0	95.15	1.306882	1.243515		-4.8	20
1,2,3-Trichlorobenzene	A	100.0	93.94	0.6431937	0.6041842		-6.1	20
1,2,4-Trichlorobenzene	A	100.0	95.12	0.7381814	0.7021335		-4.9	20
1,1,2-Trichloroethane	A	100.0	91.40	0.4426374	0.4045753		-8.6	20
1,1,1-Trichloroethane	A	100.0	109.2	0.2930192	0.3198562		9.2	20
Trichloroethene	A	100.0	99.76	0.2340808	0.2335217		-0.2	20
Trichlorofluoromethane	A	100.0	93.68	0.3110129	0.2913663		-6.3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	A	100.0	92.05	0.1847629	0.1700728		-8.0	20
Vinyl chloride	A	100.0	119.6	0.1848242	0.2211396		19.6	20
m,p-Xylene	A	200.0	192.2	1.895141	1.821721		-3.9	20
o-Xylene	A	100.0	96.86	1.959051	1.897595		-3.1	20
Xylenes (total)	A	300.0	289.1	1.916445	1.847012		-3.6	20
Bromofluorobenzene	A	30.00	31.61	0.8581783	0.9042285		5.4	20
Dibromofluoromethane	A	30.00	32.29	0.2631144	0.2832252		7.6	20
1,2-Dichloroethane-d4	A	30.00	30.33	6.156409E-02	6.224288E-02		1.1	20
Toluene-d8	A	30.00	30.63	2.250463	2.297354		2.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J23004 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/23/12 14:08	5.00	5.00
PEN-3221-09-10/12	1210127-10	10/23/12 14:37	5.00	5.00
PEN-3221-07-10/12	1210127-12	10/23/12 15:06	5.00	5.00
Blank	2J23004-BLK1	10/23/12 12:13	5.00	5.00
LCS	2J23004-BS1	10/23/12 10:47	5.00	5.00
LCS Dup	2J23004-BSD1	10/23/12 22:16	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23004-BLK1 File ID: 1023BLK1.D

Sampled: Prepared: Analyzed: 10/23/12 12:13

Solids: Preparation: 5030B Dilution:

Batch: 2J23004 Sequence: 2J29804 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	U
110-82-7	Cyclohexane		0.250	0.500	1.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J23004-BLK1 File ID: 1023BLK1.D

Sampled: Prepared: Analyzed: 10/23/12 12:13

Solids: Preparation: 5030B Dilution:

Batch: 2J23004 Sequence: 2J29804 Calibration: 2121003 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.13	104	75 - 120	
Dibromofluoromethane	30.00	32.28	108	85 - 115	
1,2-Dichloroethane-d4	30.00	29.98	99.9	70 - 120	1
Toluene-d8	30.00	30.20	101	85 - 120	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29101	Instrument:	MS-VOA5
Calibration:	2291001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29101-TUN1	1012TUN2.D	10/12/12 14:29
Cal Standard	2J29101-CAL1	1012CAL1.D	10/12/12 15:24
Cal Standard	2J29101-CAL2	1012CAL2.D	10/12/12 15:52
Cal Standard	2J29101-CAL3	1012CAL3.D	10/12/12 16:20
Cal Standard	2J29101-CAL4	1012CAL4.D	10/12/12 16:48
Cal Standard	2J29101-CAL5	1012CAL5.D	10/12/12 17:15
Cal Standard	2J29101-CAL6	1012CAL6.D	10/12/12 17:43
Cal Standard	2J29101-CAL7	1012CAL7.D	10/12/12 18:11
Cal Standard	2J29101-CAL8	1012CAL8.D	10/12/12 18:38
Cal Standard	2J29101-CAL9	1012CAL9.D	10/12/12 19:06
Initial Cal Check	2J29101-ICV2	1012ICV2.D	10/12/12 20:29
MS Tune	2J29101-TUN2	1012TUN3.D	10/16/12 13:45
Initial Cal Check	2J29101-ICV3	1012ICV3.D	10/16/12 14:13

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1012TUN2.D	Injection Date:	10/12/12
Instrument ID:	MS-VOA5	Injection Time:	14:29
Sequence:	2J29101	Lab Sample ID:	2J29101-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.6	PASS
75	30 - 60% of 95	50.8	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.98	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	75.5	PASS
175	5 - 9% of 174	7.42	PASS
176	95 - 101% of 174	95.6	PASS
177	5 - 9% of 176	6.6	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1012TUN3.D	Injection Date:	10/16/12
Instrument ID:	MS-VOA5	Injection Time:	13:45
Sequence:	2J29101	Lab Sample ID:	2J29101-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.7	PASS
75	30 - 60% of 95	49.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.69	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.7	PASS
175	5 - 9% of 174	7.11	PASS
176	95 - 101% of 174	97.4	PASS
177	5 - 9% of 176	6.57	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.1308263	7.169947	3.421429	0.1107739			15	
Acrolein	3.293869E-02	13.03005	3.321111	0.1019839			15	
Acrylonitrile	0.1050587	2.955386	4.224444	0.1237894			15	
Benzene	0.9492909	8.620587	7.344444	7.245944E-02			15	
Bromobenzene	0.9753776	12.01047	12.10889	0.0144915			15	
Bromochloromethane	0.1703055	4.507879	6.424444	8.158399E-02			15	
Tert-Amyl Methyl Ether	0.6946744	6.768849	7.543333	6.727492E-02			15	
Bromodichloromethane	0.3668169	6.534773	8.341111	4.022106E-02			15	
Bromoform	0.505661	17.59172	11.51143	2.797771E-02		0.9999593	SPCC (0.1)	
Bromomethane	0.2263207	11.54685	2.575555	0.2053272			15	
Bromofluorobenzene	0.9353573	4.777822	11.95	2.025372E-02			15	
n-Butylbenzene	1.316239	12.26201	13.54556	4.202676E-02			15	
2-Butanone	0.1900461	6.781548	5.87	1.747658E-02			15	
sec-Butylbenzene	2.066344	7.876697	13.00556	3.835336E-02			15	
tert-Butylbenzene	1.705204	6.245025	12.77111	2.030234E-02			15	
Carbon disulfide	0.6412047	4.171366	4.406667	0 1140858			15	
Carbon tetrachloride	0.3465177	8.348462	7.311111	8.229499E-02			15	
Chlorobenzene	1.561071	6.428212	10.79111	3.598659E-02			SPCC (0.3)	
Chloroethane	0.1885512	6.604544	2.696667	0.1857631			15	
Chloroform	0.524999	12.60127	6.401111	5.547756E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1771786	8.444776	8.712222	4.758714E-02			15	
Chloromethane	0.3854947	13.93974	2.037778	0.2150863			SPCC (0.1)	
1-Chlorohexane	0.8007468	8.500716	10.7675	4.454654E-02			15	
2-Chlorotoluene	2.094181	14.4823	12.33444	4.387552E-02			15	
4-Chlorotoluene	2.218103	10.33822	12.39444	4.712388E-02			15	
Cyclohexane	0.4069526	6.67736	7.241111	4.219525E-02			15	
Dibromochloromethane	0.7653683	9.53649	10.02	1.919963E-02			15	
1,2-Dibromo-3-chloropropane	0.1457781	10.28602	14.13889	1.933973E-02			15	
1,2-Dibromoethane (EDB)	0.6953223	7.645976	10.23444	5.380092E-02			15	
Dibromomethane	0.2156063	6.867565	8.275556	6.274539E-02			15	
1,2-Dichlorobenzene	1.322429	9.319326	13.49556	3.668195E-02			15	
1,3-Dichlorobenzene	1.422392	9.765556	13.08889	4.337518E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.504713	8.327264	13.18111	4.258517E-02			15	
Dichlorodifluoromethane	0.2651001	9.859331	1.845556	0.2856368			15	
1,1-Dichloroethane	0.5476241	4.780995	5.418889	5.933679E-02			SPCC (0.1)	
1,2-Dichloroethane	0.4528864	7.432713	7.172222	6.209681E-02			15	
1,1-Dichloroethene	0.219995	5.502211	3.871111	0.1550187			CCC (20)	
cis-1,2-Dichloroethene	0.299601	7.424506	6.144444	8.827927E-02			15	
trans-1,2-Dichloroethene	0.2718737	8.657721	5.04	9.962629E-02			15	
1,2-Dichloroethene (total)	0.2857373	7.486324	6.144444	8.827927E-02			15	
1,2-Dichloropropane	0.3128379	7.734725	8.164444	6.216083E-02			CCC (20)	
1,3-Dichloropropane	1.028184	5.028358	9.767778	6.969679E-02			15	
2,2-Dichloropropane	0.3982799	8.171856	6.252222	7.058938E-02			15	
1,1-Dichloropropene	0.3717116	5.417463	7.192222	6.275141E-02			15	
cis-1,3-Dichloropropene	0.4546126	6.453357	8.923333	5.284769E-02			15	
trans-1,3-Dichloropropene	0.9878761	7.795565	9.402222	4.663104E-02			15	
Diisopropyl Ether	1.371923	11.15829	5.802222	7.784852E-02			15	
Ethylbenzene	2.62125	10.36353	10.94444	4.993597E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.9841015	7.438849	6.275556	8.592307E-02			15	
Ethyl Methacrylate	0.8331089	7.325389	9.6	4.887049E-02			15	
Hexachlorobutadiene	0.2519403	14.9377	15.49778	2.865142E-02			15	
2-Hexanone	0.64531	14.68557	9.708889	6.396247E-02			15	
Iodomethane	0.4141218	9.941711	4.062222	0.1064841			15	
Isopropylbenzene	2.060659	6.880268	11.84444	4.914158E-02			15	
p-Isopropyltoluene	1.585513	6.678641	13.14444	0.0373946			15	
Methylene chloride	0.3058374	7.270345	4.355556	0.121083			15	
Methyl Acetate	0.2709814	5.229151	4.21	0.1259766			15	
Methylcyclohexane	0.2757224	4.97078	8.495555	6.049599E-02			15	
Naphthalene	0.8628979	13.76505	15.36	1.759729E-02			15	
Methyl Methacrylate	0.3369681	10.31889	8.306667	5.808503E-02			15	
4-Methyl-2-pentanone	0.3461514	10.63507	8.851111	0.0427818			15	
Methyl t-Butyl Ether	0.6443611	5.590097	5.03	1.761348E-02			15	
n-Propylbenzene	2.867866	13.93909	12.25333	3.966289E-02			15	
Styrene	1.57265	7.853373	11.41889	2.195589E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2291001
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 10/12/12 15:24 10/12/12 19:06

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.891879	12.88279	11.76778	5.755305E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.6412186	6.505399	10.83444	4.503166E-02			15	
tert-Butyl alcohol	2.145603E-02	9.323035	3.998889	8.342015E-02			15	
Tetrachloroethene	0.7104583	4.599011	10.13333	5.271432E-02			15	
Toluene	1.442954	5.337669	9.4	4.407662E-03			CCC (20)	
1,2,3-Trichlorobenzene	0.4083448	11.43467	15.64778	2.504416E-02			15	
1,2,4-Trichlorobenzene	0.4983989	11.29925	15.21222	2.863628E-02			15	
1,1,2-Trichloroethane	0.5170842	7.469048	9.554445	5.725395E-02			15	
1,1,1-Trichloroethane	0.4192187	4.558507	6.966667	7.320109E-02			15	
Tetrahydrofuran	0.0249648	16.34235	6.61	0.0180108	0.9995332		0.995	
Trichloroethene	0.2944908	6.692227	8.115555	6.266205E-02			15	
Trichlorofluoromethane	0.4689858	5.793276	3.15	0.1588719			15	
1,2,3-Trichloropropane	0.1991037	7.060199	11.89111	0.0147569			15	
1,3,5-Trimethylbenzene	2.039265	8.795024	12.43333	4.248275E-02			15	
1,2,4-Trimethylbenzene	1.766581	7.92246	12.80222	4.014229E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2264658	3.944156	3.947778	0.2110514			15	
Vinyl chloride	0.2359945	23.03148	2.175714	0.2462423	0.9988621		CCC (20)	*
m,p-Xylene	1.813543	13.97709	11.05778	5.889907E-02			15	
o-Xylene	1.905321	7.777756	11.44778	3.791632E-02			15	
Vinyl acetate	0.8911488	11.32924	5.49875	6.399563E-02			15	
Xylenes (total)	1.844136	11.38244	11.44778	3.791632E-02			15	
Dibromofluoromethane	0.3431068	1.223972	6.572222	6.593489E-02			15	
1,2-Dichloroethane-d4	6.230074E-02	1.652363	7.081111	4.893599E-02			15	
Toluene-d8	2.274744	4.528986	9.322222	4.878895E-02			15	
tert-Amyl alcohol	1.753356E-02	4.883647	6.7775	6.889731E-02			15	
tert-Amyl ethyl ether	0.790677	7.256792	8.443333	5.558737E-02			15	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29608	Instrument:	MS-VOA5
Calibration:	2291001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29608-TUN1	1020TUN1.D	10/20/12 10:44
Calibration Check	2J29608-CCV1	1020CCV1.D	10/20/12 11:18
LCS	2J19029-BS1	1020LCS1.D	10/20/12 11:46
Blank	2J19029-BLK1	1020BLK1.D	10/20/12 13:09
Trip Blank 01035	1210127-13	1012713.D	10/20/12 15:00
LCS Dup	2J19029-BSD1	1020LCSD.D	10/20/12 21:56

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	1020TUN1.D	Injection Date:	10/20/12
Instrument ID:	MS-VOA5	Injection Time:	10:44
Sequence:	2J29608	Lab Sample ID:	2J29608-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.2	PASS
75	30 - 60% of 95	49.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.95	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.3	PASS
175	5 - 9% of 174	7.24	PASS
176	95 - 101% of 174	96.8	PASS
177	5 - 9% of 176	6.64	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA5	Calibration:	2291001
Lab File ID:	1020CCV1.D	Calibration Date:	10/12/12 03:24
Sequence:	2J29608	Injection Date:	10/20/12
Lab Sample ID:	2J29608-CCV1	Injection Time:	11:18

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100.0	76.35	0.1308263	9.988141E-02		-23.7	20	*
Benzene	A	50.00	52.25	0.9492909	0.9920712		4.5	20	
Bromochloromethane	A	50.00	50.92	0.1703055	0.1734433		1.8	20	
Bromodichloromethane	A	50.00	55.67	0.3668169	0.4084281		11.3	20	
Bromoform	Q	50.00	46.44	0.505661	0.5468473	0.1	-7.1	20	
Bromomethane	A	50.00	52.00	0.2263207	0.2353729		4.0	20	
2-Butanone	A	100.0	95.95	0.1900461	0.1823417		-4.1	20	
Carbon disulfide	A	50.00	70.81	0.6412047	0.9081343		41.6	20	*
Carbon tetrachloride	A	50.00	51.08	0.3465177	0.3540196		2.2	20	
Chlorobenzene	A	50.00	54.35	1.561071	1.697034	0.3	8.7	20	
Chloroethane	A	50.00	56.94	0.1885512	0.2147162		13.9	20	
Chloroform	A	50.00	50.37	0.524999	0.528858		0.7	20	
Chloromethane	A	50.00	64.93	0.3854947	0.50059	0.1	29.9	20	*
Cyclohexane	A	50.00	60.13	0.4069526	0.489367		20.3	20	*
Dibromochloromethane	A	50.00	52.89	0.7653683	0.8095983		5.8	20	
1,2-Dibromo-3-chloropropane	A	50.00	54.72	0.1457781	0.1595297		9.4	20	
1,2-Dibromoethane (EDB)	A	50.00	50.76	0.6953223	0.7058226		1.5	20	
1,2-Dichlorobenzene	A	50.00	53.59	1.322429	1.417337		7.2	20	
1,3-Dichlorobenzene	A	50.00	52.92	1.422392	1.505321		5.8	20	
1,4-Dichlorobenzene	A	50.00	49.65	1.504713	1.494277		-0.7	20	
Dichlorodifluoromethane	A	50.00	82.28	0.2651001	0.4362612		64.6	20	*
1,1-Dichloroethane	A	50.00	53.47	0.5476241	0.585608	0.1	6.9	20	
1,2-Dichloroethane	A	50.00	52.22	0.4528864	0.4730278		4.4	20	
1,1-Dichloroethene	A	50.00	58.48	0.219995	0.257318		17.0	20	
cis-1,2-Dichloroethene	A	50.00	50.74	0.299601	0.3040104		1.5	20	
trans-1,2-Dichloroethene	A	50.00	51.49	0.2718737	0.2799849		3.0	20	
1,2-Dichloropropane	A	50.00	53.58	0.3128379	0.3352204		7.2	20	
cis-1,3-Dichloropropene	A	50.00	50.53	0.4546126	0.4594384		1.1	20	
trans-1,3-Dichloropropene	A	50.00	57.03	0.9878761	1.126773		14.1	20	

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-VOA5	Calibration:	2291001
Lab File ID:	1020CCV1.D	Calibration Date:	10/12/12 03:24
Sequence:	2J29608	Injection Date:	10/20/12
Lab Sample ID:	2J29608-CCV1	Injection Time:	11:18

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Ethylbenzene	A	50.00	52.24	2.62125	2.738843		4.5	20	
2-Hexanone	A	100.0	96.97	0.64531	0.6257736		-3.0	20	
Isopropylbenzene	A	50.00	52.06	2.060659	2.145749		4.1	20	
Methylene chloride	A	50.00	51.59	0.3058374	0.3155359		3.2	20	
Methyl Acetate	A	50.00	51.45	0.2709814	0.2788537		2.9	20	
Methylcyclohexane	A	50.00	58.33	0.2757224	0.321666		16.7	20	
4-Methyl-2-pentanone	A	100.0	103.1	0.3461514	0.356784		3.1	20	
Methyl t-Butyl Ether	A	50.00	53.98	0.6443611	0.6956156		8.0	20	
Styrene	A	50.00	54.93	1.57265	1.727733		9.9	20	
1,1,2,2-Tetrachloroethane	A	50.00	51.62	0.891879	0.9208147	0.3	3.2	20	
Tetrachloroethene	A	50.00	48.43	0.7104583	0.6881786		-3.1	20	
Toluene	A	50.00	50.77	1.442954	1.465293		1.5	20	
1,2,3-Trichlorobenzene	A	50.00	49.34	0.4083448	0.4029793		-1.3	20	
1,2,4-Trichlorobenzene	A	50.00	49.72	0.4983989	0.4955644		-0.6	20	
1,1,2-Trichloroethane	A	50.00	49.50	0.5170842	0.5119239		-1.0	20	
1,1,1-Trichloroethane	A	50.00	50.23	0.4192187	0.421147		0.5	20	
Trichloroethene	A	50.00	50.38	0.2944908	0.2967069		0.8	20	
Trichlorofluoromethane	A	50.00	52.12	0.4689858	0.4888322		4.2	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	A	50.00	62.94	0.2264658	0.2850597		25.9	20	*
Vinyl chloride	L	50.00	65.20	0.2359945	0.255975		30.4	20	*
m,p-Xylene	A	100.0	110.8	1.813543	2.009355		10.8	20	
o-Xylene	A	50.00	57.39	1.905321	2.186743		14.8	20	
Xylenes (total)	A	150.0	168.2	1.844136	2.068484		12.2	20	
Bromofluorobenzene	A	30.00	29.71	0.9353573	0.9262456		-1.0	20	
Dibromofluoromethane	A	30.00	30.18	0.3431068	0.3451986		0.6	20	
1,2-Dichloroethane-d4	A	30.00	30.58	6.230074E-02	6.350289E-02		1.9	20	
Toluene-d8	A	30.00	29.95	2.274744	2.271295		-0.2	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J19029 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
Trip Blank 01035	1210127-13	10/20/12 15:00	5.00	5.00
Blank	2J19029-BLK1	10/20/12 13:09	5.00	5.00
LCS	2J19029-BS1	10/20/12 11:46	5.00	5.00
LCS Dup	2J19029-BSD1	10/20/12 21:56	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19029-BLK1 File ID: 1020BLK1.D

Sampled: Prepared: Analyzed: 10/20/12 13:09

Solids: Preparation: 5030B Dilution:

Batch: 2J19029 Sequence: 2J29608 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
67-64-1	Acetone		2.50	5.00	10.0	Y, U
71-43-2	Benzene		0.250	0.500	1.00	U
74-97-5	Bromochloromethane		0.250	0.500	1.00	U
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
78-93-3	2-Butanone		2.50	5.00	10.0	U
75-15-0	Carbon disulfide		0.250	0.500	1.00	X, U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
74-87-3	Chloromethane		0.250	0.500	1.00	X, U
110-82-7	Cyclohexane		0.250	0.500	1.00	X, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
96-12-8	1,2-Dibromo-3-chloropropane		0.500	1.00	2.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	X, U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
591-78-6	2-Hexanone		1.25	2.50	5.00	U
98-82-8	Isopropylbenzene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-20-9	Methyl Acetate		0.500	1.00	2.00	U
108-87-2	Methylcyclohexane		0.250	0.500	1.00	U
108-10-1	4-Methyl-2-pentanone		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
100-42-5	Styrene		0.250	0.500	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19029-BLK1 File ID: 1020BLK1.D

Sampled: Prepared: Analyzed: 10/20/12 13:09

Solids: Preparation: 5030B Dilution:

Batch: 2J19029 Sequence: 2J29608 Calibration: 2291001 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
108-88-3	Toluene		0.250	0.500	1.00	U
87-61-6	1,2,3-Trichlorobenzene		0.250	0.500	1.00	U
120-82-1	1,2,4-Trichlorobenzene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.500	1.00	2.00	X, U
75-01-4	Vinyl chloride		0.250	0.500	1.00	X, U
108-38-3/106-42-	m,p-Xylene		0.500	1.00	2.00	U
95-47-6	o-Xylene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.93	93.1	75 - 120	I
Dibromofluoromethane	30.00	29.56	98.5	85 - 115	I
1,2-Dichloroethane-d4	30.00	30.34	101	70 - 120	
Toluene-d8	30.00	29.70	99.0	85 - 120	I

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I25803	Instrument:	MS-BNA3
Calibration:	2261001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I25803-TUN1	SEQ-TUN1.D	09/11/12 10:14
Cal Standard	2I25803-CAL1	SEQ-CAL1.D	09/11/12 10:38
Cal Standard	2I25803-CAL2	SEQ-CAL2.D	09/11/12 11:06
Cal Standard	2I25803-CAL3	SEQ-CAL3.D	09/11/12 11:34
Cal Standard	2I25803-CAL4	SEQ-CAL4.D	09/11/12 12:03
Cal Standard	2I25803-CAL5	SEQ-CAL5.D	09/11/12 12:31
Cal Standard	2I25803-CAL6	SEQ-CAL6.D	09/11/12 12:59
Cal Standard	2I25803-CAL7	SEQ-CAL7.D	09/11/12 13:27
Cal Standard	2I25803-CAL8	SEQ-CAL8.D	09/11/12 13:55
Cal Standard	2I25803-CAL9	SEQ-CAL9.D	09/11/12 14:23
Cal Standard	2I25803-CALA	SEQ-CALA.D	09/11/12 14:51
Cal Standard	2I25803-CALB	SEQ-CALB.D	09/11/12 15:20
Cal Standard	2I25803-CALC	SEQ-CALC.D	09/11/12 15:48
Cal Standard	2I25803-CALD	SEQ-CALD.D	09/11/12 16:16
Cal Standard	2I25803-CALE	SEQ-CALE.D	09/11/12 16:44
Cal Standard	2I25803-CALF	SEQ-CALF.D	09/11/12 17:11
Cal Standard	2I25803-CALG	SEQ-CALG.D	09/11/12 17:40
Initial Cal Check	2I25803-ICV1	SEQ-ICV1.D	09/11/12 18:08
Initial Cal Check	2I25803-ICV2	SEQ-ICV2.D	09/11/12 18:36
MS Tune	2I25803-TUN2	SEQ-TUN2.D	09/12/12 15:25
Initial Cal Check	2I25803-ICV3	SEQ-ICV3.D	09/12/12 15:49

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/11/12
Instrument ID:	MS-BNA3	Injection Time:	10:14
Sequence:	2I25803	Lab Sample ID:	2I25803-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	39.9	PASS
68	Less than 2% of 69	0.427	PASS
69	Less than 200% of 198	45	PASS
70	Less than 2% of 69	0.427	PASS
127	40 - 60% of 198	48.7	PASS
197	Less than 1% of 198	0.112	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.32	PASS
275	10 - 30% of 198	23.4	PASS
365	1 - 200% of 198	2.18	PASS
441	0.001 - 100% of 443	80	PASS
442	40 - 200% of 198	79.1	PASS
443	17 - 23% of 442	18.8	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/12/12
Instrument ID:	MS-BNA3	Injection Time:	15:25
Sequence:	2I25803	Lab Sample ID:	2I25803-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	38.9	PASS
68	Less than 2% of 69	1.04	PASS
69	Less than 200% of 198	42.9	PASS
70	Less than 2% of 69	0.427	PASS
127	40 - 60% of 198	48.8	PASS
197	Less than 1% of 198	0.0543	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.99	PASS
275	10 - 30% of 198	22.3	PASS
365	1 - 200% of 198	2.57	PASS
441	0.001 - 100% of 443	68.9	PASS
442	40 - 200% of 198	78.2	PASS
443	17 - 23% of 442	20.5	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2261001	Instrument:	MS-BNA3
Matrix:	Water	Calibration Dates:	9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.10566	8.941982	9.541375	5.759679E-02			CCC (20)	
Acenaphthylene	1.65984	11.47408	9.309875	5.149462E-02			CCC (20)	
Acetophenone	1.761778	4.548734	6.15075	0.029436			CCC (20)	
Aniline	1.975584	6.156998	5.21875	8.840861E-03			CCC (20)	
Anthracene	1.081887	12.14042	11.38375	4.965419E-02			CCC (20)	
Atrazine	0.2286444	3.743847	11.014	2.800227E-02			CCC (20)	
Benzaldehyde	0.9974323	8.489099	5.032875	0.0350803			CCC (20)	
Benzidine	0.650866	4.862256	12.96125	7.03444E-03			CCC (20)	
Benzo(a)anthracene	1.096178	5.859442	14.68275	0.0361667			CCC (20)	
Benzo(a)pyrene	1.020199	5.91785	16.89375	4.367248E-02			CCC (20)	
Benzo(b)fluoranthene	1.062636	8.32804	16.3765	4.687998E-02			CCC (20)	
Benzo(g,h,i)perylene	0.9945587	5.662765	19.13462	6.322926E-02			CCC (20)	
Benzoic acid	0.2585828	19.18735	7.002875	0.5416775	0.9968332		CCC (20)	
Benzo(k)fluoranthene	1.300594	10.47456	16.41512	4.428847E-02			CCC (20)	
Benzyl alcohol	0.8350847	3.232369	5.801	8.006347E-02			CCC (20)	
1,1-Biphenyl	1.358172	8.14203	8.777	3.752441E-02			CCC (20)	
4-Bromophenyl-phenylether	0.2362641	2.694889	10.759	4.506461E-02			CCC (20)	
Butylbenzylphthalate	0.5337897	6.795952	13.95313	1.982893E-02			CCC (20)	
Caprolactam	0.1054972	6.369373	7.769375	0.1428007			CCC (20)	
Carbazole	1.029924	10.35465	11.592	4.012654E-02			CCC (20)	
4-Chloro-3-methylphenol	0.3241539	4.484259	8.02375	2.422232E-02			CCC (20)	
4-Chloroaniline	0.4387603	4.499309	7.395	6.407021E-02			CCC (20)	
Bis(2-chloroethoxy)methane	0.4361706	4.861304	6.99	5.257221E-02			CCC (20)	
Bis(2-chloroethyl)ether	1.284228	4.005468	5.29525	0.1014556			CCC (20)	
2,2'-Oxybis-1-chloropropane	1.662963	5.286827	6.008	7.846643E-02			CCC (20)	
2-Chloronaphthalene	1.10867	7.247886	8.782	5.276285E-02			CCC (20)	
2-Chlorophenol	1.266695	3.235977	5.356	8.851782E-02			CCC (20)	
4-Chlorophenyl phenyl ether	0.6443488	6.230529	10.16638	5.729773E-03			CCC (20)	
Chrysene	1.072128	8.541599	14.74763	3.641467E-02			CCC (20)	
Dibenz(a,h)anthracene	0.968097	8.317117	18.71425	4.210554E-02			CCC (20)	
Dibenzofuran	1.531191	11.0083	9.734	4.736714E-02			CCC (20)	
Di-n-butylphthalate	1.117323	11.87776	12.081	2.243919E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2261001
Instrument: MS-BNA3
Matrix: Water
Calibration Dates: 9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.454535	5.818776	5.61225	0.013037			CCC (20)	
1,3-Dichlorobenzene	1.438718	4.610703	5.53975	1.248566E-02			CCC (20)	
1,2-Dichlorobenzene	1.382609	5.210718	5.860625	0.0201332			CCC (20)	
3,3'-Dichlorobenzidine	0.3990372	6.177841	14.68175	2.892872E-02			CCC (20)	
2,6-Dichlorophenol	0.3076612	2.595722	7.40325	2.436204E-02			15	
2,4-Dichlorophenol	0.3172443	5.18606	7.101375	4.761375E-02			CCC (20)	
Diethylphthalate	1.246346	6.574405	10.103	6.670748E-02			CCC (20)	
2,4-Dimethylphenol	0.3802932	3.960326	6.8645	1.752451E-02			CCC (20)	
Dimethyl phthalate	1.25703	8.5773	9.232125	5.107294E-02			CCC (20)	
4,6-Dinitro-2-methylphenol	0.1376067	22.31038	10.28925	8.292123E-02	0 9995831		CCC (20)	*
2,4-Dinitrophenol	0.1586589	30.52087	9.602375	5.674957E-02	0.9965146		CCC (20)	*
2,4-Dinitrotoluene	0.4130027	6.633871	9.796125	4.871438E-02			CCC (20)	
2,6-Dinitrotoluene	0.3035821	5.167856	9.315	4.886391E-02			CCC (20)	
Di-n-octylphthalate	1.122715	10.64814	15.776	1.209158E-02			CCC (20)	
1,4-Dioxane	0.5337955	4.869741	2.414375	7.061711E-02			15	
1,2-Diphenylhydrazine	0.7871146	8.877235	10.355	4.530772E-02			CCC (20)	
Bis(2-ethylhexyl)phthalate	0.6994262	7.777001	14.8135	7.521677E-03			CCC (20)	
Fluoranthene	1.164281	11.37119	12.78475	7.212182E-03			CCC (20)	
Fluorene	1.322497	9.629889	10.15838	0.047539			CCC (20)	
2-Fluorobiphenyl	1.269863	8.146411	8.668	5.397084E-02			CCC (20)	
2-Fluorophenol	1.119802	5.107841	4.039	1.607769E-02			CCC (20)	
Hexachlorobenzene	0.2557988	3 811211	10.93875	0.0483882			CCC (20)	
Hexachlorobutadiene	0.2021383	2.894676	7.537375	1.656083E-02			CCC (20)	
Hexachlorocyclopentadiene	0.3471121	8.069592	8.46875	1.743379E-02			CCC (20)	
Hexachloroethane	0.606057	2.830271	6.25375	5.98945E-03			CCC (20)	
Indeno(1,2,3-cd)pyrene	1.18309	7.999515	18.68575	3.410259E-02			CCC (20)	
Isophorone	0.694789	5.463283	6.678375	9.487201E-03			CCC (20)	
1-Methylnaphthalene	0.5852855	7.165809	8.311	5.573635E-02			CCC (20)	
2-Methylnaphthalene	0.6105231	7.071532	8.168625	0.0152489			CCC (20)	
2-Methylphenol	1.15948	3.037164	5.977	7.574059E-02			CCC (20)	
3-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	
4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2261001	Instrument:	MS-BNA3
Matrix:	Water	Calibration Dates:	9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
3-Methylphenol/4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			15	
Naphthalene	0.9922437	12.28808	7.288875	1.449498E-02			CCC (20)	
4-Nitroaniline	0.3237232	5.187175	10.24375	9.360202E-02			CCC (20)	
3-Nitroaniline	0.3275855	3.191586	9.4845	6.968371E-02			CCC (20)	
2-Nitroaniline	0.3368371	4.692985	8.965625	2.313171E-02			CCC (20)	
Nitrobenzene	0.4042427	3.277603	6.37825	1.726574E-02			CCC (20)	
Nitrobenzene-d5	0.3989519	3.300556	6.357375	2.012303E-02			CCC (20)	
4-Nitrophenol	0.263969	9.91531	9.692875	0.0512375			CCC (20)	
2-Nitrophenol	0.1877485	8.18829	6.8025	0.0109992			CCC (20)	
N-Nitrosodimethylamine	0.6512354	3.595621	2.705	0.1357375			CCC (20)	
N-Nitrosodiphenylamine	0.6783385	6.967624	10.324	4.608146E-02			CCC (20)	
N-Nitroso-di-n-propylamine	0.977041	4.270567	6.194375	7.506511E-02			CCC (20)	
Pentachlorophenol	0.1662584	12.1407	11.15975	0.0122687			CCC (20)	
Phenanthrene	1.082295	13.7748	11.32925	4.510804E-02			CCC (20)	
Phenol	1.701202	4.253285	5.197	0.128711			CCC (20)	
Phenol-d6	1.476584	6.577862	5.18125	0.1022497			CCC (20)	
Pyrene	1.182005	12.0001	13.058	3.821264E-02			CCC (20)	
Pyridine	1.443915	2.816602	2.7155	0.1280989			CCC (20)	
Terphenyl-d14	0.755263	6.374122	13.26762	4.197651E-02			CCC (20)	
1,2,4,5-Tetrachlorobenzene	0.3539919	4.108493	8.43825	1.427966E-02			CCC (20)	
2,3,4,6-Tetrachlorophenol	0.3406087	4.554587	9.94875	1.854361E-02			CCC (20)	
2,4,6-Tribromophenol	0.1129158	6.053375	10.48725	7.380264E-03			CCC (20)	
1,2,4-Trichlorobenzene	0.3379206	3.985092	7.2165	8.724103E-03			CCC (20)	
2,4,6-Trichlorophenol	0.3893444	3.105104	8.572375	2.137935E-02			CCC (20)	
2,4,5-Trichlorophenol	0.3894227	5.904797	8.613625	1.934255E-02			CCC (20)	
1,4-Dioxane	8840.275	4.44897	2.414375	7.061711E-02				*
Acenaphthene	1.10566	8.941982	9.541375	5.759679E-02			CCC (20)	
Acenaphthylene	1.65984	11.47408	9.309875	5.149462E-02			CCC (20)	
Acetophenone	1.761778	4.548734	6.15075	0.029436			CCC (20)	
Aniline	1.975584	6.156998	5.21875	8.840861E-03			CCC (20)	
Anthracene	1.081887	12.14042	11.38375	4.965419E-02			CCC (20)	
Atrazine	0.2286444	3.743847	11.014	2.800227E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2261001
Instrument: MS-BNA3
Matrix: Water
Calibration Dates: 9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Benzaldehyde	0.9974323	8.489099	5.032875	0.0350803			CCC (20)	
Benzidine	0.650866	4.862256	12.96125	7.03444E-03			CCC (20)	
Benzo(a)anthracene	1.096178	5.859442	14.68275	0.0361667			CCC (20)	
Benzo(a)pyrene	1.020199	5.91785	16.89375	4.367248E-02			CCC (20)	
Benzo(b)fluoranthene	1.062636	8.32804	16.3765	4.687998E-02			CCC (20)	
Benzo(g,h,i)perylene	0.9945587	5.662765	19.13462	6.322926E-02			CCC (20)	
Benzoic acid	0.2585828	19.18735	7.002875	0.5416775	0.9968332		CCC (20)	
Benzo(k)fluoranthene	1.300594	10.47456	16.41512	4.428847E-02			CCC (20)	
Benzyl alcohol	0.8350847	3.232369	5.801	8.006347E-02			CCC (20)	
1,1-Biphenyl	1.358172	8.14203	8.777	3.752441E-02			CCC (20)	
4-Bromophenyl-phenylether	0.2362641	2.694889	10.759	4.506461E-02			CCC (20)	
Butylbenzylphthalate	0.5337897	6.795952	13.95313	1.982893E-02			CCC (20)	
Caprolactam	0.1054972	6.369373	7.769375	0.1428007			CCC (20)	
Carbazole	1.029924	10.35465	11.592	4.012654E-02			CCC (20)	
4-Chloro-3-methylphenol	0.3241539	4.484259	8.02375	2.422232E-02			CCC (20)	
4-Chloroaniline	0.4387603	4.499309	7.395	6.407021E-02			CCC (20)	
Bis(2-chloroethoxy)methane	0.4361706	4.861304	6.99	5.257221E-02			CCC (20)	
Bis(2-chloroethyl)ether	1.284228	4.005468	5.29525	0.1014556			CCC (20)	
2,2'-Oxybis-1-chloropropane	1.662963	5.286827	6.008	7.846643E-02			CCC (20)	
2-Chloronaphthalene	1.10867	7.247886	8.782	5.276285E-02			CCC (20)	
2-Chlorophenol	1.266695	3.235977	5.356	8.851782E-02			CCC (20)	
4-Chlorophenyl phenyl ether	0.6443488	6.230529	10.16638	5.729773E-03			CCC (20)	
Chrysene	1.072128	8.541599	14.74763	3.641467E-02			CCC (20)	
Dibenz(a,h)anthracene	0.968097	8.317117	18.71425	4.210554E-02			CCC (20)	
Dibenzofuran	1.531191	11.0083	9.734	4.736714E-02			CCC (20)	
Di-n-butylphthalate	1.117323	11.87776	12.081	2.243919E-02			CCC (20)	
1,4-Dichlorobenzene	1.454535	5.818776	5.61225	0.013037			CCC (20)	
1,3-Dichlorobenzene	1.438718	4.610703	5.53975	1.248566E-02			CCC (20)	
1,2-Dichlorobenzene	1.382609	5.210718	5.860625	0.0201332			CCC (20)	
3,3'-Dichlorobenzidine	0.3990372	6.177841	14.68175	2.892872E-02			CCC (20)	
2,6-Dichlorophenol	0.3076612	2.595722	7.40325	2.436204E-02			CCC (20)	
2,4-Dichlorophenol	0.3172443	5.18606	7.101375	4.761375E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2261001
Instrument: MS-BNA3
Matrix: Water
Calibration Dates: 9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Diethylphthalate	1.246346	6.574405	10.103	6.670748E-02			CCC (20)	
2,4-Dimethylphenol	0.3802932	3.960326	6.8645	1.752451E-02			CCC (20)	
Dimethyl phthalate	1.25703	8.5773	9.232125	5.107294E-02			CCC (20)	
4,6-Dinitro-2-methylphenol	0.1376067	22.31038	10.28925	8.292123E-02	0.9995831		CCC (20)	*
2,4-Dinitrophenol	0.1586589	30.52087	9.602375	5.674957E-02	0.9965146		CCC (20)	*
2,4-Dinitrotoluene	0.4130027	6.633871	9.796125	4.871438E-02			CCC (20)	
2,6-Dinitrotoluene	0.3035821	5.167856	9.315	4.886391E-02			CCC (20)	
Di-n-octylphthalate	1.122715	10.64814	15.776	1.209158E-02			CCC (20)	
1,2-Diphenylhydrazine	0.7871146	8.877235	10.355	4.530772E-02			CCC (20)	
Bis(2-ethylhexyl)phthalate	0.6994262	7.777001	14.8135	7.521677E-03			CCC (20)	
Fluoranthene	1.164281	11.37119	12.78475	7.212182E-03			CCC (20)	
Fluorene	1.322497	9.629889	10.15838	0.047539			CCC (20)	
2-Fluorobiphenyl	1.269863	8.146411	8.668	5.397084E-02			CCC (20)	
2-Fluorophenol	1.119802	5.107841	4.039	1.607769E-02			CCC (20)	
Hexachlorobenzene	0.2557988	3.811211	10.93875	0.0483882			CCC (20)	
Hexachlorobutadiene	0.2021383	2.894676	7.537375	1.656083E-02			CCC (20)	
Hexachlorocyclopentadiene	0.3471121	8.069592	8.46875	1.743379E-02			CCC (20)	
Hexachloroethane	0.606057	2.830271	6.25375	5.98945E-03			CCC (20)	
Indeno(1,2,3-cd)pyrene	1.18309	7.999515	18.68575	3.410259E-02			CCC (20)	
Isophorone	0.694789	5.463283	6.678375	9.487201E-03			CCC (20)	
1-Methylnaphthalene	0.5852855	7.165809	8.311	5.573635E-02			CCC (20)	
2-Methylnaphthalene	0.6105231	7.071532	8.168625	0.0152489			CCC (20)	
2-Methylphenol	1.15948	3.037164	5.977	7.574059E-02			CCC (20)	
3-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	
3-Methylphenol/4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	
4-Methylphenol	1.219104	2.320772	6.17375	7.362797E-02			CCC (20)	
Naphthalene	0.9922437	12.28808	7.288875	1.449498E-02			CCC (20)	
4-Nitroaniline	0.3237232	5.187175	10.24375	9.360202E-02			CCC (20)	
3-Nitroaniline	0.3275855	3.191586	9.4845	6.968371E-02			CCC (20)	
2-Nitroaniline	0.3368371	4.692985	8.965625	2.313171E-02			CCC (20)	
Nitrobenzene	0.4042427	3.277603	6.37825	1.726574E-02			CCC (20)	
Nitrobenzene-d5	0.3989519	3.300556	6.357375	2.012303E-02			CCC (20)	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2261001	Instrument:	MS-BNA3
Matrix:	Water	Calibration Dates:	9/11/12 10:38 9/11/12 17:40

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
4-Nitrophenol	0.263969	9.91531	9.692875	0.0512375			CCC (20)	
2-Nitrophenol	0.1877485	8.18829	6.8025	0.0109992			CCC (20)	
N-Nitrosodimethylamine	0.6512354	3.595621	2.705	0.1357375			CCC (20)	
N-Nitrosodiphenylamine	0.6783385	6.967624	10.324	4.608146E-02			CCC (20)	
N-Nitroso-di-n-propylamine	0.977041	4.270567	6.194375	7.506511E-02			CCC (20)	
Pentachlorophenol	0.1662584	12.1407	11.15975	0.0122687			CCC (20)	
Phenanthrene	1.082295	13.7748	11.32925	4.510804E-02			CCC (20)	
Phenol	1.701202	4.253285	5.197	0.128711			CCC (20)	
Phenol-d6	1.476584	6.577862	5.18125	0.1022497			CCC (20)	
Pyrene	1.182005	12.0001	13.058	3.821264E-02			CCC (20)	
Pyridine	1.443915	2.816602	2.7155	0.1280989			CCC (20)	
Terphenyl-d14	0.755263	6.374122	13.26762	4.197651E-02			CCC (20)	
1,2,4,5-Tetrachlorobenzene	0.3539919	4.108493	8.43825	1.427966E-02			CCC (20)	
2,3,4,6-Tetrachlorophenol	0.3406087	4.554587	9.94875	1.854361E-02			CCC (20)	
2,4,6-Tribromophenol	0.1129158	6.053375	10.48725	7.380264E-03			CCC (20)	
1,2,4-Trichlorobenzene	0.3379206	3.985092	7.2165	8.724103E-03			CCC (20)	
2,4,6-Trichlorophenol	0.3893444	3.105104	8.572375	2.137935E-02			CCC (20)	
2,4,5-Trichlorophenol	0.3894227	5.904797	8.613625	1.934255E-02			CCC (20)	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29819	Instrument:	MS-BNA3
Calibration:	2261001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29819-TUN1	SEQ-TUN1.D	10/23/12 11:47
Calibration Check	2J29819-CCV1	SEQ-CCV1.D	10/23/12 12:12
Calibration Check	2J29819-CCV2	SEQ-CCV2.D	10/23/12 12:40
Blank	2J17004-BLK1	J17004B1.D	10/23/12 16:23
LCS	2J17004-BS1	J17004L1.D	10/23/12 16:50
LCS Dup	2J17004-BSD1	J17004L2.D	10/23/12 17:18
PEN-44-09-10/12	1210127-08	1012708.D	10/23/12 18:14
PEN-3221-09-10/12	1210127-10	1012710.D	10/23/12 18:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/23/12
Instrument ID:	MS-BNA3	Injection Time:	11:47
Sequence:	2J29819	Lab Sample ID:	2J29819-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	38.6	PASS
68	Less than 2% of 69	0.331	PASS
69	Less than 200% of 198	41.9	PASS
70	Less than 2% of 69	0.654	PASS
127	40 - 60% of 198	48.3	PASS
197	Less than 1% of 198	0.0162	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.2	PASS
275	10 - 30% of 198	26.2	PASS
365	1 - 200% of 198	2.59	PASS
441	0.001 - 100% of 443	74.8	PASS
442	40 - 200% of 198	85.1	PASS
443	17 - 23% of 442	19.2	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2J29819	Injection Date:	10/23/12
Lab Sample ID:	2J29819-CCV1	Injection Time:	12:12

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Bromophenyl-phenylether	A	50.00	53.01	0.2362641	0.2505098	0.1	6.0	20	
Butylbenzylphthalate	A	50.00	55.53	0.5337897	0.5928641	0.01	11.1	20	
Carbazole	A	50.00	52.37	1.029924	1.078795	0.01	4.7	20	
4-Chloro-3-methylphenol	A	50.00	53.33	0.3241539	0.3457738	0.2	6.7	20	
4-Chloroaniline	A	50.00	53.26	0.4387603	0.4673854	0.01	6.5	20	
Bis(2-chloroethoxy)methane	A	50.00	51.14	0.4361706	0.4461527	0.3	2.3	20	
Bis(2-chloroethyl)ether	A	50.00	53.57	1.284228	1.375935	0.7	7.1	20	
2,2'-Oxybis-1-chloropropane	A	50.00	52.64	1.662963	1.750723	0.01	5.3	20	
2-Chloronaphthalene	A	50.00	48.95	1.10867	1.085393	0.8	-2.1	20	
2-Chlorophenol	A	50.00	55.65	1.266695	1.40989	0.8	11.3	20	
4-Chlorophenyl phenyl ether	A	50.00	49.98	0.6443488	0.6441526	0.4	-0.03	20	
Dibenzofuran	A	50.00	48.41	1.531191	1.482621	0.8	-3.2	20	
Di-n-butylphthalate	A	50.00	52.61	1.117323	1.175643	0.01	5.2	20	
2,4-Dichlorophenol	A	50.00	54.19	0.3172443	0.3438112	0.2	8.4	20	
Diethylphthalate	A	50.00	47.73	1.246346	1.189802	0.01	-4.5	20	
2,4-Dimethylphenol	A	50.00	51.32	0.3802932	0.3903082	0.2	2.6	20	
Dimethyl phthalate	A	50.00	48.44	1.25703	1.217929	0.01	-3.1	20	
4,6-Dinitro-2-methylphenol	L	50.00	57.88	0.1376067	0.1823073	0.01	15.8	20	
2,4-Dinitrophenol	L	50.00	61.02	0.1586589	0.2378055	0.05	22.0	20	*
2,4-Dinitrotoluene	A	50.00	54.15	0.4130027	0.447275	0.2	8.3	20	
2,6-Dinitrotoluene	A	50.00	54.10	0.3035821	0.3284613	0.2	8.2	20	
Di-n-octylphthalate	A	50.00	55.64	1.122715	1.24934	0.01	11.3	20	
Bis(2-ethylhexyl)phthalate	A	50.00	56.49	0.6994262	0.7902203	0.01	13.0	20	
Hexachlorobenzene	A	50.00	53.01	0.2557988	0.2712171	0.1	6.0	20	
Hexachlorobutadiene	A	50.00	49.58	0.2021383	0.200441	0.01	-0.8	20	
Hexachlorocyclopentadiene	A	50.00	54.28	0.3471121	0.3768134	0.05	8.6	20	
Hexachloroethane	A	50.00	50.09	0.606057	0.6071449	0.3	0.2	20	
Isophorone	A	50.00	50.81	0.694789	0.7060303	0.4	1.6	20	
2-Methylphenol	A	50.00	55.54	1.15948	1.287983	0.7	11.1	20	

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2J29819	Injection Date:	10/23/12
Lab Sample ID:	2J29819-CCV1	Injection Time:	12:12

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Methylphenol	A	50.00	55.85	1.219104	1.361746	0.6	11.7	20	
4-Nitroaniline	A	50.00	56.42	0.3237232	0.3653255	0.01	12.9	20	
3-Nitroaniline	A	50.00	54.11	0.3275855	0.3544948	0.01	8.2	20	
2-Nitroaniline	A	50.00	51.49	0.3368371	0.3469075	0.01	3.0	20	
Nitrobenzene	A	50.00	50.74	0.4042427	0.4102681	0.2	1.5	20	
4-Nitrophenol	A	50.00	53.42	0.263969	0.2819979	0.05	6.8	20	
2-Nitrophenol	A	50.00	61.70	0.1877485	0.2316727	0.1	23.4	20	*
N-Nitrosodimethylamine	A	50.00	47.02	0.6512354	0.6123696	0.01	-6.0	20	
N-Nitroso-di-n-propylamine	A	50.00	51.28	0.977041	1.001993	0.5	2.6	20	
Pentachlorophenol	A	50.00	59.18	0.1662584	0.196794	0.05	18.4	20	
Phenol	A	50.00	54.51	1.701202	1.854749	0.8	9.0	20	
2,3,4,6-Tetrachlorophenol	A	50.00	53.86	0.3406087	0.3669092	0.01	7.7	20	
2,4,6-Trichlorophenol	A	50.00	52.59	0.3893444	0.4094859	0.2	5.2	20	
2,4,5-Trichlorophenol	A	50.00	53.70	0.3894227	0.4182034	0.2	7.4	20	
2-Fluorobiphenyl	A	50.00	49.67	1.269863	1.261586	0.01	-0.7	20	
2-Fluorophenol	A	100.0	106.1	1.119802	1.187957	0.01	6.1	20	
Nitrobenzene-d5	A	50.00	51.61	0.3989519	0.4117965	0.01	3.2	20	
Phenol-d6	A	100.0	105.4	1.476584	1.556074	0.01	5.4	20	
Terphenyl-d14	A	50.00	58.58	0.755263	0.8848747	0.01	17.2	20	
2,4,6-Tribromophenol	A	100.0	112.2	0.1129158	0.1266912	0.01	12.2	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV2.D	Calibration Date:	09/11/12 10:38
Sequence:	2J29819	Injection Date:	10/23/12
Lab Sample ID:	2J29819-CCV2	Injection Time:	12:40

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Atrazine	A	50.00	51.74	0.2286444	0.2365943	0.01	3.5	20	
Benzaldehyde	A	50.00	56.32	0.9974323	1.123591	0.01	12.6	20	
1,1-Biphenyl	A	50.00	48.56	1.358172	1.319215	0.01	-2.9	20	
Caprolactam	A	50.00	62.80	0.1054972	0.1325156	0.01	25.6	20	*
3,3'-Dichlorobenzidine	A	50.00	60.16	0.3990372	0.4801412	0.01	20.3	20	*
1,2,4,5-Tetrachlorobenzene	A	50.00	49.24	0.3539919	0.3485842	0.01	-1.5	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J17004 Batch Matrix: Water

Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/17/12 09:54	1,080.00	1.00
PEN-3221-09-10/12	1210127-10	10/17/12 09:54	1,060.00	1.00
Blank	2J17004-BLK1	10/17/12 09:54	1,000.00	1.00
LCS	2J17004-BS1	10/17/12 09:54	1,000.00	1.00
LCS Dup	2J17004-BSD1	10/17/12 09:54	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17004-BLK1 File ID: J17004B1.D

Sampled: Prepared: Analyzed: 10/23/12 16:23

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17004 Sequence: 2J29819 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
1912-24-9	Atrazine		1.25	2.50	5.00	U
100-52-7	Benzaldehyde		1.25	2.50	5.00	U
92-52-4	1,1-Biphenyl		1.25	2.50	5.00	U
101-55-3	4-Bromophenyl-phenylether		1.25	2.50	5.00	U
85-68-7	Butylbenzylphthalate		1.25	2.50	5.00	U
105-60-2	Caprolactam		1.25	2.50	5.00	X, U
86-74-8	Carbazole		1.25	2.50	5.00	U
59-50-7	4-Chloro-3-methylphenol		1.25	2.50	5.00	U
106-47-8	4-Chloroaniline		1.25	2.50	5.00	U
111-91-1	Bis(2-chloroethoxy)methane		1.25	2.50	5.00	U
111-44-4	Bis(2-chloroethyl)ether		1.25	2.50	5.00	U
108-60-1	2,2'-Oxybis-1-chloropropane		1.25	2.50	5.00	U
91-58-7	2-Chloronaphthalene		1.25	2.50	5.00	U
95-57-8	2-Chlorophenol		1.25	2.50	5.00	U
7005-72-3	4-Chlorophenyl phenyl ether		1.25	2.50	5.00	U
132-64-9	Dibenzofuran		1.25	2.50	5.00	U
84-74-2	Di-n-butylphthalate		1.25	2.50	5.00	U
91-94-1	3,3'-Dichlorobenzidine		1.25	2.50	5.00	X, U
120-83-2	2,4-Dichlorophenol		1.25	2.50	5.00	U
84-66-2	Diethylphthalate		1.25	2.50	5.00	U
105-67-9	2,4-Dimethylphenol		5.00	10.0	20.0	U
131-11-3	Dimethyl phthalate		1.25	2.50	5.00	U
534-52-1	4,6-Dinitro-2-methylphenol		5.00	10.0	20.0	Q, U
51-28-5	2,4-Dinitrophenol		8.33	25.0	50.0	Q, X, U
121-14-2	2,4-Dinitrotoluene		1.25	2.50	5.00	U
606-20-2	2,6-Dinitrotoluene		1.25	2.50	5.00	U
117-84-0	Di-n-octylphthalate		1.25	2.50	5.00	U
117-81-7	Bis(2-ethylhexyl)phthalate		1.25	2.50	5.00	U
118-74-1	Hexachlorobenzene		1.25	2.50	5.00	U
87-68-3	Hexachlorobutadiene		1.25	2.50	5.00	U
77-47-4	Hexachlorocyclopentadiene		1.25	5.00	10.0	U
67-72-1	Hexachloroethane		1.25	2.50	5.00	U
78-59-1	Isophorone		1.25	2.50	5.00	U
95-48-7	2-Methylphenol		1.25	2.50	5.00	U
106-44-5	4-Methylphenol		1.25	2.50	5.00	U
100-01-6	4-Nitroaniline		5.00	10.0	20.0	U
99-09-2	3-Nitroaniline		5.00	10.0	20.0	U
88-74-4	2-Nitroaniline		5.00	10.0	20.0	U
98-95-3	Nitrobenzene		1.25	2.50	5.00	U
100-02-7	4-Nitrophenol		5.00	10.0	20.0	Q, U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17004-BLK1 File ID: J17004B1.D

Sampled: Prepared: Analyzed: 10/23/12 16:23

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17004 Sequence: 2J29819 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
88-75-5	2-Nitrophenol		1.25	2.50	5.00	X, U
62-75-9	N-Nitrosodimethylamine		1.25	2.50	5.00	U
621-64-7	N-Nitroso-di-n-propylamine		1.25	2.50	5.00	U
87-86-5	Pentachlorophenol		5.00	10.0	20.0	Q, U
108-95-2	Phenol		1.25	2.50	5.00	U
95-94-3	1,2,4,5-Tetrachlorobenzene		1.25	2.50	5.00	U
58-90-2	2,3,4,6-Tetrachlorophenol		2.50	5.00	10.0	Q, U
88-06-2	2,4,6-Trichlorophenol		1.25	2.50	5.00	Q, U
95-95-4	2,4,5-Trichlorophenol		1.25	2.50	5.00	Q, U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	43.43	86.9	50 - 110	
2-Fluorophenol	100.0	33.28	33.3	20 - 110	
Nitrobenzene-d5	50.00	44.18	88.4	40 - 110	
Phenol-d6	100.0	22.41	22.4	0 - 110	
Terphenyl-d14	50.00	52.41	105	50 - 135	
2,4,6-Tribromophenol	100.0	76.12	76.1	40 - 125	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2K30609	Instrument:	MS-BNA3
Calibration:	2261001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2K30609-TUN1	SEQ-TUN1.D	10/31/12 13:46
Calibration Check	2K30609-CCV1	SEQ-CCV1.D	10/31/12 14:10
Calibration Check	2K30609-CCV2	SEQ-CCV2.D	10/31/12 14:38
Blank	2J19037-BLK1	J19037B1.D	10/31/12 17:24
LCS	2J19037-BS1	J19037L1.D	10/31/12 17:52
PEN-44-SS01-0-2-10/12	1210127-01	1012701.D	10/31/12 18:48
PEN-44-SS01-0-2-10/12	2J19037-MS1	1012701M.D	10/31/12 19:15
PEN-44-SS01-0-2-10/12	2J19037-MSD1	1012701S.D	10/31/12 19:43
PEN-44-SS01-6-8-10/12	1210127-02	1012702.D	10/31/12 20:10
PEN-44-SS02-0-2-10/12	1210127-03	1012703.D	10/31/12 20:38
PEN-44-SS02-6-8-10/12	1210127-04	1012704.D	10/31/12 21:05
PEN-44-SS03-0-2-10/12	1210127-05	1012705.D	10/31/12 21:33
PEN-44-SS03-6-8-10/12	1210127-06	1012706.D	10/31/12 22:01
FD10111201	1210127-07	1012707.D	10/31/12 22:28

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/31/12
Instrument ID:	MS-BNA3	Injection Time:	13:46
Sequence:	2K30609	Lab Sample ID:	2K30609-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	37.5	PASS
68	Less than 2% of 69	0.853	PASS
69	Less than 200% of 198	42.1	PASS
70	Less than 2% of 69	1.29	PASS
127	40 - 60% of 198	47.1	PASS
197	Less than 1% of 198	0.03	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.68	PASS
275	10 - 30% of 198	26.2	PASS
365	1 - 200% of 198	2.29	PASS
441	0.001 - 100% of 443	72.4	PASS
442	40 - 200% of 198	84	PASS
443	17 - 23% of 442	19.1	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2K30609	Injection Date:	10/31/12
Lab Sample ID:	2K30609-CCV1	Injection Time:	14:10

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	50.00	48.17	1.10566	1.065198	0.9	-3.7	20	
Acenaphthylene	A	50.00	48.67	1.65984	1.615601	0.9	-2.7	20	
Anthracene	A	50.00	50.79	1.081887	1.0989	0.7	1.6	20	
Benzo(g,h,i)perylene	A	50.00	53.96	0.9945587	1.073301	0.5	7.9	20	
Benzo(k)fluoranthene	A	50.00	49.12	1.300594	1.277803	0.7	-1.8	20	
4-Bromophenyl-phenylether	A	50.00	51.28	0.2362641	0.2422952	0.1	2.6	20	
Butylbenzylphthalate	A	50.00	54.94	0.5337897	0.5865205	0.01	9.9	20	
Carbazole	A	50.00	51.85	1.029924	1.068128	0.01	3.7	20	
4-Chloro-3-methylphenol	A	50.00	53.01	0.3241539	0.3436505	0.2	6.0	20	
4-Chloroaniline	A	50.00	52.36	0.4387603	0.4595028	0.01	4.7	20	
Bis(2-chloroethoxy)methane	A	50.00	50.96	0.4361706	0.4445765	0.3	1.9	20	
Bis(2-chloroethyl)ether	A	50.00	52.79	1.284228	1.355988	0.7	5.6	20	
2,2'-Oxybis-1-chloropropane	A	50.00	52.59	1.662963	1.749197	0.01	5.2	20	
2-Chloronaphthalene	A	50.00	49.04	1.10867	1.087403	0.8	-1.9	20	
2-Chlorophenol	A	50.00	55.18	1.266695	1.397923	0.8	10.4	20	
4-Chlorophenyl phenyl ether	A	50.00	48.91	0.6443488	0.6303153	0.4	-2.2	20	
Chrysene	A	50.00	49.50	1.072128	1.061381	0.7	-1.0	20	
Dibenzofuran	A	50.00	48.56	1.531191	1.487068	0.8	-2.9	20	
Di-n-butylphthalate	A	50.00	51.29	1.117323	1.146216	0.01	2.6	20	
2,4-Dichlorophenol	A	50.00	52.94	0.3172443	0.3358866	0.2	5.9	20	
Diethylphthalate	A	50.00	47.49	1.246346	1.183858	0.01	-5.0	20	
2,4-Dimethylphenol	A	50.00	50.88	0.3802932	0.3870315	0.2	1.8	20	
Dimethyl phthalate	A	50.00	48.67	1.25703	1.223635	0.01	-2.7	20	
4,6-Dinitro-2-methylphenol	L	50.00	59.40	0.1376067	0.1874121	0.01	18.8	20	
2,4-Dinitrophenol	L	50.00	60.70	0.1586589	0.236392	0.05	21.4	20	*
2,4-Dinitrotoluene	A	50.00	52.65	0.4130027	0.4349011	0.2	5.3	20	
2,6-Dinitrotoluene	A	50.00	54.09	0.3035821	0.3284125	0.2	8.2	20	
Di-n-octylphthalate	A	50.00	56.76	1.122715	1.274548	0.01	13.5	20	
Bis(2-ethylhexyl)phthalate	A	50.00	55.61	0.6994262	0.7778716	0.01	11.2	20	

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2K30609	Injection Date:	10/31/12
Lab Sample ID:	2K30609-CCV1	Injection Time:	14:10

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Fluoranthene	A	50.00	51.37	1.164281	1.196194	0.6	2.7	20	
Fluorene	A	50.00	48.05	1.322497	1.270872	0.9	-3.9	20	
Hexachlorobenzene	A	50.00	51.21	0.2557988	0.2619819	0.1	2.4	20	
Hexachlorobutadiene	A	50.00	50.24	0.2021383	0.2031002	0.01	0.5	20	
Hexachlorocyclopentadiene	A	50.00	55.24	0.3471121	0.3834654	0.05	10.5	20	
Hexachloroethane	A	50.00	49.52	0.606057	0.6002164	0.3	-1.0	20	
Indeno(1,2,3-cd)pyrene	A	50.00	53.13	1.18309	1.257229	0.5	6.3	20	
Isophorone	A	50.00	50.69	0.694789	0.7043418	0.4	1.4	20	
2-Methylnaphthalene	A	50.00	50.30	0.6105231	0.6141434	0.4	0.6	20	
2-Methylphenol	A	50.00	55.49	1.15948	1.286751	0.7	11.0	20	
4-Methylphenol	A	50.00	56.78	1.219104	1.384334	0.6	13.6	20	
4-Nitroaniline	A	50.00	55.83	0.3237232	0.3614734	0.01	11.7	20	
3-Nitroaniline	A	50.00	53.62	0.3275855	0.3512759	0.01	7.2	20	
2-Nitroaniline	A	50.00	51.04	0.3368371	0.3438227	0.01	2.1	20	
Nitrobenzene	A	50.00	49.74	0.4042427	0.4021587	0.2	-0.5	20	
4-Nitrophenol	A	50.00	51.07	0.263969	0.2696314	0.05	2.1	20	
2-Nitrophenol	A	50.00	60.92	0.1877485	0.2287532	0.1	21.8	20	*
N-Nitrosodimethylamine	A	50.00	45.46	0.6512354	0.5920768	0.01	-9.1	20	
N-Nitroso-di-n-propylamine	A	50.00	50.89	0.977041	0.9944479	0.5	1.8	20	
Pentachlorophenol	A	50.00	53.83	0.1662584	0.1789857	0.05	7.7	20	
Phenanthrene	A	50.00	49.69	1.082295	1.075588	0.7	-0.6	20	
Phenol	A	50.00	53.19	1.701202	1.809745	0.8	6.4	20	
Pyrene	A	50.00	51.46	1.182005	1.216541	0.6	2.9	20	
2,3,4,6-Tetrachlorophenol	A	50.00	52.06	0.3406087	0.3546322	0.01	4.1	20	
2,4,6-Trichlorophenol	A	50.00	51.94	0.3893444	0.4044907	0.2	3.9	20	
2,4,5-Trichlorophenol	A	50.00	51.76	0.3894227	0.4031752	0.2	3.5	20	
2-Fluorobiphenyl	A	50.00	49.67	1.269863	1.261543	0.01	-0.7	20	
2-Fluorophenol	A	100.0	106.0	1.119802	1.187561	0.01	6.1	20	
Nitrobenzene-d5	A	50.00	51.65	0.3989519	0.412113	0.01	3.3	20	

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/11/12 10:38
Sequence:	2K30609	Injection Date:	10/31/12
Lab Sample ID:	2K30609-CCV1	Injection Time:	14:10

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Phenol-d6	A	100.0	105.2	1.476584	1.553258	0.01	5.2	20
Terphenyl-d14	A	50.00	58.58	0.755263	0.8848718	0.01	17.2	20
2,4,6-Tribromophenol	A	100.0	105.9	0.1129158	0.1195394	0.01	5.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA3	Calibration:	2261001
Lab File ID:	SEQ-CCV2.D	Calibration Date:	09/11/12 10:38
Sequence:	2K30609	Injection Date:	10/31/12
Lab Sample ID:	2K30609-CCV2	Injection Time:	14:38

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Atrazine	A	50.00	52.71	0.2286444	0.2410192	0.01	5.4	20	
Benzaldehyde	A	50.00	59.85	0.9974323	1.193961	0.01	19.7	20	
1,1-Biphenyl	A	50.00	49.06	1.358172	1.33274	0.01	-1.9	20	
Caprolactam	A	50.00	62.29	0.1054972	0.13142	0.01	24.6	20	*
3,3'-Dichlorobenzidine	A	50.00	60.72	0.3990372	0.484553	0.01	21.4	20	*
1,2,4,5-Tetrachlorobenzene	A	50.00	48.73	0.3539919	0.3450208	0.01	-2.5	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J19037 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-SS01-0-2-10/12	1210127-01	10/22/12 15:37	15.40	1.00
PEN-44-SS01-6-8-10/12	1210127-02	10/22/12 15:37	15.20	1.00
PEN-44-SS02-0-2-10/12	1210127-03	10/22/12 15:37	15.20	1.00
PEN-44-SS02-6-8-10/12	1210127-04	10/22/12 15:37	15.60	1.00
PEN-44-SS03-0-2-10/12	1210127-05	10/22/12 15:37	15.30	1.00
PEN-44-SS03-6-8-10/12	1210127-06	10/22/12 15:37	15.70	1.00
FD10111201	1210127-07	10/22/12 15:37	15.80	1.00
Blank	2J19037-BLK1	10/19/12 16:51	15.00	1.00
LCS	2J19037-BS1	10/19/12 16:51	15.00	1.00
PEN-44-SS01-0-2-10/12	2J19037-MS1	10/19/12 16:51	15.30	1.00
PEN-44-SS01-0-2-10/12	2J19037-MSD1	10/19/12 16:51	15.30	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19037-BLK1 File ID: J19037B1.D

Sampled: Prepared: Analyzed: 10/31/12 17:24

Solids: Preparation: EXT_3546 Dilution:

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg wet)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		83.3	167	333	U
208-96-8	Acenaphthylene		83.3	167	333	U
120-12-7	Anthracene		83.3	167	333	U
1912-24-9	Atrazine		83.3	167	333	U
100-52-7	Benzaldehyde		83.3	167	333	U
191-24-2	Benzo(g,h,i)perylene		83.3	167	333	U
207-08-9	Benzo(k)fluoranthene		83.3	167	333	U
92-52-4	1,1-Biphenyl		83.3	167	333	U
101-55-3	4-Bromophenyl-phenylether		83.3	167	333	U
85-68-7	Butylbenzylphthalate		83.3	167	333	U
105-60-2	Caprolactam		83.3	167	333	Q, X, U
86-74-8	Carbazole		83.3	167	333	U
59-50-7	4-Chloro-3-methylphenol		83.3	167	333	U
106-47-8	4-Chloroaniline		83.3	167	333	U
111-91-1	Bis(2-chloroethoxy)methane		83.3	167	333	U
111-44-4	Bis(2-chloroethyl)ether		83.3	167	333	U
108-60-1	2,2'-Oxybis-1-chloropropane		83.3	167	333	U
91-58-7	2-Chloronaphthalene		83.3	167	333	U
95-57-8	2-Chlorophenol		83.3	167	333	U
7005-72-3	4-Chlorophenyl phenyl ether		83.3	167	333	U
218-01-9	Chrysene		83.3	167	333	U
132-64-9	Dibenzofuran		83.3	167	333	U
84-74-2	Di-n-butylphthalate		83.3	167	333	U
91-94-1	3,3'-Dichlorobenzidine		83.3	167	333	X, U
120-83-2	2,4-Dichlorophenol		83.3	167	333	U
84-66-2	Diethylphthalate		83.3	167	333	U
105-67-9	2,4-Dimethylphenol		333	667	1330	U
131-11-3	Dimethyl phthalate		83.3	167	333	U
534-52-1	4,6-Dinitro-2-methylphenol		833	1670	3330	U
51-28-5	2,4-Dinitrophenol		833	1670	3330	X, U
121-14-2	2,4-Dinitrotoluene		83.3	167	333	U
606-20-2	2,6-Dinitrotoluene		83.3	167	333	U
117-84-0	Di-n-octylphthalate		83.3	167	333	U
117-81-7	Bis(2-ethylhexyl)phthalate	302	83.3	167	333	I
206-44-0	Fluoranthene		83.3	167	333	U
86-73-7	Fluorene		83.3	167	333	U
118-74-1	Hexachlorobenzene		83.3	167	333	U
87-68-3	Hexachlorobutadiene		83.3	167	333	U
77-47-4	Hexachlorocyclopentadiene		83.3	167	333	U

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19037-BLK1 File ID: J19037B1.D

Sampled: Prepared: Analyzed: 10/31/12 17:24

Solids: Preparation: EXT_3546 Dilution:

Batch: 2J19037 Sequence: 2K30609 Calibration: 2261001 Instrument: MS-BNA3

CAS NO.	COMPOUND	CONC. (ug/Kg wet)	DL	LOD	LOQ	Q
67-72-1	Hexachloroethane		83.3	167	333	U
193-39-5	Indeno(1,2,3-cd)pyrene		83.3	167	333	U
78-59-1	Isophorone		83.3	167	333	U
91-57-6	2-Methylnaphthalene		83.3	167	333	U
95-48-7	2-Methylphenol		83.3	167	333	U
106-44-5	4-Methylphenol		83.3	167	333	U
100-01-6	4-Nitroaniline		333	667	1330	U
99-09-2	3-Nitroaniline		333	667	1330	U
88-74-4	2-Nitroaniline		333	667	1330	U
98-95-3	Nitrobenzene		83.3	167	333	U
100-02-7	4-Nitrophenol		333	667	1330	U
88-75-5	2-Nitrophenol		83.3	167	333	X, U
62-75-9	N-Nitrosodimethylamine		83.3	167	333	U
621-64-7	N-Nitroso-di-n-propylamine		83.3	167	333	U
87-86-5	Pentachlorophenol		333	667	1330	U
85-01-8	Phenanthrene		83.3	167	333	U
108-95-2	Phenol		83.3	167	333	U
129-00-0	Pyrene		83.3	167	333	U
95-94-3	1,2,4,5-Tetrachlorobenzene		83.3	167	333	U
58-90-2	2,3,4,6-Tetrachlorophenol		83.3	167	333	U
88-06-2	2,4,6-Trichlorophenol		83.3	167	333	U
95-95-4	2,4,5-Trichlorophenol		83.3	167	333	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3333	2897	86.9	45 - 105	
2-Fluorophenol	6667	6322	94.8	35 - 105	
Nitrobenzene-d5	3333	2830	84.9	35 - 100	
Phenol-d6	6667	6304	94.6	40 - 100	
Terphenyl-d14	3333	3637	109	30 - 125	
2,4,6-Tribromophenol	6667	6991	105	35 - 125	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2I26212	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2I26212-TUN1	SEQ-TUN1.D	09/17/12 16:19
Cal Standard	2I26212-CAL1	SEQCAL1.D	09/17/12 16:37
Cal Standard	2I26212-CAL2	SEQCAL2.D	09/17/12 17:04
Cal Standard	2I26212-CAL3	SEQCAL3.D	09/17/12 17:32
Cal Standard	2I26212-CAL4	SEQCAL4.D	09/17/12 18:00
Cal Standard	2I26212-CAL5	SEQCAL5.D	09/17/12 18:27
Cal Standard	2I26212-CAL7	SEQCAL7.D	09/17/12 19:22
Cal Standard	2I26212-CAL8	SEQCAL8.D	09/17/12 19:50
Initial Cal Check	2I26212-ICV1	SEQICV1.D	09/17/12 20:45
MS Tune	2I26212-TUN2	SEQ-TUN2.D	09/18/12 09:45
Initial Cal Check	2I26212-ICV3	SEQICV6.D	09/18/12 10:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	09/17/12
Instrument ID:	MS-BNA4	Injection Time:	16:19
Sequence:	2I26212	Lab Sample ID:	2I26212-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	55.7	PASS
68	Less than 2% of 69	1.62	PASS
69	Less than 200% of 198	45.5	PASS
70	Less than 2% of 69	0.47	PASS
127	40 - 60% of 198	50.3	PASS
197	Less than 1% of 198	0.97	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.1	PASS
275	10 - 30% of 198	23.8	PASS
365	1 - 200% of 198	2.46	PASS
441	0.001 - 100% of 443	82	PASS
442	40 - 200% of 198	81	PASS
443	17 - 23% of 442	19.9	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN2.D	Injection Date:	09/18/12
Instrument ID:	MS-BNA4	Injection Time:	09:45
Sequence:	2126212	Lab Sample ID:	2126212-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	56	PASS
68	Less than 2% of 69	1.57	PASS
69	Less than 200% of 198	46.5	PASS
70	Less than 2% of 69	0.546	PASS
127	40 - 60% of 198	51.2	PASS
197	Less than 1% of 198	0.947	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	22.8	PASS
365	1 - 200% of 198	2.51	PASS
441	0.001 - 100% of 443	86	PASS
442	40 - 200% of 198	75.1	PASS
443	17 - 23% of 442	18.7	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2263001
Instrument: MS-BNA4
Matrix: Water
Calibration Dates: 9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.6437384	4.43344	9.826428	2.985676E-02			15	
Acenaphthylene	0.9742916	4.035626	9.595428	1.918522E-02			15	
Anthracene	1.099743	2.563612	11.661	2.252376E-02			15	
Benzo(a)anthracene	1.229242	6.441806	15.02286	1.745497E-02			15	
Benzo(a)pyrene	1.07648	6.419449	17.30657	3.859793E-02			15	
Benzo(b)fluoranthene	1.13689	8.675422	16.776	4.277508E-02			15	
Benzo(g,h,i)perylene	1.047311	4.920087	19.51071	5.631089E-02			15	
Benzo(k)fluoranthene	1.24554	3.34658	16.81471	4.942397E-02			15	
1,4-Dioxane	0.1353576	8.293508	2.807714	0.3439013			15	
Carbazole	0.9802225	2.241632	11.86814	2.504839E-02			15	
Chrysene	1.208255	4.137079	15.088	3.491361E-02			15	
Dibenz(a,h)anthracene	0.9978242	7.835988	19.12857	4.851823E-02			15	
Dibenzofuran	0.8884622	2.303766	10.01886	1.864152E-02			15	
Di-n-octylphthalate	1.086216	29.06585	16.1744	2.245235E-02	0.999354		0.995	
Bis(2-ethylhexyl)phthalate	0.6840102	19.96093	15.176	1.107344E-02	0.9997681		0.995	
Fluoranthene	1.285226	3.369817	13.06243	2.192161E-02			15	
Fluorene	0.7105484	2.132605	10.44243	2.405673E-02			15	
2-Fluorobiphenyl	0.711319	4.922771	8.959429	2.274919E-02			15	
Hexachlorobenzene	0.2596715	3.133576	11.21714	1.535378E-02			15	
Hexachlorobutadiene	0.2192212	7.351404	7.841	1.360725E-02			15	
Hexachlorocyclopentadiene	0.1679048	12.80219	8.7625	1.864214E-02			15	
Hexachloroethane	0.1525449	2.904575	6.596143	4.437949E-02			15	
Indeno(1,2,3-cd)pyrene	1.186493	8.935141	19.09971	5.454845E-02			15	
Isophorone	0.5537188	9.391578	7.004428	3.986617E-02			15	
1-Methylnaphthalene	0.5918516	7.284457	8.607715	3.795704E-03			15	
2-Methylnaphthalene	0.6355094	7.594757	8.469143	2.944197E-02			15	
Naphthalene	0.9715298	9.419315	7.597143	3.351781E-02			15	
N-Nitrosodiphenylamine	0.5730382	5.63645	10.60214	3.741727E-02			15	
N-Nitroso-di-n-propylamine	0.2204215	14.9536	6.530286	4.997956E-02			15	
Pentachloroethane	0.1495348	7.718331	5.587714	3.061233E-02			CCC (20)	
Pentachlorophenol	0.1281745	27.63764	11.435	2.819468E-02	0.9982283		0.995	
Phenanthrene	1.114392	5.345567	11.60814	1.843103E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2263001
Instrument: MS-BNA4
Matrix: Water
Calibration Dates: 9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Phenol	0.423713	8.39034	5.563429	9.658823E-02			CCC (30)	
Pyrene	1.313745	3.59993	13.33786	2.306796E-02			15	
Terphenyl-d14	0.8895742	7.28489	13.55414	2.079779E-02			15	
2,4,6-Tribromophenol	0.104865	17.39735	10.766	2.069718E-02	0.9993091		0.995	
Acenaphthene	0.6437384	4.43344	9.826428	2.985676E-02			15	
Acenaphthylene	0.9742916	4.035626	9.595428	1.918522E-02			15	
Anthracene	1.099743	2.563612	11.661	2.252376E-02			15	
Benzo(a)anthracene	1.229242	6.441806	15.02286	1.745497E-02			15	
Benzo(a)pyrene	1.07648	6.419449	17.30657	3.859793E-02			15	
Benzo(b)fluoranthene	1.13689	8.675422	16.776	4.277508E-02			15	
Benzo(g,h,i)perylene	1.047311	4.920087	19.51071	5.631089E-02			15	
Benzo(k)fluoranthene	1.24554	3.34658	16.81471	4.942397E-02			15	
1,4-Dioxane	0.1353576	8.293508	2.807714	0.3439013			15	
Carbazole	0.9802225	2.241632	11.86814	2.504839E-02			15	
Chrysene	1.208255	4.137079	15.088	3.491361E-02			15	
Dibenz(a,h)anthracene	0.9978242	7.835988	19.12857	4.851823E-02			15	
Dibenzofuran	0.8884622	2.303766	10.01886	1.864152E-02			15	
Di-n-octylphthalate	1.086216	29.06585	16.1744	2.245235E-02	0.999354		0.995	
Bis(2-ethylhexyl)phthalate	0.6840102	19.96093	15.176	1.107344E-02	0.9997681		0.995	
Fluoranthene	1.285226	3.369817	13.06243	2.192161E-02			15	
Fluorene	0.7105484	2.132605	10.44243	2.405673E-02			15	
2-Fluorobiphenyl	0.711319	4.922771	8.959429	2.274919E-02			15	
Hexachlorobenzene	0.2596715	3.133576	11.21714	1.535378E-02			15	
Hexachlorobutadiene	0.2192212	7.351404	7.841	1.360725E-02			15	
Hexachlorocyclopentadiene	0.1679048	12.80219	8.7625	1.864214E-02			15	
Hexachloroethane	0.1525449	2.904575	6.596143	4.437949E-02			15	
Indeno(1,2,3-cd)pyrene	1.186493	8.935141	19.09971	5.454845E-02			15	
Isophorone	0.5537188	9.391578	7.004428	3.986617E-02			15	
1-Methylnaphthalene	0.5918516	7.284457	8.607715	3.795704E-03			15	
2-Methylnaphthalene	0.6355094	7.594757	8.469143	2.944197E-02			15	
Naphthalene	0.9715298	9.419315	7.597143	3.351781E-02			15	
N-Nitrosodiphenylamine	0.5730382	5.63645	10.60214	3.741727E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2263001	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	9/17/12 16:37 9/17/12 19:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
N-Nitroso-di-n-propylamine	0.2204215	14.9536	6.530286	4.997956E-02			15	
Pentachloroethane	0.1495348	7.718331	5.587714	3.061233E-02			CCC (20)	
Pentachlorophenol	0.1281745	27.63764	11.435	2.819468E-02	0.9982283		0.995	
Phenanthrene	1.114392	5.345567	11.60814	1.843103E-02			15	
Phenol	0.423713	8.39034	5.563429	9.658823E-02			CCC (30)	
Pyrene	1.313745	3.59993	13.33786	2.306796E-02			15	
Terphenyl-d14	0.8895742	7.28489	13.55414	2.079779E-02			15	
2,4,6-Tribromophenol	0.104865	17.39735	10.766	2.069718E-02	0.9993091		0.995	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29806	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2J29806-TUN1	SEQ-TUN1.D	10/23/12 15:54
Calibration Check	2J29806-CCV1	SEQ-CCV1.D	10/23/12 16:11
Blank	2J17004-BLK2	J17004B1.D	10/23/12 16:39
LCS	2J17004-BS2	J17004L1.D	10/23/12 17:07
PEN-44-09-10/12	1210127-08	1012708.D	10/23/12 18:32
PEN-3221-09-10/12	1210127-10	1012710.D	10/23/12 19:00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	10/23/12
Instrument ID:	MS-BNA4	Injection Time:	15:54
Sequence:	2J29806	Lab Sample ID:	2J29806-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	48.9	PASS
68	Less than 2% of 69	1.82	PASS
69	Less than 200% of 198	44.7	PASS
70	Less than 2% of 69	0.462	PASS
127	40 - 60% of 198	48.9	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.62	PASS
275	10 - 30% of 198	24.1	PASS
365	1 - 200% of 198	2.62	PASS
441	0.001 - 100% of 443	83.4	PASS
442	40 - 200% of 198	83.7	PASS
443	17 - 23% of 442	19.3	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2J29806	Injection Date:	10/23/12
Lab Sample ID:	2J29806-CCV1	Injection Time:	16:11

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	5.000	4.638	0.6437384	0.5970939		-7.2	20	
Acenaphthylene	A	5.000	4.663	0.9742916	0.9087063		-6.7	20	
Anthracene	A	5.000	5.044	1.099743	1.109366		0.9	20	
Benzo(a)anthracene	A	5.000	5.125	1.229242	1.259979		2.5	20	
Benzo(a)pyrene	A	5.000	5.009	1.07648	1.078367		0.2	20	
Benzo(b)fluoranthene	A	5.000	5.142	1.13689	1.169273		2.8	20	
Benzo(g,h,i)perylene	A	5.000	5.060	1.047311	1.059825		1.2	20	
Benzo(k)fluoranthene	A	5.000	4.688	1.24554	1.167695		-6.2	20	
1,4-Dioxane	A	5.000	3.857	0.1353576	0.1044057		-22.9	20	*
Chrysene	A	5.000	4.919	1.208255	1.188656		-1.6	20	
Dibenz(a,h)anthracene	A	5.000	5.325	0.9978242	1.062762		6.5	20	
Fluoranthene	A	5.000	4.882	1.285226	1.254878		-2.4	20	
Fluorene	A	5.000	4.892	0.7105484	0.6951861		-2.2	20	
Indeno(1,2,3-cd)pyrene	A	5.000	5.329	1.186493	1.264519		6.6	20	
2-Methylnaphthalene	A	5.000	4.290	0.6355094	0.5452267		-14.2	20	
Naphthalene	A	5.000	4.214	0.9715298	0.8187676		-15.7	20	
Phenanthrene	A	5.000	4.662	1.114392	1.039108		-6.8	20	
Pyrene	A	5.000	4.876	1.313745	1.281192		-2.5	20	
2-Fluorobiphenyl	A	5.000	4.492	0.711319	0.6390266		-10.2	20	
Terphenyl-d14	A	5.000	5.297	0.8895742	0.9423704		5.9	20	
2,4,6-Tribromophenol	L	10.00	11.72	0.104865	0.1348044		17.2	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J17004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/17/12 09:54	1,080.00	1.00
PEN-3221-09-10/12	1210127-10	10/17/12 09:54	1,060.00	1.00
Blank	2J17004-BLK2	10/17/12 09:54	1,000.00	1.00
LCS	2J17004-BS2	10/17/12 09:54	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J17004-BLK2 File ID: J17004B1.D

Sampled: Prepared: Analyzed: 10/23/12 16:39

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J17004 Sequence: 2J29806 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	U
120-12-7	Anthracene		0.0500	0.100	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
191-24-2	Benzo(g,h,i)perylene		0.0500	0.100	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	U
123-91-1	1,4-Dioxane		0.500	1.00	2.00	Q, Y, U
218-01-9	Chrysene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	U
206-44-0	Fluoranthene		0.0500	0.100	0.200	U
86-73-7	Fluorene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.100	0.200	U
91-20-3	Naphthalene		0.0500	0.100	0.200	U
85-01-8	Phenanthrene		0.0500	0.200	0.400	U
129-00-0	Pyrene		0.0500	0.100	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	42.26	84.5	34 - 167	
Terphenyl-d14	50.00	44.71	89.4	34 - 167	
2,4,6-Tribromophenol	100.0	74.91	74.9	34 - 167	

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2K30718	Instrument:	MS-BNA4
Calibration:	2263001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2K30718-TUN1	SEQ-TUN1.D	11/01/12 15:10
Calibration Check	2K30718-CCV1	SEQ-CCV1.D	11/01/12 15:35
Blank	2J19037-BLK2	J19037B1.D	11/01/12 16:04
LCS	2J19037-BS2	J19037L1.D	11/01/12 16:32
LCS Dup	2J19037-BSD2	J19037L2.D	11/01/12 17:00
PEN-44-SS01-0-2-10/12	1210127-01	1012701.D	11/01/12 19:19
PEN-44-SS01-0-2-10/12	2J19037-MS4	1012701M.D	11/01/12 19:46
PEN-44-SS01-0-2-10/12	2J19037-MSD4	1012701S.D	11/01/12 20:14
PEN-44-SS01-6-8-10/12	1210127-02	1012702.D	11/01/12 20:41
PEN-44-SS02-0-2-10/12	1210127-03	1012703.D	11/01/12 21:09
PEN-44-SS02-6-8-10/12	1210127-04	1012704.D	11/01/12 21:37
PEN-44-SS03-0-2-10/12	1210127-05	1012705.D	11/01/12 22:05
PEN-44-SS03-6-8-10/12	1210127-06	1012706.D	11/01/12 22:33
FD10111201	1210127-07	1012707.D	11/01/12 23:00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Lab File ID:	SEQ-TUN1.D	Injection Date:	11/01/12
Instrument ID:	MS-BNA4	Injection Time:	15:10
Sequence:	2K30718	Lab Sample ID:	2K30718-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	45.9	PASS
68	Less than 2% of 69	1.92	PASS
69	Less than 200% of 198	41.5	PASS
70	Less than 2% of 69	0.512	PASS
127	40 - 60% of 198	48.9	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	25.8	PASS
365	1 - 200% of 198	3.1	PASS
441	0.001 - 100% of 443	82.3	PASS
442	40 - 200% of 198	102	PASS
443	17 - 23% of 442	20.3	PASS

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	MS-BNA4	Calibration:	2263001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	09/17/12 16:37
Sequence:	2K30718	Injection Date:	11/01/12
Lab Sample ID:	2K30718-CCV1	Injection Time:	15:35

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzo(a)anthracene	A	5.000	5.102	1.229242	1.254226		2.0	20
Benzo(a)pyrene	A	5.000	5.230	1.07648	1.126049		4.6	20
Benzo(b)fluoranthene	A	5.000	5.352	1.13689	1.216833		7.0	20
1,4-Dioxane	A	5.000	4.257	0.1353576	0.1152467		-14.9	20
Dibenz(a,h)anthracene	A	5.000	5.537	0.9978242	1.104957		10.7	20
Naphthalene	A	5.000	4.922	0.9715298	0.9564451		-1.6	20
2-Fluorobiphenyl	A	5.000	5.066	0.711319	0.7207868		1.3	20
Terphenyl-d14	A	5.000	5.160	0.8895742	0.9179858		3.2	20
2,4,6-Tribromophenol	L	10.00	11.61	0.104865	0.1333873		16.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J19037 Batch Matrix: Solid
Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-SS01-0-2-10/12	1210127-01	10/22/12 15:37	15.40	1.00
PEN-44-SS01-6-8-10/12	1210127-02	10/22/12 15:37	15.20	1.00
PEN-44-SS02-0-2-10/12	1210127-03	10/22/12 15:37	15.20	1.00
PEN-44-SS02-6-8-10/12	1210127-04	10/22/12 15:37	15.60	1.00
PEN-44-SS03-0-2-10/12	1210127-05	10/22/12 15:37	15.30	1.00
PEN-44-SS03-6-8-10/12	1210127-06	10/22/12 15:37	15.70	1.00
FD10111201	1210127-07	10/22/12 15:37	15.80	1.00
Blank	2J19037-BLK2	10/19/12 16:51	15.00	1.00
LCS	2J19037-BS2	10/19/12 16:51	15.00	1.00
LCS Dup	2J19037-BSD2	10/19/12 16:51	15.00	1.00
PEN-44-SS01-0-2-10/12	2J19037-MS4	10/19/12 16:51	15.30	1.00
PEN-44-SS01-0-2-10/12	2J19037-MSD4	10/19/12 16:51	15.30	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19037-BLK2 File ID: J19037B1.D

Sampled: Prepared: Analyzed: 11/01/12 16:04

Solids: Preparation: EXT_3546 Dilution:

Batch: 2J19037 Sequence: 2K30718 Calibration: 2263001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg wet)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		1.67	3.33	6.67	U
50-32-8	Benzo(a)pyrene		1.67	3.33	6.67	U
205-99-2	Benzo(b)fluoranthene		1.67	3.33	6.67	U
123-91-1	1,4-Dioxane		16.7	33.3	66.7	U
53-70-3	Dibenz(a,h)anthracene		1.67	3.33	6.67	U
91-20-3	Naphthalene		1.67	3.33	6.67	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3333	3029	90.9	14 - 129	
Terphenyl-d14	3333	3339	100	14 - 129	
2,4,6-Tribromophenol	6667	7284	109	14 - 129	

INITIAL CALIBRATION STANDARDS

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001F0101.D	10/08/12 15:32
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001R0101.D	10/08/12 15:32
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002F0201.D	10/08/12 15:51
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002R0201.D	10/08/12 15:51
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003F0301.D	10/08/12 16:10
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003R0301.D	10/08/12 16:10
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004F0401.D	10/08/12 16:29
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004R0401.D	10/08/12 16:29
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005F0501.D	10/08/12 16:48
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005R0501.D	10/08/12 16:48
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006F0601.D	10/08/12 17:07
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006R0601.D	10/08/12 17:07
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007R0701.D	10/08/12 17:26
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007F0701.D	10/08/12 17:26
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023F2301.D	10/08/12 22:31
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023R2301.D	10/08/12 22:31
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024F2401.D	10/08/12 22:50
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024R2401.D	10/08/12 22:50
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025F2501.D	10/08/12 23:09
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025R2501.D	10/08/12 23:09
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026F2601.D	10/08/12 23:29
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026R2601.D	10/08/12 23:29
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027F2701.D	10/08/12 23:48
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027R2701.D	10/08/12 23:48
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028F2801.D	10/09/12 00:07
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028R2801.D	10/09/12 00:07
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030R3001.D	10/09/12 00:45
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030F3001.D	10/09/12 00:45
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031F3101.D	10/09/12 01:04
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031R3101.D	10/09/12 01:04
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032F3201.D	10/09/12 01:23
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032R3201.D	10/09/12 01:23

12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033F3301.D	10/09/12 01:42
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033R3301.D	10/09/12 01:42
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034F3401.D	10/09/12 02:01
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034R3401.D	10/09/12 02:01
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035R3501.D	10/09/12 02:20
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035F3501.D	10/09/12 02:20

INITIAL CALIBRATION STANDARDS

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29909	Instrument:	GL-ECD3
Calibration:	2299003		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010R1001.D	10/22/12 11:28
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010F1001.D	10/22/12 11:28
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011F1101.D	10/22/12 11:47
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011R1101.D	10/22/12 11:47
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012F1201.D	10/22/12 12:06
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012R1201.D	10/22/12 12:06
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013F1301.D	10/22/12 12:25
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013R1301.D	10/22/12 12:25
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014F1401.D	10/22/12 12:44
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014R1401.D	10/22/12 12:44
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015R1501.D	10/22/12 13:03
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015F1501.D	10/22/12 13:03
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016F1601.D	10/22/12 13:23
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016R1601.D	10/22/12 13:23
12D0724	Aro-1660 Cal1@2500/250	2J29909-CALK	032F3201.D	10/22/12 18:28
12D0724	Aro-1660 Cal1@2500/250	2J29909-CALK	032R3201.D	10/22/12 18:28
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J29909-CALL	033F3301.D	10/22/12 18:47
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J29909-CALL	033R3301.D	10/22/12 18:47
12D0726	Aro-1660 Cal3@750/75	2J29909-CALM	034R3401.D	10/22/12 19:06
12D0726	Aro-1660 Cal3@750/75	2J29909-CALM	034F3401.D	10/22/12 19:06
12D0727	Aro-1660 Cal4@500/50	2J29909-CALN	035F3501.D	10/22/12 19:25
12D0727	Aro-1660 Cal4@500/50	2J29909-CALN	035R3501.D	10/22/12 19:25
12D0728	Aro-1660 Cal5@100/10	2J29909-CALO	036F3601.D	10/22/12 19:45
12D0728	Aro-1660 Cal5@100/10	2J29909-CALO	036R3601.D	10/22/12 19:45
12D0730	Aro-1660 Cal6@50/5	2J29909-CALP	037F3701.D	10/22/12 20:04
12D0730	Aro-1660 Cal6@50/5	2J29909-CALP	037R3701.D	10/22/12 20:04
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J29909-CALQ	039R3901.D	10/22/12 20:42
12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J29909-CALQ	039F3901.D	10/22/12 20:42
12E0534	Aroclor-1254 Cal 2 1000ppb	2J29909-CALR	040F4001.D	10/22/12 21:01
12E0534	Aroclor-1254 Cal 2 1000ppb	2J29909-CALR	040R4001.D	10/22/12 21:01
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J29909-CALS	041F4101.D	10/22/12 21:20
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J29909-CALS	041R4101.D	10/22/12 21:20

12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J29909-CALT	042F4201.D	10/22/12 21:39
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J29909-CALT	042R4201.D	10/22/12 21:39
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J29909-CALU	043F4301.D	10/22/12 21:58
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J29909-CALU	043R4301.D	10/22/12 21:58
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J29909-CALV	044R4401.D	10/22/12 22:17
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J29909-CALV	044F4401.D	10/22/12 22:17

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J28406
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J28406-CAL1	001R0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL1	001F0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL2	002F0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL2	002R0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL3	003F0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL3	003R0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL4	004F0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL4	004R0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL5	005R0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL5	005F0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL6	006F0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL6	006R0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL7	007F0701.D	10/08/12 17:26
Cal Standard	2J28406-CAL7	007R0701.D	10/08/12 17:26
Cal Standard	2J28406-CALK	023F2301.D	10/08/12 22:31
Cal Standard	2J28406-CALK	023R2301.D	10/08/12 22:31
Cal Standard	2J28406-CALL	024F2401.D	10/08/12 22:50
Cal Standard	2J28406-CALL	024R2401.D	10/08/12 22:50
Cal Standard	2J28406-CALM	025F2501.D	10/08/12 23:09
Cal Standard	2J28406-CALM	025R2501.D	10/08/12 23:09
Cal Standard	2J28406-CALN	026R2601.D	10/08/12 23:29
Cal Standard	2J28406-CALN	026F2601.D	10/08/12 23:29
Cal Standard	2J28406-CALO	027F2701.D	10/08/12 23:48
Cal Standard	2J28406-CALO	027R2701.D	10/08/12 23:48
Cal Standard	2J28406-CALP	028F2801.D	10/09/12 00:07
Cal Standard	2J28406-CALP	028R2801.D	10/09/12 00:07
Initial Cal Check	2J28406-ICV4	029R2901.D	10/09/12 00:26
Initial Cal Check	2J28406-ICV4	029F2901.D	10/09/12 00:26
Cal Standard	2J28406-CALQ	030F3001.D	10/09/12 00:45
Cal Standard	2J28406-CALQ	030R3001.D	10/09/12 00:45
Cal Standard	2J28406-CALR	031F3101.D	10/09/12 01:04
Cal Standard	2J28406-CALR	031R3101.D	10/09/12 01:04

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J28406-CALS	032F3201.D	10/09/12 01:23
Cal Standard	2J28406-CALS	032R3201.D	10/09/12 01:23
Cal Standard	2J28406-CALT	033R3301.D	10/09/12 01:42
Cal Standard	2J28406-CALT	033F3301.D	10/09/12 01:42
Cal Standard	2J28406-CALU	034F3401.D	10/09/12 02:01
Cal Standard	2J28406-CALU	034R3401.D	10/09/12 02:01
Cal Standard	2J28406-CALV	035F3501.D	10/09/12 02:20
Cal Standard	2J28406-CALV	035R3501.D	10/09/12 02:20
Initial Cal Check	2J28406-ICV5	013R1301.D	10/09/12 17:14
Initial Cal Check	2J28406-ICV5	013F1301.D	10/09/12 17:14

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29616
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29616-CCV1	003R0301.D	10/17/12 12:51
Calibration Check	2J29616-CCV1	003F0301.D	10/17/12 12:51
Calibration Check	2J29616-CCV4	006R0601.D	10/17/12 13:48
Calibration Check	2J29616-CCV4	006F0601.D	10/17/12 13:48
Calibration Check	2J29616-CCV5	007R0701.D	10/17/12 14:07
Calibration Check	2J29616-CCV5	007F0701.D	10/17/12 14:07
Blank	2J12031-BLK1	008F0801.D	10/17/12 14:26
Blank	2J12031-BLK1	008R0801.D	10/17/12 14:26
LCS	2J12031-BS2	010R1001.D	10/17/12 15:05
LCS	2J12031-BS2	010F1001.D	10/17/12 15:05
Calibration Check	2J29616-CCV6	021F2101.D	10/17/12 18:34
Calibration Check	2J29616-CCV6	021R2101.D	10/17/12 18:34
Calibration Check	2J29616-CCV9	024R2401.D	10/17/12 19:31
Calibration Check	2J29616-CCV9	024F2401.D	10/17/12 19:31
Calibration Check	2J29616-CCVA	025R2501.D	10/17/12 19:50
Calibration Check	2J29616-CCVA	025F2501.D	10/17/12 19:50
Calibration Check	2J29616-CCVB	036F3601.D	10/17/12 23:20
Calibration Check	2J29616-CCVB	036R3601.D	10/17/12 23:20
Calibration Check	2J29616-CCVE	039F3901.D	10/18/12 00:17
Calibration Check	2J29616-CCVE	039R3901.D	10/18/12 00:17
Calibration Check	2J29616-CCVF	040F4001.D	10/18/12 00:37
Calibration Check	2J29616-CCVF	040R4001.D	10/18/12 00:37
PEN-44-SS01-0-2-10/12	1210127-01	042R4201.D	10/18/12 01:15
PEN-44-SS01-0-2-10/12	1210127-01	042F4201.D	10/18/12 01:15
PEN-44-SS01-0-2-10/12	2J12031-MS2	045R4501.D	10/18/12 02:12
PEN-44-SS01-0-2-10/12	2J12031-MS2	045F4501.D	10/18/12 02:12
PEN-44-SS01-0-2-10/12	2J12031-MSD2	046F4601.D	10/18/12 02:31
PEN-44-SS01-0-2-10/12	2J12031-MSD2	046R4601.D	10/18/12 02:31
PEN-44-SS01-6-8-10/12	1210127-02	047R4701.D	10/18/12 02:50
PEN-44-SS01-6-8-10/12	1210127-02	047F4701.D	10/18/12 02:50
PEN-44-SS02-0-2-10/12	1210127-03	048R4801.D	10/18/12 03:09
PEN-44-SS02-0-2-10/12	1210127-03	048F4801.D	10/18/12 03:09

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29616	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PEN-44-SS02-6-8-10/12	1210127-04	049R4901.D	10/18/12 03:28
PEN-44-SS02-6-8-10/12	1210127-04	049F4901.D	10/18/12 03:28
PEN-44-SS03-0-2-10/12	1210127-05	050R5001.D	10/18/12 03:47
PEN-44-SS03-0-2-10/12	1210127-05	050F5001.D	10/18/12 03:47
PEN-44-SS03-6-8-10/12	1210127-06	051F5101.D	10/18/12 04:06
PEN-44-SS03-6-8-10/12	1210127-06	051R5101.D	10/18/12 04:06
Calibration Check	2J29616-CCVG	052F5201.D	10/18/12 04:25
Calibration Check	2J29616-CCVG	052R5201.D	10/18/12 04:25
Calibration Check	2J29616-CCVJ	055R5501.D	10/18/12 05:23
Calibration Check	2J29616-CCVJ	055F5501.D	10/18/12 05:23
Calibration Check	2J29616-CCVK	056R5601.D	10/18/12 05:42
Calibration Check	2J29616-CCVK	056F5601.D	10/18/12 05:42

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29706-CCV1	003F0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV1	003R0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV4	006F0601.D	10/18/12 11:18
Calibration Check	2J29706-CCV4	006R0601.D	10/18/12 11:18
Calibration Check	2J29706-CCV5	007R0701.D	10/18/12 11:37
Calibration Check	2J29706-CCV5	007F0701.D	10/18/12 11:37
Blank	2J16016-BLK1	008R0801.D	10/18/12 11:56
Blank	2J16016-BLK1	008F0801.D	10/18/12 11:56
LCS	2J16016-BS2	011F1101.D	10/18/12 12:53
LCS	2J16016-BS2	011R1101.D	10/18/12 12:53
LCS Dup	2J16016-BSD2	012F1201.D	10/18/12 13:13
LCS Dup	2J16016-BSD2	012R1201.D	10/18/12 13:13
Calibration Check	2J29706-CCV6	026R2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV6	026F2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV9	029R2901.D	10/18/12 18:36
Calibration Check	2J29706-CCV9	029F2901.D	10/18/12 18:36
Calibration Check	2J29706-CCVA	030R3001.D	10/18/12 18:55
Calibration Check	2J29706-CCVA	030F3001.D	10/18/12 18:55
Calibration Check	2J29706-CCVB	040F4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVB	040R4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVE	043F4301.D	10/18/12 23:03
Calibration Check	2J29706-CCVE	043R4301.D	10/18/12 23:03
Calibration Check	2J29706-CCVF	044F4401.D	10/18/12 23:22
Calibration Check	2J29706-CCVF	044R4401.D	10/18/12 23:22
PEN-44-09-10/12	1210127-08	047F4701.D	10/19/12 00:20
PEN-44-09-10/12	1210127-08	047R4701.D	10/19/12 00:20
PEN-3221-09-10/12	1210127-10	048R4801.D	10/19/12 00:39
PEN-3221-09-10/12	1210127-10	048F4801.D	10/19/12 00:39
Calibration Check	2J29706-CCVG	060F6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVG	060R6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVJ	063F6301.D	10/19/12 05:25
Calibration Check	2J29706-CCVJ	063R6301.D	10/19/12 05:25

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29706	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J29706-CCVK	064R6401.D	10/19/12 05:44
Calibration Check	2J29706-CCVK	064F6401.D	10/19/12 05:44

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29909
Instrument: GL-ECD3
Calibration: 2299003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29909-CAL1	010R1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL1	010F1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL2	011F1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL2	011R1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL3	012F1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL3	012R1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL4	013F1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL4	013R1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL5	014R1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL5	014F1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL6	015F1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL6	015R1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL7	016F1601.D	10/22/12 13:23
Cal Standard	2J29909-CAL7	016R1601.D	10/22/12 13:23
Cal Standard	2J29909-CALK	032F3201.D	10/22/12 18:28
Cal Standard	2J29909-CALK	032R3201.D	10/22/12 18:28
Cal Standard	2J29909-CALL	033F3301.D	10/22/12 18:47
Cal Standard	2J29909-CALL	033R3301.D	10/22/12 18:47
Cal Standard	2J29909-CALM	034F3401.D	10/22/12 19:06
Cal Standard	2J29909-CALM	034R3401.D	10/22/12 19:06
Cal Standard	2J29909-CALN	035R3501.D	10/22/12 19:25
Cal Standard	2J29909-CALN	035F3501.D	10/22/12 19:25
Cal Standard	2J29909-CALO	036F3601.D	10/22/12 19:45
Cal Standard	2J29909-CALO	036R3601.D	10/22/12 19:45
Cal Standard	2J29909-CALP	037F3701.D	10/22/12 20:04
Cal Standard	2J29909-CALP	037R3701.D	10/22/12 20:04
Initial Cal Check	2J29909-ICV4	038R3801.D	10/22/12 20:23
Initial Cal Check	2J29909-ICV4	038F3801.D	10/22/12 20:23
Cal Standard	2J29909-CALQ	039F3901.D	10/22/12 20:42
Cal Standard	2J29909-CALQ	039R3901.D	10/22/12 20:42
Cal Standard	2J29909-CALR	040F4001.D	10/22/12 21:01
Cal Standard	2J29909-CALR	040R4001.D	10/22/12 21:01

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29909	Instrument:	GL-ECD3
Calibration:	2299003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2J29909-CALS	041F4101.D	10/22/12 21:20
Cal Standard	2J29909-CALS	041R4101.D	10/22/12 21:20
Cal Standard	2J29909-CALT	042R4201.D	10/22/12 21:39
Cal Standard	2J29909-CALT	042F4201.D	10/22/12 21:39
Cal Standard	2J29909-CALU	043F4301.D	10/22/12 21:58
Cal Standard	2J29909-CALU	043R4301.D	10/22/12 21:58
Cal Standard	2J29909-CALV	044F4401.D	10/22/12 22:17
Cal Standard	2J29909-CALV	044R4401.D	10/22/12 22:17
Initial Cal Check	2J29909-ICV5	045R4501.D	10/22/12 22:37
Initial Cal Check	2J29909-ICV5	045F4501.D	10/22/12 22:37

ANALYSIS SEQUENCE SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Sequence: 2J30449

Instrument: GL-ECD3

Calibration: 2299003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2J30449-CCV1	003F0301.D	10/26/12 07:58
Calibration Check	2J30449-CCV1	003R0301.D	10/26/12 07:58
Calibration Check	2J30449-CCVB	040F4001.D	10/26/12 19:45
Calibration Check	2J30449-CCVB	040R4001.D	10/26/12 19:45
Calibration Check	2J30449-CCVE	043R4301.D	10/26/12 20:42
Calibration Check	2J30449-CCVE	043F4301.D	10/26/12 20:42
Calibration Check	2J30449-CCVF	044R4401.D	10/26/12 21:01
Calibration Check	2J30449-CCVF	044F4401.D	10/26/12 21:01
Blank	2J19031-BLK1	049R4901.D	10/26/12 22:37
Blank	2J19031-BLK1	049F4901.D	10/26/12 22:37
LCS	2J19031-BS2	051F5101.D	10/26/12 23:15
LCS	2J19031-BS2	051R5101.D	10/26/12 23:15
Calibration Check	2J30449-CCVG	062R6201.D	10/27/12 02:46
Calibration Check	2J30449-CCVG	062F6201.D	10/27/12 02:46
Calibration Check	2J30449-CCVJ	065R6501.D	10/27/12 03:43
Calibration Check	2J30449-CCVJ	065F6501.D	10/27/12 03:43
Calibration Check	2J30449-CCVK	066R6601.D	10/27/12 04:02
Calibration Check	2J30449-CCVK	066F6601.D	10/27/12 04:02
FD10111201	1210127-07	071F7101.D	10/27/12 05:38
FD10111201	1210127-07	071R7101.D	10/27/12 05:38
Calibration Check	2J30449-CCVL	080F8001.D	10/27/12 08:30
Calibration Check	2J30449-CCVL	080R8001.D	10/27/12 08:30
Calibration Check	2J30449-CCVO	083R8301.D	10/27/12 09:27
Calibration Check	2J30449-CCVO	083F8301.D	10/27/12 09:27
Calibration Check	2J30449-CCVP	084F8401.D	10/27/12 09:47
Calibration Check	2J30449-CCVP	084R8401.D	10/27/12 09:47

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1016	1211.68	2.651423	7.412	0.0162173			20	
Aroclor-1016 (1)	1998.279	1.868085	7.111833	3.466751E-03			20	
Aroclor-1016 (2)	737.4585	4.861005	6.183167	1.530938E-02			20	
Aroclor-1016 (3)	1103.083	4.159952	6.5585	1.416792E-02			20	
Aroclor-1016 (4)	1381.051	7.475082	7.087	1.81205E-03			20	
Aroclor-1016 (5)	838.5294	4.403324	7.412	0.0162173			20	
Aroclor-1016 [2C]	1436.644	10.70371	6.6695	2.588352E-03			20	
Aroclor-1016 (1) [2C]	2181.91	12.63869	6.369	7.68006E-03			20	
Aroclor-1016 (2) [2C]	1375.587	12.43596	6.098333	1.222863E-02			20	
Aroclor-1016 (3) [2C]	1141.906	6.462062	6.568833	9.334152E-03			20	
Aroclor-1016 (4) [2C]	1158.223	11.14295	6.622833	1.693396E-02			20	
Aroclor-1016 (5) [2C]	1325.593	16.57982	6.6695	2.588352E-03			20	
Aroclor-1248	758.7065	7.267487	9.219333	7.873254E-02		0.9998429	0.995	
Aroclor-1248 (1)	952.0071	7.162791	8.538	0.2492864		0.999706	0.995	
Aroclor-1248 (2)	757.9911	6.082106	7.7715	5.295247E-02		0.9997806	0.995	
Aroclor-1248 (3)	482.7702	34.39494	8.480667	6.058882E-02		0.9995866	0.995	
Aroclor-1248 (4)	921.4139	14.51966	8.758333	5.075192E-02		0.9998197	0.995	
Aroclor-1248 (5)	679.3505	4.488466	9.219333	7.873254E-02		0.9998103	0.995	
Aroclor-1248 [2C]	937.5975	10.41717	7.544167	9.330969E-02	0.9991794		0.995	
Aroclor-1248 (1) [2C]	1361.915	38.26215	7.008833	0.2826843	0.9992803		0.995	
Aroclor-1248 (2) [2C]	1234.637	4.986944	6.357833	2.028725E-02	0.9998706		0.995	
Aroclor-1248 (3) [2C]	904.2617	6.705059	6.758167	4.643876E-02	0.9974451		0.995	
Aroclor-1248 (4) [2C]	606.4015	19.46593	7.440167	8.004361E-02	0.9988609		0.995	
Aroclor-1248 (5) [2C]	580.7719	8.125579	7.544167	9.330969E-02	0.9955324		0.995	
Aroclor-1254	2315.112	2.465993	9.729833	0.0230136			20	
Aroclor-1254 (1)	3197.742	3.274659	8.8325	8.978777E-03			20	
Aroclor-1254 (2)	1002.121	1.718671	7.411833	1.416199E-02			20	
Aroclor-1254 (3)	3051.415	2.544717	8.381667	1.699636E-03			20	
Aroclor-1254 (4)	1540.727	6.850945	9.377833	2.408567E-02			20	
Aroclor-1254 (5)	2783.555	3.866763	9.729833	0.0230136			20	
Aroclor-1254 [2C]	2492.935	13.91024	8.643333	4.776138E-02			20	
Aroclor-1254 (1) [2C]	3732.51	14.12391	7.961667	3.249477E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1254 (2) [2C]	2910.505	17.50065	7.287333	1.382676E-02			20	
Aroclor-1254 (3) [2C]	2546.45	14.73764	7.470333	3.081998E-02			20	
Aroclor-1254 (4) [2C]	1876.557	14.14564	8.126167	1.895317E-02			20	
Aroclor-1254 (5) [2C]	1398.651	8.183716	8.643333	4.776138E-02			20	
Aroclor-1260	3211.825	4.49341	11.635	0.0166325			20	
Aroclor-1260 (1)	5494.936	4.613131	10.52067	3.771478E-03			20	
Aroclor-1260 (2)	3224.326	3.711074	9.376667	0.0237599			20	
Aroclor-1260 (3)	3829.492	8.450002	9.727	9.356043E-03			20	
Aroclor-1260 (4)	2372.787	3.387169	9.832667	1.787885E-02			20	
Aroclor-1260 (5)	1137.586	3.214277	11.635	0.0166325			20	
Aroclor-1260 [2C]	3119.071	14.37388	9.471	2.433087E-02			20	
Aroclor-1260 (1) [2C]	4662.745	13.3188	9.471	2.433087E-02			20	
Aroclor-1260 (2) [2C]	2691.935	14.62566	8.123667	1.998328E-02			20	
Aroclor-1260 (3) [2C]	3128.594	12.98403	8.3665	3.214936E-02			20	
Aroclor-1260 (4) [2C]	2972.886	15.3638	8.5515	2.009633E-02			20	
Aroclor-1260 (5) [2C]	2139.196	17.43372	9.151167	1.639216E-02			20	
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	
Aroclor-1016	1211.68	2.651423	7.412	0.0162173			20	
Aroclor-1016 (1)	1998.279	1.868085	7.111833	3.466751E-03			20	
Aroclor-1016 (2)	737.4585	4.861005	6.183167	1.530938E-02			20	
Aroclor-1016 (3)	1103.083	4.159952	6.5585	1.416792E-02			20	
Aroclor-1016 (4)	1381.051	7.475082	7.087	1.81205E-03			20	
Aroclor-1016 (5)	838.5294	4.403324	7.412	0.0162173			20	
Aroclor-1016 [2C]	1436.644	10.70371	6.6695	2.588352E-03			20	
Aroclor-1016 (1) [2C]	2181.91	12.63869	6.369	7.68006E-03			20	
Aroclor-1016 (2) [2C]	1375.587	12.43596	6.098333	1.222863E-02			20	
Aroclor-1016 (3) [2C]	1141.906	6.462062	6.568833	9.334152E-03			20	
Aroclor-1016 (4) [2C]	1158.223	11.14295	6.622833	1.693396E-02			20	
Aroclor-1016 (5) [2C]	1325.593	16.57982	6.6695	2.588352E-03			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2284005	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1248	758.7065	7.267487	9.219333	7.873254E-02		0.9998429	0.995	
Aroclor-1248 (1)	952.0071	7.162791	8.538	0.2492864		0.999706	0.995	
Aroclor-1248 (2)	757.9911	6.082106	7.7715	5.295247E-02		0.9997806	0.995	
Aroclor-1248 (3)	482.7702	34.39494	8.480667	6.058882E-02		0.9995866	0.995	
Aroclor-1248 (4)	921.4139	14.51966	8.758333	5.075192E-02		0.9998197	0.995	
Aroclor-1248 (5)	679.3505	4.488466	9.219333	7.873254E-02		0.9998103	0.995	
Aroclor-1248 [2C]	937.5975	10.41717	7.544167	9.330969E-02	0.9991794		0.995	
Aroclor-1248 (1) [2C]	1361.915	38.26215	7.008833	0.2826843	0.9992803		0.995	
Aroclor-1248 (2) [2C]	1234.637	4.986944	6.357833	2.028725E-02	0.9998706		0.995	
Aroclor-1248 (3) [2C]	904.2617	6.705059	6.758167	4.643876E-02	0.9974451		0.995	
Aroclor-1248 (4) [2C]	606.4015	19.46593	7.440167	8.004361E-02	0.9988609		0.995	
Aroclor-1248 (5) [2C]	580.7719	8.125579	7.544167	9.330969E-02	0.9955324		0.995	
Aroclor-1254	2315.112	2.465993	9.729833	0.0230136			20	
Aroclor-1254 (1)	3197.742	3.274659	8.8325	8.978777E-03			20	
Aroclor-1254 (2)	1002.121	1.718671	7.411833	1.416199E-02			20	
Aroclor-1254 (3)	3051.415	2.544717	8.381667	1.699636E-03			20	
Aroclor-1254 (4)	1540.727	6.850945	9.377833	2.408567E-02			20	
Aroclor-1254 (5)	2783.555	3.866763	9.729833	0.0230136			20	
Aroclor-1254 [2C]	2492.935	13.91024	8.643333	4.776138E-02			20	
Aroclor-1254 (1) [2C]	3732.51	14.12391	7.961667	3.249477E-02			20	
Aroclor-1254 (2) [2C]	2910.505	17.50065	7.287333	1.382676E-02			20	
Aroclor-1254 (3) [2C]	2546.45	14.73764	7.470333	3.081998E-02			20	
Aroclor-1254 (4) [2C]	1876.557	14.14564	8.126167	1.895317E-02			20	
Aroclor-1254 (5) [2C]	1398.651	8.183716	8.643333	4.776138E-02			20	
Aroclor-1260	3211.825	4.49341	11.635	0.0166325			20	
Aroclor-1260 (1)	5494.936	4.613131	10.52067	3.771478E-03			20	
Aroclor-1260 (2)	3224.326	3.711074	9.376667	0.0237599			20	
Aroclor-1260 (3)	3829.492	8.450002	9.727	9.356043E-03			20	
Aroclor-1260 (4)	2372.787	3.387169	9.832667	1.787885E-02			20	
Aroclor-1260 (5)	1137.586	3.214277	11.635	0.0166325			20	
Aroclor-1260 [2C]	3119.071	14.37388	9.471	2.433087E-02			20	
Aroclor-1260 (1) [2C]	4662.745	13.3188	9.471	2.433087E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2284005	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	2/2/12 15:30 10/9/12 2:20

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1260 (2) [2C]	2691.935	14.62566	8.123667	1.998328E-02			20	
Aroclor-1260 (3) [2C]	3128.594	12.98403	8.3665	3.214936E-02			20	
Aroclor-1260 (4) [2C]	2972.886	15.3638	8.5515	2.009633E-02			20	
Aroclor-1260 (5) [2C]	2139.196	17.43372	9.151167	1.639216E-02			20	
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299003
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/22/12 11:28 10/22/12 22:17

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1016	1174.516	2.311246	7.333667	2.171858E-02			20	
Aroclor-1016 (1)	1964.494	3.581075	7.034167	7.244369E-03			20	
Aroclor-1016 (2)	709.6265	6.281095	6.112667	9.425495E-03			20	
Aroclor-1016 (3)	1073.222	6.718095	6.485167	1.307988E-02			20	
Aroclor-1016 (4)	1300.088	3.756672	7.0095	9.226517E-03			20	
Aroclor-1016 (5)	825.148	3.220945	7.333667	2.171858E-02			20	
Aroclor-1016 [2C]	1228.556	12.85368	6.6295	1.323378E-02			20	
Aroclor-1016 (1) [2C]	1955.791	12.05326	6.331	8.701677E-03			20	
Aroclor-1016 (2) [2C]	1130.285	13.6631	6.061333	1.898219E-02			20	
Aroclor-1016 (3) [2C]	1024.428	11.21134	6.529167	1.555927E-02			20	
Aroclor-1016 (4) [2C]	967.0585	15.24816	6.583333	7.416931E-03			20	
Aroclor-1016 (5) [2C]	1065.218	13.29546	6.6295	1.323378E-02			20	
Aroclor-1254	2132.619	3.940259	9.643	1.619697E-02			20	
Aroclor-1254 (1)	2914.766	8.123141	8.748333	2.802871E-02			20	
Aroclor-1254 (2)	944.7771	1.301137	7.3335	1.735395E-02			20	
Aroclor-1254 (3)	2813.096	3.589606	8.298833	3.195678E-02			20	
Aroclor-1254 (4)	1309.796	10.14071	9.2915	1.908829E-02			20	
Aroclor-1254 (5)	2680.662	5.509629	9.643	1.619697E-02			20	
Aroclor-1254 [2C]	2097.869	8.227751	8.5955	2.176966E-02			20	
Aroclor-1254 (1) [2C]	3120.727	9.2133	7.915833	2.658287E-02			20	
Aroclor-1254 (2) [2C]	2397.279	10.15893	7.244167	0.0161338			20	
Aroclor-1254 (3) [2C]	2118.341	8.903629	7.426333	1.211855E-02			20	
Aroclor-1254 (4) [2C]	1579.379	5.911214	8.080833	9.889376E-03			20	
Aroclor-1254 (5) [2C]	1273.619	4.303819	8.5955	2.176966E-02			20	
Aroclor-1260	3202.663	1.761731	11.5435	0.0203816			20	
Aroclor-1260 (1)	5841.086	1.520848	10.4315	9.117338E-03			20	
Aroclor-1260 (2)	3061.653	1.745347	9.2915	1.369735E-02			20	
Aroclor-1260 (3)	3570.469	3.337977	9.640333	1.268409E-02			20	
Aroclor-1260 (4)	2337.498	4.280156	9.745	0.0163278			20	
Aroclor-1260 (5)	1202.608	1.27378	11.5435	0.0203816			20	
Aroclor-1260 [2C]	2770.633	12.22155	9.423833	1.967665E-02			20	
Aroclor-1260 (1) [2C]	4381.511	10.90292	9.423833	1.967665E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2299003	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	10/22/12 11:28 10/22/12 22:17

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aroclor-1260 (2) [2C]	2274.812	13.91767	8.077833	6.967508E-03			20	
Aroclor-1260 (3) [2C]	2775.875	11.4597	8.321333	1.422968E-02			20	
Aroclor-1260 (4) [2C]	2572.017	13.64883	8.505167	1.364563E-02			20	
Aroclor-1260 (5) [2C]	1848.952	12.64522	9.104333	0.015783			20	
Tetrachloro-m-xylene	45628.87	3.636376	5.705571	1.944434E-02			20	
Tetrachloro-m-xylene [2C]	41703.98	13.96605	5.120428	2.381203E-02			20	
Decachlorobiphenyl	44279.28	2.016261	12.16586	1.524311E-02			20	
Decachlorobiphenyl [2C]	29662.28	9.461277	11.15186	1.443424E-02			20	

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	029F2901.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/09/12
Lab Sample ID:	2J28406-ICV4	Injection Time:	00:26

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1016 (1)	A	1003	1125	1998.279	2241.387		12.2	20
Aroclor-1016 (2)	A	1003	1041	737.4585	765.4786		3.8	20
Aroclor-1016 (3)	A	1003	1108	1103.083	1218.05		10.4	20
Aroclor-1016 (4)	A	1003	1184	1381.051	1630.296		18.0	20
Aroclor-1016 (5)	A	1003	1141	838.5294	953.8285		13.8	20
Aroclor-1016 (1) [2C]	A	1003	1051	2181.91	2285.794		4.8	20
Aroclor-1016 (2) [2C]	A	1003	1021	1375.587	1400.548		1.8	20
Aroclor-1016 (3) [2C]	A	1003	1105	1141.906	1258.596		10.2	20
Aroclor-1016 (4) [2C]	A	1003	1052	1158.223	1215.474		4.9	20
Aroclor-1016 (5) [2C]	A	1003	1050	1325.593	1388.168		4.7	20
Aroclor-1260 (1)	A	1002	1080	5494.936	5921.413		7.8	20
Aroclor-1260 (2)	A	1002	1124	3224.326	3616.337		12.2	20
Aroclor-1260 (3)	A	1002	1044	3829.492	3988.561		4.2	20
Aroclor-1260 (4)	A	1002	1083	2372.787	2565.43		8.1	20
Aroclor-1260 (5)	A	1002	1098	1137.586	1246.318		9.6	20
Aroclor-1260 (1) [2C]	A	1002	1038	4662.745	4830.391		3.6	20
Aroclor-1260 (2) [2C]	A	1002	1023	2691.935	2748.98		2.1	20
Aroclor-1260 (3) [2C]	A	1002	1054	3128.594	3292.769		5.2	20
Aroclor-1260 (4) [2C]	A	1002	1018	2972.886	3021.426		1.6	20
Aroclor-1260 (5) [2C]	A	1002	1004	2139.196	2144.726		0.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	013F1301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/09/12
Lab Sample ID:	2J28406-ICV5	Injection Time:	17:14

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1254 (1)	A	1000	986.9	3197.742	3155.955		-1.3	20
Aroclor-1254 (2)	A	1000	934.7	1002.121	936.697		-6.5	20
Aroclor-1254 (3)	A	1000	982.1	3051.415	2996.849		-1.8	20
Aroclor-1254 (4)	A	1000	1024	1540.727	1577.34		2.4	20
Aroclor-1254 (5)	A	1000	940.9	2783.555	2618.945		-5.9	20
Aroclor-1254 (1) [2C]	A	1000	916.4	3732.51	3420.667		-8.4	20
Aroclor-1254 (2) [2C]	A	1000	913.2	2910.505	2657.751		-8.7	20
Aroclor-1254 (3) [2C]	A	1000	918.0	2546.45	2337.619		-8.2	20
Aroclor-1254 (4) [2C]	A	1000	906.1	1876.557	1700.371		-9.4	20
Aroclor-1254 (5) [2C]	A	1000	972.8	1398.651	1360.628		-2.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	038F3801.D	Calibration Date:	10/22/12 00:00
Sequence:	2J29909	Injection Date:	10/22/12
Lab Sample ID:	2J29909-ICV4	Injection Time:	20:23

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1016 (1)	A	1003	1150	1964.494	2253.254		14.7	20
Aroclor-1016 (2)	A	1003	1044	709.6265	738.8265		4.1	20
Aroclor-1016 (3)	A	1003	1099	1073.222	1176.351		9.6	20
Aroclor-1016 (4)	A	1003	1122	1300.088	1453.785		11.8	20
Aroclor-1016 (5)	A	1003	1153	825.148	948.7687		15.0	20
Aroclor-1016 (1) [2C]	A	1003	1046	1955.791	2040.403		4.3	20
Aroclor-1016 (2) [2C]	A	1003	1035	1130.285	1166.338		3.2	20
Aroclor-1016 (3) [2C]	A	1003	1068	1024.428	1090.938		6.5	20
Aroclor-1016 (4) [2C]	A	1003	1056	967.0585	1018.144		5.3	20
Aroclor-1016 (5) [2C]	A	1003	1081	1065.218	1148.048		7.8	20
Aroclor-1260 (1)	A	1002	1114	5841.086	6492.627		11.2	20
Aroclor-1260 (2)	A	1002	1099	3061.653	3356.851		9.6	20
Aroclor-1260 (3)	A	1002	1092	3570.469	3890.242		9.0	20
Aroclor-1260 (4)	A	1002	1082	2337.498	2525.05		8.0	20
Aroclor-1260 (5)	A	1002	1097	1202.608	1316.425		9.5	20
Aroclor-1260 (1) [2C]	A	1002	1037	4381.511	4532.893		3.5	20
Aroclor-1260 (2) [2C]	A	1002	1031	2274.812	2340.379		2.9	20
Aroclor-1260 (3) [2C]	A	1002	1050	2775.875	2908.25		4.8	20
Aroclor-1260 (4) [2C]	A	1002	1027	2572.017	2636.237		2.5	20
Aroclor-1260 (5) [2C]	A	1002	1026	1848.952	1893.276		2.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	045F4501.D	Calibration Date:	10/22/12 00:00
Sequence:	2J29909	Injection Date:	10/22/12
Lab Sample ID:	2J29909-ICV5	Injection Time:	22:37

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Aroclor-1254 (1)	A	1000	1091	2914.766	3180.951		9.1	20
Aroclor-1254 (2)	A	1000	1010	944.7771	953.784		1.0	20
Aroclor-1254 (3)	A	1000	1055	2813.096	2968.685		5.5	20
Aroclor-1254 (4)	A	1000	1143	1309.796	1496.76		14.3	20
Aroclor-1254 (5)	A	1000	990.0	2680.662	2653.827		-1.0	20
Aroclor-1254 (1) [2C]	A	1000	978.4	3120.727	3053.339		-2.2	20
Aroclor-1254 (2) [2C]	A	1000	964.9	2397.279	2313.201		-3.5	20
Aroclor-1254 (3) [2C]	A	1000	976.0	2118.341	2067.599		-2.4	20
Aroclor-1254 (4) [2C]	A	1000	1005	1579.379	1586.844		0.5	20
Aroclor-1254 (5) [2C]	A	1000	1004	1273.619	1279.435		0.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV1	Injection Time:	12:51

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	96.12	48154.4	46285.06		-3.9	20
Tetrachloro-m-xylene [2C]	A	100.0	83.65	56983.64	47666.99		-16.3	20
Decachlorobiphenyl	A	100.0	98.84	41014.66	40538.57		-1.2	20
Decachlorobiphenyl [2C]	A	100.0	87.86	36168.37	31776.4		-12.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	006F0601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV4	Injection Time:	13:48

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	963.2	1998.279	1924.676		-3.7	20
Aroclor-1016 (2)	A	1000	926.6	737.4585	683.37		-7.3	20
Aroclor-1016 (3)	A	1000	926.1	1103.083	1021.523		-7.4	20
Aroclor-1016 (4)	A	1000	938.3	1381.051	1295.858		-6.2	20
Aroclor-1016 (5)	A	1000	974.0	838.5294	816.726		-2.6	20
Aroclor-1016 (1) [2C]	A	1000	1003	2181.91	2188.75		0.3	20
Aroclor-1016 (2) [2C]	A	1000	908.2	1375.587	1249.376		-9.2	20
Aroclor-1016 (3) [2C]	A	1000	1022	1141.906	1167.198		2.2	20
Aroclor-1016 (4) [2C]	A	1000	926.8	1158.223	1073.474		-7.3	20
Aroclor-1016 (5) [2C]	A	1000	910.1	1325.593	1206.397		-9.0	20
Aroclor-1260 (1)	A	1000	940.5	5494.936	5168.134		-5.9	20
Aroclor-1260 (2)	A	1000	888.0	3224.326	2863.376		-11.2	20
Aroclor-1260 (3)	A	1000	880.1	3829.492	3370.246		-12.0	20
Aroclor-1260 (4)	A	1000	942.4	2372.787	2236.168		-5.8	20
Aroclor-1260 (5)	A	1000	979.6	1137.586	1114.415		-2.0	20
Aroclor-1260 (1) [2C]	A	1000	995.6	4662.745	4642.175		-0.4	20
Aroclor-1260 (2) [2C]	A	1000	922.2	2691.935	2482.558		-7.8	20
Aroclor-1260 (3) [2C]	A	1000	988.0	3128.594	3091.055		-1.2	20
Aroclor-1260 (4) [2C]	A	1000	935.0	2972.886	2779.643		-6.5	20
Aroclor-1260 (5) [2C]	A	1000	910.2	2139.196	1947.099		-9.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	007F0701.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV5	Injection Time:	14:07

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	875.9	3197.742	2800.879		-12.4	20
Aroclor-1254 (2)	A	1000	881.0	1002.121	882.842		-11.9	20
Aroclor-1254 (3)	A	1000	859.7	3051.415	2623.364		-14.0	20
Aroclor-1254 (4)	A	1000	861.9	1540.727	1327.962		-13.8	20
Aroclor-1254 (5)	A	1000	841.2	2783.555	2341.602		-15.9	20
Aroclor-1254 (1) [2C]	A	1000	896.4	3732.51	3345.694		-10.4	20
Aroclor-1254 (2) [2C]	A	1000	885.5	2910.505	2577.153		-11.5	20
Aroclor-1254 (3) [2C]	A	1000	898.4	2546.45	2287.871		-10.2	20
Aroclor-1254 (4) [2C]	A	1000	925.0	1876.557	1735.74		-7.5	20
Aroclor-1254 (5) [2C]	A	1000	971.8	1398.651	1359.203		-2.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	021F2101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV6	Injection Time:	18:34

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	99.51	48154.4	47917.53		-0.5	20
Tetrachloro-m-xylene [2C]	A	100.0	86.85	56983.64	49491.48		-13.1	20
Decachlorobiphenyl	A	100.0	97.40	41014.66	39949.76		-2.6	20
Decachlorobiphenyl [2C]	A	100.0	81.24	36168.37	29384.42		-18.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	024F2401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV9	Injection Time:	19:31

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1046	1998.279	2091.302		4.7	20
Aroclor-1016 (2)	A	1000	985.0	737.4585	726.369		-1.5	20
Aroclor-1016 (3)	A	1000	995.8	1103.083	1098.482		-0.4	20
Aroclor-1016 (4)	A	1000	1018	1381.051	1405.48		1.8	20
Aroclor-1016 (5)	A	1000	1052	838.5294	881.932		5.2	20
Aroclor-1016 (1) [2C]	A	1000	1064	2181.91	2320.647		6.4	20
Aroclor-1016 (2) [2C]	A	1000	980.3	1375.587	1348.463		-2.0	20
Aroclor-1016 (3) [2C]	A	1000	1114	1141.906	1272.064		11.4	20
Aroclor-1016 (4) [2C]	A	1000	1001	1158.223	1159.831		0.1	20
Aroclor-1016 (5) [2C]	A	1000	992.2	1325.593	1315.304		-0.8	20
Aroclor-1260 (1)	A	1000	1004	5494.936	5517.309		0.4	20
Aroclor-1260 (2)	A	1000	1008	3224.326	3249.163		0.8	20
Aroclor-1260 (3)	A	1000	961.3	3829.492	3681.236		-3.9	20
Aroclor-1260 (4)	A	1000	1007	2372.787	2389.658		0.7	20
Aroclor-1260 (5)	A	1000	1043	1137.586	1186.231		4.3	20
Aroclor-1260 (1) [2C]	A	1000	1085	4662.745	5059.612		8.5	20
Aroclor-1260 (2) [2C]	A	1000	996.2	2691.935	2681.799		-0.4	20
Aroclor-1260 (3) [2C]	A	1000	1074	3128.594	3359.956		7.4	20
Aroclor-1260 (4) [2C]	A	1000	1010	2972.886	3001.993		1.0	20
Aroclor-1260 (5) [2C]	A	1000	987.4	2139.196	2112.316		-1.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	025F2501.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCVA	Injection Time:	19:50

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	954.3	3197.742	3051.492		-4.6	20
Aroclor-1254 (2)	A	1000	937.9	1002.121	939.89		-6.2	20
Aroclor-1254 (3)	A	1000	944.7	3051.415	2882.635		-5.5	20
Aroclor-1254 (4)	A	1000	933.1	1540.727	1437.608		-6.7	20
Aroclor-1254 (5)	A	1000	911.4	2783.555	2537.033		-8.9	20
Aroclor-1254 (1) [2C]	A	1000	955.9	3732.51	3568.032		-4.4	20
Aroclor-1254 (2) [2C]	A	1000	946.4	2910.505	2754.653		-5.4	20
Aroclor-1254 (3) [2C]	A	1000	953.2	2546.45	2427.276		-4.7	20
Aroclor-1254 (4) [2C]	A	1000	978.6	1876.557	1836.351		-2.1	20
Aroclor-1254 (5) [2C]	A	1000	1056	1398.651	1477.027		5.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	036F3601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCVB	Injection Time:	23:20

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	104.5	48154.4	50335.15		4.5	20
Tetrachloro-m-xylene [2C]	A	100.0	90.00	56983.64	51283.34		-10.0	20
Decachlorobiphenyl	A	100.0	102.5	41014.66	42049.55		2.5	20
Decachlorobiphenyl [2C]	A	100.0	90.14	36168.37	32603.99		-9.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	039F3901.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVE	Injection Time:	00:17

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1080	1998.279	2158.295		8.0	20
Aroclor-1016 (2)	A	1000	1020	737.4585	751.937		2.0	20
Aroclor-1016 (3)	A	1000	1022	1103.083	1127.953		2.3	20
Aroclor-1016 (4)	A	1000	1069	1381.051	1476.016		6.9	20
Aroclor-1016 (5)	A	1000	1070	838.5294	897.462		7.0	20
Aroclor-1016 (1) [2C]	A	1000	1075	2181.91	2346.274		7.5	20
Aroclor-1016 (2) [2C]	A	1000	994.5	1375.587	1367.985		-0.6	20
Aroclor-1016 (3) [2C]	A	1000	1134	1141.906	1294.575		13.4	20
Aroclor-1016 (4) [2C]	A	1000	1018	1158.223	1178.511		1.8	20
Aroclor-1016 (5) [2C]	A	1000	995.1	1325.593	1319.056		-0.5	20
Aroclor-1260 (1)	A	1000	1034	5494.936	5682.869		3.4	20
Aroclor-1260 (2)	A	1000	1030	3224.326	3322.847		3.1	20
Aroclor-1260 (3)	A	1000	984.4	3829.492	3769.808		-1.6	20
Aroclor-1260 (4)	A	1000	1024	2372.787	2430.909		2.4	20
Aroclor-1260 (5)	A	1000	1071	1137.586	1218.531		7.1	20
Aroclor-1260 (1) [2C]	A	1000	1105	4662.745	5150.548		10.5	20
Aroclor-1260 (2) [2C]	A	1000	1008	2691.935	2715.012		0.9	20
Aroclor-1260 (3) [2C]	A	1000	1087	3128.594	3401.238		8.7	20
Aroclor-1260 (4) [2C]	A	1000	1025	2972.886	3048.228		2.5	20
Aroclor-1260 (5) [2C]	A	1000	1013	2139.196	2166.645		1.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040F4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVF	Injection Time:	00:37

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	882.9	3197.742	2823.379		-11.7	20
Aroclor-1254 (2)	A	1000	952.8	1002.121	954.878		-4.7	20
Aroclor-1254 (3)	A	1000	920.8	3051.415	2809.766		-7.9	20
Aroclor-1254 (4)	A	1000	864.4	1540.727	1331.848		-13.6	20
Aroclor-1254 (5)	A	1000	883.4	2783.555	2459.136		-11.7	20
Aroclor-1254 (1) [2C]	A	1000	957.0	3732.51	3571.959		-4.3	20
Aroclor-1254 (2) [2C]	A	1000	945.6	2910.505	2752.034		-5.4	20
Aroclor-1254 (3) [2C]	A	1000	962.8	2546.45	2451.725		-3.7	20
Aroclor-1254 (4) [2C]	A	1000	989.6	1876.557	1857.023		-1.0	20
Aroclor-1254 (5) [2C]	A	1000	1065	1398.651	1489.113		6.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	052F5201.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVG	Injection Time:	04:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	98.43	48154.4	47397.21		-1.6	20
Tetrachloro-m-xylene [2C]	A	100.0	85.64	56983.64	48802.76		-14.4	20
Decachlorobiphenyl	A	100.0	99.25	41014.66	40708.54		-0.7	20
Decachlorobiphenyl [2C]	A	100.0	86.51	36168.37	31290.28		-13.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	055F5501.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVJ	Injection Time:	05:23

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1068	1998.279	2134.996		6.8	20
Aroclor-1016 (2)	A	1000	998.6	737.4585	736.39		-0.1	20
Aroclor-1016 (3)	A	1000	983.2	1103.083	1084.526		-1.7	20
Aroclor-1016 (4)	A	1000	1030	1381.051	1423.268		3.1	20
Aroclor-1016 (5)	A	1000	1043	838.5294	874.361		4.3	20
Aroclor-1016 (1) [2C]	A	1000	1061	2181.91	2315.813		6.1	20
Aroclor-1016 (2) [2C]	A	1000	977.6	1375.587	1344.755		-2.2	20
Aroclor-1016 (3) [2C]	A	1000	1118	1141.906	1276.449		11.8	20
Aroclor-1016 (4) [2C]	A	1000	998.3	1158.223	1156.234		-0.2	20
Aroclor-1016 (5) [2C]	A	1000	978.8	1325.593	1297.564		-2.1	20
Aroclor-1260 (1)	A	1000	1010	5494.936	5552.638		1.1	20
Aroclor-1260 (2)	A	1000	1003	3224.326	3233.358		0.3	20
Aroclor-1260 (3)	A	1000	963.8	3829.492	3690.827		-3.6	20
Aroclor-1260 (4)	A	1000	996.9	2372.787	2365.363		-0.3	20
Aroclor-1260 (5)	A	1000	1035	1137.586	1177.618		3.5	20
Aroclor-1260 (1) [2C]	A	1000	1089	4662.745	5080.011		8.9	20
Aroclor-1260 (2) [2C]	A	1000	987.9	2691.935	2659.398		-1.2	20
Aroclor-1260 (3) [2C]	A	1000	1065	3128.594	3332.348		6.5	20
Aroclor-1260 (4) [2C]	A	1000	1010	2972.886	3001.979		1.0	20
Aroclor-1260 (5) [2C]	A	1000	994.6	2139.196	2127.65		-0.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	056F5601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVK	Injection Time:	05:42

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	986.8	3197.742	3155.532		-1.3	20
Aroclor-1254 (2)	A	1000	964.3	1002.121	966.355		-3.6	20
Aroclor-1254 (3)	A	1000	979.0	3051.415	2987.312		-2.1	20
Aroclor-1254 (4)	A	1000	961.5	1540.727	1481.454		-3.8	20
Aroclor-1254 (5)	A	1000	940.2	2783.555	2617.196		-6.0	20
Aroclor-1254 (1) [2C]	A	1000	986.3	3732.51	3681.557		-1.4	20
Aroclor-1254 (2) [2C]	A	1000	973.9	2910.505	2834.636		-2.6	20
Aroclor-1254 (3) [2C]	A	1000	978.0	2546.45	2490.506		-2.2	20
Aroclor-1254 (4) [2C]	A	1000	1003	1876.557	1882.73		0.3	20
Aroclor-1254 (5) [2C]	A	1000	1119	1398.651	1564.686		11.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	96.27	48154.4	46356.45		-3.7	20
Tetrachloro-m-xylene [2C]	A	100.0	83.40	56983.64	47527.17		-16.6	20
Decachlorobiphenyl	A	100.0	96.23	41014.66	39470.06		-3.8	20
Decachlorobiphenyl [2C]	A	100.0	88.94	36168.37	32168.73		-11.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	006F0601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV4	Injection Time:	11:18

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1020	1998.279	2037.573		2.0	20
Aroclor-1016 (2)	A	1000	971.5	737.4585	716.464		-2.8	20
Aroclor-1016 (3)	A	1000	953.7	1103.083	1052.043		-4.6	20
Aroclor-1016 (4)	A	1000	943.8	1381.051	1303.467		-5.6	20
Aroclor-1016 (5)	A	1000	1025	838.5294	859.254		2.5	20
Aroclor-1016 (1) [2C]	A	1000	1015	2181.91	2213.767		1.5	20
Aroclor-1016 (2) [2C]	A	1000	941.6	1375.587	1295.238		-5.8	20
Aroclor-1016 (3) [2C]	A	1000	1051	1141.906	1200.232		5.1	20
Aroclor-1016 (4) [2C]	A	1000	980.0	1158.223	1135.104		-2.0	20
Aroclor-1016 (5) [2C]	A	1000	916.8	1325.593	1215.375		-8.3	20
Aroclor-1260 (1)	A	1000	1063	5494.936	5843.007		6.3	20
Aroclor-1260 (2)	A	1000	952.7	3224.326	3071.879		-4.7	20
Aroclor-1260 (3)	A	1000	920.7	3829.492	3525.813		-7.9	20
Aroclor-1260 (4)	A	1000	991.0	2372.787	2351.53		-0.9	20
Aroclor-1260 (5)	A	1000	1027	1137.586	1168.358		2.7	20
Aroclor-1260 (1) [2C]	A	1000	1063	4662.745	4957.045		6.3	20
Aroclor-1260 (2) [2C]	A	1000	961.8	2691.935	2589.122		-3.8	20
Aroclor-1260 (3) [2C]	A	1000	1049	3128.594	3281.612		4.9	20
Aroclor-1260 (4) [2C]	A	1000	993.2	2972.886	2952.573		-0.7	20
Aroclor-1260 (5) [2C]	A	1000	966.9	2139.196	2068.346		-3.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	007F0701.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV5	Injection Time:	11:37

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	900.7	3197.742	2880.232		-9.9	20
Aroclor-1254 (2)	A	1000	902.3	1002.121	904.227		-9.8	20
Aroclor-1254 (3)	A	1000	873.5	3051.415	2665.429		-12.6	20
Aroclor-1254 (4)	A	1000	885.5	1540.727	1364.321		-11.4	20
Aroclor-1254 (5)	A	1000	875.2	2783.555	2436.116		-12.5	20
Aroclor-1254 (1) [2C]	A	1000	919.5	3732.51	3432.149		-8.0	20
Aroclor-1254 (2) [2C]	A	1000	908.9	2910.505	2645.459		-9.1	20
Aroclor-1254 (3) [2C]	A	1000	920.7	2546.45	2344.548		-7.9	20
Aroclor-1254 (4) [2C]	A	1000	936.2	1876.557	1756.859		-6.4	20
Aroclor-1254 (5) [2C]	A	1000	996.5	1398.651	1393.793		-0.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	026F2601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV6	Injection Time:	17:39

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	100.2	48154.4	48273.33		0.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.43	56983.64	52098.02		-8.6	20
Decachlorobiphenyl	A	100.0	101.9	41014.66	41796.14		1.9	20
Decachlorobiphenyl [2C]	A	100.0	86.65	36168.37	31339.41		-13.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	029F2901.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV9	Injection Time:	18:36

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1055	1998.279	2107.563		5.5	20
Aroclor-1016 (2)	A	1000	1015	737.4585	748.447		1.5	20
Aroclor-1016 (3)	A	1000	1016	1103.083	1120.403		1.6	20
Aroclor-1016 (4)	A	1000	1078	1381.051	1488.515		7.8	20
Aroclor-1016 (5)	A	1000	1075	838.5294	901.122		7.5	20
Aroclor-1016 (1) [2C]	A	1000	1156	2181.91	2522.096		15.6	20
Aroclor-1016 (2) [2C]	A	1000	1024	1375.587	1409.124		2.4	20
Aroclor-1016 (3) [2C]	A	1000	1161	1141.906	1325.322		16.1	20
Aroclor-1016 (4) [2C]	A	1000	1038	1158.223	1202.723		3.8	20
Aroclor-1016 (5) [2C]	A	1000	1037	1325.593	1374.692		3.7	20
Aroclor-1260 (1)	A	1000	1048	5494.936	5758.192		4.8	20
Aroclor-1260 (2)	A	1000	1032	3224.326	3328.549		3.2	20
Aroclor-1260 (3)	A	1000	988.0	3829.492	3783.431		-1.2	20
Aroclor-1260 (4)	A	1000	1035	2372.787	2456.187		3.5	20
Aroclor-1260 (5)	A	1000	1090	1137.586	1240.034		9.0	20
Aroclor-1260 (1) [2C]	A	1000	1144	4662.745	5336.726		14.5	20
Aroclor-1260 (2) [2C]	A	1000	1042	2691.935	2806.05		4.2	20
Aroclor-1260 (3) [2C]	A	1000	1122	3128.594	3510.198		12.2	20
Aroclor-1260 (4) [2C]	A	1000	1064	2972.886	3161.72		6.4	20
Aroclor-1260 (5) [2C]	A	1000	1045	2139.196	2235.168		4.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	030F3001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVA	Injection Time:	18:55

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	963.1	3197.742	3079.661		-3.7	20
Aroclor-1254 (2)	A	1000	959.0	1002.121	960.985		-4.1	20
Aroclor-1254 (3)	A	1000	951.0	3051.415	2901.834		-4.9	20
Aroclor-1254 (4)	A	1000	959.1	1540.727	1477.726		-4.1	20
Aroclor-1254 (5)	A	1000	941.7	2783.555	2621.332		-5.8	20
Aroclor-1254 (1) [2C]	A	1000	1000	3732.51	3733.342		0.02	20
Aroclor-1254 (2) [2C]	A	1000	992.4	2910.505	2888.256		-0.8	20
Aroclor-1254 (3) [2C]	A	1000	1006	2546.45	2562.173		0.6	20
Aroclor-1254 (4) [2C]	A	1000	1042	1876.557	1955.657		4.2	20
Aroclor-1254 (5) [2C]	A	1000	1122	1398.651	1570.073		12.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040F4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Tetrachloro-m-xylene	A	100.0	102.8	48154.4	49529.4		2.9	20	
Tetrachloro-m-xylene [2C]	A	100.0	68.33	56983.64	38937.33		-31.7	20	*
Decachlorobiphenyl	A	100.0	100.1	41014.66	41065.71		0.1	20	
Decachlorobiphenyl [2C]	A	100.0	85.53	36168.37	30934.69		-14.5	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	043F4301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVE	Injection Time:	23:03

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1055	1998.279	2108.136		5.5	20
Aroclor-1016 (2)	A	1000	1010	737.4585	745.108		1.0	20
Aroclor-1016 (3)	A	1000	1025	1103.083	1131.167		2.5	20
Aroclor-1016 (4)	A	1000	1090	1381.051	1505.523		9.0	20
Aroclor-1016 (5)	A	1000	1078	838.5294	904.381		7.9	20
Aroclor-1016 (1) [2C]	A	1000	1108	2181.91	2416.484		10.8	20
Aroclor-1016 (2) [2C]	A	1000	998.4	1375.587	1373.357		-0.2	20
Aroclor-1016 (3) [2C]	A	1000	1133	1141.906	1294.209		13.3	20
Aroclor-1016 (4) [2C]	A	1000	1018	1158.223	1179.346		1.8	20
Aroclor-1016 (5) [2C]	A	1000	1001	1325.593	1326.429		0.06	20
Aroclor-1260 (1)	A	1000	1099	5494.936	6038.542		9.9	20
Aroclor-1260 (2)	A	1000	1026	3224.326	3307.731		2.6	20
Aroclor-1260 (3)	A	1000	992.3	3829.492	3800.146		-0.8	20
Aroclor-1260 (4)	A	1000	1035	2372.787	2455.613		3.5	20
Aroclor-1260 (5)	A	1000	1053	1137.586	1197.529		5.3	20
Aroclor-1260 (1) [2C]	A	1000	1109	4662.745	5172.189		10.9	20
Aroclor-1260 (2) [2C]	A	1000	1022	2691.935	2751.189		2.2	20
Aroclor-1260 (3) [2C]	A	1000	1097	3128.594	3430.872		9.7	20
Aroclor-1260 (4) [2C]	A	1000	1031	2972.886	3064.285		3.1	20
Aroclor-1260 (5) [2C]	A	1000	1018	2139.196	2178.228		1.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	044F4401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVF	Injection Time:	23:22

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	910.8	3197.742	2912.35		-8.9	20
Aroclor-1254 (2)	A	1000	977.3	1002.121	979.341		-2.3	20
Aroclor-1254 (3)	A	1000	945.0	3051.415	2883.618		-5.5	20
Aroclor-1254 (4)	A	1000	886.6	1540.727	1365.958		-11.3	20
Aroclor-1254 (5)	A	1000	930.5	2783.555	2590.126		-6.9	20
Aroclor-1254 (1) [2C]	A	1000	970.7	3732.51	3623.263		-2.9	20
Aroclor-1254 (2) [2C]	A	1000	965.9	2910.505	2811.177		-3.4	20
Aroclor-1254 (3) [2C]	A	1000	968.9	2546.45	2467.174		-3.1	20
Aroclor-1254 (4) [2C]	A	1000	1010	1876.557	1895		1.0	20
Aroclor-1254 (5) [2C]	A	1000	1094	1398.651	1530.469		9.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060F6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	104.2	48154.4	50182.73		4.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.00	56983.64	51855.59		-9.0	20
Decachlorobiphenyl	A	100.0	108.6	41014.66	44551.56		8.6	20
Decachlorobiphenyl [2C]	A	100.0	100.1	36168.37	36207.27		0.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	063F6301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVJ	Injection Time:	05:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1060	1998.279	2117.455		6.0	20
Aroclor-1016 (2)	A	1000	1014	737.4585	748.225		1.5	20
Aroclor-1016 (3)	A	1000	1019	1103.083	1124.116		1.9	20
Aroclor-1016 (4)	A	1000	1084	1381.051	1497.609		8.4	20
Aroclor-1016 (5)	A	1000	1081	838.5294	906.48		8.1	20
Aroclor-1016 (1) [2C]	A	1000	1124	2181.91	2453.036		12.4	20
Aroclor-1016 (2) [2C]	A	1000	1002	1375.587	1378.274		0.2	20
Aroclor-1016 (3) [2C]	A	1000	1139	1141.906	1300.399		13.9	20
Aroclor-1016 (4) [2C]	A	1000	1016	1158.223	1176.232		1.6	20
Aroclor-1016 (5) [2C]	A	1000	1017	1325.593	1347.641		1.7	20
Aroclor-1260 (1)	A	1000	1035	5494.936	5686.082		3.5	20
Aroclor-1260 (2)	A	1000	1010	3224.326	3258.181		1.0	20
Aroclor-1260 (3)	A	1000	985.4	3829.492	3773.63		-1.5	20
Aroclor-1260 (4)	A	1000	1036	2372.787	2459.218		3.6	20
Aroclor-1260 (5)	A	1000	1074	1137.586	1221.721		7.4	20
Aroclor-1260 (1) [2C]	A	1000	1132	4662.745	5277.264		13.2	20
Aroclor-1260 (2) [2C]	A	1000	1024	2691.935	2757.419		2.4	20
Aroclor-1260 (3) [2C]	A	1000	1101	3128.594	3445.752		10.1	20
Aroclor-1260 (4) [2C]	A	1000	1042	2972.886	3096.826		4.2	20
Aroclor-1260 (5) [2C]	A	1000	1033	2139.196	2210.704		3.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	064F6401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVK	Injection Time:	05:44

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	936.6	3197.742	2995.119		-6.3	20
Aroclor-1254 (2)	A	1000	974.9	1002.121	976.93		-2.5	20
Aroclor-1254 (3)	A	1000	956.0	3051.415	2917.297		-4.4	20
Aroclor-1254 (4)	A	1000	883.9	1540.727	1361.815		-11.6	20
Aroclor-1254 (5)	A	1000	925.0	2783.555	2574.73		-7.5	20
Aroclor-1254 (1) [2C]	A	1000	990.6	3732.51	3697.616		-0.9	20
Aroclor-1254 (2) [2C]	A	1000	970.2	2910.505	2823.893		-3.0	20
Aroclor-1254 (3) [2C]	A	1000	978.3	2546.45	2491.204		-2.2	20
Aroclor-1254 (4) [2C]	A	1000	1026	1876.557	1924.944		2.6	20
Aroclor-1254 (5) [2C]	A	1000	1127	1398.651	1576.683		12.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	003F0301.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCV1	Injection Time:	07:58

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	102.8	45628.87	46903.62		2.8	20
Tetrachloro-m-xylene [2C]	A	100.0	99.87	41703.98	41648.51		-0.1	20
Decachlorobiphenyl	A	100.0	85.20	44279.28	37727.17		-14.8	20
Decachlorobiphenyl [2C]	A	100.0	75.40	29662.28	22365.71		-24.6	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	040F4001.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCVB	Injection Time:	19:45

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	111.0	45628.87	50636.53		11.0	20
Tetrachloro-m-xylene [2C]	A	100.0	109.3	41703.98	45566.26		9.3	20
Decachlorobiphenyl	A	100.0	101.4	44279.28	44911.94		1.4	20
Decachlorobiphenyl [2C]	A	100.0	100.3	29662.28	29743.25		0.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	043F4301.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCVE	Injection Time:	20:42

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1064	1964.494	2089.461		6.4	20
Aroclor-1016 (2)	A	1000	1045	709.6265	741.514		4.5	20
Aroclor-1016 (3)	A	1000	1045	1073.222	1121.589		4.5	20
Aroclor-1016 (4)	A	1000	1176	1300.088	1528.83		17.6	20
Aroclor-1016 (5)	A	1000	1105	825.148	911.761		10.5	20
Aroclor-1016 (1) [2C]	A	1000	1069	1955.791	2090.099		6.9	20
Aroclor-1016 (2) [2C]	A	1000	1073	1130.285	1212.588		7.3	20
Aroclor-1016 (3) [2C]	A	1000	1119	1024.428	1146.262		11.9	20
Aroclor-1016 (4) [2C]	A	1000	1093	967.0585	1057.157		9.3	20
Aroclor-1016 (5) [2C]	A	1000	1087	1065.218	1158.26		8.7	20
Aroclor-1260 (1)	A	1000	1049	5841.086	6126.992		4.9	20
Aroclor-1260 (2)	A	1000	1063	3061.653	3254.727		6.3	20
Aroclor-1260 (3)	A	1000	1025	3570.469	3659.639		2.5	20
Aroclor-1260 (4)	A	1000	954.4	2337.498	2230.874		-4.6	20
Aroclor-1260 (5)	A	1000	1006	1202.608	1210.295		0.6	20
Aroclor-1260 (1) [2C]	A	1000	1066	4381.511	4672.707		6.6	20
Aroclor-1260 (2) [2C]	A	1000	1059	2274.812	2409.118		5.9	20
Aroclor-1260 (3) [2C]	A	1000	1078	2775.875	2993.347		7.8	20
Aroclor-1260 (4) [2C]	A	1000	1060	2572.017	2725.692		6.0	20
Aroclor-1260 (5) [2C]	A	1000	1058	1848.952	1955.644		5.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	044F4401.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCVF	Injection Time:	21:01

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	1138	2914.766	3317.348		13.8	20
Aroclor-1254 (2)	A	1000	1044	944.7771	986.026		4.4	20
Aroclor-1254 (3)	A	1000	1100	2813.096	3094.11		10.0	20
Aroclor-1254 (4)	A	1000	1130	1309.796	1480.488		13.0	20
Aroclor-1254 (5)	A	1000	1040	2680.662	2788.342		4.0	20
Aroclor-1254 (1) [2C]	A	1000	1064	3120.727	3318.931		6.4	20
Aroclor-1254 (2) [2C]	A	1000	1076	2397.279	2579.229		7.6	20
Aroclor-1254 (3) [2C]	A	1000	1074	2118.341	2275.865		7.4	20
Aroclor-1254 (4) [2C]	A	1000	1099	1579.379	1735.449		9.9	20
Aroclor-1254 (5) [2C]	A	1000	1111	1273.619	1415.503		11.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	062F6201.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVG	Injection Time:	02:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	110.3	45628.87	50340.4		10.3	20
Tetrachloro-m-xylene [2C]	A	100.0	108.5	41703.98	45268.78		8.5	20
Decachlorobiphenyl	A	100.0	100.6	44279.28	44548.51		0.6	20
Decachlorobiphenyl [2C]	A	100.0	103.5	29662.28	30689.69		3.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	065F6501.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVJ	Injection Time:	03:43

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1108	1964.494	2175.85		10.8	20
Aroclor-1016 (2)	A	1000	1074	709.6265	762.241		7.4	20
Aroclor-1016 (3)	A	1000	1067	1073.222	1144.889		6.7	20
Aroclor-1016 (4)	A	1000	1165	1300.088	1515.138		16.5	20
Aroclor-1016 (5)	A	1000	1127	825.148	929.659		12.7	20
Aroclor-1016 (1) [2C]	A	1000	1131	1955.791	2212.777		13.1	20
Aroclor-1016 (2) [2C]	A	1000	1096	1130.285	1238.644		9.6	20
Aroclor-1016 (3) [2C]	A	1000	1146	1024.428	1174.399		14.6	20
Aroclor-1016 (4) [2C]	A	1000	1115	967.0585	1078.086		11.5	20
Aroclor-1016 (5) [2C]	A	1000	1110	1065.218	1182.092		11.0	20
Aroclor-1260 (1)	A	1000	1081	5841.086	6312.32		8.1	20
Aroclor-1260 (2)	A	1000	1120	3061.653	3428.358		12.0	20
Aroclor-1260 (3)	A	1000	1107	3570.469	3953.282		10.7	20
Aroclor-1260 (4)	A	1000	1055	2337.498	2465.611		5.5	20
Aroclor-1260 (5)	A	1000	1068	1202.608	1284.326		6.8	20
Aroclor-1260 (1) [2C]	A	1000	1097	4381.511	4808.6		9.7	20
Aroclor-1260 (2) [2C]	A	1000	1100	2274.812	2501.256		10.0	20
Aroclor-1260 (3) [2C]	A	1000	1114	2775.875	3093.459		11.4	20
Aroclor-1260 (4) [2C]	A	1000	1086	2572.017	2793.509		8.6	20
Aroclor-1260 (5) [2C]	A	1000	1094	1848.952	2023.442		9.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	066F6601.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVK	Injection Time:	04:02

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	1173	2914.766	3420.081		17.3	20
Aroclor-1254 (2)	A	1000	1073	944.7771	1013.396		7.3	20
Aroclor-1254 (3)	A	1000	1131	2813.096	3181.883		13.1	20
Aroclor-1254 (4)	A	1000	1182	1309.796	1548.351		18.2	20
Aroclor-1254 (5)	A	1000	1061	2680.662	2844.335		6.1	20
Aroclor-1254 (1) [2C]	A	1000	1081	3120.727	3372.48		8.1	20
Aroclor-1254 (2) [2C]	A	1000	1084	2397.279	2598.154		8.4	20
Aroclor-1254 (3) [2C]	A	1000	1088	2118.341	2304.916		8.8	20
Aroclor-1254 (4) [2C]	A	1000	1116	1579.379	1762.021		11.6	20
Aroclor-1254 (5) [2C]	A	1000	1141	1273.619	1453.58		14.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	080F8001.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVL	Injection Time:	08:30

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Tetrachloro-m-xylene	A	100.0	111.0	45628.87	50635.45		11.0	20
Tetrachloro-m-xylene [2C]	A	100.0	109.2	41703.98	45548.64		9.2	20
Decachlorobiphenyl	A	100.0	102.0	44279.28	45171.12		2.0	20
Decachlorobiphenyl [2C]	A	100.0	106.6	29662.28	31627.85		6.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	083F8301.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVO	Injection Time:	09:27

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016 (1)	A	1000	1165	1964.494	2288.476		16.5	20
Aroclor-1016 (2)	A	1000	1098	709.6265	778.979		9.8	20
Aroclor-1016 (3)	A	1000	1080	1073.222	1158.937		8.0	20
Aroclor-1016 (4)	A	1000	1155	1300.088	1501.346		15.5	20
Aroclor-1016 (5)	A	1000	1151	825.148	949.416		15.1	20
Aroclor-1016 (1) [2C]	A	1000	1193	1955.791	2333.346		19.3	20
Aroclor-1016 (2) [2C]	A	1000	1111	1130.285	1256.202		11.1	20
Aroclor-1016 (3) [2C]	A	1000	1166	1024.428	1194.628		16.6	20
Aroclor-1016 (4) [2C]	A	1000	1129	967.0585	1092.123		12.9	20
Aroclor-1016 (5) [2C]	A	1000	1126	1065.218	1199.681		12.6	20
Aroclor-1260 (1)	A	1000	1118	5841.086	6527.617		11.8	20
Aroclor-1260 (2)	A	1000	1140	3061.653	3491.148		14.0	20
Aroclor-1260 (3)	A	1000	1148	3570.469	4099.106		14.8	20
Aroclor-1260 (4)	A	1000	1094	2337.498	2556.265		9.4	20
Aroclor-1260 (5)	A	1000	1122	1202.608	1349.623		12.2	20
Aroclor-1260 (1) [2C]	A	1000	1135	4381.511	4973.485		13.5	20
Aroclor-1260 (2) [2C]	A	1000	1125	2274.812	2559.363		12.5	20
Aroclor-1260 (3) [2C]	A	1000	1141	2775.875	3168.534		14.1	20
Aroclor-1260 (4) [2C]	A	1000	1117	2572.017	2872.941		11.7	20
Aroclor-1260 (5) [2C]	A	1000	1126	1848.952	2081.22		12.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8082A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	084F8401.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVP	Injection Time:	09:47

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1254 (1)	A	1000	1150	2914.766	3353.056		15.0	20
Aroclor-1254 (2)	A	1000	1043	944.7771	985.148		4.3	20
Aroclor-1254 (3)	A	1000	1101	2813.096	3098.102		10.1	20
Aroclor-1254 (4)	A	1000	1172	1309.796	1535.611		17.2	20
Aroclor-1254 (5)	A	1000	1040	2680.662	2789.286		4.1	20
Aroclor-1254 (1) [2C]	A	1000	1066	3120.727	3325.242		6.6	20
Aroclor-1254 (2) [2C]	A	1000	1065	2397.279	2552.893		6.5	20
Aroclor-1254 (3) [2C]	A	1000	1065	2118.341	2256.201		6.5	20
Aroclor-1254 (4) [2C]	A	1000	1097	1579.379	1732.052		9.7	20
Aroclor-1254 (5) [2C]	A	1000	1116	1273.619	1421.636		11.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J12031 Batch Matrix: Solid
Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-SS01-0-2-10/12	1210127-01	10/17/12 07:46	15.80	5.00
PEN-44-SS01-6-8-10/12	1210127-02	10/17/12 07:46	15.70	5.00
PEN-44-SS02-0-2-10/12	1210127-03	10/17/12 07:46	15.80	5.00
PEN-44-SS02-6-8-10/12	1210127-04	10/17/12 07:46	15.70	5.00
PEN-44-SS03-0-2-10/12	1210127-05	10/17/12 07:46	15.70	5.00
PEN-44-SS03-6-8-10/12	1210127-06	10/17/12 07:46	15.60	5.00
Blank	2J12031-BLK1	10/17/12 07:46	15.00	5.00
LCS	2J12031-BS2	10/17/12 07:46	15.00	5.00
PEN-44-SS01-0-2-10/12	2J12031-MS2	10/17/12 07:46	15.70	5.00
PEN-44-SS01-0-2-10/12	2J12031-MSD2	10/17/12 07:46	15.40	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J12031-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/17/12 07:46 Analyzed: 10/17/12 14:26

Solids: Preparation: EXT_3546 Dilution:

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg wet)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.20	8.33	17.0	U
11104-28-2	Aroclor-1221		4.20	8.33	17.0	U
11141-16-5	Aroclor-1232		4.20	8.33	17.0	U
53469-21-9	Aroclor-1242		4.20	8.33	17.0	U
12672-29-6	Aroclor-1248		4.20	8.33	17.0	U
11097-69-1	Aroclor-1254		4.20	8.33	17.0	U
11096-82-5	Aroclor-1260		4.20	8.33	17.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.67	12.35	74.1	70 - 125	
Tetrachloro-m-xylene [2C]	16.67	11.51	69.0	70 - 125	*
Decachlorobiphenyl	16.67	13.60	81.6	60 - 125	
Decachlorobiphenyl [2C]	16.67	12.82	76.9	60 - 125	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC

SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J16016 Batch Matrix: Water

Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/16/12 14:38	1,060.00	10.00
PEN-3221-09-10/12	1210127-10	10/16/12 14:38	1,080.00	10.00
Blank	2J16016-BLK1	10/16/12 14:38	1,000.00	10.00
LCS	2J16016-BS2	10/16/12 14:38	1,000.00	10.00
LCS Dup	2J16016-BSD2	10/16/12 14:38	1,000.00	10.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J16016-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/16/12 14:38 Analyzed: 10/18/12 11:56

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		0.120	0.250	0.500	U
11104-28-2	Aroclor-1221		0.120	0.250	0.500	U
11141-16-5	Aroclor-1232		0.120	0.250	0.500	U
53469-21-9	Aroclor-1242		0.120	0.250	0.500	U
12672-29-6	Aroclor-1248		0.120	0.250	0.500	U
11097-69-1	Aroclor-1254		0.120	0.250	0.500	U
11096-82-5	Aroclor-1260		0.120	0.250	0.500	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.3744	74.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.5000	0.3476	69.5	25 - 140	
Decachlorobiphenyl	0.5000	0.3958	79.2	40 - 135	
Decachlorobiphenyl [2C]	0.5000	0.3851	77.0	40 - 135	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8082A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J19031 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
FD10111201	1210127-07	10/22/12 10:20	15.80	5.00
Blank	2J19031-BLK1	10/22/12 10:20	15.00	5.00
LCS	2J19031-BS2	10/22/12 10:20	15.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19031-BLK1 File ID: 049R4901.D

Sampled: Prepared: 10/22/12 10:20 Analyzed: 10/26/12 22:37

Solids: Preparation: EXT_3546 Dilution:

Batch: 2J19031 Sequence: 2J30449 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg wet	DL	LOD	LOQ	Q
12674-11-2	Aroclor-1016		4.20	8.33	17.0	U
11104-28-2	Aroclor-1221		4.20	8.33	17.0	U
11141-16-5	Aroclor-1232		4.20	8.33	17.0	U
53469-21-9	Aroclor-1242		4.20	8.33	17.0	U
12672-29-6	Aroclor-1248		4.20	8.33	17.0	U
11097-69-1	Aroclor-1254		4.20	8.33	17.0	U
11096-82-5	Aroclor-1260		4.20	8.33	17.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.67	15.20	91.2	70 - 125	
Tetrachloro-m-xylene [2C]	16.67	16.08	96.5	70 - 125	
Decachlorobiphenyl	16.67	14.25	85.5	60 - 125	
Decachlorobiphenyl [2C]	16.67	15.17	91.0	60 - 125	

* Values outside of QC limits

INITIAL CALIBRATION STANDARDS

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001F0101.D	10/08/12 15:32
12G0301	Pest_ICAL1@200ppb	2J28406-CAL1	001R0101.D	10/08/12 15:32
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002F0201.D	10/08/12 15:51
12G0300	Pest. ICAL2 @ 100ppb	2J28406-CAL2	002R0201.D	10/08/12 15:51
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003F0301.D	10/08/12 16:10
12G0299	Pest_ICAL3@50ppb	2J28406-CAL3	003R0301.D	10/08/12 16:10
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004R0401.D	10/08/12 16:29
12G0298	Pest_ICAL4@25ppb	2J28406-CAL4	004F0401.D	10/08/12 16:29
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005F0501.D	10/08/12 16:48
12G0297	Pest_ICAL5 @ 10ppb	2J28406-CAL5	005R0501.D	10/08/12 16:48
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006F0601.D	10/08/12 17:07
12G0296	Pest_ICAL6 @ 5ppb	2J28406-CAL6	006R0601.D	10/08/12 17:07
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007F0701.D	10/08/12 17:26
12G0295	Pest_ICAL7 @ 1ppb	2J28406-CAL7	007R0701.D	10/08/12 17:26
12F0458	Toxaphene CAL1 (2000ppb)	2J28406-CAL8	009F0901.D	10/08/12 18:04
12F0458	Toxaphene CAL1 (2000ppb)	2J28406-CAL8	009R0901.D	10/08/12 18:04
12F0459	Toxaphene CAL2 (1000ppb)	2J28406-CAL9	010R1001.D	10/08/12 18:24
12F0459	Toxaphene CAL2 (1000ppb)	2J28406-CAL9	010F1001.D	10/08/12 18:24
12F0460	Toxaphene CAL3 (750ppb)	2J28406-CALA	011F1101.D	10/08/12 18:43
12F0460	Toxaphene CAL3 (750ppb)	2J28406-CALA	011R1101.D	10/08/12 18:43
12F0461	Toxaphene CAL4 (500ppb)	2J28406-CALB	012F1201.D	10/08/12 19:02
12F0461	Toxaphene CAL4 (500ppb)	2J28406-CALB	012R1201.D	10/08/12 19:02
12F0462	Toxaphene CAL5 (250ppb)	2J28406-CALC	013F1301.D	10/08/12 19:21
12F0462	Toxaphene CAL5 (250ppb)	2J28406-CALC	013R1301.D	10/08/12 19:21
12F0463	Toxaphene CAL6 (100ppb)	2J28406-CALD	014F1401.D	10/08/12 19:40
12F0463	Toxaphene CAL6 (100ppb)	2J28406-CALD	014R1401.D	10/08/12 19:40
12D0724	Aro-1660 Cal1@2500/250	2J28406-CALK	023R2301.D	10/08/12 22:31
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J28406-CALL	024R2401.D	10/08/12 22:50
12D0726	Aro-1660 Cal3@750/75	2J28406-CALM	025R2501.D	10/08/12 23:09
12D0727	Aro-1660 Cal4@500/50	2J28406-CALN	026R2601.D	10/08/12 23:29
12D0728	Aro-1660 Cal5@100/10	2J28406-CALO	027R2701.D	10/08/12 23:48
12D0729	Aro-1660 Cal6@50/5	2J28406-CALP	028R2801.D	10/09/12 00:07

12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J28406-CALQ	030R3001.D	10/09/12 00:45
12I0331	Aroclor-1254 Cal 2 1000ppb	2J28406-CALR	031R3101.D	10/09/12 01:04
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J28406-CALS	032R3201.D	10/09/12 01:23
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J28406-CALT	033R3301.D	10/09/12 01:42
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J28406-CALU	034R3401.D	10/09/12 02:01
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J28406-CALV	035R3501.D	10/09/12 02:20

INITIAL CALIBRATION STANDARDS

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J29909	Instrument:	GL-ECD3
Calibration:	2299003		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010R1001.D	10/22/12 11:28
12G0301	Pest_ICAL1@200ppb	2J29909-CAL1	010F1001.D	10/22/12 11:28
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011F1101.D	10/22/12 11:47
12G0300	Pest. ICAL2 @ 100ppb	2J29909-CAL2	011R1101.D	10/22/12 11:47
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012F1201.D	10/22/12 12:06
12G0299	Pest_ICAL3@50ppb	2J29909-CAL3	012R1201.D	10/22/12 12:06
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013F1301.D	10/22/12 12:25
12G0298	Pest_ICAL4@25ppb	2J29909-CAL4	013R1301.D	10/22/12 12:25
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014F1401.D	10/22/12 12:44
12G0297	Pest_ICAL5 @ 10ppb	2J29909-CAL5	014R1401.D	10/22/12 12:44
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015R1501.D	10/22/12 13:03
12G0296	Pest_ICAL6 @ 5ppb	2J29909-CAL6	015F1501.D	10/22/12 13:03
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016F1601.D	10/22/12 13:23
12G0295	Pest_ICAL7 @ 1ppb	2J29909-CAL7	016R1601.D	10/22/12 13:23
12F0458	Toxaphene CAL1 (2000ppb)	2J29909-CAL8	018F1801.D	10/22/12 14:01
12F0458	Toxaphene CAL1 (2000ppb)	2J29909-CAL8	018R1801.D	10/22/12 14:01
12F0459	Toxaphene CAL2 (1000ppb)	2J29909-CAL9	019F1901.D	10/22/12 14:20
12F0459	Toxaphene CAL2 (1000ppb)	2J29909-CAL9	019R1901.D	10/22/12 14:20
12F0460	Toxaphene CAL3 (750ppb)	2J29909-CALA	020R2001.D	10/22/12 14:39
12F0460	Toxaphene CAL3 (750ppb)	2J29909-CALA	020F2001.D	10/22/12 14:39
12F0461	Toxaphene CAL4 (500ppb)	2J29909-CALB	021F2101.D	10/22/12 14:58
12F0461	Toxaphene CAL4 (500ppb)	2J29909-CALB	021R2101.D	10/22/12 14:58
12F0462	Toxaphene CAL5 (250ppb)	2J29909-CALC	022F2201.D	10/22/12 15:17
12F0462	Toxaphene CAL5 (250ppb)	2J29909-CALC	022R2201.D	10/22/12 15:17
12F0463	Toxaphene CAL6 (100ppb)	2J29909-CALD	023F2301.D	10/22/12 15:36
12F0463	Toxaphene CAL6 (100ppb)	2J29909-CALD	023R2301.D	10/22/12 15:36
12D0724	Aro-1660 Cal1@2500/250	2J29909-CALK	032R3201.D	10/22/12 18:28
12D0725	Aro-1660 Cal2@1000/100 (CCV)	2J29909-CALL	033R3301.D	10/22/12 18:47
12D0726	Aro-1660 Cal3@750/75	2J29909-CALM	034R3401.D	10/22/12 19:06
12D0727	Aro-1660 Cal4@500/50	2J29909-CALN	035R3501.D	10/22/12 19:25
12D0728	Aro-1660 Cal5@100/10	2J29909-CALO	036R3601.D	10/22/12 19:45
12D0730	Aro-1660 Cal6@50/5	2J29909-CALP	037R3701.D	10/22/12 20:04

12E0533	Aroclor-1254 CAL 1 (2500 ppb)	2J29909-CALQ	039R3901.D	10/22/12 20:42
12E0534	Aroclor-1254 Cal 2 1000ppb	2J29909-CALR	040R4001.D	10/22/12 21:01
12E0535	Aroclor-1254 CAL 3 (750 ppb)	2J29909-CALS	041R4101.D	10/22/12 21:20
12E0536	Aroclor-1254 CAL 4 (500 ppb)	2J29909-CALT	042R4201.D	10/22/12 21:39
12E0537	Aroclor-1254 CAL 5 (100 ppb)	2J29909-CALU	043R4301.D	10/22/12 21:58
12E0538	Aroclor-1254 CAL 6 (50 ppb)	2J29909-CALV	044R4401.D	10/22/12 22:17

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J28406
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J28406-PEM1	002R0201pem.D	10/08/12 07:40
Performance Mix	2J28406-PEM1	002F0201pem.D	10/08/12 07:40
Cal Standard	2J28406-CAL1	001R0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL1	001F0101.D	10/08/12 15:32
Cal Standard	2J28406-CAL2	002F0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL2	002R0201.D	10/08/12 15:51
Cal Standard	2J28406-CAL3	003F0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL3	003R0301.D	10/08/12 16:10
Cal Standard	2J28406-CAL4	004F0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL4	004R0401.D	10/08/12 16:29
Cal Standard	2J28406-CAL5	005F0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL5	005R0501.D	10/08/12 16:48
Cal Standard	2J28406-CAL6	006F0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL6	006R0601.D	10/08/12 17:07
Cal Standard	2J28406-CAL7	007F0701.D	10/08/12 17:26
Cal Standard	2J28406-CAL7	007R0701.D	10/08/12 17:26
Initial Cal Check	2J28406-ICV1	008R0801.D	10/08/12 17:46
Initial Cal Check	2J28406-ICV1	008F0801.D	10/08/12 17:46
Cal Standard	2J28406-CAL8	009R0901.D	10/08/12 18:04
Cal Standard	2J28406-CAL8	009F0901.D	10/08/12 18:04
Cal Standard	2J28406-CAL9	010R1001.D	10/08/12 18:24
Cal Standard	2J28406-CAL9	010F1001.D	10/08/12 18:24
Cal Standard	2J28406-CALA	011R1101.D	10/08/12 18:43
Cal Standard	2J28406-CALA	011F1101.D	10/08/12 18:43
Cal Standard	2J28406-CALB	012F1201.D	10/08/12 19:02
Cal Standard	2J28406-CALB	012R1201.D	10/08/12 19:02
Cal Standard	2J28406-CALC	013F1301.D	10/08/12 19:21
Cal Standard	2J28406-CALC	013R1301.D	10/08/12 19:21
Cal Standard	2J28406-CALD	014F1401.D	10/08/12 19:40
Cal Standard	2J28406-CALD	014R1401.D	10/08/12 19:40
Initial Cal Check	2J28406-ICV2	015F1501.D	10/08/12 19:59
Initial Cal Check	2J28406-ICV2	015R1501.D	10/08/12 19:59

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J28406	Instrument:	GL-ECD3
Calibration:	2284005		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J28406-PEM2	002R0201.D	10/11/12 13:19
Performance Mix	2J28406-PEM2	002F0201.D	10/11/12 13:19
Initial Cal Check	2J28406-ICV6	004F0401.D	10/11/12 13:57
Initial Cal Check	2J28406-ICV6	004R0401.D	10/11/12 13:57

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29616
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J29616-PEM1	002R0201.D	10/17/12 12:32
Performance Mix	2J29616-PEM1	002F0201.D	10/17/12 12:32
Calibration Check	2J29616-CCV1	003R0301.D	10/17/12 12:51
Calibration Check	2J29616-CCV1	003F0301.D	10/17/12 12:51
Calibration Check	2J29616-CCV2	004R0401.D	10/17/12 13:10
Calibration Check	2J29616-CCV2	004F0401.D	10/17/12 13:10
Blank	2J12031-BLK1	008R0801.D	10/17/12 14:26
Blank	2J12031-BLK1	008F0801.D	10/17/12 14:26
LCS	2J12031-BS1	009R0901.D	10/17/12 14:46
LCS	2J12031-BS1	009F0901.D	10/17/12 14:46
Calibration Check	2J29616-CCV6	021R2101.D	10/17/12 18:34
Calibration Check	2J29616-CCV6	021F2101.D	10/17/12 18:34
Calibration Check	2J29616-CCV7	022R2201.D	10/17/12 18:53
Calibration Check	2J29616-CCV7	022F2201.D	10/17/12 18:53
Calibration Check	2J29616-CCVB	036F3601.D	10/17/12 23:20
Calibration Check	2J29616-CCVB	036R3601.D	10/17/12 23:20
Calibration Check	2J29616-CCVC	037F3701.D	10/17/12 23:39
Calibration Check	2J29616-CCVC	037R3701.D	10/17/12 23:39
Performance Mix	2J29616-PEM2	041R4101.D	10/18/12 00:56
Performance Mix	2J29616-PEM2	041F4101.D	10/18/12 00:56
PEN-44-SS01-0-2-10/12	1210127-01	042R4201.D	10/18/12 01:15
PEN-44-SS01-0-2-10/12	1210127-01	042F4201.D	10/18/12 01:15
PEN-44-SS01-0-2-10/12	2J12031-MS1	043R4301.D	10/18/12 01:34
PEN-44-SS01-0-2-10/12	2J12031-MS1	043F4301.D	10/18/12 01:34
PEN-44-SS01-0-2-10/12	2J12031-MSD1	044R4401.D	10/18/12 01:53
PEN-44-SS01-0-2-10/12	2J12031-MSD1	044F4401.D	10/18/12 01:53
PEN-44-SS01-6-8-10/12	1210127-02	047R4701.D	10/18/12 02:50
PEN-44-SS01-6-8-10/12	1210127-02	047F4701.D	10/18/12 02:50
PEN-44-SS02-0-2-10/12	1210127-03	048R4801.D	10/18/12 03:09
PEN-44-SS02-0-2-10/12	1210127-03	048F4801.D	10/18/12 03:09
PEN-44-SS02-6-8-10/12	1210127-04	049R4901.D	10/18/12 03:28
PEN-44-SS02-6-8-10/12	1210127-04	049F4901.D	10/18/12 03:28

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29616
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
PEN-44-SS03-0-2-10/12	1210127-05	050R5001.D	10/18/12 03:47
PEN-44-SS03-0-2-10/12	1210127-05	050F5001.D	10/18/12 03:47
PEN-44-SS03-6-8-10/12	1210127-06	051R5101.D	10/18/12 04:06
PEN-44-SS03-6-8-10/12	1210127-06	051F5101.D	10/18/12 04:06
Calibration Check	2J29616-CCVG	052F5201.D	10/18/12 04:25
Calibration Check	2J29616-CCVG	052R5201.D	10/18/12 04:25
Calibration Check	2J29616-CCVH	053F5301.D	10/18/12 04:44
Calibration Check	2J29616-CCVH	053R5301.D	10/18/12 04:44

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29706
Instrument: GL-ECD3
Calibration: 2284005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J29706-PEM1	002R0201.D	10/18/12 10:02
Performance Mix	2J29706-PEM1	002F0201.D	10/18/12 10:02
Calibration Check	2J29706-CCV1	003F0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV1	003R0301.D	10/18/12 10:21
Calibration Check	2J29706-CCV2	004R0401.D	10/18/12 10:40
Calibration Check	2J29706-CCV2	004F0401.D	10/18/12 10:40
Blank	2J16016-BLK1	008R0801.D	10/18/12 11:56
Blank	2J16016-BLK1	008F0801.D	10/18/12 11:56
LCS	2J16016-BS1	009F0901.D	10/18/12 12:16
LCS	2J16016-BS1	009R0901.D	10/18/12 12:16
LCS Dup	2J16016-BSD1	010F1001.D	10/18/12 12:35
LCS Dup	2J16016-BSD1	010R1001.D	10/18/12 12:35
Calibration Check	2J29706-CCV6	026R2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV6	026F2601.D	10/18/12 17:39
Calibration Check	2J29706-CCV7	027R2701.D	10/18/12 17:58
Calibration Check	2J29706-CCV7	027F2701.D	10/18/12 17:58
Calibration Check	2J29706-CCVB	040F4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVB	040R4001.D	10/18/12 22:06
Calibration Check	2J29706-CCVC	041F4101.D	10/18/12 22:25
Calibration Check	2J29706-CCVC	041R4101.D	10/18/12 22:25
Performance Mix	2J29706-PEM2	045R4501.D	10/18/12 23:41
Performance Mix	2J29706-PEM2	045F4501.D	10/18/12 23:41
PEN-44-09-10/12	1210127-08	047R4701.D	10/19/12 00:20
PEN-44-09-10/12	1210127-08	047F4701.D	10/19/12 00:20
PEN-3221-09-10/12	1210127-10	048F4801.D	10/19/12 00:39
PEN-3221-09-10/12	1210127-10	048R4801.D	10/19/12 00:39
Calibration Check	2J29706-CCVG	060F6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVG	060R6001.D	10/19/12 04:28
Calibration Check	2J29706-CCVH	061F6101.D	10/19/12 04:47
Calibration Check	2J29706-CCVH	061R6101.D	10/19/12 04:47

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Sequence: 2J29909
Instrument: GL-ECD3
Calibration: 2299003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J29909-PEM1	002F0201.D	10/22/12 08:54
Performance Mix	2J29909-PEM1	002R0201.D	10/22/12 08:54
Cal Standard	2J29909-CAL1	010R1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL1	010F1001.D	10/22/12 11:28
Cal Standard	2J29909-CAL2	011F1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL2	011R1101.D	10/22/12 11:47
Cal Standard	2J29909-CAL3	012R1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL3	012F1201.D	10/22/12 12:06
Cal Standard	2J29909-CAL4	013F1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL4	013R1301.D	10/22/12 12:25
Cal Standard	2J29909-CAL5	014F1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL5	014R1401.D	10/22/12 12:44
Cal Standard	2J29909-CAL6	015F1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL6	015R1501.D	10/22/12 13:03
Cal Standard	2J29909-CAL7	016R1601.D	10/22/12 13:23
Cal Standard	2J29909-CAL7	016F1601.D	10/22/12 13:23
Initial Cal Check	2J29909-ICV1	017F1701.D	10/22/12 13:42
Initial Cal Check	2J29909-ICV1	017R1701.D	10/22/12 13:42
Cal Standard	2J29909-CAL8	018R1801.D	10/22/12 14:01
Cal Standard	2J29909-CAL8	018F1801.D	10/22/12 14:01
Cal Standard	2J29909-CAL9	019R1901.D	10/22/12 14:20
Cal Standard	2J29909-CAL9	019F1901.D	10/22/12 14:20
Cal Standard	2J29909-CALA	020F2001.D	10/22/12 14:39
Cal Standard	2J29909-CALA	020R2001.D	10/22/12 14:39
Cal Standard	2J29909-CALB	021F2101.D	10/22/12 14:58
Cal Standard	2J29909-CALB	021R2101.D	10/22/12 14:58
Cal Standard	2J29909-CALC	022F2201.D	10/22/12 15:17
Cal Standard	2J29909-CALC	022R2201.D	10/22/12 15:17
Cal Standard	2J29909-CALD	023F2301.D	10/22/12 15:36
Cal Standard	2J29909-CALD	023R2301.D	10/22/12 15:36
Initial Cal Check	2J29909-ICV2	024F2401.D	10/22/12 15:56
Initial Cal Check	2J29909-ICV2	024R2401.D	10/22/12 15:56

ANALYSIS SEQUENCE SUMMARY

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Sequence:	2J30449	Instrument:	GL-ECD3
Calibration:	2299003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Performance Mix	2J30449-PEM1	002R0201.D	10/26/12 07:39
Performance Mix	2J30449-PEM1	002F0201.D	10/26/12 07:39
Calibration Check	2J30449-CCV1	003F0301.D	10/26/12 07:58
Calibration Check	2J30449-CCV1	003R0301.D	10/26/12 07:58
Calibration Check	2J30449-CCVB	040F4001.D	10/26/12 19:45
Calibration Check	2J30449-CCVB	040R4001.D	10/26/12 19:45
Calibration Check	2J30449-CCVC	041R4101.D	10/26/12 20:04
Calibration Check	2J30449-CCVC	041F4101.D	10/26/12 20:04
Performance Mix	2J30449-PEM2	045F4501.D	10/26/12 21:21
Performance Mix	2J30449-PEM2	045R4501.D	10/26/12 21:21
Blank	2J19031-BLK1	049F4901.D	10/26/12 22:37
Blank	2J19031-BLK1	049R4901.D	10/26/12 22:37
LCS	2J19031-BS1	050R5001.D	10/26/12 22:56
LCS	2J19031-BS1	050F5001.D	10/26/12 22:56
Calibration Check	2J30449-CCVG	062R6201.D	10/27/12 02:46
Calibration Check	2J30449-CCVG	062F6201.D	10/27/12 02:46
Calibration Check	2J30449-CCVH	063F6301.D	10/27/12 03:05
Calibration Check	2J30449-CCVH	063R6301.D	10/27/12 03:05
FD10111201	1210127-07	071R7101.D	10/27/12 05:38
FD10111201	1210127-07	071F7101.D	10/27/12 05:38
Calibration Check	2J30449-CCVL	080F8001.D	10/27/12 08:30
Calibration Check	2J30449-CCVL	080R8001.D	10/27/12 08:30
Calibration Check	2J30449-CCVM	081F8101.D	10/27/12 08:49
Calibration Check	2J30449-CCVM	081R8101.D	10/27/12 08:49

BREAKDOWN REPORT

Lab Sample ID: 2J29616-PEM1 **Analyzed:** 10/17/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	3.77
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	4.98
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J29616-PEM2 **Analyzed:** 10/18/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	7.84
Endrin	7.39

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	9.39
Endrin	6.95

BREAKDOWN REPORT

Lab Sample ID: 2J29706-PEM1 **Analyzed:** 10/18/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	2.95
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J29706-PEM2 **Analyzed:** 10/18/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	11.25
Endrin	8.57

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	12.64
Endrin	8.98

BREAKDOWN REPORT

Lab Sample ID: 2J30449-PEM1 **Analyzed:** 10/26/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	3.84
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	4.57
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J30449-PEM2 **Analyzed:** 10/26/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	5.07
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	6.71
Endrin	8.22

BREAKDOWN REPORT

Lab Sample ID: 2J28406-PEM1 **Analyzed:** 10/08/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	3.06
Endrin	5.91

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

BREAKDOWN REPORT

Lab Sample ID: 2J28406-PEM2 **Analyzed:** 10/11/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	2.38
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	3.36
Endrin	7.01

BREAKDOWN REPORT

Lab Sample ID: 2J29909-PEM1 **Analyzed:** 10/22/2012

Column Number: 1

Analyte	% Breakdown
4.4'-DDT	0.00
Endrin	0.00

Column Number: 2

Analyte	% Breakdown
4.4'-DDT	3.33
Endrin	6.01

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
4,4'-DDE	51094.47	13.36793	8.727857	5.825639E-02			20	
4,4'-DDE [2C]	50321.72	5.365485	7.795143	2.925106E-02			20	
4,4'-DDD	41428.21	16.34301	9.37	4.665635E-02			20	
4,4'-DDD [2C]	45332.02	6.910073	8.467143	3.733103E-02			20	
4,4'-DDT	41951.39	14.66624	9.765571	5.224335E-02			20	
4,4'-DDT [2C]	44183.69	5.572004	8.781	3.233758E-02			20	
Aldrin	63496.28	10.96892	7.636857	0.0705073			20	
Aldrin [2C]	62700.35	11.94878	6.682143	2.737238E-02			20	
alpha-BHC	72070.6	13.68616	6.244571	8.187212E-02			20	
alpha-BHC [2C]	75274.46	7.693702	5.667143	2.084635E-02			20	
alpha-Chlordane	56005.2	8.575271	8.528572	6.546021E-02			20	
alpha-Chlordane [2C]	57042.46	12.34952	7.594571	2.656618E-02			20	
beta-BHC	26102.06	6.530916	6.793	7.130419E-02			20	
beta-BHC [2C]	31407.75	9.952564	6.293	2.354579E-02			20	
delta-BHC	55943.6	17.97339	7.073571	7.731066E-02			20	
delta-BHC [2C]	61726.37	4.757049	6.556143	2.689054E-02			20	
Dieldrin	57719.49	11.60028	8.929572	6.286051E-02			20	
Dieldrin [2C]	60838.72	11.61915	7.985429	1.836013E-02			20	
Endosulfan I	53958.87	10.13715	8.595	6.083858E-02			20	
Endosulfan I [2C]	54945.66	11.77728	7.672429	0.0312186			20	
Endosulfan II	48331.97	9.989613	9.487143	5.679254E-02			20	
Endosulfan II [2C]	51135.22	11.56956	8.677	3.540361E-02			20	
Endosulfan sulfate	40280.74	9.889046	9.945714	5.093722E-02			20	
Endosulfan sulfate [2C]	42025.14	9.677244	9.174714	1.667823E-02			20	
Endrin	42937.13	12.93175	9.217143	5.742018E-02			20	
Endrin [2C]	46591.55	11.76563	8.325286	2.016478E-02			20	
Endrin aldehyde	39912.39	8.237052	9.65	5.515379E-02			20	
Endrin aldehyde [2C]	43719.7	10.52404	8.898572	2.524229E-02			20	
Endrin ketone	52202.94	7.902905	10.57014	4.691657E-02			20	
Endrin ketone [2C]	59552.03	17.25021	9.835714	6.401645E-03			20	
gamma-BHC (Lindane)	63404.4	12.44694	6.595286	7.922886E-02			20	
gamma-BHC (Lindane) [2C]	68059.61	7.772349	6.006571	2.894988E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
gamma-Chlordane	57479.09	10.32669	8.433571	6.918914E-02			20	
gamma-Chlordane [2C]	57877.86	11.6952	7.518572	2.115394E-02			20	
Heptachlor	56022.6	13.02672	7.244143	7.659515E-02			20	
Heptachlor [2C]	57138.09	10.64037	6.370857	5.805038E-03			20	
Heptachlor epoxide	57511.77	8.934334	8.128429	7.437776E-02			20	
Heptachlor epoxide [2C]	58027.29	14.05335	7.234571	2.189043E-02			20	
Methoxychlor	20681.87	10.91639	10.36786	5.205519E-02			20	
Methoxychlor [2C]	21957.26	12.52895	9.497714	2.541327E-02			20	
Chlordane (tech)	4739.676	3.425129	9.584	9.884912E-03			20	
Chlordane (1)	9184.691	2.907131	8.528667	1.278337E-02			20	
Chlordane (2)	2136.475	3.72727	7.003167	0.0186218			20	
Chlordane (3)	2941.406	8.609028	7.2415	1.387489E-02			20	
Chlordane (4)	7720.052	4.22816	8.4315	1.785286E-02			20	
Chlordane (5)	1715.758	3.872244	9.584	9.884912E-03			20	
Chlordane (tech) [2C]	3734.494	12.02405	8.689333	1.386043E-02			20	
Chlordane (1) [2C]	7793.493	15.09109	7.594	1.267471E-02			20	
Chlordane (2) [2C]	2683.884	11.96028	6.185	1.570752E-02			20	
Chlordane (3) [2C]	3340.631	12.26069	6.369667	1.488498E-02			20	
Chlordane (4) [2C]	2492.994	7.867662	6.797833	1.332475E-02			20	
Chlordane (5) [2C]	2361.467	9.962445	8.689333	1.386043E-02			20	
Toxaphene	1698.308	11.93069	10.94117	1.541817E-02			20	
Toxaphene (1)	2840.514	15.58817	10.47183	0.0179704			20	
Toxaphene (2)	943.6576	13.52652	9.042167	1.496001E-02			20	
Toxaphene (3)	1285.613	11.47967	9.564167	1.877273E-02			20	
Toxaphene (4)	2281.984	10.50788	9.935667	2.013178E-02			20	
Toxaphene (5)	1139.769	12.8342	10.94117	1.541817E-02			20	
Toxaphene [2C]	1972.125	3.895161	10.25417	1.221345E-02			20	
Toxaphene (1) [2C]	4049.199	4.647507	9.693	2.986822E-02			20	
Toxaphene (2) [2C]	690.2388	3.832762	7.926833	3.407985E-03			20	
Toxaphene (3) [2C]	1470.725	2.510751	8.675167	1.934436E-02			20	
Toxaphene (4) [2C]	2525.314	4.315087	9.5225	1.019319E-02			20	
Toxaphene (5) [2C]	1125.146	3.465383	10.25417	1.221345E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	
4,4'-DDE	51094.47	13.36793	8.727857	5.825639E-02			20	
4,4'-DDE [2C]	50321.72	5.365485	7.795143	2.925106E-02			20	
4,4'-DDD	41428.21	16.34301	9.37	4.665635E-02			20	
4,4'-DDD [2C]	45332.02	6.910073	8.467143	3.733103E-02			20	
4,4'-DDT	41951.39	14.66624	9.765571	5.224335E-02			20	
4,4'-DDT [2C]	44183.69	5.572004	8.781	3.233758E-02			20	
Aldrin	63496.28	10.96892	7.636857	0.0705073			20	
Aldrin [2C]	62700.35	11.94878	6.682143	2.737238E-02			20	
alpha-BHC	72070.6	13.68616	6.244571	8.187212E-02			20	
alpha-BHC [2C]	75274.46	7.693702	5.667143	2.084635E-02			20	
alpha-Chlordane	56005.2	8.575271	8.528572	6.546021E-02			20	
alpha-Chlordane [2C]	57042.46	12.34952	7.594571	2.656618E-02			20	
beta-BHC	26102.06	6.530916	6.793	7.130419E-02			20	
beta-BHC [2C]	31407.75	9.952564	6.293	2.354579E-02			20	
delta-BHC	55943.6	17.97339	7.073571	7.731066E-02			20	
delta-BHC [2C]	61726.37	4.757049	6.556143	2.689054E-02			20	
Dieldrin	57719.49	11.60028	8.929572	6.286051E-02			20	
Dieldrin [2C]	60838.72	11.61915	7.985429	1.836013E-02			20	
Endosulfan I	53958.87	10.13715	8.595	6.083858E-02			20	
Endosulfan I [2C]	54945.66	11.77728	7.672429	0.0312186			20	
Endosulfan II	48331.97	9.989613	9.487143	5.679254E-02			20	
Endosulfan II [2C]	51135.22	11.56956	8.677	3.540361E-02			20	
Endosulfan sulfate	40280.74	9.889046	9.945714	5.093722E-02			20	
Endosulfan sulfate [2C]	42025.14	9.677244	9.174714	1.667823E-02			20	
Endrin	42937.13	12.93175	9.217143	5.742018E-02			20	
Endrin [2C]	46591.55	11.76563	8.325286	2.016478E-02			20	
Endrin aldehyde	39912.39	8.237052	9.65	5.515379E-02			20	
Endrin aldehyde [2C]	43719.7	10.52404	8.898572	2.524229E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Endrin ketone	52202.94	7.902905	10.57014	4.691657E-02			20	
Endrin ketone [2C]	59552.03	17.25021	9.835714	6.401645E-03			20	
gamma-BHC (Lindane)	63404.4	12.44694	6.595286	7.922886E-02			20	
gamma-BHC (Lindane) [2C]	68059.61	7.772349	6.006571	2.894988E-02			20	
gamma-Chlordane	57479.09	10.32669	8.433571	6.918914E-02			20	
gamma-Chlordane [2C]	57877.86	11.6952	7.518572	2.115394E-02			20	
Heptachlor	56022.6	13.02672	7.244143	7.659515E-02			20	
Heptachlor [2C]	57138.09	10.64037	6.370857	5.805038E-03			20	
Heptachlor epoxide	57511.77	8.934334	8.128429	7.437776E-02			20	
Heptachlor epoxide [2C]	58027.29	14.05335	7.234571	2.189043E-02			20	
Methoxychlor	20681.87	10.91639	10.36786	5.205519E-02			20	
Methoxychlor [2C]	21957.26	12.52895	9.497714	2.541327E-02			20	
Chlordane (tech)	4739.676	3.425129	9.584	9.884912E-03			20	
Chlordane (1)	9184.691	2.907131	8.528667	1.278337E-02			20	
Chlordane (2)	2136.475	3.72727	7.003167	0.0186218			20	
Chlordane (3)	2941.406	8.609028	7.2415	1.387489E-02			20	
Chlordane (4)	7720.052	4.22816	8.4315	1.785286E-02			20	
Chlordane (5)	1715.758	3.872244	9.584	9.884912E-03			20	
Chlordane (tech) [2C]	3734.494	12.02405	8.689333	1.386043E-02			20	
Chlordane (1) [2C]	7793.493	15.09109	7.594	1.267471E-02			20	
Chlordane (2) [2C]	2683.884	11.96028	6.185	1.570752E-02			20	
Chlordane (3) [2C]	3340.631	12.26069	6.369667	1.488498E-02			20	
Chlordane (4) [2C]	2492.994	7.867662	6.797833	1.332475E-02			20	
Chlordane (5) [2C]	2361.467	9.962445	8.689333	1.386043E-02			20	
Toxaphene	1698.308	11.93069	10.94117	1.541817E-02			20	
Toxaphene (1)	2840.514	15.58817	10.47183	0.0179704			20	
Toxaphene (2)	943.6576	13.52652	9.042167	1.496001E-02			20	
Toxaphene (3)	1285.613	11.47967	9.564167	1.877273E-02			20	
Toxaphene (4)	2281.984	10.50788	9.935667	2.013178E-02			20	
Toxaphene (5)	1139.769	12.8342	10.94117	1.541817E-02			20	
Toxaphene [2C]	1972.125	3.895161	10.25417	1.221345E-02			20	
Toxaphene (1) [2C]	4049.199	4.647507	9.693	2.986822E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2284005
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/8/12 15:32 10/8/12 21:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Toxaphene (2) [2C]	690.2388	3.832762	7.926833	3.407985E-03			20	
Toxaphene (3) [2C]	1470.725	2.510751	8.675167	1.934436E-02			20	
Toxaphene (4) [2C]	2525.314	4.315087	9.5225	1.019319E-02			20	
Toxaphene (5) [2C]	1125.146	3.465383	10.25417	1.221345E-02			20	
Tetrachloro-m-xylene	48154.4	5.887151	5.773714	7.978546E-02			20	
Tetrachloro-m-xylene [2C]	56983.64	12.49655	5.154143	2.772295E-02			20	
Decachlorobiphenyl	41014.66	3.460543	12.25957	4.506739E-02			20	
Decachlorobiphenyl [2C]	36168.37	15.35769	11.20257	2.085627E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299003
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/22/12 11:28 10/22/12 17:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
4,4'-DDE	50456.48	11.45176	8.642286	1.919744E-02			20	
4,4'-DDE [2C]	40256.05	7.266198	7.747429	0.0242545			20	
4,4'-DDD	41312.58	14.50185	9.283143	0.022035			20	
4,4'-DDD [2C]	36108.37	7.843011	8.419143	6.303865E-03			20	
4,4'-DDT	44465.68	10.82573	9.676286	2.711061E-02			20	
4,4'-DDT [2C]	36018.1	6.52793	8.733429	2.083517E-02			20	
Aldrin	61759.15	8.696004	7.552143	1.962824E-02			20	
Aldrin [2C]	46614.19	12.79016	6.640857	1.425249E-02			20	
alpha-BHC	69569.94	11.51672	6.172	2.459251E-02			20	
alpha-BHC [2C]	56093.27	9.266278	5.631143	1.701138E-02			20	
alpha-Chlordane	56017.16	2.510435	8.440571	1.030399E-02			20	
alpha-Chlordane [2C]	44337.74	15.53471	7.549286	1.442982E-02			20	
beta-BHC	24624.75	5.830733	6.719	1.724608E-02			20	
beta-BHC [2C]	23906.8	9.980012	6.256429	3.710673E-03			20	
delta-BHC	55058.59	11.63285	6.996429	2.870538E-02			20	
delta-BHC [2C]	48101.72	8.407713	6.517	9.246901E-03			20	
Dieldrin	57227.59	9.519606	8.839286	1.670298E-02			20	
Dieldrin [2C]	46523.38	10.13599	7.938857	9.698118E-03			20	
Endosulfan I	53823.05	5.102184	8.506143	1.557002E-02			20	
Endosulfan I [2C]	42053.07	10.70344	7.627428	1.891112E-02			20	
Endosulfan II	49816.28	7.787051	9.395714	0.024562			20	
Endosulfan II [2C]	39085.89	10.44234	8.629714	2.851753E-03			20	
Endosulfan sulfate	42311.38	5.824695	9.854714	1.341369E-02			20	
Endosulfan sulfate [2C]	33356.07	8.427926	9.126572	1.081605E-02			20	
Endrin	45068.01	7.724023	9.124286	7.881339E-03			20	
Endrin [2C]	37171.95	9.789625	8.277143	2.004171E-02			20	
Endrin aldehyde	42211.46	2.602744	9.559428	0.0117056			20	
Endrin aldehyde [2C]	34823.56	9.288629	8.850714	1.137347E-02			20	
Endrin ketone	54639.44	5.439363	10.47586	9.833696E-03			20	
Endrin ketone [2C]	47133.68	11.54939	9.786	1.170692E-02			20	
gamma-BHC (Lindane)	61058.46	7.990573	6.52	0.0188397			20	
gamma-BHC (Lindane) [2C]	51469.37	9.195163	5.969428	9.81418E-03			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Calibration: 2299003
Instrument: GL-ECD3
Matrix: Water
Calibration Dates: 10/22/12 11:28 10/22/12 17:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
gamma-Chlordane	58537.46	2.924263	8.346	5.793478E-03			20	
gamma-Chlordane [2C]	45600.43	14.66834	7.474143	2.32823E-04			20	
Heptachlor	57764.29	6.301845	7.162571	2.829725E-02			20	
Heptachlor [2C]	45029.56	10.65233	6.331714	1.839598E-02			20	
Heptachlor epoxide	56762.85	6.000368	8.042429	1.160931E-02			20	
Heptachlor epoxide [2C]	44380.7	12.61305	7.191571	1.085085E-02			20	
Methoxychlor	23126.34	3.275902	10.27986	2.475987E-02			20	
Methoxychlor [2C]	18651.37	11.89257	9.448	1.607851E-02			20	
Chlordane (tech)	5213.023	6.945077	9.493834	1.643624E-02			20	
Chlordane (1)	10093.54	6.205913	8.442167	1.799726E-02			20	
Chlordane (2)	2121.478	3.72961	6.924167	1.495177E-02			20	
Chlordane (3)	3426.878	12.3863	7.160833	1.502208E-02			20	
Chlordane (4)	8714.666	9.585749	8.345167	1.094751E-02			20	
Chlordane (5)	1708.548	4.515809	9.493834	1.643624E-02			20	
Chlordane (tech) [2C]	2881.585	9.6759	8.641167	2.973201E-03			20	
Chlordane (1) [2C]	5800.193	12.24173	7.5485	0.0122311			20	
Chlordane (2) [2C]	2010.126	9.144563	6.147	1.461363E-02			20	
Chlordane (3) [2C]	2662.477	10.18159	6.331167	9.439628E-03			20	
Chlordane (4) [2C]	2029.668	9.750059	6.757167	8.867439E-03			20	
Chlordane (5) [2C]	1905.46	10.47139	8.641167	2.973201E-03			20	
Toxaphene	1494.854	10.65984	10.847	1.059879E-02			20	
Toxaphene (1)	2796.327	7.877845	10.3785	1.110669E-03			20	
Toxaphene (2)	967.348	12.6772	9.0515	3.100109E-03			20	
Toxaphene (3)	1320.97	11.17715	9.474333	1.806879E-02			20	
Toxaphene (4)	1170.645	14.19916	9.962833	7.255309E-03			20	
Toxaphene (5)	1218.979	11.74457	10.847	1.059879E-02			20	
Toxaphene [2C]	1631.136	2.272472	10.205	1.279475E-02			20	
Toxaphene (1) [2C]	3443.187	4.074187	9.645	1.271282E-02			20	
Toxaphene (2) [2C]	499.6382	2.484696	7.881	6.184723E-03			20	
Toxaphene (3) [2C]	1159.89	2.620831	8.628167	5.452377E-03			20	
Toxaphene (4) [2C]	2100.622	2.209609	9.474667	1.803671E-02			20	
Toxaphene (5) [2C]	952.3446	2.504376	10.205	1.279475E-02			20	

INITIAL CALIBRATION DATA (Continued)

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Calibration:	2299003	Instrument:	GL-ECD3
Matrix:	Water	Calibration Dates:	10/22/12 11:28 10/22/12 17:50

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Tetrachloro-m-xylene	45628.87	3.636376	5.705571	1.944434E-02			20	
Tetrachloro-m-xylene [2C]	41703.98	13.96605	5.120428	2.381203E-02			20	
Decachlorobiphenyl	44279.28	2.016261	12.16586	1.524311E-02			20	
Decachlorobiphenyl [2C]	29662.28	9.461277	11.15186	1.443424E-02			20	

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	008F0801.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV1	Injection Time:	17:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
4,4'-DDE	A	100.0	114.7	51094.47	58598.24		14.7	20
4,4'-DDE [2C]	A	100.0	100.1	50321.72	50358.88		0.07	20
4,4'-DDD	A	100.0	115.7	41428.21	47923.4		15.7	20
4,4'-DDD [2C]	A	100.0	94.97	45332.02	43053.56		-5.0	20
Aldrin	A	100.0	111.0	63496.28	70501.14		11.0	20
Aldrin [2C]	A	100.0	92.92	62700.35	58259.47		-7.1	20
alpha-BHC	A	100.0	111.7	72070.6	80508.52		11.7	20
alpha-BHC [2C]	A	100.0	96.36	75274.46	72538.13		-3.6	20
alpha-Chlordane	A	100.0	110.1	56005.2	61652.03		10.1	20
alpha-Chlordane [2C]	A	100.0	92.42	57042.46	52717.42		-7.6	20
beta-BHC	A	100.0	107.9	26102.06	28161.76		7.9	20
beta-BHC [2C]	A	100.0	95.30	31407.75	29931.54		-4.7	20
delta-BHC	A	100.0	108.3	55943.6	60577.68		8.3	20
delta-BHC [2C]	A	100.0	95.29	61726.37	58821.65		-4.7	20
Dieldrin	A	100.0	110.4	57719.49	63708.22		10.4	20
Dieldrin [2C]	A	100.0	91.15	60838.72	55456.9		-8.8	20
Endosulfan I	A	100.0	107.8	53958.87	58187.84		7.8	20
Endosulfan I [2C]	A	100.0	90.41	54945.66	49675.09		-9.6	20
Endosulfan II	A	100.0	107.6	48331.97	51994.04		7.6	20
Endosulfan II [2C]	A	100.0	90.14	51135.22	46093.52		-9.9	20
Endosulfan sulfate	A	100.0	110.0	40280.74	44310.72		10.0	20
Endosulfan sulfate [2C]	A	100.0	95.03	42025.14	39936.24		-5.0	20
Endrin	A	100.0	103.2	42937.13	44291.58		3.2	20
Endrin [2C]	A	100.0	84.48	46591.55	39361.73		-15.5	20
Endrin aldehyde	A	100.0	95.48	39912.39	38110.6		-4.5	20
Endrin aldehyde [2C]	A	100.0	82.76	43719.7	36184.6		-17.2	20
Endrin ketone	A	100.0	111.2	52202.94	58028.46		11.2	20
Endrin ketone [2C]	A	100.0	89.68	59552.03	53406.72		-10.3	20
gamma-BHC (Lindane)	A	100.0	111.6	63404.4	70790.23		11.6	20

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	008R0801.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV1	Injection Time:	17:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
gamma-BHC (Lindane) [2C]	A	100.0	96.85	68059.61	65916.07		-3.1	20
gamma-Chlordane	A	100.0	110.9	57479.09	63755.35		10.9	20
gamma-Chlordane [2C]	A	100.0	93.06	57877.86	53859.79		-6.9	20
Heptachlor	A	100.0	118.1	56022.6	66141.72		18.1	20
Heptachlor [2C]	A	100.0	97.55	57138.09	55739.47		-2.4	20
Heptachlor epoxide	A	100.0	110.5	57511.77	63567.08		10.5	20
Heptachlor epoxide [2C]	A	100.0	92.46	58027.29	53651.1		-7.5	20
Methoxychlor	A	100.0	117.4	20681.87	24287.46		17.4	20
Methoxychlor [2C]	A	100.0	93.87	21957.26	20610.58		-6.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	015F1501.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/08/12
Lab Sample ID:	2J28406-ICV2	Injection Time:	19:59

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)	
Toxaphene (1)	A	1000	900.8	2840.514	2558.741		-9.9	20	
Toxaphene (2)	A	1000	1268	943.6576	1196.603		26.8	20	*
Toxaphene (3)	A	1000	817.4	1285.613	1050.829		-18.3	20	
Toxaphene (4)	A	1000	1042	2281.984	2378.043		4.2	20	
Toxaphene (5)	A	1000	1213	1139.769	1382.38		21.3	20	*
Toxaphene (1) [2C]	A	1000	805.1	4049.199	3260.021		-19.5	20	
Toxaphene (2) [2C]	A	1000	1176	690.2388	811.876		17.6	20	
Toxaphene (3) [2C]	A	1000	496.3	1470.725	729.874		-50.4	20	*
Toxaphene (4) [2C]	A	1000	1063	2525.314	2684.678		6.3	20	
Toxaphene (5) [2C]	A	1000	1086	1125.146	1221.706		8.6	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	004F0401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J28406	Injection Date:	10/11/12
Lab Sample ID:	2J28406-ICV6	Injection Time:	13:57

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
4,4'-DDT	A	100.0	118.2	41951.39	49590.68		18.2	20
4,4'-DDT [2C]	A	100.0	100.2	44183.69	44278.24		0.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	017F1701.D	Calibration Date:	10/22/12 00:00
Sequence:	2J29909	Injection Date:	10/22/12
Lab Sample ID:	2J29909-ICV1	Injection Time:	13:42

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
4,4'-DDE	A	100.0	115.1	50456.48	58086.75		15.1	20
4,4'-DDE [2C]	A	100.0	99.11	40256.05	39897.07		-0.9	20
4,4'-DDD	A	100.0	114.9	41312.58	47461.02		14.9	20
4,4'-DDD [2C]	A	100.0	96.44	36108.37	34821.57		-3.6	20
4,4'-DDT	A	100.0	117.9	44465.68	52426.85		17.9	20
4,4'-DDT [2C]	A	100.0	103.9	36018.1	37420.27		3.9	20
Aldrin	A	100.0	111.4	61759.15	68829.68		11.4	20
Aldrin [2C]	A	100.0	95.85	46614.19	44680.03		-4.1	20
alpha-BHC	A	100.0	113.0	69569.94	78585.08		13.0	20
alpha-BHC [2C]	A	100.0	96.29	56093.27	54011.01		-3.7	20
alpha-Chlordane	A	100.0	107.9	56017.16	60427.03		7.9	20
alpha-Chlordane [2C]	A	100.0	93.05	44337.74	41258.32		-6.9	20
beta-BHC	A	100.0	109.4	24624.75	26941.58		9.4	20
beta-BHC [2C]	A	100.0	95.81	23906.8	22906.02		-4.2	20
delta-BHC	A	100.0	109.1	55058.59	60080.53		9.1	20
delta-BHC [2C]	A	100.0	95.67	48101.72	46018.58		-4.3	20
Dieldrin	A	100.0	112.2	57227.59	64235.69		12.2	20
Dieldrin [2C]	A	100.0	95.15	46523.38	44269.16		-4.8	20
Endosulfan I	A	100.0	107.5	53823.05	57879.57		7.5	20
Endosulfan I [2C]	A	100.0	95.61	42053.07	40206.16		-4.4	20
Endosulfan II	A	100.0	110.4	49816.28	54989.06		10.4	20
Endosulfan II [2C]	A	100.0	96.94	39085.89	37890.69		-3.1	20
Endosulfan sulfate	A	100.0	108.4	42311.38	45881.43		8.4	20
Endosulfan sulfate [2C]	A	100.0	97.26	33356.07	32443.1		-2.7	20
Endrin	A	100.0	98.57	45068.01	44425.67		-1.4	20
Endrin [2C]	A	100.0	86.68	37171.95	32220.58		-13.3	20
Endrin aldehyde	A	100.0	99.01	42211.46	41794.36		-1.0	20
Endrin aldehyde [2C]	A	100.0	91.50	34823.56	31864.36		-8.5	20
Endrin ketone	A	100.0	113.8	54639.44	62183.88		13.8	20

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	017R1701.D	Calibration Date:	10/22/12 00:00
Sequence:	2J29909	Injection Date:	10/22/12
Lab Sample ID:	2J29909-ICV1	Injection Time:	13:42

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Endrin ketone [2C]	A	100.0	100.7	47133.68	47461.66		0.7	20
gamma-BHC (Lindane)	A	100.0	111.7	61058.46	68226.23		11.7	20
gamma-BHC (Lindane) [2C]	A	100.0	96.73	51469.37	49784.32		-3.3	20
gamma-Chlordane	A	100.0	107.5	58537.46	62944.93		7.5	20
gamma-Chlordane [2C]	A	100.0	93.29	45600.43	42539.37		-6.7	20
Heptachlor	A	100.0	114.4	57764.29	66092.33		14.4	20
Heptachlor [2C]	A	100.0	98.33	45029.56	44275.8		-1.7	20
Heptachlor epoxide	A	100.0	110.2	56762.85	62530.54		10.2	20
Heptachlor epoxide [2C]	A	100.0	95.61	44380.7	42430.66		-4.4	20
Methoxychlor	A	100.0	110.9	23126.34	25649.44		10.9	20
Methoxychlor [2C]	A	100.0	96.51	18651.37	17999.93		-3.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	024F2401.D	Calibration Date:	10/22/12 00:00
Sequence:	2J29909	Injection Date:	10/22/12
Lab Sample ID:	2J29909-ICV2	Injection Time:	15:56

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Toxaphene (1)	A	1000	944.9	2796.327	2642.316		-5.5	20
Toxaphene (2)	A	1000	392.4	967.348	379.606		-60.8	20 *
Toxaphene (3)	A	1000	803.5	1320.97	1061.388		-19.7	20
Toxaphene (4)	A	1000	1189	1170.645	1392.095		18.9	20
Toxaphene (5)	A	1000	1175	1218.979	1432.501		17.5	20
Toxaphene (1) [2C]	A	1000	793.7	3443.187	2732.801		-20.6	20 *
Toxaphene (2) [2C]	A	1000	1189	499.6382	594		18.9	20
Toxaphene (3) [2C]	A	1000	538.7	1159.89	624.863		-46.1	20 *
Toxaphene (4) [2C]	A	1000	1080	2100.622	2268.45		8.0	20
Toxaphene (5) [2C]	A	1000	1117	952.3446	1063.856		11.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV1	Injection Time:	12:51

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	103.1	51094.47	52671.64		3.1	20
4,4'-DDE [2C]	A	100.0	96.03	50321.72	48326.33		-4.0	20
4,4'-DDD	A	100.0	105.0	41428.21	43496.19		5.0	20
4,4'-DDD [2C]	A	100.0	93.28	45332.02	42285.75		-6.7	20
4,4'-DDT	A	100.0	100.7	41951.39	42242.7		0.7	20
4,4'-DDT [2C]	A	100.0	91.42	44183.69	40392.15		-8.6	20
Aldrin	A	100.0	99.04	63496.28	62889.94		-1.0	20
Aldrin [2C]	A	100.0	85.58	62700.35	53657.85		-14.4	20
alpha-BHC	A	100.0	99.87	72070.6	71974.95		-0.1	20
alpha-BHC [2C]	A	100.0	87.05	75274.46	65524.25		-13.0	20
alpha-Chlordane	A	100.0	96.76	56005.2	54191.78		-3.2	20
alpha-Chlordane [2C]	A	100.0	85.84	57042.46	48964.97		-14.2	20
beta-BHC	A	100.0	95.09	26102.06	24820.44		-4.9	20
beta-BHC [2C]	A	100.0	89.86	31407.75	28224.29		-10.1	20
delta-BHC	A	100.0	99.42	55943.6	55619.23		-0.6	20
delta-BHC [2C]	A	100.0	88.87	61726.37	54859.08		-11.1	20
Dieldrin	A	100.0	100.2	57719.49	57862.98		0.2	20
Dieldrin [2C]	A	100.0	87.80	60838.72	53416.61		-12.2	20
Endosulfan I	A	100.0	97.07	53958.87	52379.56		-2.9	20
Endosulfan I [2C]	A	100.0	86.62	54945.66	47593.65		-13.4	20
Endosulfan II	A	100.0	98.77	48331.97	47738.94		-1.2	20
Endosulfan II [2C]	A	100.0	86.57	51135.22	44269.01		-13.4	20
Endosulfan sulfate	A	100.0	90.02	40280.74	36261.35		-10.0	20
Endosulfan sulfate [2C]	A	100.0	80.72	42025.14	33925.19		-19.3	20
Endrin	A	100.0	101.9	42937.13	43752.67		1.9	20
Endrin [2C]	A	100.0	91.00	46591.55	42396.68		-9.0	20
Endrin aldehyde	A	100.0	97.86	39912.39	39057.6		-2.1	20
Endrin aldehyde [2C]	A	100.0	88.62	43719.7	38746.5		-11.4	20
Endrin ketone	A	100.0	94.06	52202.94	49103.68		-5.9	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003R0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV1	Injection Time:	12:51

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	80.20	59552.03	47759.82		-19.8	20
gamma-BHC (Lindane)	A	100.0	97.51	63404.4	61827.53		-2.5	20
gamma-BHC (Lindane) [2C]	A	100.0	87.43	68059.61	59505.45		-12.6	20
gamma-Chlordane	A	100.0	98.75	57479.09	56762.28		-1.2	20
gamma-Chlordane [2C]	A	100.0	86.66	57877.86	50157.61		-13.3	20
Heptachlor	A	100.0	102.2	56022.6	57252.76		2.2	20
Heptachlor [2C]	A	100.0	85.90	57138.09	49079.42		-14.1	20
Heptachlor epoxide	A	100.0	98.16	57511.77	56455.98		-1.8	20
Heptachlor epoxide [2C]	A	100.0	86.43	58027.29	50153.76		-13.6	20
Methoxychlor	A	100.0	100.6	20681.87	20808.93		0.6	20
Methoxychlor [2C]	A	100.0	86.89	21957.26	19079.04		-13.1	20
Tetrachloro-m-xylene	A	100.0	96.12	48154.4	46285.06		-3.9	20
Tetrachloro-m-xylene [2C]	A	100.0	83.65	56983.64	47666.99		-16.3	20
Decachlorobiphenyl	A	100.0	98.84	41014.66	40538.57		-1.2	20
Decachlorobiphenyl [2C]	A	100.0	87.86	36168.37	31776.4		-12.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	004F0401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV2	Injection Time:	13:10

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	827.6	2840.514	2350.923		-17.2	20
Toxaphene (2)	A	1000	986.6	943.6576	931.017		-1.3	20
Toxaphene (3)	A	1000	901.2	1285.613	1158.638		-9.9	20
Toxaphene (4)	A	1000	910.2	2281.984	2077.049		-9.0	20
Toxaphene (5)	A	1000	894.2	1139.769	1019.239		-10.6	20
Toxaphene (1) [2C]	A	1000	861.0	4049.199	3486.38		-13.9	20
Toxaphene (2) [2C]	A	1000	1093	690.2388	754.401		9.3	20
Toxaphene (3) [2C]	A	1000	926.0	1470.725	1361.944		-7.4	20
Toxaphene (4) [2C]	A	1000	867.6	2525.314	2190.845		-13.2	20
Toxaphene (5) [2C]	A	1000	817.0	1125.146	919.191		-18.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	021F2101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV6	Injection Time:	18:34

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	106.6	51094.47	54482.08		6.6	20
4,4'-DDE [2C]	A	100.0	95.93	50321.72	48272.66		-4.1	20
4,4'-DDD	A	100.0	111.6	41428.21	46257.7		11.7	20
4,4'-DDD [2C]	A	100.0	93.33	45332.02	42310.07		-6.7	20
4,4'-DDT	A	100.0	106.5	41951.39	44687.84		6.5	20
4,4'-DDT [2C]	A	100.0	89.34	44183.69	39472.37		-10.7	20
Aldrin	A	100.0	103.0	63496.28	65401.66		3.0	20
Aldrin [2C]	A	100.0	86.95	62700.35	54519.3		-13.0	20
alpha-BHC	A	100.0	106.1	72070.6	76466.72		6.1	20
alpha-BHC [2C]	A	100.0	91.46	75274.46	68848.99		-8.5	20
alpha-Chlordane	A	100.0	100.8	56005.2	56484.92		0.9	20
alpha-Chlordane [2C]	A	100.0	86.36	57042.46	49264.06		-13.6	20
beta-BHC	A	100.0	100.7	26102.06	26287.11		0.7	20
beta-BHC [2C]	A	100.0	92.05	31407.75	28912.37		-7.9	20
delta-BHC	A	100.0	111.9	55943.6	62589.84		11.9	20
delta-BHC [2C]	A	100.0	96.55	61726.37	59599.47		-3.4	20
Dieldrin	A	100.0	103.1	57719.49	59489.31		3.1	20
Dieldrin [2C]	A	100.0	87.11	60838.72	52997.75		-12.9	20
Endosulfan I	A	100.0	101.8	53958.87	54960.96		1.9	20
Endosulfan I [2C]	A	100.0	86.99	54945.66	47796.85		-13.0	20
Endosulfan II	A	100.0	102.2	48331.97	49415.65		2.2	20
Endosulfan II [2C]	A	100.0	84.69	51135.22	43305.72		-15.3	20
Endosulfan sulfate	A	100.0	110.2	40280.74	44379.89		10.2	20
Endosulfan sulfate [2C]	A	100.0	89.44	42025.14	37589.1		-10.6	20
Endrin	A	100.0	108.2	42937.13	46446.32		8.2	20
Endrin [2C]	A	100.0	88.53	46591.55	41246.11		-11.5	20
Endrin aldehyde	A	100.0	104.4	39912.39	41652.48		4.4	20
Endrin aldehyde [2C]	A	100.0	86.57	43719.7	37847.85		-13.4	20
Endrin ketone	A	100.0	102.3	52202.94	53408.75		2.3	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	021R2101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV6	Injection Time:	18:34

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	81.23	59552.03	48374.8		-18.8	20
gamma-BHC (Lindane)	A	100.0	104.5	63404.4	66245.96		4.5	20
gamma-BHC (Lindane) [2C]	A	100.0	91.42	68059.61	62218.65		-8.6	20
gamma-Chlordane	A	100.0	102.5	57479.09	58921.42		2.5	20
gamma-Chlordane [2C]	A	100.0	87.35	57877.86	50556.14		-12.7	20
Heptachlor	A	100.0	112.5	56022.6	63024.88		12.5	20
Heptachlor [2C]	A	100.0	92.54	57138.09	52874.87		-7.5	20
Heptachlor epoxide	A	100.0	101.5	57511.77	58354.32		1.5	20
Heptachlor epoxide [2C]	A	100.0	87.32	58027.29	50669.51		-12.7	20
Methoxychlor	A	100.0	114.2	20681.87	23619.55		14.2	20
Methoxychlor [2C]	A	100.0	86.14	21957.26	18915.05		-13.9	20
Tetrachloro-m-xylene	A	100.0	99.51	48154.4	47917.53		-0.5	20
Tetrachloro-m-xylene [2C]	A	100.0	86.85	56983.64	49491.48		-13.1	20
Decachlorobiphenyl	A	100.0	97.40	41014.66	39949.76		-2.6	20
Decachlorobiphenyl [2C]	A	100.0	81.24	36168.37	29384.42		-18.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	022F2201.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCV7	Injection Time:	18:53

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	895.7	2840.514	2544.376		-10.4	20
Toxaphene (2)	A	1000	975.8	943.6576	920.864		-2.4	20
Toxaphene (3)	A	1000	927.4	1285.613	1192.237		-7.3	20
Toxaphene (4)	A	1000	951.0	2281.984	2170.218		-4.9	20
Toxaphene (5)	A	1000	961.5	1139.769	1095.944		-3.8	20
Toxaphene (1) [2C]	A	1000	885.8	4049.199	3586.931		-11.4	20
Toxaphene (2) [2C]	A	1000	1003	690.2388	692.559		0.3	20
Toxaphene (3) [2C]	A	1000	939.7	1470.725	1382.064		-6.0	20
Toxaphene (4) [2C]	A	1000	904.3	2525.314	2283.698		-9.6	20
Toxaphene (5) [2C]	A	1000	849.0	1125.146	955.29		-15.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	036F3601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCVB	Injection Time:	23:20

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	111.7	51094.47	57078.76		11.7	20
4,4'-DDE [2C]	A	100.0	102.6	50321.72	51614.88		2.6	20
4,4'-DDD	A	100.0	119.9	41428.21	49680.68		19.9	20
4,4'-DDD [2C]	A	100.0	104.1	45332.02	47198.88		4.1	20
4,4'-DDT	A	100.0	107.6	41951.39	45125.99		7.6	20
4,4'-DDT [2C]	A	100.0	95.65	44183.69	42261.09		-4.4	20
Aldrin	A	100.0	108.6	63496.28	68936.53		8.6	20
Aldrin [2C]	A	100.0	91.57	62700.35	57415.74		-8.4	20
alpha-BHC	A	100.0	112.6	72070.6	81164.74		12.6	20
alpha-BHC [2C]	A	100.0	96.04	75274.46	72291.51		-4.0	20
alpha-Chlordane	A	100.0	106.2	56005.2	59464.53		6.2	20
alpha-Chlordane [2C]	A	100.0	92.27	57042.46	52630.9		-7.7	20
beta-BHC	A	100.0	104.9	26102.06	27388.67		4.9	20
beta-BHC [2C]	A	100.0	97.58	31407.75	30648.51		-2.4	20
delta-BHC	A	100.0	115.0	55943.6	64337.32		15.0	20
delta-BHC [2C]	A	100.0	102.9	61726.37	63535.12		2.9	20
Dieldrin	A	100.0	108.2	57719.49	62429.39		8.2	20
Dieldrin [2C]	A	100.0	93.37	60838.72	56805.15		-6.6	20
Endosulfan I	A	100.0	105.8	53958.87	57062.9		5.8	20
Endosulfan I [2C]	A	100.0	93.20	54945.66	51211.68		-6.8	20
Endosulfan II	A	100.0	106.7	48331.97	51554.74		6.7	20
Endosulfan II [2C]	A	100.0	92.82	51135.22	47462.14		-7.2	20
Endosulfan sulfate	A	100.0	112.4	40280.74	45289.38		12.4	20
Endosulfan sulfate [2C]	A	100.0	99.20	42025.14	41688.46		-0.8	20
Endrin	A	100.0	109.8	42937.13	47153.45		9.8	20
Endrin [2C]	A	100.0	93.37	46591.55	43501.68		-6.6	20
Endrin aldehyde	A	100.0	108.8	39912.39	43442.74		8.8	20
Endrin aldehyde [2C]	A	100.0	95.53	43719.7	41767.02		-4.5	20
Endrin ketone	A	100.0	109.3	52202.94	57068.35		9.3	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	036R3601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCVB	Injection Time:	23:20

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	91.15	59552.03	54280.47		-8.9	20
gamma-BHC (Lindane)	A	100.0	110.5	63404.4	70073.67		10.5	20
gamma-BHC (Lindane) [2C]	A	100.0	96.44	68059.61	65634.36		-3.6	20
gamma-Chlordane	A	100.0	108.1	57479.09	62145.25		8.1	20
gamma-Chlordane [2C]	A	100.0	93.27	57877.86	53984.46		-6.7	20
Heptachlor	A	100.0	117.7	56022.6	65960.37		17.7	20
Heptachlor [2C]	A	100.0	97.48	57138.09	55696.64		-2.5	20
Heptachlor epoxide	A	100.0	106.8	57511.77	61409.53		6.8	20
Heptachlor epoxide [2C]	A	100.0	92.99	58027.29	53959.69		-7.0	20
Methoxychlor	A	100.0	107.6	20681.87	22260.53		7.6	20
Methoxychlor [2C]	A	100.0	93.12	21957.26	20447.64		-6.9	20
Tetrachloro-m-xylene	A	100.0	104.5	48154.4	50335.15		4.5	20
Tetrachloro-m-xylene [2C]	A	100.0	90.00	56983.64	51283.34		-10.0	20
Decachlorobiphenyl	A	100.0	102.5	41014.66	42049.55		2.5	20
Decachlorobiphenyl [2C]	A	100.0	90.14	36168.37	32603.99		-9.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	037F3701.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/17/12
Lab Sample ID:	2J29616-CCVC	Injection Time:	23:39

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	900.3	2840.514	2557.419		-10.0	20
Toxaphene (2)	A	1000	1009	943.6576	952.237		0.9	20
Toxaphene (3)	A	1000	897.1	1285.613	1153.303		-10.3	20
Toxaphene (4)	A	1000	938.4	2281.984	2141.493		-6.2	20
Toxaphene (5)	A	1000	921.8	1139.769	1050.686		-7.8	20
Toxaphene (1) [2C]	A	1000	880.2	4049.199	3564.008		-12.0	20
Toxaphene (2) [2C]	A	1000	1044	690.2388	720.666		4.4	20
Toxaphene (3) [2C]	A	1000	937.0	1470.725	1378.123		-6.3	20
Toxaphene (4) [2C]	A	1000	887.5	2525.314	2241.338		-11.2	20
Toxaphene (5) [2C]	A	1000	818.2	1125.146	920.605		-18.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	052F5201.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVG	Injection Time:	04:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	108.9	51094.47	55634.71		8.9	20
4,4'-DDE [2C]	A	100.0	93.35	50321.72	46973.7		-6.7	20
4,4'-DDD	A	100.0	119.5	41428.21	49508.33		19.5	20
4,4'-DDD [2C]	A	100.0	101.9	45332.02	46199.41		1.9	20
4,4'-DDT	A	100.0	94.13	41951.39	39489.05		-5.9	20
4,4'-DDT [2C]	A	100.0	83.16	44183.69	36741		-16.8	20
Aldrin	A	100.0	100.9	63496.28	64076.32		0.9	20
Aldrin [2C]	A	100.0	86.21	62700.35	54055.07		-13.8	20
alpha-BHC	A	100.0	104.6	72070.6	75391.26		4.6	20
alpha-BHC [2C]	A	100.0	90.23	75274.46	67917.48		-9.8	20
alpha-Chlordane	A	100.0	99.64	56005.2	55804.25		-0.4	20
alpha-Chlordane [2C]	A	100.0	85.57	57042.46	48808.98		-14.4	20
beta-BHC	A	100.0	99.52	26102.06	25976.41		-0.5	20
beta-BHC [2C]	A	100.0	91.37	31407.75	28696.27		-8.6	20
delta-BHC	A	100.0	111.1	55943.6	62158.15		11.1	20
delta-BHC [2C]	A	100.0	98.16	61726.37	60590.87		-1.8	20
Dieldrin	A	100.0	101.7	57719.49	58728.97		1.7	20
Dieldrin [2C]	A	100.0	87.54	60838.72	53255.8		-12.5	20
Endosulfan I	A	100.0	99.94	53958.87	53929.69		-0.05	20
Endosulfan I [2C]	A	100.0	86.67	54945.66	47620.51		-13.3	20
Endosulfan II	A	100.0	102.3	48331.97	49458.61		2.3	20
Endosulfan II [2C]	A	100.0	87.29	51135.22	44637.34		-12.7	20
Endosulfan sulfate	A	100.0	108.3	40280.74	43622.18		8.3	20
Endosulfan sulfate [2C]	A	100.0	94.66	42025.14	39782.54		-5.3	20
Endrin	A	100.0	106.1	42937.13	45547.48		6.1	20
Endrin [2C]	A	100.0	91.49	46591.55	42628.43		-8.5	20
Endrin aldehyde	A	100.0	103.2	39912.39	41197.02		3.2	20
Endrin aldehyde [2C]	A	100.0	89.10	43719.7	38952.36		-10.9	20
Endrin ketone	A	100.0	103.4	52202.94	53992.19		3.4	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	052R5201.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVG	Injection Time:	04:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	84.28	59552.03	50191.47		-15.7	20
gamma-BHC (Lindane)	A	100.0	102.7	63404.4	65142.29		2.7	20
gamma-BHC (Lindane) [2C]	A	100.0	89.50	68059.61	60911.84		-10.5	20
gamma-Chlordane	A	100.0	101.3	57479.09	58224.85		1.3	20
gamma-Chlordane [2C]	A	100.0	86.97	57877.86	50336.5		-13.0	20
Heptachlor	A	100.0	108.4	56022.6	60710.48		8.4	20
Heptachlor [2C]	A	100.0	90.51	57138.09	51715.02		-9.5	20
Heptachlor epoxide	A	100.0	98.84	57511.77	56841.94		-1.2	20
Heptachlor epoxide [2C]	A	100.0	87.05	58027.29	50512.43		-13.0	20
Methoxychlor	A	100.0	98.33	20681.87	20336.62		-1.7	20
Methoxychlor [2C]	A	100.0	85.10	21957.26	18684.81		-14.9	20
Tetrachloro-m-xylene	A	100.0	98.43	48154.4	47397.21		-1.6	20
Tetrachloro-m-xylene [2C]	A	100.0	85.64	56983.64	48802.76		-14.4	20
Decachlorobiphenyl	A	100.0	99.25	41014.66	40708.54		-0.7	20
Decachlorobiphenyl [2C]	A	100.0	86.51	36168.37	31290.28		-13.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	053F5301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29616	Injection Date:	10/18/12
Lab Sample ID:	2J29616-CCVH	Injection Time:	04:44

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	736.6	2840.514	2092.346		-26.3	20 *
Toxaphene (2)	A	1000	1003	943.6576	946.505		0.3	20
Toxaphene (3)	A	1000	802.8	1285.613	1032.078		-19.7	20
Toxaphene (4)	A	1000	832.6	2281.984	1900.058		-16.7	20
Toxaphene (5)	A	1000	758.1	1139.769	864.072		-24.2	20 *
Toxaphene (1) [2C]	A	1000	742.8	4049.199	3007.705		-25.7	20 *
Toxaphene (2) [2C]	A	1000	1081	690.2388	746.082		8.1	20
Toxaphene (3) [2C]	A	1000	818.4	1470.725	1203.578		-18.2	20
Toxaphene (4) [2C]	A	1000	771.7	2525.314	1948.731		-22.8	20 *
Toxaphene (5) [2C]	A	1000	560.3	1125.146	630.436		-44.0	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003F0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	106.1	51094.47	54217.78		6.1	20
4,4'-DDE [2C]	A	100.0	96.94	50321.72	48780.3		-3.1	20
4,4'-DDD	A	100.0	108.2	41428.21	44805.13		8.2	20
4,4'-DDD [2C]	A	100.0	95.01	45332.02	43069.74		-5.0	20
4,4'-DDT	A	100.0	108.2	41951.39	45395.85		8.2	20
4,4'-DDT [2C]	A	100.0	95.76	44183.69	42308.96		-4.2	20
Aldrin	A	100.0	102.5	63496.28	65068.38		2.5	20
Aldrin [2C]	A	100.0	84.85	62700.35	53201.65		-15.1	20
alpha-BHC	A	100.0	104.2	72070.6	75092.54		4.2	20
alpha-BHC [2C]	A	100.0	90.54	75274.46	68157.08		-9.5	20
alpha-Chlordane	A	100.0	98.49	56005.2	55159.08		-1.5	20
alpha-Chlordane [2C]	A	100.0	86.56	57042.46	49377.83		-13.4	20
beta-BHC	A	100.0	98.94	26102.06	25824.67		-1.1	20
beta-BHC [2C]	A	100.0	91.91	31407.75	28867.07		-8.1	20
delta-BHC	A	100.0	106.9	55943.6	59782.12		6.9	20
delta-BHC [2C]	A	100.0	93.90	61726.37	57960.14		-6.1	20
Dieldrin	A	100.0	103.3	57719.49	59609.77		3.3	20
Dieldrin [2C]	A	100.0	89.76	60838.72	54609.62		-10.2	20
Endosulfan I	A	100.0	101.1	53958.87	54570.89		1.1	20
Endosulfan I [2C]	A	100.0	89.22	54945.66	49023.44		-10.8	20
Endosulfan II	A	100.0	104.6	48331.97	50576.5		4.6	20
Endosulfan II [2C]	A	100.0	88.97	51135.22	45495.9		-11.0	20
Endosulfan sulfate	A	100.0	106.5	40280.74	42887.37		6.5	20
Endosulfan sulfate [2C]	A	100.0	94.34	42025.14	39648.68		-5.7	20
Endrin	A	100.0	108.4	42937.13	46544.45		8.4	20
Endrin [2C]	A	100.0	92.11	46591.55	42917.33		-7.9	20
Endrin aldehyde	A	100.0	102.8	39912.39	41031.8		2.8	20
Endrin aldehyde [2C]	A	100.0	92.76	43719.7	40555.7		-7.2	20
Endrin ketone	A	100.0	101.9	52202.94	53185.87		1.9	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	003R0301.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV1	Injection Time:	10:21

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	87.04	59552.03	51832.16		-13.0	20
gamma-BHC (Lindane)	A	100.0	101.7	63404.4	64473.69		1.7	20
gamma-BHC (Lindane) [2C]	A	100.0	91.22	68059.61	62084.42		-8.8	20
gamma-Chlordane	A	100.0	102.9	57479.09	59168.16		2.9	20
gamma-Chlordane [2C]	A	100.0	89.33	57877.86	51702.53		-10.7	20
Heptachlor	A	100.0	108.2	56022.6	60645.28		8.3	20
Heptachlor [2C]	A	100.0	92.45	57138.09	52824.09		-7.6	20
Heptachlor epoxide	A	100.0	101.3	57511.77	58270.66		1.3	20
Heptachlor epoxide [2C]	A	100.0	88.27	58027.29	51220.3		-11.7	20
Methoxychlor	A	100.0	109.6	20681.87	22657.21		9.6	20
Methoxychlor [2C]	A	100.0	94.00	21957.26	20639.2		-6.0	20
Tetrachloro-m-xylene	A	100.0	96.27	48154.4	46356.45		-3.7	20
Tetrachloro-m-xylene [2C]	A	100.0	83.40	56983.64	47527.17		-16.6	20
Decachlorobiphenyl	A	100.0	96.23	41014.66	39470.06		-3.8	20
Decachlorobiphenyl [2C]	A	100.0	88.94	36168.37	32168.73		-11.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	004F0401.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV2	Injection Time:	10:40

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	903.0	2840.514	2564.94		-9.7	20
Toxaphene (2)	A	1000	920.9	943.6576	868.98		-7.9	20
Toxaphene (3)	A	1000	928.6	1285.613	1193.803		-7.1	20
Toxaphene (4)	A	1000	922.1	2281.984	2104.306		-7.8	20
Toxaphene (5)	A	1000	956.5	1139.769	1090.21		-4.3	20
Toxaphene (1) [2C]	A	1000	919.1	4049.199	3721.751		-8.1	20
Toxaphene (2) [2C]	A	1000	938.9	690.2388	648.062		-6.1	20
Toxaphene (3) [2C]	A	1000	923.6	1470.725	1358.353		-7.6	20
Toxaphene (4) [2C]	A	1000	941.0	2525.314	2376.325		-5.9	20
Toxaphene (5) [2C]	A	1000	951.5	1125.146	1070.6		-4.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	026F2601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV6	Injection Time:	17:39

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	106.7	51094.47	54532.3		6.7	20
4,4'-DDE [2C]	A	100.0	98.52	50321.72	49574.78		-1.5	20
4,4'-DDD	A	100.0	110.6	41428.21	45815.01		10.6	20
4,4'-DDD [2C]	A	100.0	100.2	45332.02	45444.68		0.2	20
4,4'-DDT	A	100.0	100.5	41951.39	42153.59		0.5	20
4,4'-DDT [2C]	A	100.0	91.55	44183.69	40450.17		-8.4	20
Aldrin	A	100.0	102.1	63496.28	64831.81		2.1	20
Aldrin [2C]	A	100.0	90.13	62700.35	56511.08		-9.9	20
alpha-BHC	A	100.0	108.3	72070.6	78054.83		8.3	20
alpha-BHC [2C]	A	100.0	97.24	75274.46	73193.58		-2.8	20
alpha-Chlordane	A	100.0	90.01	56005.2	50410.41		-10.0	20
alpha-Chlordane [2C]	A	100.0	90.55	57042.46	51651.29		-9.5	20
beta-BHC	A	100.0	101.7	26102.06	26557.25		1.7	20
beta-BHC [2C]	A	100.0	96.46	31407.75	30296.06		-3.5	20
delta-BHC	A	100.0	113.7	55943.6	63585.83		13.7	20
delta-BHC [2C]	A	100.0	101.6	61726.37	62714.02		1.6	20
Dieldrin	A	100.0	98.04	57719.49	56591.57		-2.0	20
Dieldrin [2C]	A	100.0	90.57	60838.72	55099.36		-9.4	20
Endosulfan I	A	100.0	95.59	53958.87	51577.33		-4.4	20
Endosulfan I [2C]	A	100.0	91.07	54945.66	50040.21		-8.9	20
Endosulfan II	A	100.0	102.2	48331.97	49372.24		2.2	20
Endosulfan II [2C]	A	100.0	90.16	51135.22	46101.52		-9.8	20
Endosulfan sulfate	A	100.0	109.0	40280.74	43905.43		9.0	20
Endosulfan sulfate [2C]	A	100.0	89.58	42025.14	37645.27		-10.4	20
Endrin	A	100.0	106.4	42937.13	45684.09		6.4	20
Endrin [2C]	A	100.0	96.64	46591.55	45026.21		-3.4	20
Endrin aldehyde	A	100.0	103.6	39912.39	41347.79		3.6	20
Endrin aldehyde [2C]	A	100.0	91.58	43719.7	40038.89		-8.4	20
Endrin ketone	A	100.0	106.7	52202.94	55680.56		6.7	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	026R2601.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV6	Injection Time:	17:39

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	86.28	59552.03	51381.4		-13.7	20
gamma-BHC (Lindane)	A	100.0	106.6	63404.4	67576.83		6.6	20
gamma-BHC (Lindane) [2C]	A	100.0	96.88	68059.61	65935.85		-3.1	20
gamma-Chlordane	A	100.0	90.39	57479.09	51958.12		-9.6	20
gamma-Chlordane [2C]	A	100.0	92.11	57877.86	53310.09		-7.9	20
Heptachlor	A	100.0	112.0	56022.6	62751.57		12.0	20
Heptachlor [2C]	A	100.0	96.43	57138.09	55100.52		-3.6	20
Heptachlor epoxide	A	100.0	102.5	57511.77	58961.99		2.5	20
Heptachlor epoxide [2C]	A	100.0	91.60	58027.29	53156.31		-8.4	20
Methoxychlor	A	100.0	101.8	20681.87	21047.77		1.8	20
Methoxychlor [2C]	A	100.0	90.37	21957.26	19843.08		-9.6	20
Tetrachloro-m-xylene	A	100.0	100.2	48154.4	48273.33		0.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.43	56983.64	52098.02		-8.6	20
Decachlorobiphenyl	A	100.0	101.9	41014.66	41796.14		1.9	20
Decachlorobiphenyl [2C]	A	100.0	86.65	36168.37	31339.41		-13.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	027F2701.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCV7	Injection Time:	17:58

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Toxaphene (1)	A	1000	868.1	2840.514	2465.906		-13.2	20	
Toxaphene (2)	A	1000	1038	943.6576	980.035		3.9	20	
Toxaphene (3)	A	1000	902.4	1285.613	1160.075		-9.8	20	
Toxaphene (4)	A	1000	965.6	2281.984	2203.559		-3.4	20	
Toxaphene (5)	A	1000	961.7	1139.769	1096.169		-3.8	20	
Toxaphene (1) [2C]	A	1000	878.2	4049.199	3555.908		-12.2	20	
Toxaphene (2) [2C]	A	1000	1087	690.2388	750.302		8.7	20	
Toxaphene (3) [2C]	A	1000	960.4	1470.725	1412.536		-4.0	20	
Toxaphene (4) [2C]	A	1000	921.2	2525.314	2326.251		-7.9	20	
Toxaphene (5) [2C]	A	1000	781.5	1125.146	879.302		-21.8	20	*

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040F4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	110.2	51094.47	56316		10.2	20
4,4'-DDE [2C]	A	100.0	94.08	50321.72	47341.24		-5.9	20
4,4'-DDD	A	100.0	119.1	41428.21	49329.86		19.1	20
4,4'-DDD [2C]	A	100.0	100.4	45332.02	45525.77		0.4	20
4,4'-DDT	A	100.0	101.4	41951.39	42558.86		1.4	20
4,4'-DDT [2C]	A	100.0	87.08	44183.69	38475.2		-12.9	20
Aldrin	A	100.0	105.3	63496.28	66884.37		5.3	20
Aldrin [2C]	A	100.0	82.44	62700.35	51690.64		-17.6	20
alpha-BHC	A	100.0	111.3	72070.6	80238.38		11.3	20
alpha-BHC [2C]	A	100.0	80.97	75274.46	60950.97		-19.0	20
alpha-Chlordane	A	100.0	95.88	56005.2	53698.13		-4.1	20
alpha-Chlordane [2C]	A	100.0	84.90	57042.46	48427.37		-15.1	20
beta-BHC	A	100.0	105.4	26102.06	27501.7		5.4	20
beta-BHC [2C]	A	100.0	80.68	31407.75	25341.61		-19.3	20
delta-BHC	A	100.0	117.6	55943.6	65762.94		17.6	20
delta-BHC [2C]	A	100.0	90.35	61726.37	55771.28		-9.6	20
Dieldrin	A	100.0	102.0	57719.49	58865.96		2.0	20
Dieldrin [2C]	A	100.0	87.34	60838.72	53139.33		-12.7	20
Endosulfan I	A	100.0	100.6	53958.87	54289.69		0.6	20
Endosulfan I [2C]	A	100.0	86.23	54945.66	47377.68		-13.8	20
Endosulfan II	A	100.0	107.3	48331.97	51858.69		7.3	20
Endosulfan II [2C]	A	100.0	88.75	51135.22	45383.01		-11.2	20
Endosulfan sulfate	A	100.0	111.3	40280.74	44824.97		11.3	20
Endosulfan sulfate [2C]	A	100.0	96.53	42025.14	40567.3		-3.5	20
Endrin	A	100.0	110.0	42937.13	47209.82		10.0	20
Endrin [2C]	A	100.0	93.69	46591.55	43653.55		-6.3	20
Endrin aldehyde	A	100.0	107.5	39912.39	42893.55		7.5	20
Endrin aldehyde [2C]	A	100.0	90.99	43719.7	39779.74		-9.0	20
Endrin ketone	A	100.0	108.8	52202.94	56801.79		8.8	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	040R4001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVB	Injection Time:	22:06

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Endrin ketone [2C]	A	100.0	88.07	59552.03	52449.98		-11.9	20	
gamma-BHC (Lindane)	A	100.0	109.2	63404.4	69255.24		9.2	20	
gamma-BHC (Lindane) [2C]	A	100.0	81.67	68059.61	55584.47		-18.3	20	
gamma-Chlordane	A	100.0	95.96	57479.09	55159.83		-4.0	20	
gamma-Chlordane [2C]	A	100.0	86.03	57877.86	49792.91		-14.0	20	
Heptachlor	A	100.0	114.7	56022.6	64255.36		14.7	20	
Heptachlor [2C]	A	100.0	81.16	57138.09	46373.55		-18.8	20	
Heptachlor epoxide	A	100.0	105.7	57511.77	60811.35		5.7	20	
Heptachlor epoxide [2C]	A	100.0	85.60	58027.29	49674.33		-14.4	20	
Methoxychlor	A	100.0	103.4	20681.87	21377.13		3.4	20	
Methoxychlor [2C]	A	100.0	88.49	21957.26	19429.92		-11.5	20	
Tetrachloro-m-xylene	A	100.0	102.8	48154.4	49529.4		2.9	20	
Tetrachloro-m-xylene [2C]	A	100.0	68.33	56983.64	38937.33		-31.7	20	*
Decachlorobiphenyl	A	100.0	100.1	41014.66	41065.71		0.1	20	
Decachlorobiphenyl [2C]	A	100.0	85.53	36168.37	30934.69		-14.5	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	041F4101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/18/12
Lab Sample ID:	2J29706-CCVC	Injection Time:	22:25

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	876.1	2840.514	2488.515		-12.4	20
Toxaphene (2)	A	1000	1098	943.6576	1036.172		9.8	20
Toxaphene (3)	A	1000	902.2	1285.613	1159.945		-9.8	20
Toxaphene (4)	A	1000	991.9	2281.984	2263.575		-0.8	20
Toxaphene (5)	A	1000	938.4	1139.769	1069.622		-6.2	20
Toxaphene (1) [2C]	A	1000	867.6	4049.199	3513.319		-13.2	20
Toxaphene (2) [2C]	A	1000	1077	690.2388	743.203		7.7	20
Toxaphene (3) [2C]	A	1000	947.1	1470.725	1392.886		-5.3	20
Toxaphene (4) [2C]	A	1000	897.9	2525.314	2267.59		-10.2	20
Toxaphene (5) [2C]	A	1000	749.5	1125.146	843.256		-25.1	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060F6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

aqueous samples

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	116.8	51094.47	59695.14		16.8	20
4,4'-DDE [2C]	A	100.0	103.6	50321.72	52149.43		3.6	20
4,4'-DDD	A	100.0	128.4	41428.21	53189.21		28.4	20 *
4,4'-DDD [2C]	A	100.0	112.1	45332.02	50800.63		12.1	20
4,4'-DDT	A	100.0	108.8	41951.39	45626.09		8.8	20
4,4'-DDT [2C]	A	100.0	98.09	44183.69	43340.29		-1.9	20
Aldrin	A	100.0	110.2	63496.28	69977.03		10.2	20
Aldrin [2C]	A	100.0	94.94	62700.35	59525.94		-5.1	20
alpha-BHC	A	100.0	113.3	72070.6	81635.79		13.3	20
alpha-BHC [2C]	A	100.0	97.43	75274.46	73342.63		-2.6	20
alpha-Chlordane	A	100.0	108.1	56005.2	60569.55		8.1	20
alpha-Chlordane [2C]	A	100.0	94.85	57042.46	54107.22		-5.1	20
beta-BHC	A	100.0	107.7	26102.06	28124.11		7.7	20
beta-BHC [2C]	A	100.0	99.36	31407.75	31205.81		-0.6	20
delta-BHC	A	100.0	120.8	55943.6	67587.8		20.8	20 *
delta-BHC [2C]	A	100.0	106.2	61726.37	65586.37		6.3	20
Dieldrin	A	100.0	113.2	57719.49	65323.26		13.2	20
Dieldrin [2C]	A	100.0	96.98	60838.72	59002.47		-3.0	20
Endosulfan I	A	100.0	108.2	53958.87	58404.11		8.2	20
Endosulfan I [2C]	A	100.0	96.15	54945.66	52831.72		-3.8	20
Endosulfan II	A	100.0	114.3	48331.97	55264.33		14.3	20
Endosulfan II [2C]	A	100.0	98.80	51135.22	50523.92		-1.2	20
Endosulfan sulfate	A	100.0	119.4	40280.74	48107.85		19.4	20
Endosulfan sulfate [2C]	A	100.0	106.9	42025.14	44921.12		6.9	20
Endrin	A	100.0	115.2	42937.13	49457.23		15.2	20
Endrin [2C]	A	100.0	101.5	46591.55	47292.43		1.5	20
Endrin aldehyde	A	100.0	113.7	39912.39	45398.36		13.7	20
Endrin aldehyde [2C]	A	100.0	101.7	43719.7	44465.32		1.7	20
Endrin ketone	A	100.0	116.4	52202.94	60766.65		16.4	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	060R6001.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVG	Injection Time:	04:28

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	98.46	59552.03	58634.95		-1.5	20
gamma-BHC (Lindane)	A	100.0	111.7	63404.4	70805.09		11.7	20
gamma-BHC (Lindane) [2C]	A	100.0	98.10	68059.61	66764.99		-1.9	20
gamma-Chlordane	A	100.0	111.3	57479.09	63976.75		11.3	20
gamma-Chlordane [2C]	A	100.0	96.32	57877.86	55751.13		-3.7	20
Heptachlor	A	100.0	119.3	56022.6	66852.62		19.3	20
Heptachlor [2C]	A	100.0	98.82	57138.09	56465.58		-1.2	20
Heptachlor epoxide	A	100.0	109.5	57511.77	62964.61		9.5	20
Heptachlor epoxide [2C]	A	100.0	95.81	58027.29	55598.23		-4.2	20
Methoxychlor	A	100.0	113.4	20681.87	23451.04		13.4	20
Methoxychlor [2C]	A	100.0	97.57	21957.26	21423.65		-2.4	20
Tetrachloro-m-xylene	A	100.0	104.2	48154.4	50182.73		4.2	20
Tetrachloro-m-xylene [2C]	A	100.0	91.00	56983.64	51855.59		-9.0	20
Decachlorobiphenyl	A	100.0	108.6	41014.66	44551.56		8.6	20
Decachlorobiphenyl [2C]	A	100.0	100.1	36168.37	36207.27		0.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2284005
Lab File ID:	061F6101.D	Calibration Date:	10/08/12 00:00
Sequence:	2J29706	Injection Date:	10/19/12
Lab Sample ID:	2J29706-CCVH	Injection Time:	04:47

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	875.5	2840.514	2486.913		-12.4	20
Toxaphene (2)	A	1000	1121	943.6576	1057.943		12.1	20
Toxaphene (3)	A	1000	935.2	1285.613	1202.344		-6.5	20
Toxaphene (4)	A	1000	1016	2281.984	2319.499		1.6	20
Toxaphene (5)	A	1000	977.7	1139.769	1114.332		-2.2	20
Toxaphene (1) [2C]	A	1000	866.8	4049.199	3510.085		-13.3	20
Toxaphene (2) [2C]	A	1000	1088	690.2388	750.658		8.8	20
Toxaphene (3) [2C]	A	1000	949.8	1470.725	1396.84		-5.0	20
Toxaphene (4) [2C]	A	1000	937.4	2525.314	2367.339		-6.3	20
Toxaphene (5) [2C]	A	1000	842.2	1125.146	947.618		-15.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	003F0301.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCV1	Injection Time:	07:58

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	109.8	50456.48	55408.08		9.8	20
4,4'-DDE [2C]	A	100.0	102.6	40256.05	41325.9		2.7	20
4,4'-DDD	A	100.0	110.5	41312.58	45658.63		10.5	20
4,4'-DDD [2C]	A	100.0	103.5	36108.37	37376.03		3.5	20
4,4'-DDT	A	100.0	93.02	44465.68	41361.51		-7.0	20
4,4'-DDT [2C]	A	100.0	90.32	36018.1	32530.26		-9.7	20
Aldrin	A	100.0	105.7	61759.15	65274.22		5.7	20
Aldrin [2C]	A	100.0	97.92	46614.19	45647.07		-2.1	20
alpha-BHC	A	100.0	107.5	69569.94	74818.18		7.5	20
alpha-BHC [2C]	A	100.0	102.9	56093.27	57711.54		2.9	20
alpha-Chlordane	A	100.0	101.8	56017.16	57051.54		1.8	20
alpha-Chlordane [2C]	A	100.0	94.39	44337.74	41850.52		-5.6	20
beta-BHC	A	100.0	104.6	24624.75	25770.17		4.7	20
beta-BHC [2C]	A	100.0	101.6	23906.8	24278.8		1.6	20
delta-BHC	A	100.0	110.1	55058.59	60613.58		10.1	20
delta-BHC [2C]	A	100.0	102.8	48101.72	49458.17		2.8	20
Dieldrin	A	100.0	105.7	57227.59	60466.91		5.7	20
Dieldrin [2C]	A	100.0	97.74	46523.38	45470.52		-2.3	20
Endosulfan I	A	100.0	101.1	53823.05	54404.35		1.1	20
Endosulfan I [2C]	A	100.0	97.13	42053.07	40844.94		-2.9	20
Endosulfan II	A	100.0	99.57	49816.28	49603.13		-0.4	20
Endosulfan II [2C]	A	100.0	97.03	39085.89	37925.65		-3.0	20
Endosulfan sulfate	A	100.0	94.80	42311.38	40110.84		-5.2	20
Endosulfan sulfate [2C]	A	100.0	92.27	33356.07	30778.84		-7.7	20
Endrin	A	100.0	104.2	45068.01	46954.67		4.2	20
Endrin [2C]	A	100.0	98.77	37171.95	36716.13		-1.2	20
Endrin aldehyde	A	100.0	96.36	42211.46	40676.04		-3.6	20
Endrin aldehyde [2C]	A	100.0	93.78	34823.56	32657.11		-6.2	20
Endrin ketone	A	100.0	92.08	54639.44	50311.72		-7.9	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	003R0301.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCV1	Injection Time:	07:58

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	83.73	47133.68	39466.29		-16.3	20
gamma-BHC (Lindane)	A	100.0	103.5	61058.46	63206.34		3.5	20
gamma-BHC (Lindane) [2C]	A	100.0	101.9	51469.37	52451.95		1.9	20
gamma-Chlordane	A	100.0	100.0	58537.46	58572.52		0.06	20
gamma-Chlordane [2C]	A	100.0	95.93	45600.43	43745.38		-4.1	20
Heptachlor	A	100.0	96.28	57764.29	55617.21		-3.7	20
Heptachlor [2C]	A	100.0	83.33	45029.56	37522.84		-16.7	20
Heptachlor epoxide	A	100.0	103.5	56762.85	58759.69		3.5	20
Heptachlor epoxide [2C]	A	100.0	97.36	44380.7	43208.02		-2.6	20
Methoxychlor	A	100.0	88.15	23126.34	20385.26		-11.9	20
Methoxychlor [2C]	A	100.0	85.06	18651.37	15864.51		-14.9	20
Tetrachloro-m-xylene	A	100.0	102.8	45628.87	46903.62		2.8	20
Tetrachloro-m-xylene [2C]	A	100.0	99.87	41703.98	41648.51		-0.1	20
Decachlorobiphenyl	A	100.0	85.20	44279.28	37727.17		-14.8	20
Decachlorobiphenyl [2C]	A	100.0	75.40	29662.28	22365.71		-24.6	20 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	040F4001.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCVB	Injection Time:	19:45

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COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	121.2	50456.48	61169.79		21.2	20 *
4,4'-DDE [2C]	A	100.0	114.8	40256.05	46202.65		14.8	20
4,4'-DDD	A	100.0	128.6	41312.58	53135.55		28.6	20 *
4,4'-DDD [2C]	A	100.0	118.8	36108.37	42885.65		18.8	20
4,4'-DDT	A	100.0	115.1	44465.68	51198.63		15.1	20
4,4'-DDT [2C]	A	100.0	110.9	36018.1	39949.88		10.9	20
Aldrin	A	100.0	116.0	61759.15	71612.29		16.0	20
Aldrin [2C]	A	100.0	110.0	46614.19	51297.81		10.0	20
alpha-BHC	A	100.0	118.5	69569.94	82421.62		18.5	20
alpha-BHC [2C]	A	100.0	114.1	56093.27	63996.35		14.1	20
alpha-Chlordane	A	100.0	113.7	56017.16	63719.16		13.7	20
alpha-Chlordane [2C]	A	100.0	108.4	44337.74	48043.1		8.4	20
beta-BHC	A	100.0	112.9	24624.75	27807.54		12.9	20
beta-BHC [2C]	A	100.0	113.5	23906.8	27135.81		13.5	20
delta-BHC	A	100.0	121.1	55058.59	66672.81		21.1	20 *
delta-BHC [2C]	A	100.0	116.6	48101.72	56066.28		16.6	20
Dieldrin	A	100.0	117.4	57227.59	67165.15		17.4	20
Dieldrin [2C]	A	100.0	110.6	46523.38	51478.41		10.7	20
Endosulfan I	A	100.0	113.0	53823.05	60809.47		13.0	20
Endosulfan I [2C]	A	100.0	111.2	42053.07	46771.16		11.2	20
Endosulfan II	A	100.0	114.1	49816.28	56857.29		14.1	20
Endosulfan II [2C]	A	100.0	111.8	39085.89	43706.43		11.8	20
Endosulfan sulfate	A	100.0	115.4	42311.38	48840.04		15.4	20
Endosulfan sulfate [2C]	A	100.0	114.4	33356.07	38147.6		14.4	20
Endrin	A	100.0	115.9	45068.01	52222.86		15.9	20
Endrin [2C]	A	100.0	111.7	37171.95	41536.69		11.7	20
Endrin aldehyde	A	100.0	112.4	42211.46	47454.27		12.4	20
Endrin aldehyde [2C]	A	100.0	110.2	34823.56	38395.24		10.3	20
Endrin ketone	A	100.0	113.7	54639.44	62148.7		13.7	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	040R4001.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCVB	Injection Time:	19:45

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	108.8	47133.68	51261		8.8	20
gamma-BHC (Lindane)	A	100.0	116.9	61058.46	71396.92		16.9	20
gamma-BHC (Lindane) [2C]	A	100.0	113.5	51469.37	58441.85		13.5	20
gamma-Chlordane	A	100.0	113.0	58537.46	66118.35		13.0	20
gamma-Chlordane [2C]	A	100.0	108.3	45600.43	49394.15		8.3	20
Heptachlor	A	100.0	111.0	57764.29	64111.91		11.0	20
Heptachlor [2C]	A	100.0	104.1	45029.56	46873.73		4.1	20
Heptachlor epoxide	A	100.0	113.6	56762.85	64459.57		13.6	20
Heptachlor epoxide [2C]	A	100.0	110.2	44380.7	48910.82		10.2	20
Methoxychlor	A	100.0	109.3	23126.34	25284.48		9.3	20
Methoxychlor [2C]	A	100.0	106.8	18651.37	19914.77		6.8	20
Tetrachloro-m-xylene	A	100.0	111.0	45628.87	50636.53		11.0	20
Tetrachloro-m-xylene [2C]	A	100.0	109.3	41703.98	45566.26		9.3	20
Decachlorobiphenyl	A	100.0	101.4	44279.28	44911.94		1.4	20
Decachlorobiphenyl [2C]	A	100.0	100.3	29662.28	29743.25		0.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	041F4101.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/26/12
Lab Sample ID:	2J30449-CCVC	Injection Time:	20:04

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Toxaphene (1)	A	1000	1010	2796.327	2824.955		1.0	20	
Toxaphene (2)	A	1000	1128	967.348	1091.283		12.8	20	
Toxaphene (3)	A	1000	1071	1320.97	1415.155		7.1	20	
Toxaphene (4)	A	1000	1061	1170.645	1242.263		6.1	20	
Toxaphene (5)	A	1000	999.4	1218.979	1218.263		-0.06	20	
Toxaphene (1) [2C]	A	1000	1057	3443.187	3638.145		5.7	20	
Toxaphene (2) [2C]	A	1000	1229	499.6382	613.865		22.9	20	*
Toxaphene (3) [2C]	A	1000	1114	1159.89	1292.259		11.4	20	
Toxaphene (4) [2C]	A	1000	1059	2100.622	2225.098		5.9	20	
Toxaphene (5) [2C]	A	1000	992.6	952.3446	945.328		-0.7	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	062F6201.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVG	Injection Time:	02:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	119.9	50456.48	60503.19		19.9	20
4,4'-DDE [2C]	A	100.0	116.4	40256.05	46875.51		16.4	20
4,4'-DDD	A	100.0	99.33	41312.58	41037		-0.7	20
4,4'-DDD [2C]	A	100.0	119.9	36108.37	43309.26		19.9	20
4,4'-DDT	A	100.0	108.4	44465.68	48189.94		8.4	20
4,4'-DDT [2C]	A	100.0	106.1	36018.1	38201.11		6.1	20
Aldrin	A	100.0	114.6	61759.15	70765.06		14.6	20
Aldrin [2C]	A	100.0	111.2	46614.19	51842.28		11.2	20
alpha-BHC	A	100.0	118.1	69569.94	82164.57		18.1	20
alpha-BHC [2C]	A	100.0	113.3	56093.27	63552.67		13.3	20
alpha-Chlordane	A	100.0	112.4	56017.16	62995.63		12.5	20
alpha-Chlordane [2C]	A	100.0	107.6	44337.74	47686.57		7.6	20
beta-BHC	A	100.0	113.0	24624.75	27833.57		13.0	20
beta-BHC [2C]	A	100.0	112.9	23906.8	26998.56		12.9	20
delta-BHC	A	100.0	119.8	55058.59	65940.71		19.8	20
delta-BHC [2C]	A	100.0	117.5	48101.72	56526.43		17.5	20
Dieldrin	A	100.0	116.5	57227.59	66671.12		16.5	20
Dieldrin [2C]	A	100.0	110.2	46523.38	51276.15		10.2	20
Endosulfan I	A	100.0	112.1	53823.05	60337.96		12.1	20
Endosulfan I [2C]	A	100.0	110.9	42053.07	46634.15		10.9	20
Endosulfan II	A	100.0	86.54	49816.28	43111.58		-13.5	20
Endosulfan II [2C]	A	100.0	110.9	39085.89	43342.65		10.9	20
Endosulfan sulfate	A	100.0	113.8	42311.38	48166.4		13.8	20
Endosulfan sulfate [2C]	A	100.0	113.8	33356.07	37963.16		13.8	20
Endrin	A	100.0	105.9	45068.01	47719.32		5.9	20
Endrin [2C]	A	100.0	110.4	37171.95	41041.19		10.4	20
Endrin aldehyde	A	100.0	106.2	42211.46	44828.37		6.2	20
Endrin aldehyde [2C]	A	100.0	111.3	34823.56	38757.73		11.3	20
Endrin ketone	A	100.0	94.95	54639.44	51878.19		-5.1	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	062R6201.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVG	Injection Time:	02:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	108.7	47133.68	51248.33		8.7	20
gamma-BHC (Lindane)	A	100.0	116.8	61058.46	71347.65		16.9	20
gamma-BHC (Lindane) [2C]	A	100.0	112.9	51469.37	58129.77		12.9	20
gamma-Chlordane	A	100.0	111.7	58537.46	65385.76		11.7	20
gamma-Chlordane [2C]	A	100.0	107.2	45600.43	48910.19		7.3	20
Heptachlor	A	100.0	110.7	57764.29	63922.85		10.7	20
Heptachlor [2C]	A	100.0	105.5	45029.56	47517.02		5.5	20
Heptachlor epoxide	A	100.0	111.9	56762.85	63543.02		11.9	20
Heptachlor epoxide [2C]	A	100.0	109.8	44380.7	48717.22		9.8	20
Methoxychlor	A	100.0	104.0	23126.34	24048.2		4.0	20
Methoxychlor [2C]	A	100.0	103.1	18651.37	19233.09		3.1	20
Tetrachloro-m-xylene	A	100.0	110.3	45628.87	50340.4		10.3	20
Tetrachloro-m-xylene [2C]	A	100.0	108.5	41703.98	45268.78		8.5	20
Decachlorobiphenyl	A	100.0	100.6	44279.28	44548.51		0.6	20
Decachlorobiphenyl [2C]	A	100.0	103.5	29662.28	30689.69		3.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	063F6301.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVH	Injection Time:	03:05

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	1006	2796.327	2813.609		0.6	20
Toxaphene (2)	A	1000	1072	967.348	1037.374		7.2	20
Toxaphene (3)	A	1000	1024	1320.97	1352.774		2.4	20
Toxaphene (4)	A	1000	1038	1170.645	1214.99		3.8	20
Toxaphene (5)	A	1000	979.7	1218.979	1194.253		-2.0	20
Toxaphene (1) [2C]	A	1000	988.9	3443.187	3404.936		-1.1	20
Toxaphene (2) [2C]	A	1000	1185	499.6382	591.899		18.5	20
Toxaphene (3) [2C]	A	1000	1032	1159.89	1197.104		3.2	20
Toxaphene (4) [2C]	A	1000	990.0	2100.622	2079.675		-1.0	20
Toxaphene (5) [2C]	A	1000	920.4	952.3446	876.505		-8.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	080F8001.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVL	Injection Time:	08:30

FP10/1/201

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4,4'-DDE	A	100.0	123.6	50456.48	62340.06		23.6	20 *
4,4'-DDE [2C]	A	100.0	118.3	40256.05	47609.29		18.3	20
4,4'-DDD	A	100.0	99.93	41312.58	41285.45		-0.07	20
4,4'-DDD [2C]	A	100.0	124.7	36108.37	45017.45		24.7	20 *
4,4'-DDT	A	100.0	107.0	44465.68	47562.44		7.0	20
4,4'-DDT [2C]	A	100.0	105.9	36018.1	38157.12		5.9	20
Aldrin	A	100.0	115.7	61759.15	71474.91		15.7	20
Aldrin [2C]	A	100.0	112.1	46614.19	52277.65		12.1	20
alpha-BHC	A	100.0	118.8	69569.94	82653.5		18.8	20
alpha-BHC [2C]	A	100.0	114.1	56093.27	64000.44		14.1	20
alpha-Chlordane	A	100.0	113.7	56017.16	63703.44		13.7	20
alpha-Chlordane [2C]	A	100.0	108.4	44337.74	48053.7		8.4	20
beta-BHC	A	100.0	114.2	24624.75	28115.11		14.2	20
beta-BHC [2C]	A	100.0	113.6	23906.8	27155.46		13.6	20
delta-BHC	A	100.0	122.0	55058.59	67169.79		22.0	20 *
delta-BHC [2C]	A	100.0	119.1	48101.72	57277.84		19.1	20
Dieldrin	A	100.0	118.2	57227.59	67627.24		18.2	20
Dieldrin [2C]	A	100.0	112.6	46523.38	52396.9		12.6	20
Endosulfan I	A	100.0	113.9	53823.05	61292.43		13.9	20
Endosulfan I [2C]	A	100.0	111.8	42053.07	46997.44		11.8	20
Endosulfan II	A	100.0	86.92	49816.28	43298.15		-13.1	20
Endosulfan II [2C]	A	100.0	114.1	39085.89	44581.51		14.1	20
Endosulfan sulfate	A	100.0	117.2	42311.38	49601.14		17.2	20
Endosulfan sulfate [2C]	A	100.0	117.2	33356.07	39091.55		17.2	20
Endrin	A	100.0	106.1	45068.01	47814.35		6.1	20
Endrin [2C]	A	100.0	113.2	37171.95	42075.44		13.2	20
Endrin aldehyde	A	100.0	106.9	42211.46	45133.56		6.9	20
Endrin aldehyde [2C]	A	100.0	113.6	34823.56	39545.72		13.6	20
Endrin ketone	A	100.0	100.0	54639.44	54656.54		0.03	20

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	080R8001.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVL	Injection Time:	08:30

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Endrin ketone [2C]	A	100.0	110.9	47133.68	52262.08		10.9	20
gamma-BHC (Lindane)	A	100.0	117.4	61058.46	71678.2		17.4	20
gamma-BHC (Lindane) [2C]	A	100.0	113.2	51469.37	58278.38		13.2	20
gamma-Chlordane	A	100.0	113.2	58537.46	66241.94		13.2	20
gamma-Chlordane [2C]	A	100.0	107.8	45600.43	49174.86		7.8	20
Heptachlor	A	100.0	113.0	57764.29	65273.47		13.0	20
Heptachlor [2C]	A	100.0	109.2	45029.56	49182.6		9.2	20
Heptachlor epoxide	A	100.0	113.6	56762.85	64496.4		13.6	20
Heptachlor epoxide [2C]	A	100.0	110.2	44380.7	48917.49		10.2	20
Methoxychlor	A	100.0	105.4	23126.34	24374.28		5.4	20
Methoxychlor [2C]	A	100.0	103.8	18651.37	19361.93		3.8	20
Tetrachloro-m-xylene	A	100.0	111.0	45628.87	50635.45		11.0	20
Tetrachloro-m-xylene [2C]	A	100.0	109.2	41703.98	45548.64		9.2	20
Decachlorobiphenyl	A	100.0	102.0	44279.28	45171.12		2.0	20
Decachlorobiphenyl [2C]	A	100.0	106.6	29662.28	31627.85		6.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8081A

Laboratory:	Empirical Laboratories, LLC	SDG:	1210127
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Pensacola CTO 0079 Site 44
Instrument ID:	GL-ECD3	Calibration:	2299003
Lab File ID:	081F8101.D	Calibration Date:	10/22/12 00:00
Sequence:	2J30449	Injection Date:	10/27/12
Lab Sample ID:	2J30449-CCVM	Injection Time:	08:49

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Toxaphene (1)	A	1000	997.6	2796.327	2789.565		-0.2	20
Toxaphene (2)	A	1000	1180	967.348	1141.719		18.0	20
Toxaphene (3)	A	1000	1123	1320.97	1483.364		12.3	20
Toxaphene (4)	A	1000	1097	1170.645	1284.114		9.7	20
Toxaphene (5)	A	1000	1036	1218.979	1262.695		3.6	20
Toxaphene (1) [2C]	A	1000	1024	3443.187	3527.001		2.4	20
Toxaphene (2) [2C]	A	1000	1313	499.6382	656.014		31.3	20 *
Toxaphene (3) [2C]	A	1000	1114	1159.89	1291.727		11.4	20
Toxaphene (4) [2C]	A	1000	1057	2100.622	2219.824		5.7	20
Toxaphene (5) [2C]	A	1000	923.4	952.3446	879.399		-7.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J12031 Batch Matrix: Solid
Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-SS01-0-2-10/12	1210127-01	10/17/12 07:46	15.80	5.00
PEN-44-SS01-6-8-10/12	1210127-02	10/17/12 07:46	15.70	5.00
PEN-44-SS02-0-2-10/12	1210127-03	10/17/12 07:46	15.80	5.00
PEN-44-SS02-6-8-10/12	1210127-04	10/17/12 07:46	15.70	5.00
PEN-44-SS03-0-2-10/12	1210127-05	10/17/12 07:46	15.70	5.00
PEN-44-SS03-6-8-10/12	1210127-06	10/17/12 07:46	15.60	5.00
Blank	2J12031-BLK1	10/17/12 07:46	15.00	5.00
LCS	2J12031-BS1	10/17/12 07:46	15.00	5.00
PEN-44-SS01-0-2-10/12	2J12031-MS1	10/17/12 07:46	15.80	5.00
PEN-44-SS01-0-2-10/12	2J12031-MSD1	10/17/12 07:46	15.90	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J12031-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/17/12 07:46 Analyzed: 10/17/12 14:26

Solids: Preparation: EXT_3546 Dilution:

Batch: 2J12031 Sequence: 2J29616 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg wet)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.170	0.330	0.670	U
72-54-8	4,4'-DDD		0.170	0.330	0.670	U
50-29-3	4,4'-DDT		0.170	0.330	0.670	U
309-00-2	Aldrin		0.110	0.330	0.670	U
319-84-6	alpha-BHC		0.110	0.330	0.670	U
5103-71-9	alpha-Chlordane		0.110	0.330	0.670	U
319-85-7	beta-BHC		0.110	0.330	0.670	U
319-86-8	delta-BHC		0.110	0.330	0.670	U
60-57-1	Dieldrin		0.170	0.330	0.670	U
959-98-8	Endosulfan I		0.110	0.330	0.670	U
33213-65-9	Endosulfan II		0.170	0.330	0.670	U
1031-07-8	Endosulfan sulfate		0.170	0.330	0.670	U
72-20-8	Endrin		0.170	0.330	0.670	U
7421-93-4	Endrin aldehyde		0.170	0.330	0.670	U
53494-70-5	Endrin ketone		0.170	0.330	0.670	U
58-89-9	gamma-BHC (Lindane)		0.110	0.330	0.670	U
5103-74-2	gamma-Chlordane		0.110	0.330	0.670	U
76-44-8	Heptachlor		0.110	0.330	0.670	U
1024-57-3	Heptachlor epoxide		0.110	0.330	0.670	U
72-43-5	Methoxychlor		0.110	0.330	0.670	U
8001-35-2	Toxaphene		11.0	22.0	33.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.67	12.35	74.1	70 - 125	
Tetrachloro-m-xylene [2C]	16.67	11.51	69.0	70 - 125	*
Decachlorobiphenyl	16.67	13.60	81.6	55 - 130	
Decachlorobiphenyl [2C]	16.67	12.82	76.9	55 - 130	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Batch: 2J16016 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PEN-44-09-10/12	1210127-08	10/16/12 14:38	1,060.00	10.00
PEN-3221-09-10/12	1210127-10	10/16/12 14:38	1,080.00	10.00
Blank	2J16016-BLK1	10/16/12 14:38	1,000.00	10.00
LCS	2J16016-BS1	10/16/12 14:38	1,000.00	10.00
LCS Dup	2J16016-BSD1	10/16/12 14:38	1,000.00	10.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J16016-BLK1 File ID: 008F0801.D

Sampled: Prepared: 10/16/12 14:38 Analyzed: 10/18/12 11:56

Solids: Preparation: EXT_3510 Dilution:

Batch: 2J16016 Sequence: 2J29706 Calibration: 2284005 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.00500	0.0100	0.0200	U
72-54-8	4,4'-DDD		0.00500	0.0100	0.0200	U
50-29-3	4,4'-DDT		0.00500	0.0100	0.0200	U
309-00-2	Aldrin		0.00330	0.0100	0.0200	U
319-84-6	alpha-BHC		0.00330	0.0100	0.0200	U
5103-71-9	alpha-Chlordane		0.00330	0.0100	0.0200	U
319-85-7	beta-BHC		0.00330	0.0100	0.0200	U
319-86-8	delta-BHC		0.00330	0.0100	0.0200	U
60-57-1	Dieldrin		0.00500	0.0100	0.0200	U
959-98-8	Endosulfan I		0.00330	0.0100	0.0200	U
33213-65-9	Endosulfan II		0.00500	0.0100	0.0200	U
1031-07-8	Endosulfan sulfate		0.00500	0.0100	0.0200	U
72-20-8	Endrin		0.00500	0.0100	0.0200	U
7421-93-4	Endrin aldehyde		0.00500	0.0100	0.0200	U
53494-70-5	Endrin ketone		0.00500	0.0100	0.0200	U
58-89-9	gamma-BHC (Lindane)		0.00330	0.0100	0.0200	U
5103-74-2	gamma-Chlordane	0.00566	0.00330	0.0100	0.0200	JP
76-44-8	Heptachlor		0.00330	0.0100	0.0200	U
1024-57-3	Heptachlor epoxide		0.00330	0.0100	0.0200	U
72-43-5	Methoxychlor		0.00330	0.0100	0.0200	U
8001-35-2	Toxaphene		0.330	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	0.5000	0.3744	74.9	25 - 140	
Tetrachloro-m-xylene [2C]	0.5000	0.3476	69.5	25 - 140	
Decachlorobiphenyl	0.5000	0.3958	79.2	30 - 135	
Decachlorobiphenyl [2C]	0.5000	0.3851	77.0	30 - 135	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8081A

Laboratory: Empirical Laboratories, LLC
SDG: 1210127
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Pensacola CTO 0079 Site 44
Batch: 2J19031 Batch Matrix: Solid
Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
FD10111201	1210127-07	10/22/12 10:20	15.80	5.00
Blank	2J19031-BLK1	10/22/12 10:20	15.00	5.00
LCS	2J19031-BS1	10/22/12 10:20	15.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1210127

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Pensacola CTO 0079 Site 44

Matrix: Laboratory ID: 2J19031-BLK1 File ID: 049F4901.D

Sampled: Prepared: 10/22/12 10:20 Analyzed: 10/26/12 22:37

Solids: Preparation: EXT_3546 Dilution:

Batch: 2J19031 Sequence: 2J30449 Calibration: 2299003 Instrument: GL-ECD3

CAS NO.	COMPOUND	CONC. (ug/Kg wet	DL	LOD	LOQ	Q
72-55-9	4,4'-DDE		0.170	0.330	0.670	UX
72-54-8	4,4'-DDD		0.170	0.330	0.670	UX
50-29-3	4,4'-DDT		0.170	0.330	0.670	U
309-00-2	Aldrin		0.110	0.330	0.670	U
319-84-6	alpha-BHC		0.110	0.330	0.670	U
5103-71-9	alpha-Chlordane		0.110	0.330	0.670	U
319-85-7	beta-BHC		0.110	0.330	0.670	U
319-86-8	delta-BHC		0.110	0.330	0.670	UX
60-57-1	Dieldrin		0.170	0.330	0.670	U
959-98-8	Endosulfan I		0.110	0.330	0.670	U
33213-65-9	Endosulfan II		0.170	0.330	0.670	U
1031-07-8	Endosulfan sulfate		0.170	0.330	0.670	U
72-20-8	Endrin		0.170	0.330	0.670	U
7421-93-4	Endrin aldehyde		0.170	0.330	0.670	U
53494-70-5	Endrin ketone		0.170	0.330	0.670	U
58-89-9	gamma-BHC (Lindane)		0.110	0.330	0.670	U
5103-74-2	gamma-Chlordane		0.110	0.330	0.670	U
76-44-8	Heptachlor		0.110	0.330	0.670	U
1024-57-3	Heptachlor epoxide		0.110	0.330	0.670	U
72-43-5	Methoxychlor		0.110	0.330	0.670	U
8001-35-2	Toxaphene		11.0	22.0	33.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Tetrachloro-m-xylene	16.67	15.20	91.2	70 - 125	
Tetrachloro-m-xylene [2C]	16.67	16.08	96.5	70 - 125	
Decachlorobiphenyl	16.67	14.25	85.5	55 - 130	
Decachlorobiphenyl [2C]	16.67	15.17	91.0	55 - 130	

* Values outside of QC limits

ATTACHMENT 3

GROUNDWATER HYDRAULIC CONDUCTIVITY DATA

Hydraulic Conductivity

Hydraulic conductivity values for Site 46 were estimated using data from slug tests and specific capacity data collected during well development conducted as part of the RI. The slug test results are summarized in Table 3-4 and the slug test data and test analyses are included in Appendix C The geometric mean of the hydraulic conductivity values reported for shallow wells at Site 46 is approximately 245 feet/day or 0.17 feet/minute. The geometric mean of the hydraulic conductivity values reported for the deep wells at Site 46 is approximately 16 feet/day or 0.011 feet/minute, which is an order of magnitude less than the shallow wells.

Groundwater Flow Velocity

Potential movement of groundwater by natural flow in the saturated zone can be estimated by Darcy's Law, which may be expressed as:

$$v = \frac{(K \times i)}{n}$$

Where:

v = average velocity

K = hydraulic conductivity

i = average hydraulic gradient

n = effective porosity

Data from soil borings advanced at Site 46 indicate that fine grained sand and silty sand are the typical lithologies at the site. Review of standard literature suggests that a representative effective porosity for this lithology is approximately 30 percent (Heath, 1983).

Using an average hydraulic conductivity of 245 feet/day, an average hydraulic gradient of 0.0035 feet/foot, and an effective porosity value of 30 percent, the estimated average groundwater velocity for the water table zone at Site 46 was calculated at 2.86 feet/day or about 1,044 feet/year.

Using an average hydraulic conductivity of 16 feet/day, an average hydraulic gradient of 0.0035 feet/foot, and an effective porosity value of 30 percent, the estimated average groundwater velocity for the deep zone at Site 46 was calculated at 0.19 feet/day or about 70 feet/year.

SLUG TEST RESULTS					
Monitoring Well	**Aquifer Interval**	**Test Type**	**Solution Model**	**K (ft/min)**	**Comments**
PEN-46-03	Shallow	Falling Head	Bouwer/Rice	0.13	
		Falling Head	Hvorslev	0.22	
		Rising Head	Bouwer/Rice	0.15	
		Rising Head	Hvorslev	0.24	
PEN-46-04	Deep	Falling Head	Bouwer/Rice	0.01	
		Falling Head	Hvorslev	0.02	
		Falling Head	Cooper/Papadapoulos	0.002	Confined solution
		Rising Head	Bouwer/Rice	0.01	
		Rising Head	Hvorslev	0.02	
		Rising Head	Cooper/Papadapoulos	0.01	Confined solution
PEN-46-13	Shallow	Falling Head	Bouwer/Rice	0.22	
		Falling Head	Hvorslev	0.32	
		Rising Head	Bouwer/Rice	0.35	
		Rising Head	Hvorslev	0.55	
PEN-46-14	Deep	Falling Head	Bouwer/Rice	0.01	
		Falling Head	Hvorslev	0.01	
		Falling Head	Cooper/Papadapoulos	0.002	Confined solution
		Rising Head	Bouwer/Rice	0.01	
		Rising Head	Hvorslev	0.01	
		Rising Head	Cooper/Papadapoulos	0.004	Confined solution
PEN-46-19	Shallow	Falling Head	Bouwer/Rice	0.05	
		Falling Head	Hvorslev	0.08	
		Rising Head	Bouwer/Rice	0.08	
		Rising Head	Hvorslev	0.13	
PEN-46-20	Deep	Falling Head	Bouwer/Rice	0.01	
		Falling Head	Hvorslev	0.01	
		Falling Head	Cooper/Papadapoulos	0.001	Confined solution
		Rising Head	Bouwer/Rice	0.01	
		Rising Head	Hvorslev	0.01	
		Rising Head	Cooper/Papadapoulos	0.001	Confined solution

SHALLOW WELL STATISTICAL SUMMARY					
	Falling Head	**Rising Head**	**Bouwer/Rice**	**Hvorslev**	
PEN-46-03	0.13	0.15	0.13	0.22	
	0.22	0.24	0.15	0.24	
PEN-46-13	0.22	0.35	0.22	0.32	
	0.32	0.55	0.35	0.55	
PEN-46-19	0.05	0.08	0.05	0.081	**Geometric Mean of**
	0.08	0.13	0.08	0.13	**Shallow K (ft/min)**
Geometric Mean	**0.14**	**0.21**	**0.13**	**0.22**	**0.17**

DEEP WELL STATISTICAL SUMMARY					
	Falling Head	**Rising Head**	**Bouwer/Rice**	**Hvorslev**	
PEN-46-04	0.013	0.013	0.013	0.016	
	0.016	0.018	0.013	0.018	
PEN-46-14	0.010	0.009	0.010	0.015	
	0.015	0.01	0.009	0.01	
PEN-46-20	0.007	0.008	0.007	0.008	**Geometric Mean of**
	0.008	0.009	0.008	0.009	**Shallow K (ft/min)**
Geometric Mean	**0.011**	**0.011**	**0.010**	**0.012**	**0.011**

SPECIFIC CAPACITY TEST RESULTS					
Well	**Total Depth (ft)**	**Flow Rate (gpm)**	**Pumping Duration**	**Drawdown (ft)**	**Conductivity (ft/day)**
PEN-46-02	49.5	4	14 minutes	14.57	3.75
PEN-46-11	12.65	3	19 minutes	7.45	5.59
PEN-46-12	45.4	3.5	16 minutes	4.25	11.76
PEN-46-13	13.15	4	14 minutes	0.15	403.18
PEN-46-14	47.2	4	15 minutes	4.45	12.65
PEN-46-20	47.3	3	19 minutes	5.3	7.92

WELL PAIRS	TOTAL WELL DEPTH	SCREENED INTERVAL DEPTH	TOP-OF-CASING ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION
PEN-46-01	14	4-14	5.74	3.44	2.30	3.44	2.30
PEN-46-02	49	39-49	5.97	4.10	1.87	4.10	1.87
	SCREEN SEPARATION (feet)	35		VERTICAL GRADIENT	-0.012		-0.012
PEN-46-03	13	3-13	5.93	4.09	1.84	4.11	1.82
PEN-46-04	50	40-50	6.03	4.12	1.91	4.18	1.85
	SCREEN SEPARATION (feet)	37		VERTICAL GRADIENT	0.002		0.001
PEN-46-07	13	3-13	6.45	5.21	1.24	5.32	1.13
PEN-46-08	50	40-50	6.66	4.68	1.98	4.80	1.86
	SCREEN SEPARATION (feet)	37		VERTICAL GRADIENT	0.020		0.020
PEN-46-09	13	3-13	5.89	4.40	1.49	4.55	1.34
PEN-46-10	44	34-44	5.84	4.85	0.99	4.96	0.88
	SCREEN SEPARATION (feet)	31		VERTICAL GRADIENT	-0.016		-0.015
PEN-46-11	13	3-13	4.67	3.55	1.12	3.85	0.82
PEN-46-12	45	35-45	4.78	4.00	0.78	4.13	0.65
	SCREEN SEPARATION (feet)	32		VERTICAL GRADIENT	-0.011		-0.005
PEN-46-13	13	3-13	4.74	4.10	0.64	4.54	0.20
PEN-46-14	49	39-49	4.72	4.05	0.67	4.20	0.52
	SCREEN SEPARATION (feet)	36		VERTICAL GRADIENT	0.001		0.009
PEN-46-15	13	3-13	4.54	3.55	0.99	3.83	0.71
PEN-46-16	45	35-45	4.62	3.84	0.78	3.98	0.64
	SCREEN SEPARATION (feet)	32		VERTICAL GRADIENT	-0.007		-0.002
PEN-46-19	13	3-13	3.96	3.51	0.45	3.83	0.13
PEN-46-20	46	36-46	4.14	3.56	0.58	3.77	0.37
	SCREEN SEPARATION (feet)	33		VERTICAL GRADIENT	0.004		0.007
38GS01	13	3-13	5.70	4.45	1.25	4.65	1.05
38GI01	27	17-27	5.81	4.62	1.19	4.77	1.04
	SCREEN SEPARATION (feet)	14		VERTICAL GRADIENT	-0.004		-0.001
38GS03	13	3-13	4.12	3.57	0.55	3.88	0.24
38GI03	42	32-42	4.03	3.56	0.47	3.75	0.28
	SCREEN SEPARATION (feet)	29		VERTICAL GRADIENT	-0.003		0.001

WELL PAIRS	TOTAL WELL DEPTH	SCREENED INTERVAL DEPTH	TOP-OF-CASING ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION

Notes:

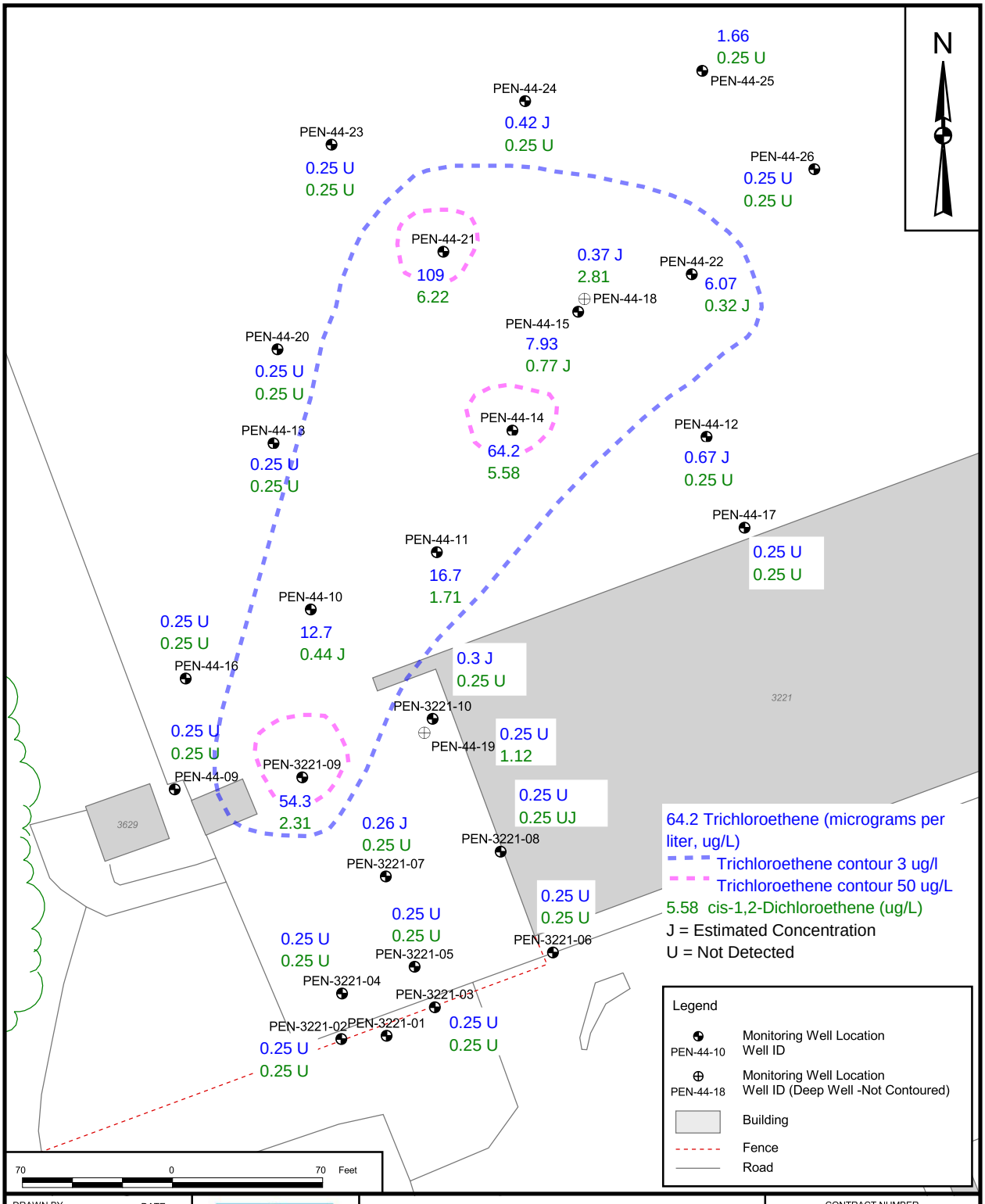
Elevations referenced to top-of-casing for PEN-38GS01, 5.70 feet above mean sea level (EnSafe, 1998).

Depths in feet below top-of-casing.

Negative gradients are downward, positive gradients are upward.

ATTACHMENT 4

DATA SUMMARY FIGURES



DRAWN BY C. SPEHAR	DATE 1/20/06	TRICHLOROETHENE AND CIS-1,2-DICHLOROETHENE CONCENTRATIONS SITE 44 TECHNICAL MEMORANDUM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO 0367
CHECKED BY B. OLSON	DATE 5/03/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 1 REV 0

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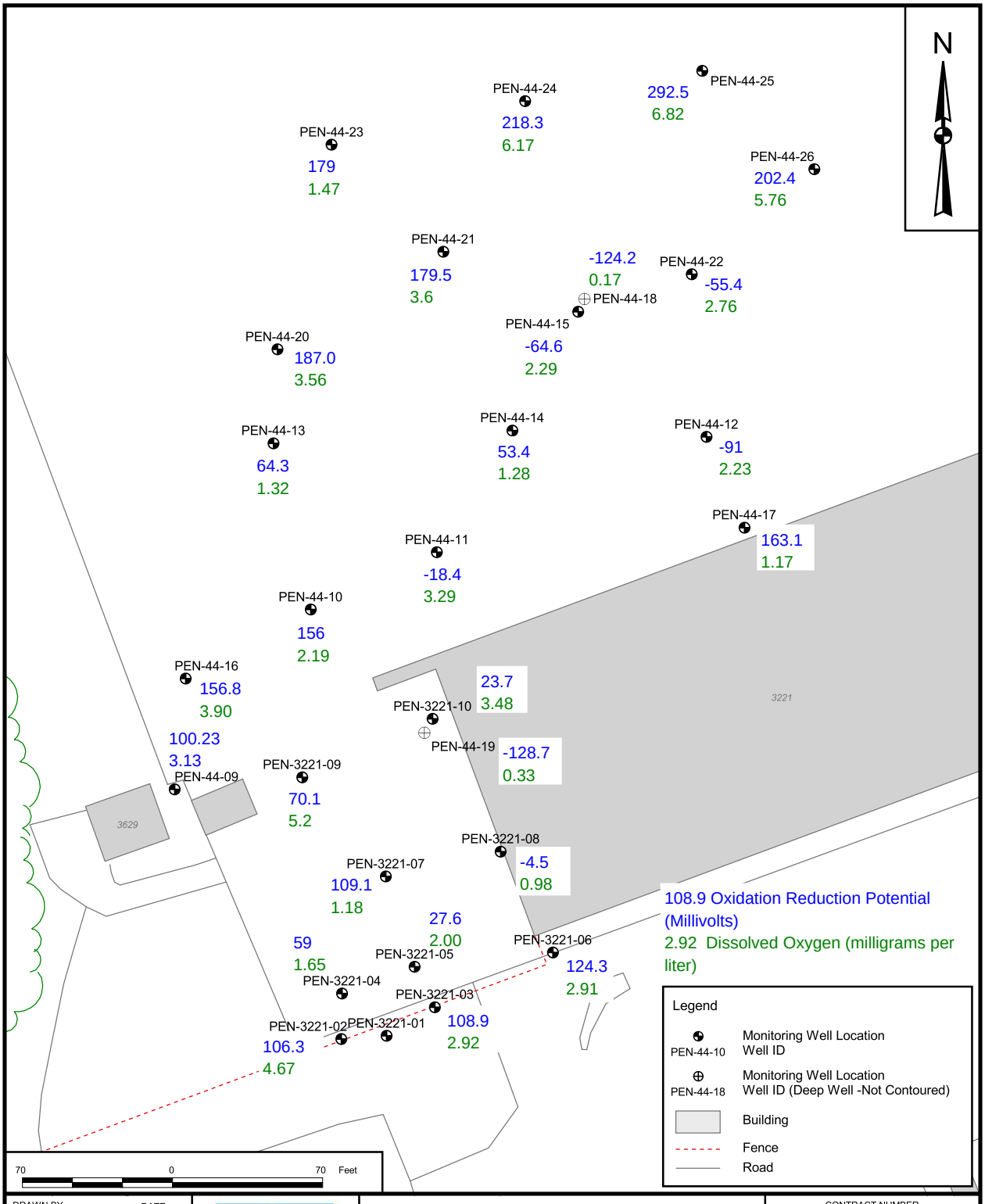

DRAWN BY C. SPEHAR	DATE 1/20/06	OXIDATION REDUCTION POTENTIAL AND DISSOLVED OXYGEN CONCENTRATIONS SITE 44 TECHNICAL MEMORANDUM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO 0367
CHECKED BY B. OLSON	DATE 5/03/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED	NAVFAC		DRAWING NO. FIGURE 2 REV 0

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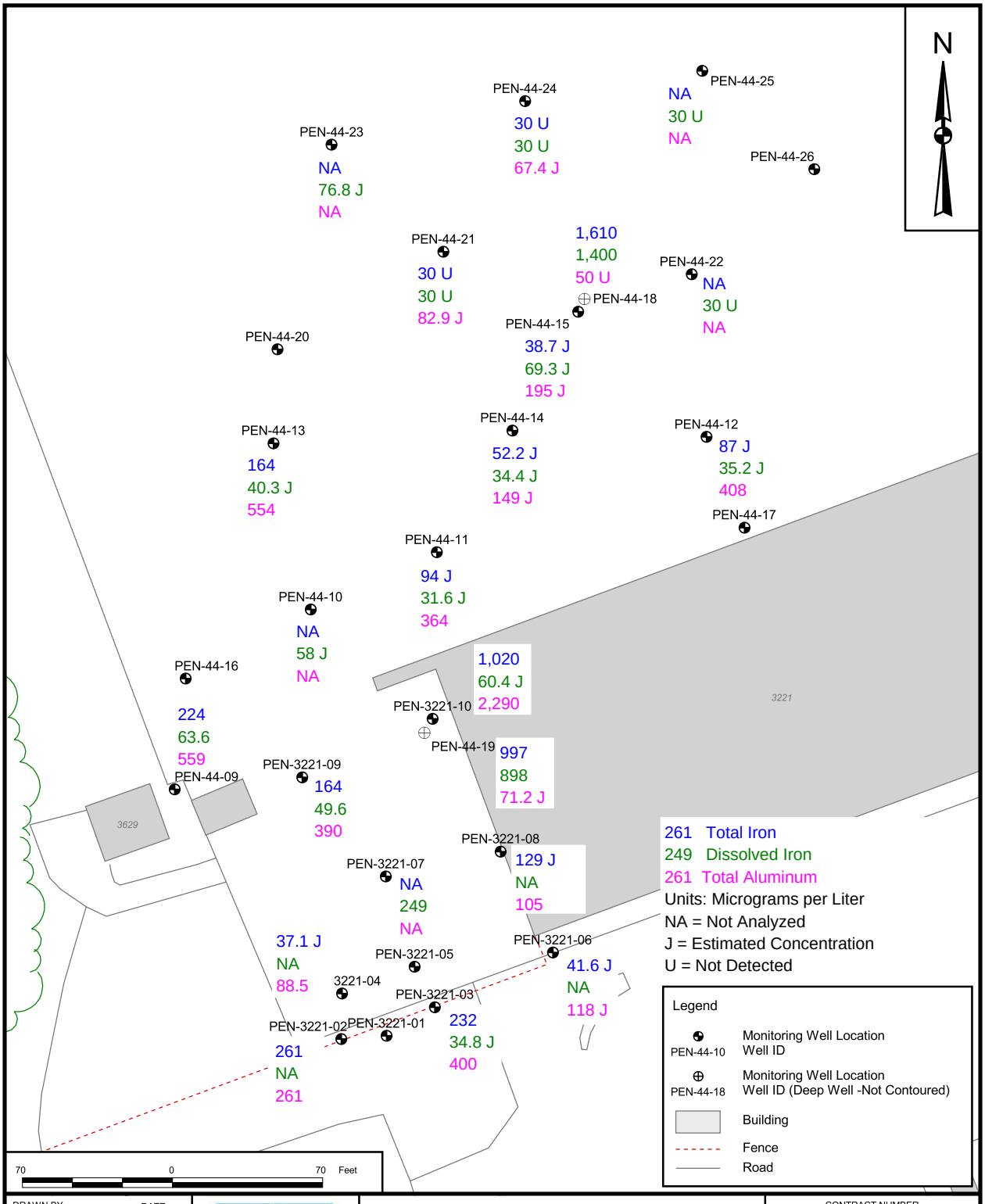

DRAWN BY C. SPEHAR	DATE 1/20/06	IRON AND ALIUMINUM CONCENTRATIONS SITE 44 TECHNICAL MEMORANDUM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO 0367
CHECKED BY B. OLSON	DATE 5/03/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 3 REV 0

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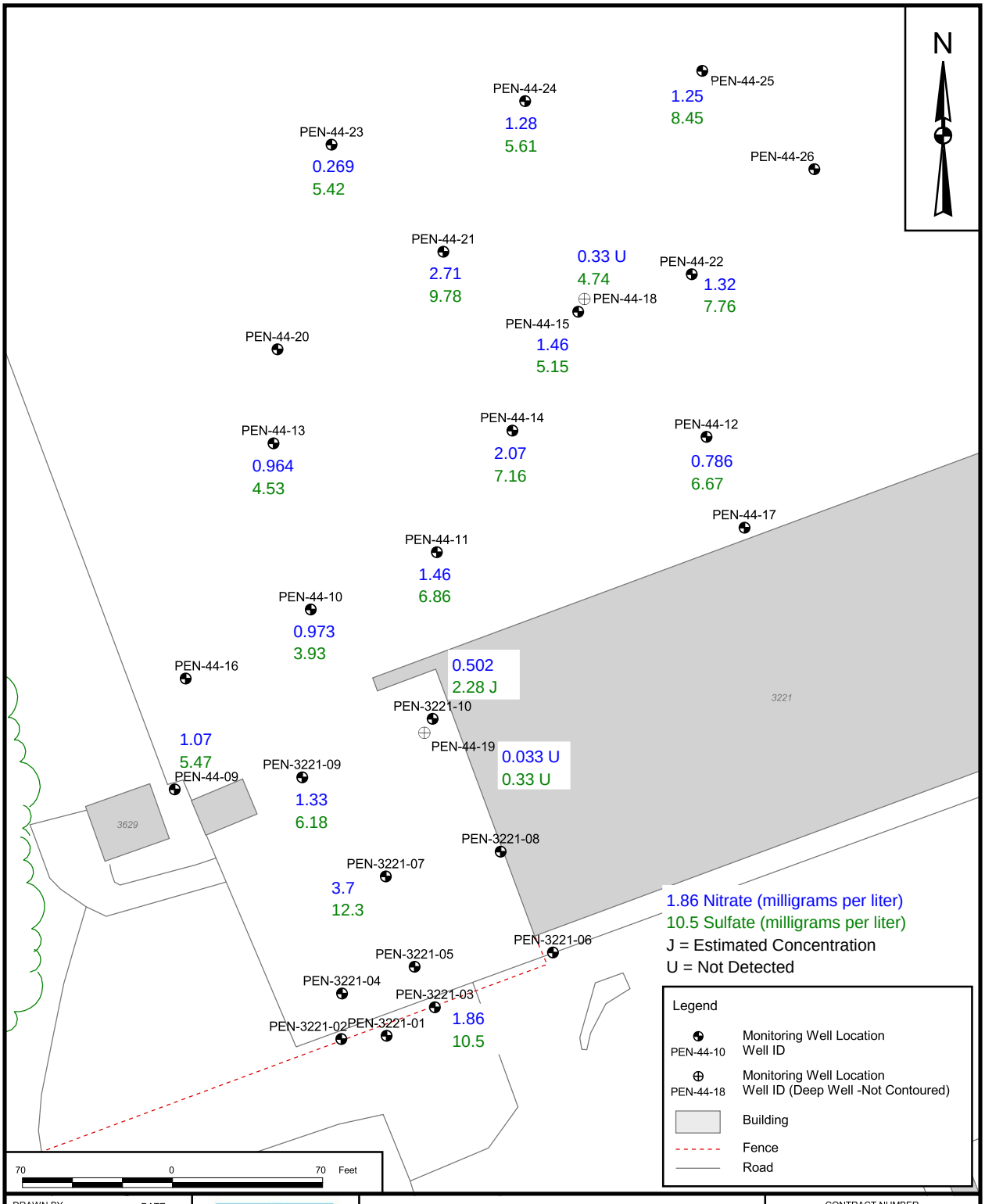

DRAWN BY C. SPEHAR	DATE 1/20/06	NITRATE AND SULFATE CONCENTRATIONS SITE 44 TECHNICAL MEMORANDUM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO 0367
CHECKED BY B. OLSON	DATE 5/03/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 4 REV 0

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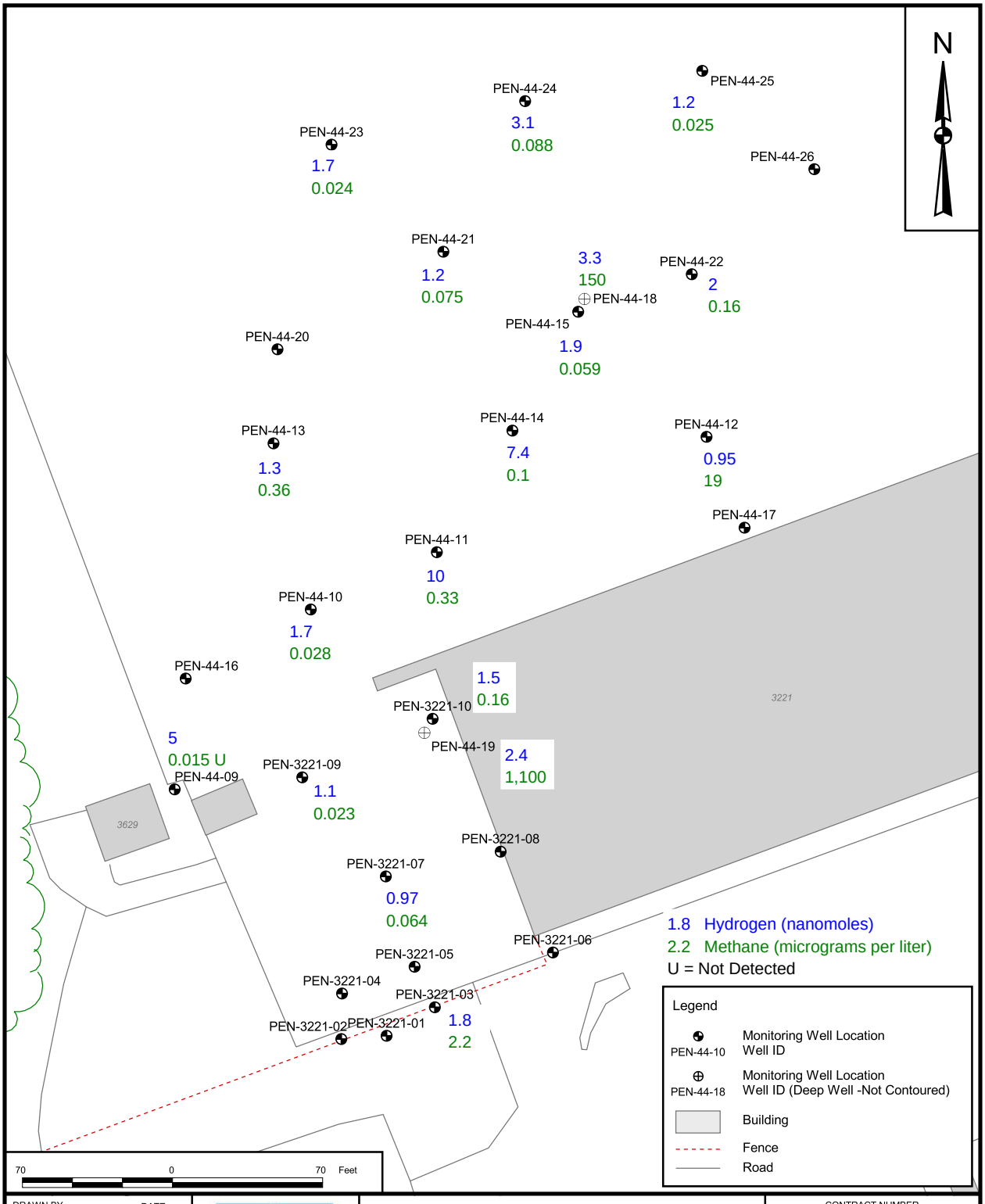

DRAWN BY C. SPEHAR	DATE 1/20/06	HYDROGEN AND METHANE CONCENTRATIONS SITE 44 TECHNICAL MEMORANDUM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO 0367
CHECKED BY B. OLSON	DATE 5/03/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 5 REV 0

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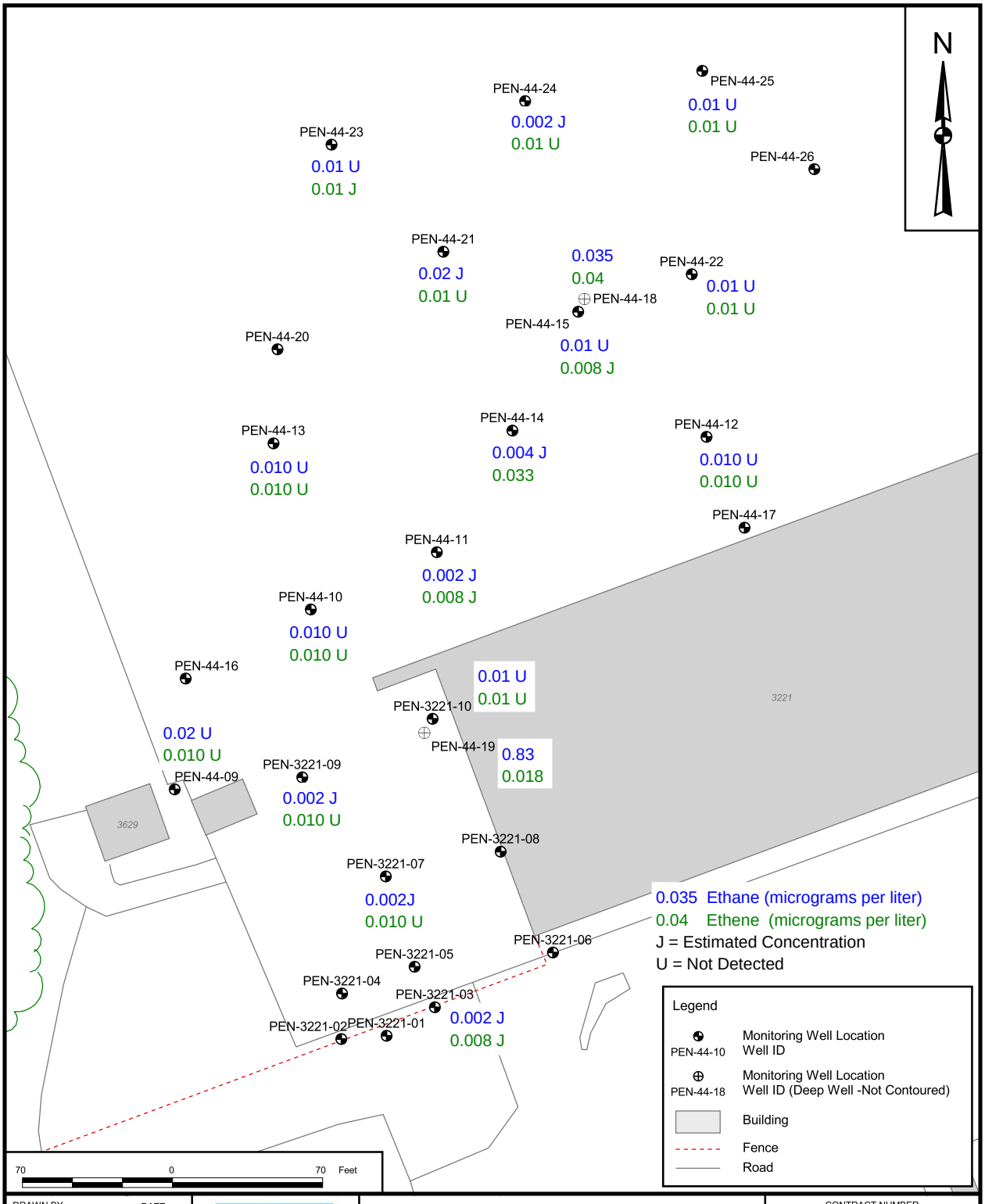

DRAWN BY C. SPEHAR	DATE 1/20/06	ETHANE AND ETHENE CONCENTRATIONS SITE 44 TECHNICAL MEMORANDUM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO 0367
CHECKED BY B. OLSON	DATE 5/03/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 6 REV 0

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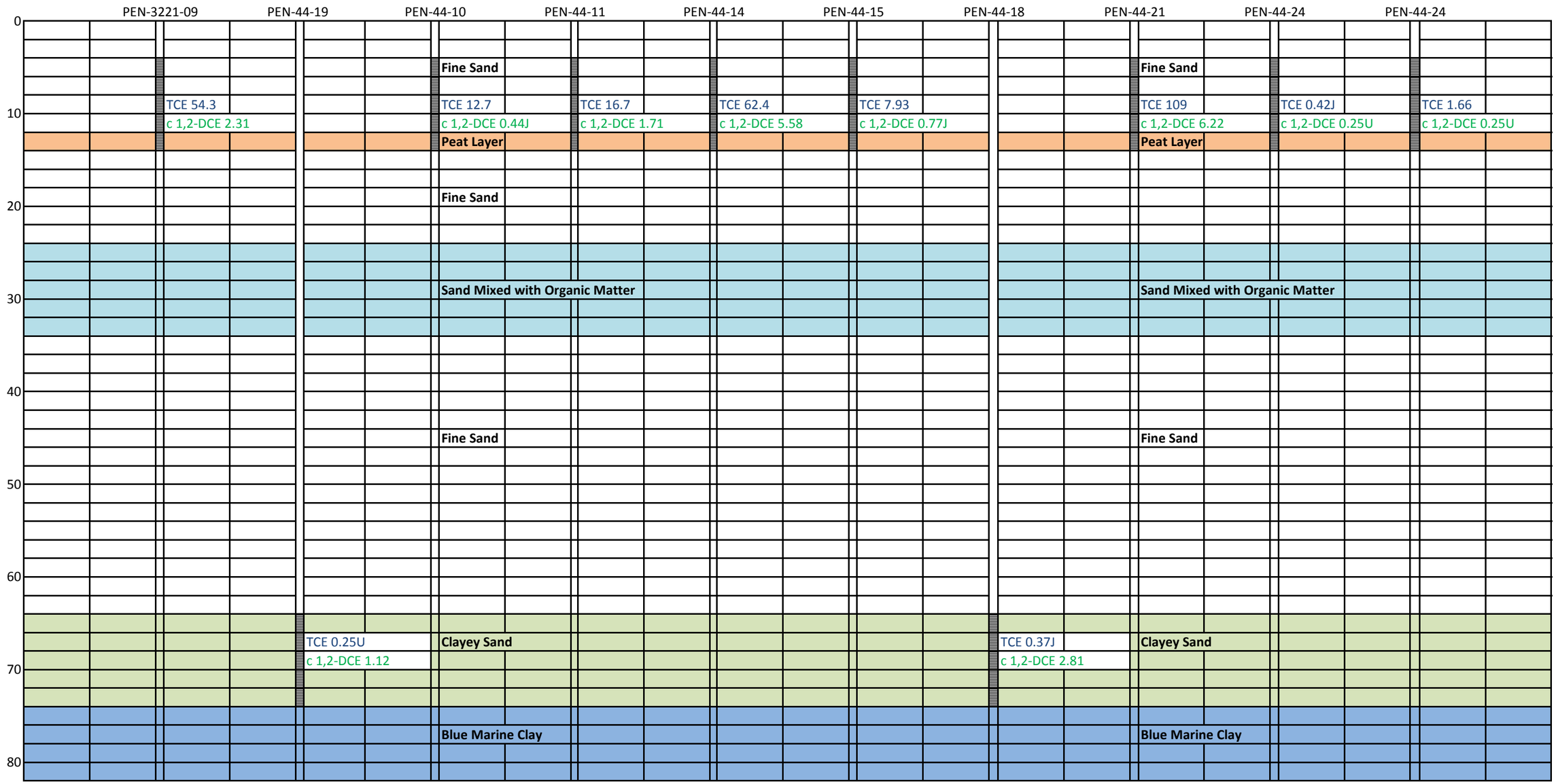


Notes:
Units = micrograms per liter
TCE = trichloroethene
c 1,2-DCE = cis 1,2-dichloroethene

ATTACHMENT 5

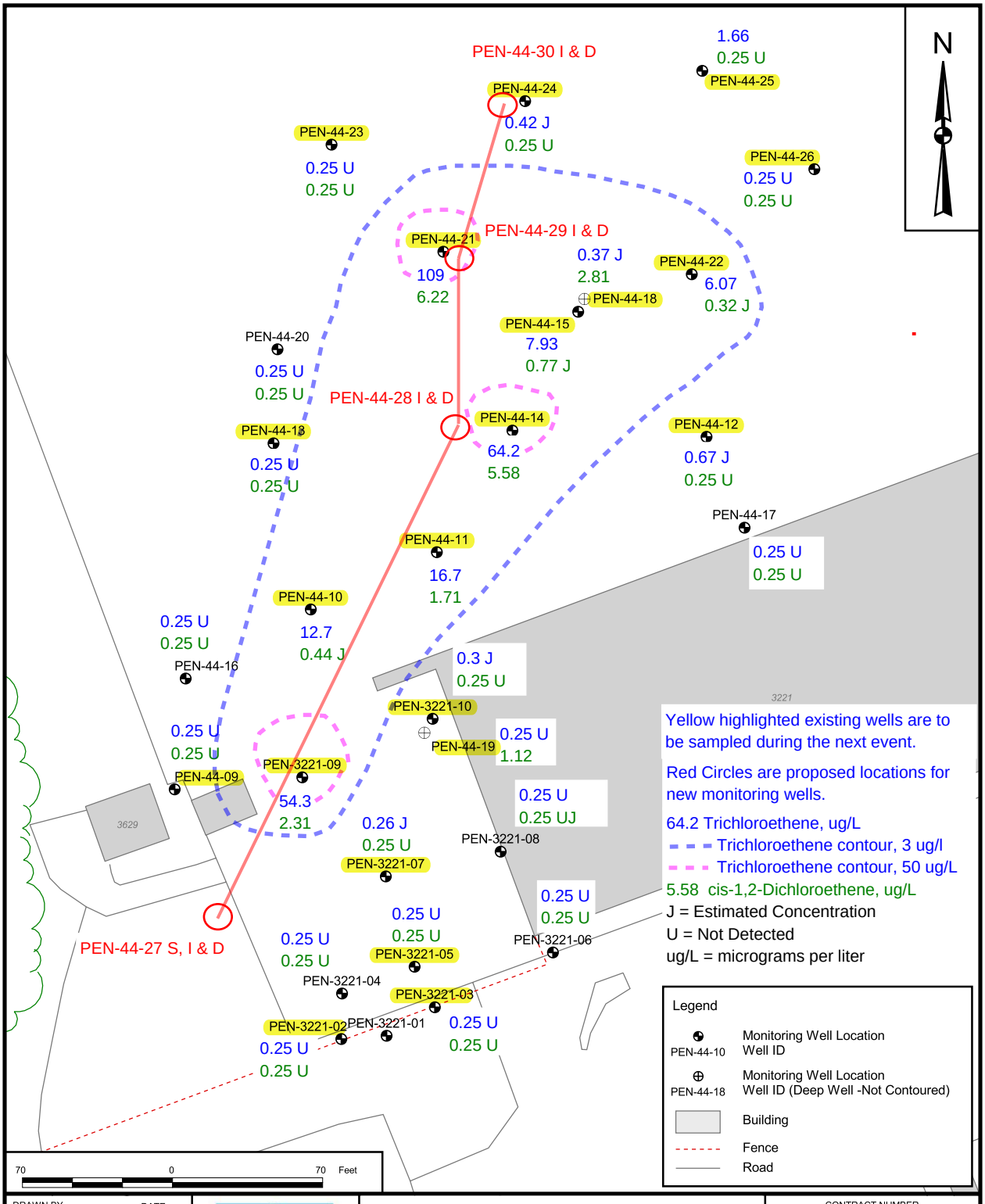
EVENT 2 MONITORING WELL LOCATIONS

Proposed Monitoring Wells and Analytical Parameters for Event 2 at Operable Unit 19, Site 44 NAS Pensacola, Florida USEPA ID FL9170024567		
Monitoring Well ID	**Purpose**	**Event 2**
PEN-44-09	Upgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[1]
PEN-44-10	Cross-Gradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-11	In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-12	Cross-Gradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[1]
PEN-44-13	Cross-Gradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[1]
PEN-44-14	In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-15	In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-16	Cross-Gradient Well	Not to be Sampled
PEN-44-17	Cross-Gradient Well	Not to be Sampled
PEN-44-18	Deep well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-19	Deep well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-20	Cross-Gradient Well	Not to be Sampled
PEN-44-21	In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-22	Cross-Gradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-23	Cross-Gradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[1]
PEN-44-24	Plume-Edge Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-25	Downgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-26	Cross-Gradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA

Proposed Monitoring Wells and Analytical Parameters for Event 2 at Operable Unit 19, Site 44 NAS Pensacola, Florida USEPA ID FL9170024567		
Monitoring Well ID	**Purpose**	**Event 2**
		Parameters[1]
PEN-3221-02	Upgradient Well	Auminum & Iron & Field Parameters
PEN-3221-03	Upgradient Well/Former UST Location	Auminum & Iron & Field Parameters
PEN-3221-04	Upgradient Well	Not to be Sampled
PEN-3221-05	Upgradient Well	Cr^6 & Field Parameters
PEN-3221-06	Upgradient Well	Not to be Sampled
PEN-3221-07	Upgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[1]
PEN-3221-08	Upgradient Well	Not to be Sampled
PEN-3221-09	In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum, Iron, & Cr^6; Field & NA Parameters[2]
PEN-3221-10	Cross-Gradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[1]
PEN-44-27S	New Shallow Upgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-27I	New Intermediate Upgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-27D	New Deep Upgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-28I	New Intermediate In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-28D	New Deep In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-29I	New Intermediate In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-29D	New Deep In-Plume Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-30I	New Intermediate Downgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA Parameters[2]
PEN-44-30D	New Deep Downgradient Well	PCE, TCE, cis-DCE, & VC; Auminum & Iron; Field & NA

Proposed Monitoring Wells and Analytical Parameters for Event 2 at Operable Unit 19, Site 44 NAS Pensacola, Florida USEPA ID FL9170024567		
Monitoring Well ID	**Purpose**	**Event 2**
		Parameters[2]

Notes:
PCE = tetrachloroethene
TCE = trichloroethene
cis-DCE = cis, 1,2-dichloroethene
VC = vinyl chloride
Cr^6 = hexavalent chromium (EPA Method 7199) and total chromium & oxidation reduction potential and pH
Field Parameters = pH, temperature, specific coductance, Dissolved Oxygen, Oxidation and Reduction Potential & Turbidity
NA Parameters[1] = iron (total & dissolved) & anions (nitrate & sulfate)
NA Parameters[2] = iron & manganese (total & dissolved); dissolved gases (methane, ethane, ethene, nitrogen, hydrogen & carbon dioxide); anions (chloride, nitrate, nitrite & sulfate); alkalinity, COD, BOD



DRAWN BY C. SPEHAR	DATE 1/20/06	PROPOSED MONITORING WELLS FOR SECOND SAMPLING EVENT AND TRICHLOROETHENE AND CIS-1,2-DICHLOROETHENE CONCENTRATIONS SITE 44 TECHNICAL MEMORANDUM NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO 0367
CHECKED BY B. OLSON	DATE 5/03/07		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 1 REV 0

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